

**PRELIMINARY SCREENING REPORT FORM**

<p><b>PRELIMINARY SCREENER:</b> Angela Love</p> <p><b>REFERENCE / FILE NUMBER:</b> S12X-006</p> <p><b>APPLICANT:</b> Husky Oil Operations Limited</p> <p><b>DATE:</b> November 28, 2012</p>	<p><b>EIRB REFERENCE NUMBER:</b></p> <p><b>TITLE:</b> Regulatory Specialist</p> <p><b>ORGANIZATION:</b> Sahtu Land and Water Board</p>
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**Type of Development:** (X) Miscellaneous – Groundwater Monitoring Program

- Type of Development:** (CHECK ALL THAT APPLY)
- New Development
  - Amend, EIRB Ref. #
  - Renew, EIRB Ref. #
  - Requires permit, license or authorization
  - Does not require permit, license or authorization

**Principal Activities (related to scoping)**  
(CHECK ALL THAT APPLY)

- |  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> Construction | <input checked="" type="checkbox"/> Exploration | <input checked="" type="checkbox"/> Decommissioning       |
| <input checked="" type="checkbox"/> Installation | <input type="checkbox"/> Industrial             | <input type="checkbox"/> Abandonment                      |
| <input checked="" type="checkbox"/> Maintenance  | <input type="checkbox"/> Recreation             | <input type="checkbox"/> Aerial                           |
| <input type="checkbox"/> Expansion               | <input type="checkbox"/> Municipal              | <input type="checkbox"/> Harvesting                       |
| <input checked="" type="checkbox"/> Operation    | <input type="checkbox"/> Quarry                 | <input type="checkbox"/> Camp                             |
| <input type="checkbox"/> Repair                  | <input type="checkbox"/> Linear / Corridor      | <input checked="" type="checkbox"/> Scientific / Research |
| <input type="checkbox"/> Water Intake            | <input type="checkbox"/> Sewage                 | <input type="checkbox"/> Solid Waste                      |

Other: \_\_\_\_\_  
(DESCRIBE)

**Principal Development Components (related to scoping)**  
(CHECK ALL THAT APPLY)

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Access Road             <ul style="list-style-type: none"> <li><input type="checkbox"/> construction</li> <li><input type="checkbox"/> abandonment/removal</li> <li><input type="checkbox"/> modification e.g., widening, straightening</li> </ul> </li> <li><input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement</li> <li><input type="checkbox"/> Blasting</li> <li><input type="checkbox"/> Building</li> <li><input type="checkbox"/> Burning</li> <li><input type="checkbox"/> Burying</li> <li><input type="checkbox"/> Channeling</li> <li><input type="checkbox"/> Cut and Fill</li> <li><input checked="" type="checkbox"/> Cutting of Trees or Removal of Vegetation</li> </ul> | <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Waste Management             <ul style="list-style-type: none"> <li><input type="checkbox"/> disposal of hazardous waste</li> <li><input checked="" type="checkbox"/> waste generated</li> </ul> </li> <li><input type="checkbox"/> Sewage             <ul style="list-style-type: none"> <li><input type="checkbox"/> disposal of sewage</li> </ul> </li> <li><input checked="" type="checkbox"/> Geoscientific Sampling             <ul style="list-style-type: none"> <li><input type="checkbox"/> trenching</li> <li><input type="checkbox"/> diamond drill</li> <li><input checked="" type="checkbox"/> borehole core sampling</li> </ul> </li> <li><input type="checkbox"/> Bulk soil sampling</li> <li><input type="checkbox"/> Gravel</li> <li><input checked="" type="checkbox"/> Hydrological Testing</li> </ul> |
|--|---|

- Dams and Impoundments
  - construction
  - abandonment/removal
  - modification
- Ditch Construction
- Drainage Alteration
- Drilling other than Geoscientific
- Ecological Surveys
- Excavation
- Explosive Storage
- Fuel Storage
- Topsoil, Overburden or Soil
  - fill
  - removal
  - disposal
  - storage

- Site Restoration
  - fertilization
  - grubbing
  - planting/seeding
  - reforestation
  - scarify
  - spraying
  - recontouring
- Slashing and removal of vegetation
- Soil Testing
- Stream Crossing/Bridging
- Tunneling/Underground
- Water Intake
- Other
  - drilling leases levelled by constructing an ice/snow pad

**NTS Topographic Map Sheet Numbers**  
(LIST ALL THAT APPLY)

**NTS Map Sheet #s:** NTS 96C, 96D and 96E

Latitude/Longitude and UTM System: Minimum Latitude: N64°40' Maximum Latitude: N65°20'  
 Minimum Longitude: W125°45' Maximum Longitude: W126°45'  
 (DEGREES, MINUTES, SECONDS, MAP SHEET)

**Nearest Community and Water Body:** The Town of Norman Wells is located approximately 40KM NNW of the exploratory drilling sites. The closest main bodies of water are Bogg Creek, the Mackenzie and Slater Rivers.

