



# LEASE PLAN OF OPERATIONS APPLICATION

State of Alaska

Department of Natural Resources, Division of Oil & Gas  
550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563

Phone: 907-269-8800 Fax: 907-269-8943

Permitting Email: [dog.permitting@alaska.gov](mailto:dog.permitting@alaska.gov)



SECTION I: APPLICANT INFORMATION	
<b>1. Applicant:</b>	<b>2. Applicant Contact:</b>
Name: Great Bear Petroleum Operating LLC.	First Name: Patrick Last Name: Galvin
Mailing Address: 3705 Arctic Blvd, Suite 2324	Title: Chief Commercial Officer & General Counsel
City: Anchorage	Is the Mailing Address the same as Applicant's Mailing Address? If "No", please provide information below: <input checked="" type="checkbox"/> Yes
State: Alaska Zip Code: 99503	Mailing Address: 3705 Arctic Blvd, Suite 2324
Phone: 907-868-8070 Fax: 907-345-5821	City: Anchorage State: Alaska Zip Code: 99503
Email: pat@greatbearpetro.com	Phone: 907-868-8070 Fax: 907-345-5821
Email: pat@greatbearpetro.com	Email: pat@greatbearpetro.com
<b>SECTION II: THIRD PARTY INFORMATION</b> (Fill out this section only if you are applying for the Applicant)	<b>SECTION III: APPLICATION DATE AND NUMBER</b> (FOR OFFICE USE ONLY)
Third Party Company Name: ELKO International LLC	Application Date:
First Name: Erik Last Name: Opstad	
Title: Managing Director	
Mailing Address: P.O. Box 112212	
City: Anchorage	
State: Alaska Zip Code: 99511-2212	
Phone: 907-244-5210 Fax: Enter Fax.	
Email: erik.opstad@gmail.com	
Describe the affiliation to the Applicant: Operating Manager	Application Number:
<b>SECTION IV: PROJECT INFORMATION</b>	
<b>1. Project Name:</b>	GBP Western Block Exploration Program
<b>2. Proposed Start Date:</b>	11/15/2018
<b>3. Project Description:</b>	
Describe what and where:	
Great Bear Petroleum Operating LLC (GBP) is proposing to drill an exploration oil well: WINX #1 in winter 2018/2019. The proposed well is in GBP oil and gas lease ADL 391720 within the GBP Western Lease Block (see Figures in Appendix A). The well location is west of Conoco Phillips Alaska, Inc. (CPAI) Drillsite 2P within the nearby Kuparuk River Unit (KRU) and will be accessed via a 10.7-mile tundra winter ice road ("TWR") starting just north of Drillsite 2P along its gravel	

access road (see Figures in Appendix A). Primary drilling objectives include testing and evaluating the Nanushuk Formation for oil. GBP planned winter operations include construction and maintenance of 11 miles of ice and snow roads (Main TWR along with 0.3 miles of water source access snow roads) and two ice pads, and drilling & then testing WINX #1. All facilities will be temporary, and will be designed and constructed to meet federal, State and North Slope Borough (NSB) regulatory requirements, industry standards and arctic oil field best practices. Based on an evaluation of the results of WINX #1, GBP may elect to conduct further exploration drilling and well testing within the GBP Western Lease Block.

## SECTION V: LAND STATUS

### 1. State Mineral Estate:

Are supplemental pages for land status included in Appendix C? ☒ Yes ☐ No

Affected ADL: 391720 Date Effective: 5/1/2011 Date Assigned: 4/1/2012

Oil And Gas Lessee(s): GREAT BEAR PETROLEUM VENTURES II, LLC

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No

Special Use Lands: ADL 50666 (as defined by 11 AAC 96.014)

Jointly Managed Lands: No

Other Considerations: See Fig. 9A Land Status Summary in Appendix A. See Figs. 3A & 4A for ADL designations and 5A & 6A for MTRSa in Appendix A.

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Winx #1 Surface Hole Location	Umiat, T008N, R005E, Sect. 21	70.0345°/150.8966°
Winx #1 Wellbore	Umiat, T008N, R005E, Sect. 21	N/A (linear)
Winx #1 Drill Pad	Umiat, T008N, R005E, Sect. 21	N/A (linear)

Affected ADL: 391720 (continued) Date Effective: 5/1/2011 Date Assigned: 4/1/2012

Oil And Gas Lessee(s): GREAT BEAR PETROLEUM VENTURES II, LLC

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No

Special Use Lands: ADL 50666

Jointly Managed Lands: No

Other Considerations: See Fig. 9A Land Status Summary in Appendix A. See Figs. 3A & 4A for ADL designations and 5A & 6A for MTRSa in Appendix A.

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
Lake GBP003 Water Source Access Snow Road	Umiat, T008N, R005E, Sect. 21	N/A (linear)
Lake GBP002 Water Source Access Snow Road	Umiat, T008N, R005E, Sect. 21	N/A (linear)
TWR	Umiat, T008N, R005E, Sect. 21	N/A (linear)

Affected ADL: 391721 Date Effective: 5/1/2011 Date Assigned: 4/1/2012

Oil And Gas Lessee(s): GREAT BEAR PETROLEUM VENTURES II, LLC

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No

Special Use Lands: ADL 50666

Jointly Managed Lands: None

Other Considerations: See Fig. 9A Land Status Summary in Appendix A. See Figs. 3A & 4A for ADL designations and 5A & 6A for MTRSa in Appendix A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
TWR	Umiat, T008N, R005E, Sect. 24, 23 & 22	N/A (linear)
Lake GBP001 Water Source Access Snow Road	Umiat T008N, R005E, Sect. 23	N/A (linear)
Lake GBP001 Water Source Access Snow Road	Umiat T008N, R005E, Sect. 23	N/A (linear)

Affected ADL: 393643 Date Effective: 8/1/2018 Date Assigned: 7/31/2018

Oil And Gas Lessee(s): REPSOL E&P USA INC

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No

Special Use Lands: ADL 50666

Jointly Managed Lands: None

Other Considerations: See Fig. 9A in Appendix A for Land Status Summary. See Figs. 3A& 4A for ADLs and 5A & 6A for MTRS in Appendix A.

