

**INDIAN & NORTHERN AFFAIRS  
CANADA**

→ File: S04A-006  
S04L1-006

**FACSIMILE MESSAGE**

**TO:** Murray Peacock      **OUR FILE #:** S04L1-006  
**COMPANY:** Sahti Land and Water Board      **DATE:** August 26, 2004  
**FAX:** (867) 598-2325

**CC:** Laurier Lapris, Northrock Res. Ltd.      **FAX:** (403) 269-2217  
John Korec, NEB      **FAX:** (403) 292-5876  
Bruce Hanna, DFO      **FAX:** (867) 669-4940  
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Jody Snortland, SRRB      **FAX:** (867) 588-3324

**SENDER:** Kevin R. Glowa      **# of PAGES:** 5 (incl. cov.)  
**RE:** NORTHROCK RES. LTD. SUMMIT 2004/05 DRILLING  
PROGRAM

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Please see attached

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Kevin

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*This facsimile message has been sent to the above recipient, and may contain confidential information. If you have received it in error or if there are problems with transmission, please notify the sender, as identified above & below, as soon as possible.*

Kevin R. Glowa, Water Resources Officer  
Indian and Northern Affairs Canada  
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August 25, 2004

*Your file - Votre référence*  
XXX-XXXX

*Our file - Notre référence*  
S04L1-006

Sent by fax: (867) 598-2325:

Sahm Land and Water Board  
P.O. Box 1  
Ft. Good Hope, NT  
Canada XOE 0H0

**Attention: Murray Peacock, Land/Resource Geographer**

Dear Mr. Peacock:

**RE: NORTHROCK RESOURCES LTD WATER LICENCE APPLICATION  
SUMMIT CREEK 2004/2005 DRILLING PROGRAM**

Indian and Northern Affairs Canada (INAC), North Mackenzie District, Water Resources Officer, has reviewed the Northrock Resources Ltd Summit Creek Drilling Program Water Licence Application S04L1-006 (the 'Application') submitted by Brian Merchant and received by this office on August 11, 2004.

From the information provided in the Application it is understood that:

- The project includes the drilling of one exploratory well ~60 km south of Tulia, and will occur co-currently with the Summit Creek B-44 reservoir evaluation. As identified in the Application the well may occur at one of four (4) possible locations (D-72, K-71, G-71 or N-70);
- Water will be required for road building, camp site and lease construction, drilling fluids, wash water, and domestic water use;
- A 60-man rig and 34-man sleigh camp will be utilised;
- Road construction will require ~3500 m<sup>3</sup> and camp (including drilling fluid requirements) use will require ~4750 m<sup>3</sup> of water;
- Water will be obtained from km 59 Lake;
- Drill wastes and cuttings will be freshwater-gel-chem and will be deposited in a drill sump. No inverts will be used. Deposit of drill waste will meet the Alberta Energy and Utility Board G-50 Guidelines for mix-burry-cover. Waste not meeting the G-50 for mix-burry-cover will be stabilized and transported to an approved waste handling facility in Alberta; and
- Rig and sleigh camp blackwater will be deposited in a sewage sump and on the ground respectively. Further, as per the Environmental Protection Plan (EPP) all camps will be

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located no less than 100 m from any water body and will not be located for more than 14 days in any one location. If longer than 14 days a sewage sump will be constructed for blackwater discharge.

Since the application involves the use of water and the deposit of Waste as defined in the *NWT Waters Act* INAC can offer the following comments and/or suggestions:

- All water intakes should be properly screened as per the Freshwater Intake End-of Pipe Fish Screen Guideline (DFO, 1995). This guideline is available upon request at the Department of Fisheries and Oceans (DFO);
- Other than Lake 59 the Application does not specify any other water source. The Environmental Protection Plan does specify the use of other water sources as identified under Water Licence S02L1-003 but does not list them in the Application. Use of water sources from other Water Licences and/or projects is generally discouraged. If other water sources are required please ensure that they are approved under this Water Licence;
- As per DFO's August 20, 2004 Letter of Advice, and the information provided in the Application water from Lake 59 will be adequate for all water requirements. Further to the above, if other water sources are required (as a result of logistical challenges) for this project please ensure that there are no misunderstandings and that they are approved under this Water Licence;
- Staging of the sleigh camp for longer than 14 days and the resulting sump excavation is discouraged. See suggestions/guidelines below; and
- As per section 4.6 of the EPP and the National Energy Boards (NEB) letter dated August 20, 2004 follow up (evidence) will be necessary to support Northrocks claim that the use of an ice pad is "unsuitable and potentially dangerous". INAC supports the NEB's position that "ice pads are used regularly, successfully and safely in other northern drilling operations".