**Land Status (consultation information)**  
(CHECK ALL THAT APPLY)

- Free Hold / Private     Commissioner's Land     Federal Crown Land     Municipal Land

**Transboundary Implications**  
(CHECK ALL THAT APPLY - IF KNOWN & APPLICABLE)

- British Columbia     Alberta     Saskatchewan     Yukon  
 Nunavut     Wood Buffalo National Park     Inuvialuit Settlement Region

N/A

**Type of Transboundary Implication:**     Impact / Effect     Development

Public Concern \_\_\_\_\_  
 (DESCRIBE)

N/A

## PHYSICAL - CHEMICAL EFFECTS

<i>IMPACT</i>	<i>MITIGATION</i>
<b>1. Ground Water</b>	
<input type="radio"/> water table alteration	
<input checked="" type="checkbox"/> water quality changes	<ol style="list-style-type: none"><li>1. Groundwater monitoring is being conducted by Husky in order to establish baseline groundwater information.</li><li>2. Surface casing will be installed over the shallow surficial zone, to isolate possible occurrences of shallow groundwater from the deep monitoring well drilling activities.</li><li>3. Fuel will be set-back a minimum of 100m from the high water mark of any water body to prevent contamination of water resources.</li><li>4. All fuel storage containers will have secondary containment.</li><li>5. Drip pans will be placed under parked equipment, equipment and/or machinery and will also be used to capture minor spills and drips while fuelling vehicles. The drip pans will be monitored for fluid levels and replaced as necessary.</li><li>6. Environment Canada (EC) recommends that a dedicated area should be used for refuelling equipment.</li><li>7. Drilling program to be conducted during winter conditions (frozen ground and snow cover) when spills are highly visible and care will be taken during refuelling and equipment will be inspected for leaks/drips.</li><li>8. Husky has developed Emergency Response and Spill Contingency Plans that will be adhered to throughout the course of the Program.</li><li>9. Spill response equipment includes fuel transfer hoses, sorbent blankets, scoop shovels and 205 litre empty drums.</li><li>10. Should a spill occur, the NT-NU 24-hour Spill Report Line will be contacted at (867) 920-8130; or <a href="mailto:spills@gov.nt.ca">spills@gov.nt.ca</a>.</li><li>11. All spills, regardless of volume will be documented and reports submitted to the AANDC Land Use Inspector upon request.</li><li>12. If a spill does occur, Husky will endeavour to clean-up the spill before infiltration occurs.</li><li>13. EC recommends that any chemical additives or drilling muds used in connection with the drilling shall be disposed of such that they do not enter any waterbody either by surface or ground water flows.</li><li>14. As recommended by ENR, any hazardous wastes generated by the proponent will be handled and disposed of in the appropriate manner. The carrier or receiver of said hazardous waste must be registered with ENR.</li></ol>
<input type="radio"/> infiltration changes	
<input type="radio"/> other: _____	
<input type="radio"/> N/A	

<i>IMPACT</i>	<i>MITIGATION</i>
<b>2. Surface Water</b>	
<input checked="" type="checkbox"/> flow or level changes	<ol style="list-style-type: none"><li>1. Soils that are disturbed will be re-graded in such a manner that drainage patterns are not altered.</li><li>2. Water for drilling purposes will be obtained from specified water sources within the program area that are approved for use by DFO and are licenced under Water Licence S11L1-003.</li></ol>
<input checked="" type="checkbox"/> water quality changes	<ol style="list-style-type: none"><li>1. A surface water monitoring program (covered under Northwest Territories Scientific Research Licence #15118) is being conducted by Husky in correlation with this program in order to monitor the long-term effects of program activities on groundwater sources.</li></ol>