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
TWR	Umiat, T008N, R006E, Sect. 19 & 20	N/A (linear)
Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.

Affected ADL: 393644 Date Effective: 8/1/2018 Date Assigned: 7/31/2018

Oil And Gas Lessee(s): REPSOL E&P USA INC

Surface Ownership: State of Alaska

Do you have, or anticipate having an Access Agreement: ☒ Yes ☐ No

Special Use Lands: ADL 50666

Jointly Managed Lands: None

Other Considerations: See Fig. 9A in Appendix A for Land Status Summary. See Figs. 3A & 4A for ADLs and Figs. 5A & 6A for MTRS in Appendix A.

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
TWR	Umiat, T008N, R006E, Sect. 20	N/A (linear)
Click here to enter text.	Click here to enter text.	
Click here to enter text.	Click here to enter text.	Click here to enter text.

## 2. State of Alaska Surface Lands:

Are supplemental pages for land status included in Appendix C? ☐ Yes ☒ No

Oil And Gas Mineral Estate Owner: N/A

Access Authorization(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
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Click here to enter text.	Click here to enter text.	Click here to enter text.

Oil And Gas Mineral Estate Owner: N/A

Access Authorization(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
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Click here to enter text.	Click here to enter text.	Click here to enter text.

Oil And Gas Mineral Estate Owner: N/A

Access Authorization(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
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Click here to enter text.	Click here to enter text.	Click here to enter text.

### 3. Private Lands:

Are supplemental pages for land status included in Appendix C? ☐ Yes ☒ No

Oil And Gas Mineral Estate Owner: N/A

Surface Ownership And Access Agreement(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
Click here to enter text.	Click here to enter text.	Click here to enter text.
Click here to enter text.	Click here to enter text.	Click here to enter text.

Oil And Gas Mineral Estate Owner: N/A

Surface Ownership And Access Agreement(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
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Click here to enter text.	Click here to enter text.	Click here to enter text.

Oil And Gas Mineral Estate Owner: N/A

Surface Ownership And Access Agreement(s): N/A

Special Use Lands: N/A

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates
N/A	N/A	N/A
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Click here to enter text.	Click here to enter text.	Click here to enter text.

### SECTION VI: BOND INFORMATION

Bonded Company: Before undertaking operations on or in the leased area, GBP will provide a Statewide Oil and Gas Bond to be held for full payment of all damages sustained by the owner of the surface estate, by reason of entering the land.

Type: Cash Trust Acct for ADLS 391720 & 391719 Number: Will be on file with ADNR-DOG Amount: \$500,000

Bonding Company: TBD

Mailing Address: TBD



City: TBD

State: TBD

Zip Code: TBD

Phone: TBD

Fax: N/A

Email: N/A

**SECTION VII: SEQUENCE AND SCHEDULE OF OPERATIONS**

<b>Project Milestone #</b>	<b>Project Milestone</b>	<b>Proposed Start Date</b>	<b>Proposed End Date</b>
1.	Conduct Field Studies, Project Planning & Design and Project Permitting	7/14/2018	10/1/2018
2.	Inspect/locate and survey TWR alignment and ice pads, sound potential water sources, and install thermistors	8/13/2018	9/1/2018
3.	Pre-pack all TWR alignments and pad locations	11/15/2018	1/1/2019
4.	Construct Main TWR and ice pads; construct ice airstrip on Lake GBP001 (optional)	1/1/2019	1/30/2019
5.	Mobilize drill rig, camp and support operations	1/30/2019	2/15/2019
6.	Drill & test WINX #1 (demob of rig may begin during testing)	2/14/2019	4/20/2019
7.	Demobilize drill rig, test equipment, camp and support operations (demob of drill rig may begin during testing)	3/1/2019	4/27/2019
8.	Cleanup, remediate & rehabilitate TWR alignments & ice pad locations	7/14/2019	9/1/2019
9.	Enter Milestone.	Enter Date.	Enter Date.
10.	Enter Milestone.	Enter Date.	Enter Date.

**SECTION VIII: PROJECTED USE REQUIREMENTS****1. Describe the proposed operations, including the location and design, of Well Sites:**

GBP proposes to drill the WINX #1 conventional exploration well in aliquot Umiat 08N/05E, Section 21 with a surface hole location at 70.034688°/150.896774° (NAD83). The well be drilled from an ice pad that will be 700 feet by 250 feet in plan with a footprint covering about 4.3 acres. WINX #1 will be drilled to about 12,000 feet true vertical depth (TVD) to test stacked conventional objectives within the Nanushuk Formation. GBP will use the Nordic #3 (or similar mobile land drilling rig). The well will be designed and permitted in accordance with an application for a Permit to Drill (PTD) from the Alaska Oil and Gas Conservation Commission (AOGCC). The well may be tested and hydraulically stimulated/flow tested, and may include laterals, sidetracks, or additional penetrations from the same exploration wellbore as allowed as per Sundry Approvals by AOGCC. Operations also may include wireline logging and related seismic surveys, such as vertical seismic profiles (VSPs). The well will either be plugged and abandoned (P&A) or suspended pursuant to AOGCC regulations prior to demobilization.