As a reminder, for the proponent, a few additional generic comments are provided below:

- Detailed water-uptake logs (total daily volumes) should be kept to the satisfaction of an Inspector. If necessary, this information may need to be calculated using pump flow rate and run time;
- Every effort should be made to ensure minimal damage to riparian areas;
- All Water Intakes and Waste Disposal Facilities should be clearly and appropriately identified with proper signage;
- In addition to the Emergency Response Plan (ERP) and Spill Contingency Plan (SCP), a copy of the Water Licence must be available at the work site at all times and be available to all personnel. Further, all personnel should be aware of the ERP/SCP, this is often neglected;

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- All re-fuelling should be conducted in a designated area that will minimise/negate spillage and or release of petroleum products. As indicated in the Application the use of drip pans/hazmats will be utilised wherever and whenever possible;
- All fuel containers and storage vessels should be inspected routinely for leaks, and deficiencies should be reported to the person in charge for speedy corrective measures. All fuel storage containers (the 400 bbl and/or 75,000l tanks) must exhibit no less than 110% containment;
- After completion of all works all areas must be inspected for foreign material and spills and removed off-site;
- No material should be stored on the ice surface of rivers, creeks and lakes when there is potential for that material to enter the water;
- All consumable construction materials (i.e. welding rods, cutting electrodes, grinding disks, etc.) must be appropriately collected and disposed of off site;
- If heavy equipment is utilised on the surfaces of frozen creeks and/or streams they, in the event of a spill, must be equipped, or be in close proximity (~20 m) to spill containment equipment and/or materials. In addition, all operators working in these areas must be fully familiar with the projects Spill Contingency Plan. As noted above this is often neglected;
- If a sewage sump is constructed all sewage sumps shall be constructed at least 100 m from any water body;
- Suggestions for details on sewage sump design (if required) and abandonment should include:
  1. a minimum of 1.2 meters free-board.
  2. replacement of NON-COMPACTED organic horizons (LFH and/or O) on the surface of the sewage sump/cap. To ensure this, spoil material (Parent Geological Material) and organic horizons must be stored separately,
  3. complete freeze in of all greywater/backwater prior to any replacement of spoil/cap material in permafrost laden areas. If not, mix-burry-cover practices should be utilised,
  4. proper compaction of all spoil material,
  5. construction of an ice pad on the sides of the sewage sump to prevent disturbance to adjacent vegetation, and
  6. a minimum of 2 m cap and overlap around the sewage sump;
- As an alternative to sewage sumps for greywater/backwater discharges at temporary and permanent camps we offer the following suggestion to minimise the footprint:

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- For a camp temporarily located (no more than 15-days or 750 man days) deposit blackwater/greywater in a surface iced down snow berm sewage sump and spread on land (maximising the area) >100 m from any water body upon abandoning the site;
- For camps permanently located (more than 15-days or 750 man days) a sewage treatment system is recommended prior to blackwater discharge. Discharge treated effluent on land (maximising the discharge area) >100 m from any water body upon abandoning the site;
- ✓○ Ensure the co-ordinates are taken of each location of blackwater discharge;
- ✓○ During blackwater discharge to a iced down snow berm, ensure: the area is restricted to worker access; blackwater is contained and FROZEN; that the underlying ground/vegetation is not damaged by melt-through during the discharge of warm blackwater (if necessary the black water may need to be cooled to approximately 3°C prior to discharge); the spreading of frozen blackwater is maximised;
- No garbage and or incineration products shall be deposited in any sump. All solid waste must be disposed of off site at an appropriate disposal location:
- The licensee must ensure that only clean snow and/or water are used on all stream and/or water body crossings and that no debris is left on the surfaces of the crossings. Furthermore, upon abandonment all stream crossings must be notched and/or decommissioned before spring break-up to ensure free flow in the spring;
- After project completion please ensure that disturbed areas are reclaimed by replacing (where necessary) native organic layers and vegetation. Native seed mixes should be utilised whenever possible.

If you have any questions/concerns regarding the enclosed, and/or if additional information is required, please do not hesitate to contact Mr. Glowa at (867) 777-3662.

Sincerely,



Rudy A. Cockney  
District Manger

Cc: Laurier Lapris, Northrock Res. Ltd. by fax: (403)-269-2217  
John Korec, NEB by fax: (403) 292-5876  
Bruce Hanna, DFO by fax: (867) 669-4940  
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KRG/rc

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