2. Drip pans will be placed under parked equipment, equipment and/or machinery and will also be used to capture minor spills and drips while fuelling vehicles. The drip pans will be monitored for fluid levels and replaced as necessary.
3. Spill response equipment will be maintained on all fuel transfer vehicles.
4. All fuel storage containers will have secondary containment.
5. Hydrocarbon caches and waste storage areas will be set-back a minimum of 100m from the high water mark of any water body to prevent contamination of water resources.
6. EC recommends that a dedicated area should be used for refuelling equipment.
7. Drilling program to be conducted during winter conditions (frozen ground and snow cover) when spills are highly visible and care will be taken during refuelling and equipment will be inspected for leaks/drips.
8. Husky has developed Emergency Response and Spill Contingency Plans that will be adhered to throughout the course of the Program.
9. Spill response materials will be stationed within 50m of every water body.
10. Spill response equipment includes fuel transfer hoses, sorbent blankets, scoop shovels and 205 litre empty drums.
11. Should a spill occur, the NT-NU 24-hour Spill Report Line will be contacted at (867) 920-8130; or [spills@gov.nt.ca](mailto:spills@gov.nt.ca).
12. Wetland areas will be designated a minimum set-back distance equal to the 1:100-year flood line.
13. Where the potential for erosion exists on-site, erosion protection materials will be installed, or soils will be seeded in order to prevent increased sedimentation of water bodies.
14. Where waste is generated near water bodies, waste will be immediately removed, and will be transported to waste storage areas. Wastes will not be stored, even temporarily, within 100m of any water body.
15. As recommended by ENR, any hazardous wastes generated by the proponent will be handled and disposed of in the appropriate manner. The carrier or receiver of said hazardous waste must be registered with ENR.

water quantity changes

1. The total anticipated water budget for this project is estimated to be 1,180m<sup>3</sup> (1,000m<sup>3</sup> for drilling pad construction and 180m<sup>3</sup> for drilling operations).
2. Water will be obtained from Water Sources 2, 6 and 7.
3. Water is licenced under Water Licence S11L1-003.

drainage pattern changes

temperature

wetland changes / loss

other: \_\_\_\_\_

N/A

### **IMPACT**

### **MITIGATION**

#### **3. Noise**

noise increase

1. Noise during drilling will be transient, local and temporary.
2. The Program will be conducted during the winter and will not take place during critical periods for wildlife (spring and fall).
3. Equipment will be properly maintained in order to minimize noise.

✓ noise in/near water

1. Noise in or near water will be limited to the Slater River.
2. Noise will be localized and of a temporary nature.
3. Effects on fish will be limited to the duration of the project activities.
4. The program will be conducted in the winter and not take place during critical periods for wildlife (spring and fall).

other: \_\_\_\_\_

N/A

#### **IMPACT**

#### **MITIGATION**

### **4. Land**

geologic structure changes

✓ soil contamination

1. Drip pans will be placed under parked equipment, equipment and/or machinery and will also be used to capture minor spills and drips while fuelling vehicles. The drip pans will be monitored for fluid levels and replaced as necessary.
2. Drilling program to be conducted during winter conditions (frozen ground and snow cover) when spills are highly visible and care will be taken during refuelling and equipment will be inspected for leaks/drips.
3. Spill response equipment will be maintained on all fuel transfer vehicles.
4. EC recommends that a dedicated area should be used for refuelling equipment.
5. Husky has developed Emergency Response and Spill Contingency Plans that will be adhered to throughout the course of the Program.
6. Spill response equipment includes fuel transfer hoses, sorbent blankets, scoop shovels and 205 litre empty drums.
7. Should a spill occur, the NT-NU 24-hour Spill Report Line will be contacted at (867) 920-8130, or [spills@gov.nt.ca](mailto:spills@gov.nt.ca).
8. All spills, regardless of volume, will be documented, and reports will be submitted to the AANDC Land Use Inspector upon request.
9. If a spill does occur, Husky will endeavour to clean up the spill before infiltration occurs.
10. Equipment being moved from one area to another will be thoroughly cleaned between projects in order to reduce the risk of cross-contamination between sites.

buffer zone loss

✓ soil compaction & settling

1. Surface disturbance is expected to be minimal as the project will be conducted during the winter season.
2. The drilling pads will be constructed using snow and ice that will create a protective layer for vegetation.
3. Dozer blades will have protective shoes or a rounded pipe on the cutting edges to elevate the blade, leaving some snow cover to protect vegetative mat.
4. Care will be taken in ensuring that impacts to the ground are minimized.