**2. Describe the proposed operations, including the location and design, of Buildings:**

General well site and pad layout is shown in Figure 7 in Appendix A. An ice staging pad constructed at the the start of the TWR (Figures 3B, 4B, 5B and 6B) will contain a 30-bed camp, laydown areas and equipment maintenance shops. Temporary facilities used to support the Exploration Program at the WINX #1 drillsite will include a satellite office, storage and laydown areas, communication tower, storage connexes, rig maintenance shop, oil service modules (such as mud logger mod), and a 60-bed camp. The camp will include additional offices, restroom, foodservice and recreation areas.

**3. Describe the proposed operations, including the location and design, of Fuel and Hazardous Substances:**

State and federal regulations require that a number of contingency plans be in place for drilling operations. Specific details of the facilities, spill risks, potential impacts, and mitigation measures are provided in these various plans. Ultra-low sulfur diesel (USLD) fuel will be trucked to the drill pad by commercial carrier for drilling, completion and well testing operations. GBP anticipates that approximately 16,800 gallons of fuel will be stored in skid-mounted, double-walled aboveground storage tanks (ASTs) staged within secondary containment areas (SCAs) providing 110% of an AST volume plus seasonal precipitation containment. No individual fuel storage tank within the SCA will exceed 9,990 gallons. An onsite tanker truck will fuel ancillary equipment such as heaters, light plants, and heavy equipment. Fuel and hazardous substance storage will comply with State and federal oil pollution prevention and contingency requirements found in 18 AAC 75, 40 CFR 112 and NSBMC § 19.50 and § 19.70. ASTs used to store flammable and combustible liquids are regulated by the EPA and will comply with the International Fire Code (IFC) and 13 AAC 50.025. Additionally, fuel storage, handling, transfers, and spill reporting will be conducted in accordance with GBP's Oil Discharge Prevention and Contingency Plan (ODPCP) which was approved by the ADEC as Plan No. 16-CP-5191, North Slope Environmental Field Handbook (NSEFH), and the Alaska Safety Handbook (ASH). All bulk hazardous fluid and fuel transfers will be conducted in accordance with the fluid transfer guidelines described in the NSEFH and GBP's Fluid Transfer Checklist. A variety of commonly used water-based mud (WBM) drilling fluids & additives will be used to provide and maintain the correct drilling mud formulation for the conditions being drilled; these will be stored in skid-mounted ASTs within SCAs. Other drill fluid chemicals, required for testing and well stimulation, also may be brought in. The various additives are provided in 5-gallon pails, 55-gallon drums or a variety of different sized (250-400 gal) isocontainers that are regulated by the USDOT and/or EPA and will be stored within SCA. Finally, crude oil testing tanks would be installed at the well site (typically 400-barrel capacity) for flow testing of the well. All storage tanks, containers and SCAs will be

inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented. All unused products will be returned to the supplier. **All used fluids will be disposed of in accordance with GBP's Waste Management Plan and other applicable guidance documents and contract/ballot agreements.** During fuel and fluid transfer operations, equipment storage or maintenance activities, the site will be protected from leaking or dripping fuel and hazardous substances by using drip pans or other surface liners designed to catch and hold fluids under the equipment or by creating a specialized, secondary containment areas (SCAs) using an impermeable liner or other suitable containment mechanism. Appropriate spill response equipment, as required in ODPCEP 16-CP-5191, will be staged on location & managed/maintained by an on-site spill technician contracted through ACS. Trained spill technicians & fuel contractor personnel (oil handlers), operating under the GBP Fluid Transfer Procedures, will attend all fuel & fluid transfer operations at all times. A copy of ODPCEP 16-CP-5191 will be kept on site at all times for guidance in controlling and cleaning up any accidental discharges of fuels, lubricants, or produced fluids. The plan will include immediate response actions, reporting requirements, communication trees, receiving environments, spill cleanup mobilization response times, well control information and spill prevention guidance. **GBP also has developed and will maintain an approved well control plan for its drilling program that includes primary and secondary blowout prevention systems, a well capping program, and a relief well plan designed for successful operations in winter arctic conditions.** Additionally, the Nordic #3 drill rig, commercial fuel suppliers and well testing contractors will have current Spill Prevention Control and Countermeasure (SPCC) Plans specific to their operations on-site. Contractor crews will be trained in the appropriate response & prevention strategies outlined in these plans.

#### 4. Describe the proposed operations, including the location and design, of **Solid Waste Sites**:

WASTE MANAGEMENT AND DISPOSAL: All waste management activities will be conducted in general accordance with the GBP Western Block Exploration Program Waste Management Plan (WMP) and in conformance with GBP HSE Management Policies. Management and treatment of waste described in the WMP will be approved by the ADEC prior to operations. Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures and workplace "best" safety, environmental and waste management practices for GBP operations. RCRA-EXEMPT WASTES: Four waste streams exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7 will be generated during operations. These include: 1) E&P fluids and solids from drilling and testing operations; 2) residue and rinsate found in "RCRA empty" containers; 3) household hazardous wastes; and, 4) domestic wastewater from camps and envirovacs. Up to 18,000 barrels (bbls) of drilling wastes (both solids and fluids) and another 5,000 bbls of test fluids will be generated during drilling, and then temporarily stored onsite in skid-mounted tanks, vacuum trucks, super sucker trucks, and/or lined temporary drill waste storage cells, before being hauled offsite for disposal by injection in either offsite Class I or Class II UIC disposal wells under contractual agreement. Non-oily E&P solid drill cuttings may also be hauled the NSB SA 10 landfill (Class II MSWLF) for beneficial reuse as sanitary cover if landfill acceptance criteria are met. All RCRA exempt wastes will be managed and tracked by using North Slope Manifest procedures. Residue and tank rinsate found in RCRA-empty tanks and vessels will be manifested, hauled and disposed by injection in offsite Class I or II disposal injection wells as they are generated at tank wash bays after drilling and testing operations. RCRA-exempt household hazardous wastes generated from camp operations will be combined with domestic wastewater and temporarily stored in the camp sewage tank modules before being hauled to the NSB-SA-10 wastewater treatment plant for disposal. The camp is expected to generate less than 2,000 gallons per day of domestic wastewater and less than 1 gallon per day of household hazardous wastes. NON-HAZARDOUS SOLID WASTE: Non-hazardous solid waste will be stored on site in Municipal Solid Waste (MSW) and Construction & Demolition (C&D) dumpsters that will be hauled to and disposed in the NSB SA10 landfill. MSW and C&D dumpsters will be managed to avoid potential wildlife interactions by covering. Metal will be collected and sent offsite for recycling. Oily waste will be managed & stored on-site until transport to an approved disposal facility. Used oil will be packaged in drums for transport & be recycled or disposed at an approved facility. HAZARDOUS and UNIVERSAL WASTES: RCRA-hazardous wastes expected to be generated during construction, drilling and production operations include very small quantities of Characteristic Hazardous and Universal Wastes (as defined by 40 CFR 261.3). These will be managed on-site in Satellite Accumulation Areas (SAAs), manifested and then transported to approved disposal or recycling facilities at the completion of the field operations.

#### 5. Describe the proposed operations, including the location and design, of **Water Supplies**:

During operations, up to 5,000 gallons per day (gpd) potable water will be required for domestic use at the construction and rig camps. Potable water will be transported to the camps by commercial water truck. Other fresh water uses during operations will total about 24 million gallons for which GBP has applied for temporary water use authorizations (TWUAs) from ADN/DML&W for withdrawal of ice chips and water from up to five area lakes (see Figures in Appendix A) as water sources for operations. These sources include the Lakes M9006, GBP001, GBP002, GBP003 & GBP004. Lake M9006 also may be used by other operators as allowed under existing TWUAs. GBP will coordinate water/ice withdrawals with all other operators that may be withdrawing water/ice from these same sources to ensure that the maximum permissible water/ice withdrawal volume is not exceeded. Snow will be removed from portions of the lakes prior to water withdrawal to help provide access for water trucks and ice trimmers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADN/DML&W. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

#### 6. Describe the proposed operations, including the location and design, of **Utilities**:

##### **NOT APPLICABLE**

Electrical, natural gas, sewer and water utilities will not be designed or located on the ice pads. Rig operations will be self contained and powered by generators. Smaller dual generator sets will provide power to camps, offices, and other facilities. Satellite phone service and internet will be available at each field camp. Operational radio communications will utilize fixed base stations and truck-mounted radio equipment, with small communication towers placed at each pad. Potable water will be hauled to the site and domestic wastewater hauled from the site (see Subsections VIII-4 and VIII-5). Emissions sources for the construction, drilling, and operations will be similar to equipment and sources at other exploration drilling projects on the North Slope. Therefore, air emissions sources from the Project related to construction, drilling and operations will be authorized under an ADEC Oil or Gas Drilling Rigs Minor General Permit MGP1.

7. Describe the proposed operations, including the location and design, of **Material Sites**:

**NOT APPLICABLE**

All operation activities on existing gravel lease roads, TWR and pads.

8. Describe the proposed operations, including the location and design, of **Roads**:

Approximately 10.7 miles of ice road will be constructed using water and ice chips from nearby lakes and flooded minesites. The main ice road will be approximately 50 feet wide and at least 1-foot thick. Ice crossings of fish-bearing streams will be constructed in accordance with Fish Habitat Permits from ADF&G. Existing gravel roads will be used whenever possible. The TWR will be constructed by using conventional ice road building techniques. In turn, the nine water sources used to construct and maintain the TWR will be accessed by snow roads at least 1-foot thick and coated with ice. The proposed TWR alignment and ice pad locations shown in Figures in Appendix A reflect the results of planning by GBP that was verified by fieldwork in mid-August 2019 where a field team mapped routes and locations to avoid higher, drier tundra covered by shrubs, forbs and tussock vegetation. The field team also avoided placing alignment close to south-southwest facing bluffs (prime bear denning habitat) and through willows (an important source of food for wildlife). The TWR will be built to accommodate drill rig moves, and the drill pad built large enough to safely carry out drilling, testing and support operations. The TWR and ice pads will be constructed and maintained using the generally accepted practices for the North Slope, subject to ADNRL/DML&W NRO opening criteria for winter tundra travel in the Western Coastal Plain Opening Area. Pre-packing of the trail will be requested prior to the official tundra opening to drive frost down and preserve early snow. Snow fences also may be erected at the start of the TWR in order to collect snow for TWR construction. Additionally, TWR crossings at established subsistence and winter trails will be constructed to provide a smooth transition to ensure trail users have safe passage. Upon completion of use, TWR stream crossings will be slotted, breached, or weakened to facilitate breakup and minimize potential impacts to stream banks. Any snow or ice used as fill for ramps will be removed from banks in a manner that does not disturb the natural stream bank.