✓ destabilization / erosion

1. The drilling pads will be constructed using snow and ice that will create a protective layer for vegetation.
2. Dozer blades will have protective shoes or a rounded pipe on the cutting edges to elevate the blade, leaving some snow cover to protect vegetative mat and, thereby, reducing the potential for erosion.
3. Where the potential for erosion exists, erosion protection materials (such as coconut matting, silt fencing, and/or rip-rap) will be installed.
4. Bare areas will be seeded in order to prevent erosion.

permafrost regime alteration

1. Frozen ground conditions will mitigate the potential damage to surface soils and permafrost.
2. Avoiding damage to the organic mat will protect any discontinuous permafrost.
3. Dozer blades will have protective shoes or a rounded pipe on the cutting edges to elevate the blade, leaving some snow cover to protect vegetative mat and, thereby, reduce potential for erosion and damage to permafrost.
4. Previously-cleared areas will be used wherever possible in order to avoid the clearing of new areas.
5. Where the potential for erosion exists, erosion protection materials (such as coconut matting, silt fencing, and/or rip-rap) will be installed.
6. Activity will be restricted to the defined program area, which will limit the area being disturbed.

other: \_\_\_\_\_

N/A

**IMPACT**

**MITIGATION**

**5. Non Renewable Natural Resources**

resource depletion

1. Equipment and vehicles using fossil fuels will be utilized in the most efficient manner possible in order to minimize program fossil fuel requirements.

other: \_\_\_\_\_

N/A

**IMPACT**

**MITIGATION**

**6. Air / Climate / Atmosphere**

green house gases

1. Vehicles, heavy equipment and drilling will emit greenhouse gases but are necessary to conduct the project.
2. Combustible wastes and non-recyclables will be collected from the site and incinerated at the campsite under Land Use Permit S11T-002 and Water Licence S11L3-002.
3. EC recommends that the *Technical Document for Batch Waste Incineration* be used as guidance for managing the waste stream, selecting the incineration unit, operation, maintenance, and for keeping records.
4. Evaporations will be used to reduce the quantity of a waste containing a fluid that can be readily evaporated at low temperatures. The resultant solids can be collected for alternative reuse. If residual material is contaminated, it will be transferred and transported to an authorized waste receiver.
5. ENR recommends that the Proponent is required, at a minimum, to integrate the requirements of the Alberta Energy Utilities Board *Guide 58, Oilfield Waste Management Requirements for the Upstream Petroleum Industry*, Section 17.5 Mobile Thermal Treatment Units.

**BIOLOGICAL ENVIRONMENT**

**IMPACT**

**MITIGATION**

**1. Vegetation**

species composition

- ✓ species introduction
  1. If ground disturbance does occur, it will be reseeded with an approved mix immediately and inspected within one full growing season.
  2. Care will be taken to clean all equipment prior to bringing into the Program area to limit the likelihood of introduction of non-native species.
  
- ✓ toxin / heavy accumulation
  1. Drilling will utilize an air/water/mud rotary drilling rig. The mud will consist of bentonite clay-based drilling fluid.
  2. When the bentonite clay drilling additive is used, waste will consist of an inert mixture of rock cuttings, fresh water and the bentonite clay. If any salt water or contaminated material is produced, the waste will be disposed to an approved and licensed facility in Northern Alberta or British Columbia.
  
- ✓ damage to ground vegetation
  1. Avoiding damage to the organic mat will protect any discontinuous permafrost.
  2. Frozen ground conditions will mitigate potential damage to ground vegetation.
  3. Dozer blades will have protective shoes or a rounded pipe on the cutting edges to elevate the blade, leaving some snow cover to protect vegetative mat and, thereby, reduce potential for erosion and damage to permafrost.
  4. Ice and snow will be used to build up the leases wherever possible. Disturbance to the vegetative mat will be minimized.
  5. Previously-cleared areas will be used wherever possible in order to avoid the clearing of new areas.
  6. Where the potential for erosion exists, erosion protection materials (such as coconut matting, silt fencing, and/or rip-rap) will be installed.
  7. Drip pans will be placed under equipment when not in operation or when unattended. Drip pans and absorbent pads will be used to capture minor spills and drips while fuelling vehicles.
  8. All fuel storage containers will have secondary containment.
  9. Activity will be restricted to the defined program area, which will limit the area being disturbed.
  