9. Describe the proposed operations, including the location and design, of **Airstrips**:

GBP may opt to build an ice airstrip to support drilling operations and to facilitate transportation of materials as well as reduce the amount of travel required for crew changes. Proposed locations include Lakes M9006 & GBP001 (see Figures in Appendix A) found within Umiat 08N/05E, Section 9, 10, 15, & 16 and Sections 12, 13 & 14, respectively. The ice airstrip will be approximately 200 feet wide by up to 5,000 feet long and will be planned/permitted/constructed with appropriate lighting and control systems, to accommodate up to 30- passenger aircraft.

10. Describe the proposed operations, including the location and design, of **All Other Facilities and Equipment**:

**HEAVY EQUIPMENT.** A list of typical equipment used to support drilling activities is provided in Appendix C. Equipment types will be the same that is used for North Slope oil and gas operations and will be obtained from North Slope contractors. **MEDICAL EVACUATION** (per GBP Medical Evacuation Plan) Resources will be mobilized from Prudhoe Bay Unit (PBU) or KRU in the event of a major medical issue or fire to provide additional emergency response, per an existing Ballot Agreement. Medical evacuation, if necessary, will be provided by ambulance, helicopter, or fixed-wing aircraft, directly from the TWR or ice pads to the Beacon Clinic at the BPXA Main Construction Camp in PBU for patient stabilization and/or transfer to a Medevac jet to an Anchorage hospital facility. If the weather precludes fixed/rotary medevac operations from the TWRs, the patient will be transported via ambulance for evacuation.

11. If another permit(s) is required for the above described Projected Use Requirements, provide the following information:

Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
ADNR/DOG	Lease Plan of Operations	TBD	Submitted	1 to 10
AOGCC	Permit to Drill	TBD	Draft	1
AOGCC	Sundry Approvals	TBD	TBD	1, 4
AOGCC	Blowout Contingency Plan	Review	Complete	1, 4
ADNR/DML&W	Land Use Permit – Ice Roads and Pads	LAS 29344	Approved	1, 2, 8, 9
ADNR/DML&W	Temporary Water Use Authorizations	TBD	Submitted	5
ADNR/OHA	State Historic Preservation Office (SHPO) Section 106 Review and Consultation	No Historic Properties Affected Stamp	Submitted	8
ADEC/DW-APDES	APDES General Permit for North Slope (NS GP AKG332000) NOI, SWPPP & BMP	AKG332026	Draft	1, 5, 8

ADEC/AQ	MGP1 Air Quality Permit for Land Drill Rigs	TBD	Submittal awaiting drill rig contract	1
ADEC/SPAR	Minor Amendment (Rev. 1) to ODPCP 16-CP-5191	16-CP-5191 Rev. 1	Public Review complete; awaiting approval letter	3
ADEC/EH	AEA SW Management Plan	Treatment Approval Letter	Draft	4
ADEC/EH	Temporary Storage of Drilling Wastes Plan	Storage Approval Letter	Draft	4
NSB/Planning	NSB Traditional Land Use Inventory (TLUI) Certificate of Clearance	TBD	Forms 600 and 500 complete and prepared for submittal	1, 8
NSB/Planning	NSB Development Permit	TBD	Awaiting TLUI for Pre-App and then Draft	All
ADF&G/DH	Title 16 Fish Habitat Permits for 1) Lakes and 2) TWR River Crossings	TBD	Preparing application package	5, 8
ADF&G/PS	Public Safety Permit	17-022	Updated draft	1, 4, 5, 8 & 9
USACOE/AK	CWA Section 404 - Confirm no wetlands impacted and CWA Section 404 not applicable	Consultation (telephonic)	Planned	5, 8
USEPA	SPCC Plans for Nordic #3	None	Updated and approved	3
USFWS	Polar Bear Letter of Authorization for Incidental/Intentional Take	Consultation (telephonic) to confirm WINX #1 is not within Beaufort Sea Incidental Take Regulations (ITRs) Action Area	Planned	8
ADNR/DML&W	Letters of Non Objection (LNOs) and road use agreements with Repsol, Brooks Range, Armstrong & CPAI.	TBD	LNO and road use agreement signed by CPAI. Others are draft.	8

## SECTION IX: REHABILITATION PLAN

### 1. Proposed Level of Infrastructure, Facilities and Equipment Removal:

The proposed operations are temporary and exploratory in nature and conducted from ice pads and ice roads that will melt during spring break up. In accordance with federal, State, and local agencies, spills will be cleaned up immediately when found and reported as required. Upon completion of drilling and evaluation operations, the well will either be plugged and abandoned (P&A) or suspended in accordance with AOGCC regulations. Equipment and structures will be removed from the Project area at the end of the season. Ice pads and roads will be scraped to remove dark-colored drips missed by the Alaska Clean Seas (ACS) spill technician and the resulting snow will be thawed with resulting oily water disposed of at a permitted disposal facility. Trash and debris will be removed and transported for disposal at a permitted disposal facility. **GBP will conduct an inspection and "stick picking" operation via helicopter in Summer 2019 to ensure that NSB and State cleanup requirements have been met.**

### 2. Description of Restoration and Rehabilitation Activities for Vegetation, Habitat, Impacted Wildlife, and Other Applicable Resources:

Although activities will be conducted from TWR and ice pads, impacts to vegetation and habitat may occur. Therefore, GBP will inspect the Project area following snowmelt in 2019 **during "stickpicking" to confirm that tundra damage did not occur.** If tundra damage is discovered, GBP will consult with the State and the NSB to determine the appropriate methods for restoration, and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, GBP ADL 391720 and 391721 lease conditions, and specific State requirements. The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide (developed by the State of Alaska Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. Agency personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

## SECTION X: OPERATING PROCEDURES DESIGNED TO MINIMIZE ADVERSE EFFECTS

Describe operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the Lease area and adjacent areas including:

**Fish and Wildlife Habitats:** Pad and roads constructed of ice will only be used in winter months during the open winter tundra travel season. Streams will crossed in shallow waters that normally freeze to bottom or will be bridged using temporary bridges founded on ice ramps and abutments. Willow and possible bear denning habitats were identified/located during fieldwork in August 2018 and the TWR alignment was staked to avoid them during TWR and ice pad construction. In summary, all GBP activities will be conducted to minimize impacts on fish and wildlife. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State of Alaska and NSB land management regulations and permit requirements. A wildlife avoidance & interaction plan for

small fur bearing mammals and birds, and a bear avoidance interaction plan (for both grizzly and polar bear) have been prepared and will be included in the site orientation for all Project personnel.

**Historic and Archeological Sites:** As part of a completed Section 106 review and consultation, GBP reviewed three recent field survey reports to identify **reported prehistoric, historic, and archeological sites ("resources") on and around the proposed ice pads and TWR alignment**. Next, TLUI data was obtained by from the NSB Inupiat Heritage and Language Center (NSB IHLC) and reviewed, along with data from Alaska Heritage Resource Survey and National Register of Historic Places. The TWR alignment and drilling pad location were then selected to avoid known cultural resource sites. This data and a field report will be submitted for review by the NSB Planning and Land Management Department, Cultural Resources Office and the **ADNR/OHA State Historic Preservation Office ("SHPO")**. **The data and field report both indicate there are no archaeological, historic or culutural resources within 0.4 miles of the TWR alignment or staging and drill ice pad locations.** Additionally, GBP has created a series of **500-foot buffers ("environmentally sensitive zones") around the TWR and pads to which traffic and all operations will be restricted**. Combined with drilling operations limited to winter when the ground is frozen and covered snow, these buffers will help provide adequate protection for the historic and **archaeological resources**. **Finally, it is GBP's intention that historic, cultural or archaeological resources (or suspected resources) that are discovered during Project activities are not to be disturbed under any circumstance.** This will include providing training to all field personnel on what to do as part of required Project orientation. If archaeological sites are discovered during Project activities, the following steps will be taken: 1) Project personnel discovering historical or archaeological (or suspected) resources during operations will not disturb materials in place at the site of discovery and mark the area with flagging tape; 2) Project personnel will stop all activities and then inform their job supervisor so as to contact **GBP's onsite representative**; 3) GBP will then report these properties to SHPO and NSB ILHC for identification and assessment, and 4) GBP will use identification and assessment consultations to guide further planned activities in the site area.

**Public Use Areas:** The proposed operations occur within the Nuiqsut Subsistence Use area (reference Figure 9 in Appendix A). GBP will conduct operations to minimize any adverse effects on subsistence uses and avoid conflicts with private, commercial & industrial users. Additionally, if potential subsistence issues are identified, subsistence organizations will be contacted and updated during drilling and testing operations to minimize impacts. The permitting actions associated with the exploration wells will be public noticed as part of the permitting processes. If there are concerns with regards to the Project, GBP will be receptive and pro-active. Although public access to the GBP TWR must be restricted due to safety concerns, GBP will provide shelter and assistance in emergency situations to subsistence users.

**Other Uses:** **PERMITS and LEASES:** ADL Oil & Gas leases in the Project area are shown in Figures 2, 3, 3A-B and, 4A-B D in Appendix A. Other ADL leases and permits are shown by Meridian, Township, Range, Section (MTRS) designation in Figures 10A-10D. GBP will contact all leasees and permittees before entering their surface lands and gain approval through LNOs (see Section VII Project Use Requirements, Subsection 11 for a complete list of other ADL leases and permits).

**SIMOPS:** The only other use in the general area will be possible activities by other oil & gas companies or geophysical companies...**When identified**, GBP will contact those companies to discuss and avoid simops problems.

**TRAINING PROGRAMS:** GBP's training program has been designed to inform each individual of the environmental, social, and cultural concerns that relate to their job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc. All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction, and Mitigation Plan. In addition, GBP employees and contractors are required to complete an 8-hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook, and a North Slope Visitor's Guide are used for the training. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness. Additioally, Finally, GBP also requires that all company personnel and contractors attend rig and location safety meetings (pre-tour, SIMOPS, and weekly), as well as participate in the best safety practice programs ("**RAJSEA, PTW, STOP,**" etc) and take on-site training orientation. Topics discussed in safety meetings will include various emergency action drills (scheduled and unscheduled) familiarizing workers with the wildlife interaction plans, warnings and hazing methods, and reporting requirements: reviewing spill/incident reporting requirements and spill prevention measures, reviewing fluid transfer procedures, and general hazard identification regarding the various chemicals used in drilling operations and other activities; reviewing cold weather operations and personal protection.

**INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS.** As part of the permitting process, GBP has published public notices detailing planned winter drilling program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RAI) from individuals and non-government organizations interested in the Project.

## SECTION XI: GLOSSARY OF TERMS

Term #	Term	Term Definition
1.	AAC	Alaska Administrative Code
2.	ACS	Alaska Clean Seas
3.	ADEC/AQ	Alaska Department of Environmental Conservation / ADEC Division of Air Quality
4.	ADEC/DW	ADEC Division of Water
5.	ADEC/EH	ADEC Division of Environmental Health
6.	ADEC/SPAR	ADEC Division of Spill Prevention and Response

7.	ADF&G	Alaska Department of Fish and Game
8.	ADF&G/DH	Alaska Department of Fish and Game/Division of Fish Habitat
9.	ADF&G/PS	ADF&G Division of Public Safety
10.	ADL	Alaska Division of Land (lease)

#### SECTION XII: CONFIDENTIALITY

The undersigned hereby requests that each page/section of this application marked confidential be held confidential under AS 38.05.035(a)(8).