- ✓ other: Increased fire hazard potential
  1. Firefighting kits will be available at fuel storage sites.
  2. Fire prevention methods include: designated smoking areas, and fire bans as conditions warrant.
  3. Forest fire management will be planned in reference to the GNWT Guidelines for Forest Fire Prevention and Suppression document.
  4. In the event of a forest fire, the GNWT Forest Fire Management Division hotline will be called at 1-877-698-3473.

○ N/A

**IMPACT**

**MITIGATION**

**2. Wildlife & Fish**

- ✓ effects on rare, threatened or endangered species
  1. Species listed as Sensitive by SARA in the project area include: Grizzly Bear, Wolverine (Western population), Woodland Caribou (Boreal population), Peregrine Falcon, Short-eared Owl and Dolly Varden (northern form).
  2. Species listed as Threatened by COSEWIC in the project area include: Woodland Caribou (Boreal population), Common Nighthawk, Olive-sided Flycatcher and Shortjaw Cisco. The Eskimo Curlew is listed as Endangered.
  3. The project does not involve the disturbance of Peregrine Falcon habitat (Cliff ledges, usually near wetlands).
  4. The project is outside of the identified Woodland Caribou calving grounds.
  5. The wintering grounds of the Common Nighthawk, Olive-sided Flycatcher and the Eskimo Curlew are located in South America. These species are not expected to be encountered during the program.
  6. Woodland Caribou and Wolverines suffer from a combination of natural

predation, habitat fragmentation or destruction, human disturbance, and intense hunting activity. Husky employees will be prohibited from hunting. This should mitigate any direct loss of Woodland Caribou or Wolverine populations.

7. The use of all-terrain vehicles and/or snowmobiles (ATVs) by Husky employees and contractors working at the program site will be restricted to use for work related activities; no recreational use of ATVs will be permitted.
8. ENR recommends the *August 2011 DRAFT Northwest Territories Seismic Operations Guidelines* are followed. As set forth in the guidelines, Peregrine Falcon setbacks of 1 km from March 1-Sept1 and 0.5 km from Aug 2-Feb 28, setback distance from bear den sites of 0.8 km, observe and put into effect minimum flight altitudes and wildlife sensitive periods and recommended minimum setback distances.
9. Any incidents involving wildlife shall be reported to the local ENR office and the local RCMP detachment as well as through Husky's Incident Management System.
10. Pilots will be encouraged to identify areas of wildlife activity and will be instructed to avoid flying over animals whenever possible. Pilots will be instructed to not fly below 305m (1,000 feet) whenever possible, and will be instructed to not chase or harass wildlife in order to minimize aircraft-induced behavioural effects.
11. Personnel, specifically Wildlife Monitors, will be directed to look for evidence of activity near the work area.
12. Den, dam, lodge, and nest sites will be actively avoided.
13. The wildlife/environmental monitor will be expected to observe and document wildlife and potential wildlife impacts to ensure that environmental protection measures are being implemented as appropriate. The monitor will be expected keep a wildlife log, and will be instructed to collect data on observations, such as: species observed, date, time, location, and animal activity.
14. As recommended by ENR, Wildlife Monitor will be provided with a digital camera and GPS.
15. ENR recommends that Husky utilize the ENR documents, "*General Bear Encounter Response Guidelines*" and "*Flying Low Brochure*."
16. Drilling will be conducted during the winter, and will not take place during critical periods for wildlife (spring and fall). Minimum fly-over distances will be implemented wherever possible in order to minimize aircraft-induced mortality.

✓ fish population changes

1. Husky employees and contractors working on the Program will be prohibited from fishing.
2. No materials will be stored on the surface ice of any water body or within 100m of the normal high water mark to prevent contamination of water resources.
3. During refuelling, non-drip nozzles and absorbent pads will be utilized.
4. Husky has developed Emergency Response and Spill Contingency Plans specific to this Program that will be adhered to throughout the course of the Program.
5. Spill response equipment includes fuel transfer hoses, sorbent blankets, scoop shovels and 205 litre empty drums.
6. Should a spill occur, the NT-NU 24-hour Spill Report Line will be contacted at (867) 920-8130 or [spills@gov.nt.ca](mailto:spills@gov.nt.ca).
7. All spills, regardless of volume will be documented and reports submitted to the AANDC Land Use Inspector upon request.
8. Program conducted during winter conditions (frozen ground and snow cover) when spills are highly visible and less prone to infiltration.
9. If any deleterious material falls into a water body, it will be removed immediately.
10. Meeting the requirements of the *Fisheries Act* is mandatory and specifies that no person shall deposit or permit the deposit of deleterious substances of any type in water frequented by fish as stated by EC.



○ waterfowl population changes

✓ breeding disturbances

1. Program conducted during winter conditions will avoid critical periods for wildlife (late spring and early fall).

✓ population reduction

1. The project has a potential to indirectly cause population reduction through increased stress from disturbance, habitat change, increased predation or hunting pressure.
2. Husky employees will be prohibited from hunting.
3. Harassment of wildlife will not be tolerated.
4. Disturbance will be temporary, local and transient.
5. Husky will ensure that the *Wildlife Act, Migratory Birds Regulation/Migratory Birds Convention Act*, and the *Fisheries Act* are complied with.

○ species diversity change

○ health changes (identify)

✓ behavioural changes (identify)

1. Pilots will be encouraged to identify areas of wildlife activity and will be instructed to avoid flying over animals whenever possible. Pilots will be instructed to not fly below 305m (1,000 feet) whenever possible, and will be instructed to not chase or harass wildlife in order to minimize aircraft-induced behavioural effects.
2. During the site orientation, all workers will receive awareness training which will include discussions on the treatment of wildlife, including not feeding wildlife, and not hunting, fishing, trapping, or harassing wildlife.
3. Food and waste will be managed appropriately throughout program operations.

✓ habitat changes / effects

1. No endangered species have been identified to occur during the program or critical habitats identified, however; caribou and fur-bearers are active in the area.
2. Activity will be restricted to the defined program area, which will limit the area being disturbed.
3. No equipment will be used for purposes other than work.

✓ game species effects

1. The disturbance to game species is limited in that the activity is short in duration and localized.
2. Firearms may be carried by local wildlife monitors if warranted for protection from bears or other wildlife.
3. Husky employees will be prohibited from hunting.
4. Harassment of wildlife will not be tolerated.
5. The wildlife/environmental monitor will be expected to observe and document wildlife and potential wildlife impacts to ensure that environmental protection measures are being implemented as appropriate. The monitor will be expected keep a wildlife log, and will be instructed to collect data on observations, such as: species observed, date, time, location, and animal activity.

○ toxins / heavy metals

✓ forestry changes

1. Previously-cleared areas will be used wherever possible in order to avoid the clearing of new areas.
2. Care will be taken to clean all equipment prior to bringing it into the program area to limit the likelihood of the introduction of non-native species.
3. Vegetation that will be removed for the duration of the program will be replaced during program reclamation, wherever possible.
4. ENR states that the *Forest Management Act and Regulations* prohibits

anyone from cutting, using or transporting timber or damaging standing timber unless: authorized with a Timber Permit, Authorized by a Licence, or Exempted from holding a permit or licence. Husky should contact the ENR office for more information on obtaining a Forest Management Authorization.

5. ENR recommends that Husky will require a Permit to Burn if any brush or other materials will be burned during the forest fire season (May1-Sept30).
6. ENR recommends if the site brush and tree cover is not merchantable then it should be piled up accordingly so that it can be burned or spread out at a later date. Merchantable wood should be cleanly set to one side of the operation and made available for recovery.

agricultural changes

✓ other: Wildlife may be attracted to garbage or harmed by debris from operations

1. All food and waste will be stored in sealed airtight containers to prevent the attraction of wildlife.

N/A

**INTERACTING ENVIRONMENT**

<i><b>IMPACT</b></i>	<i><b>MITIGATION</b></i>
<b>1. Habitat and Communities</b>	
✓ predator-prey	1. Hunting pressure and success may increase as a result of increased and more convenient access to the land.
✓ wildlife habitat / ecosystem composition changes	1. Minimal wildlife habitat/ecosystem changes are expected as a portion of the Program activities are located in an old burn area with limited re-growth. 2. Den, dam, lodge, and nest sites will be actively avoided.
✓ reduction / removal of keystone or endangered species	1. The Eskimo Curlew is listed by COSEWIC as an endangered species but is not expected to be impacted due to the fact that this is a winter program. 2. During the site orientation, all workers will receive awareness training which will include discussions on the treatment of wildlife, including not feeding wildlife, and not hunting, trapping, or harassing wildlife. 3. Workers will be made aware of the potential for hunters in the area.
✓ removal of wildlife corridor or buffer zone	1. Program activities are located in an old burn area with limited re-growth.
<input type="radio"/> other: _____	
<input type="radio"/> N/A	