APPLICANT CONTACT:

Signature	Name	Title	Date
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## MAP SUMMARY

Figure 1: Project Overview

Figure 2: Project Vicinity

Figure 3: Proposed TWR Index Map – Aerial by Alaska Division of Land (ADL) O&G Lease Blocks

Figures 3A to 3B – Proposed TWR with Water Sources and Stream Crossings - Aerial Topo

Figure 4: Proposed TWR Index Map – Topo by ADL

Figures 4A to 4B – Proposed TWR with Water Sources and Stream Crossings - Topo ADL

Figure 5: Proposed TWR Index Map – Aerial by Meridian, Township, Range and Section (MTRS)

Figures 5A to 5B – Proposed TWR with Water Sources and Stream Crossings - Aerial MTRS

Figure 6: Proposed TWR Index Map – Topo by MTRS

Figures 6A to 6B – Proposed TWR with Water Sources and Stream Crossings - Topo ADLs

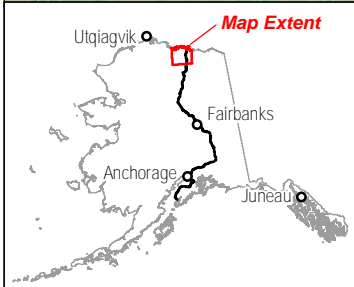
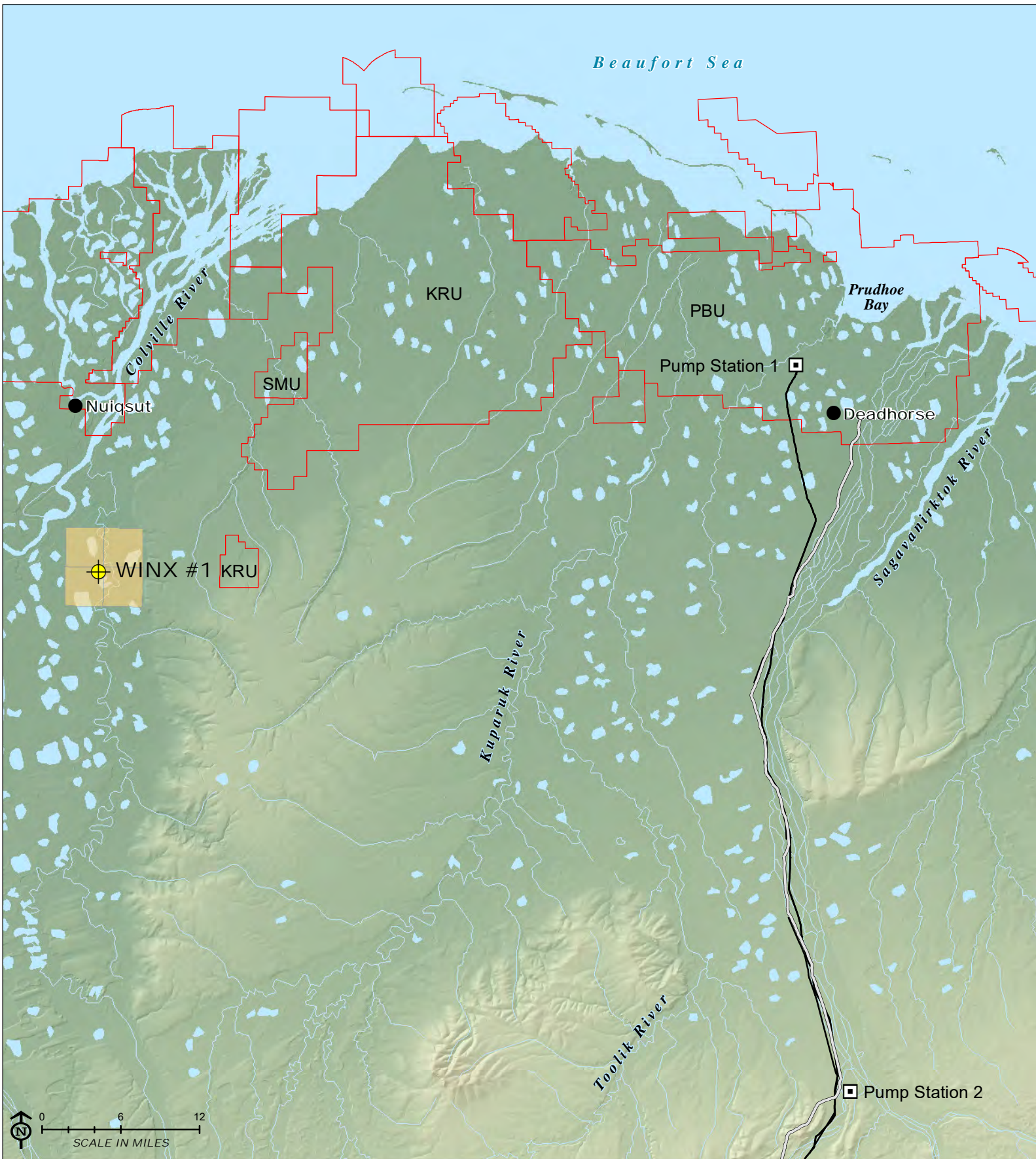
Figure 7: Proposed Site Layout During Drilling