<i><b>IMPACT</b></i>	<i><b>MITIGATION</b></i>
<b>2. Social and Economic</b>	
✓ planning / zoning changes or conflicts	1. The Sahtu Land Use Planning Board (SLUPB) has released the Sahtu Land Use Plan – Draft 3 (July12, 2010). No approved Land Use Plan exists. 2. Of note, the SLUPB has stated that any rights or authorizations granted prior to approval of the Land Use Plan will be considered existing uses and allowed to continue following plan approval, including uses that do not conform to the approved zoning and the terms of the plan.

rental house

airport operations /  
capacity changes

human health hazard

1. Fuel will be set-back a minimum of 100m from the high water mark of any water body to prevent contamination of water resources.
2. All fuel storage containers will have secondary containment.
3. Drip pans will be placed under parked equipment, equipment and/or machinery and will also be used to capture minor spills and drips while fuelling vehicles. The drip pans will be monitored for fluid levels and replaced as necessary.
4. Environment Canada (EC) recommends that a dedicated area should be used for refuelling equipment.
5. Husky has developed Emergency Response and Spill Contingency Plans that will be adhered to throughout the course of the Program.
6. Combustible wastes and non-recyclables will be collected from the site and incinerated at the campsite under Land Use Permit S11T-002 and Water Licence S11L3-002.
7. EC recommends that the *Technical Document for Batch Waste Incineration* be used as guidance for managing the waste stream, selecting the incineration unit, operation, maintenance, and for keeping records.
8. Drilling will utilize an air/water/mud rotary drilling rig. The mud will consist of bentonite clay-based drilling fluid.
9. When the bentonite clay drilling additive is used, waste will consist of an inert mixture of rock cuttings, fresh water and the bentonite clay. If any salt water or contaminated material is produced, the waste will be disposed to an approved and licensed facility in Northern Alberta or British Columbia.

impair the recreational use  
of water or aesthetic quality

affect water use for other  
purposes

affect other land use  
operations

quality of life changes

1. Public notifications will be posted in Norman Wells and Tulita prior to project operations commencing.

1. Access into the area will be improved.
2. Local personnel and businesses will be employed wherever possible.
3. Access and Benefits Agreements have been signed which will contribute to the local economy through employment of personnel and businesses.

public concern

other: \_\_\_\_\_

N/A

**IMPACT**

**MITIGATION**

**3. Cultural and Heritage**

- |   |   |
|---|---|
| <p><input checked="" type="checkbox"/> affects to historic property</p>               | <ol style="list-style-type: none"><li>1. A qualified archaeologist conducted a Heritage Resource Impact Assessment of the proposed drilling program. An existing historical site was located, but will not be impacted by the proposed program. No new historic sites were discovered.</li><li>2. If a suspected site is discovered during the conduct of the Program, the crew will not disturb the site and will contact the SLWB or AANDC as well as the PWNHC for further instructions.</li><li>3. Husky will not conduct their activities within 150m of any recorded site.</li></ol>  |
| <p><input checked="" type="checkbox"/> increased economic pressure</p>                | <ol style="list-style-type: none"><li>1. Wildlife/environmental monitors will be hired.</li><li>2. Local personnel and businesses will likely be employed.</li></ol>  |
| <p><input type="checkbox"/> changes to or loss of historic resources</p>              |   |
| <p><input type="checkbox"/> change to or loss of archaeological resources</p>         |   |
| <p><input checked="" type="checkbox"/> increased pressure on archaeological sites</p> | <ol style="list-style-type: none"><li>1. An archaeological survey has been conducted to identify areas of moderate/high potential for historical significance.</li><li>2. Husky will not conduct their activities within 150m of any recorded site.</li><li>3. If a suspected site is discovered during the conduct of the program, the crew will not disturb the site and will contact the SLWB or AANDC Land Use inspector as well as the PWNHC for further instructions.</li></ol>   |
| <p><input type="checkbox"/> change to or loss of aesthetically important site</p>     |   |
| <p><input checked="" type="checkbox"/> affects to aboriginal lifestyle</p>            | <ol style="list-style-type: none"><li>1. Wildlife/environmental monitors will be hired.</li><li>2. The wildlife/environmental monitor will be expected to observe and document wildlife and potential wildlife impacts to ensure that environmental protection measures are being implemented as appropriate. The monitor will be expected to keep a wildlife log, and will be instructed to collect data on observations, such as: species observed, date, time, location, and animal activity.</li><li>3. Local personnel and businesses will likely be employed.</li><li>4. Public notifications will be posted in Tulita and Norman Wells prior to project operations commencing.</li></ol> |
| <p><input type="checkbox"/> other: _____</p>  |   |
| <p><input type="checkbox"/> N/A</p>   |   |

**PRELIMINARY SCREENER / REFERRING BODY INFORMATION**  
(CHECK ALL THAT APPLY)

	<b>RA or DRA</b>	<b>ADVISE</b>	<b>PERMIT REQUIRED</b>
<b>Federal</b>			
ATOMIC ENERGY CONTROL BOARD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CANADIAN HERITAGE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CANADIAN TRANSPORTATION AGENCY	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ENVIRONMENT CANADA	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
FISHERIES & OCEANS	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
INDUSTRY CANADA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NATIONAL DEFENSE	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NATIONAL ENERGY BOARD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NATURAL RESOURCES	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PUBLIC WORKS & GOVERNMENT SERVICES	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TRANSPORT CANADA	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
CANADIAN NUCLEAR SAFETY COMMISSION	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Territorial</b>			
MUNICIPAL & COMMUNITY AFFAIRS	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
PUBLIC WORKS & GOVERNMENT SERVICES	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ENVIRONMENT & NATURAL RESOURCES	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TRANSPORTATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
DEPARTMENT OF HEALTH AND SOCIAL SERVICES	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
PRINCE OF WALES NORTHERN HERITAGE CENTRE	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
INDUSTRY, TOURISM AND INVESTMENT	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
<b>Boards</b>			
GWICH'IN LAND & WATER BOARD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SAHTU LAND & WATER BOARD	<input checked="" type="checkbox"/>	<input type="radio"/>	<input checked="" type="checkbox"/>
MACKENZIE VALLEY LAND & WATER BOARD	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
MACKENZIE VALLEY ENVIR. IMPACT REVIEW BOARD	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
SAHTU LAND USE PLANNING BOARD	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
SAHTU RENEWABLE RESOURCES BOARD	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
SAHTU HEALTH BOARD	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
<b>Aboriginal / First Nation</b>			
SAHTU SECRETARIAT INCORPORATED	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
NORMAN WELLS LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA BAND COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
FORT NORMAN RENEWABLE RESOURCES COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA DISTRICT LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
FORT NORMAN METIS LOCAL #60 LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
NORMAN WELLS RENEWABLE RESOURCES COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
<b>Local Government</b>			
TULITA HAMLET INCORPORATED	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TOWN OF NORMAN WELLS	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>

Communities

\_\_\_\_\_

(IDENTIFY)

Non-Governmental Organizations (NGO)

\_\_\_\_\_

(IDENTIFY)

**REASONS FOR DECISION**

(LIST ALL REASONS AND SUPPORTING RATIONALES FOR PRELIMINARY SCREENING DECISION)

- Adequate time has been given to Reviewers to provide potential environmental impacts and mitigation measures on information as requested from the Proponent during the initial review period.
- Husky Oil Operations Ltd. has committed to doing significant environmental baseline studies that will aid in future decisions on programs in the area.
- The immediate environmental impacts from this development can be mitigated with known technology or are of temporary nature.
- Despite some public concern around the specifics of the Groundwater Monitoring Plan and of the cumulative impacts of all development being proposed in the Sahtu, the Tulita Renewable Resource Council and the Sahtu Renewable Resource Board are willing to work with Husky Oil Operations Ltd. to establish a collaborative adaptive management system/structure.

-	<b>PRELIMINARY SCREENING DECISION</b>
✓	<b>Outside Local Government Boundaries</b>
○ ✓	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i> <i>Proceed with regulatory process and/or implementation.</i>
○ ✓	The development proposal might have public concern, <i>refer it to the EIRB.</i> <i>Proceed with regulatory process and/or implementation.</i>
○	<b>Wholly within Local Government Boundaries</b>
○ ○	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i> <i>Proceed with regulatory process and/or implementation.</i>
○ ○	The development proposal might have public concern, <i>refer it to the EIRB.</i> <i>Proceed with regulatory process and/or implementation.</i>

**Preliminary Screening Organization**

**Signatures**

Sahtu Land & Water Board \_\_\_\_\_



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