Figure 8: Subsistence Use Areas

Figure 9: Proposed TWR Index Map – Land Estate Summary

Figures 9A to 9B - Land Estate Information Summary by MTRS along Proposed TWR Alignments





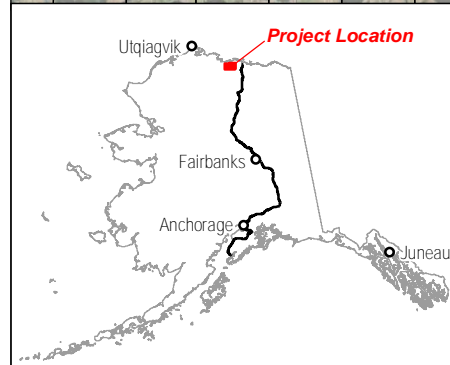
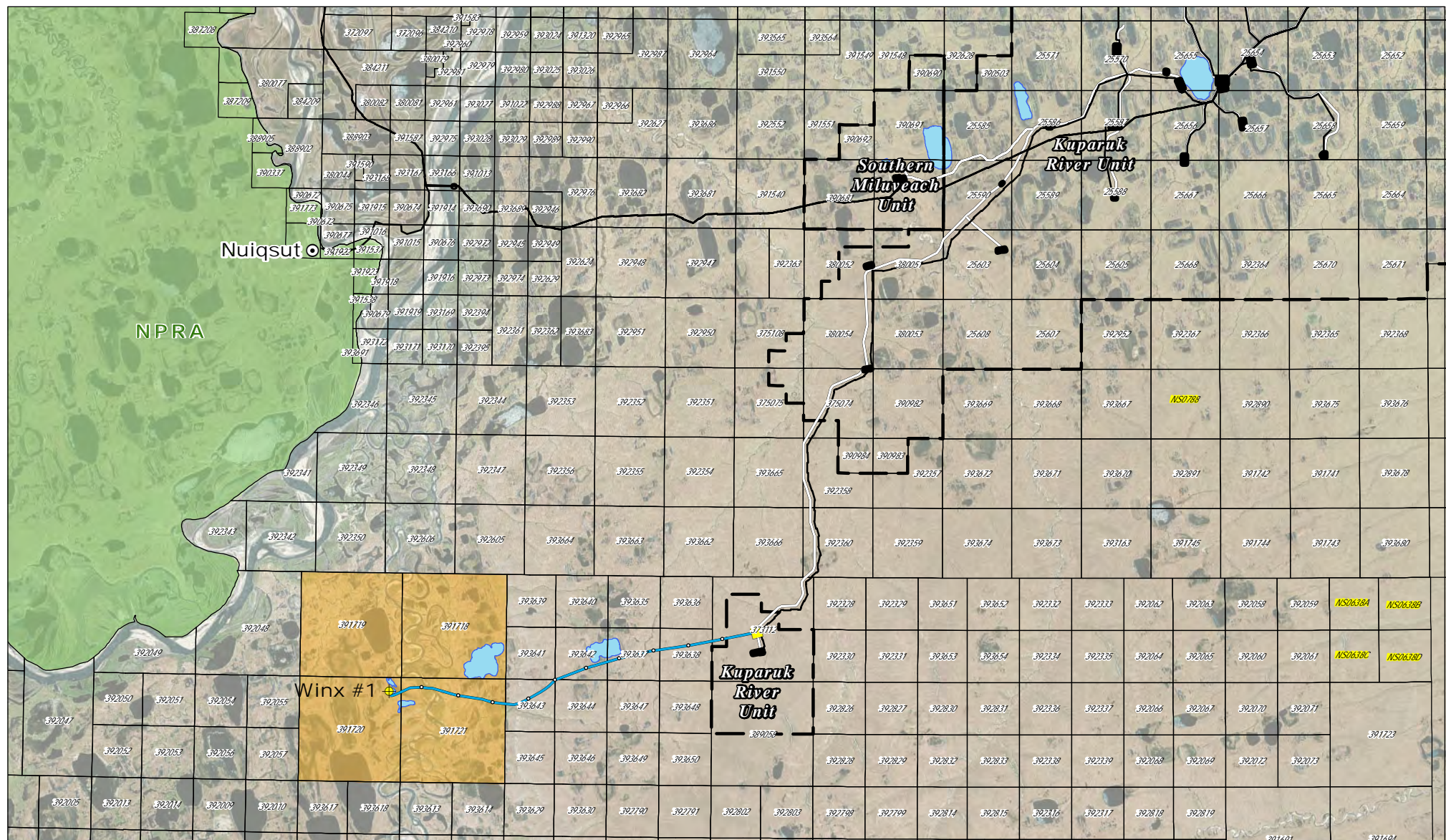
## LEGEND

- |                            |                              |
|----------------------------|------------------------------|
| WINX #1                    | Dalton Highway               |
| Villages and Service Areas | Trans-Alaska Pipeline System |
| TAPS Pump Stations         | Oil & Gas Unit Boundary      |
|                            | GBP Project Leases           |



**GREAT BEAR PETROLEUM  
EXPLORATION PROGRAM - WINX #1  
Project Vicinity Map  
Figure 1**





## LEGEND

• Mile Post	Proposed TWR	ADL Lease
Staging Pad	Pipeline	Lease Sale Tract
Proposed Well Pad	Existing Road	GBP Project Leases
Production Unit Boundary	Proposed Water Source	NPRA
Existing Drill Pad		

0 3 6  
SCALE IN MILES

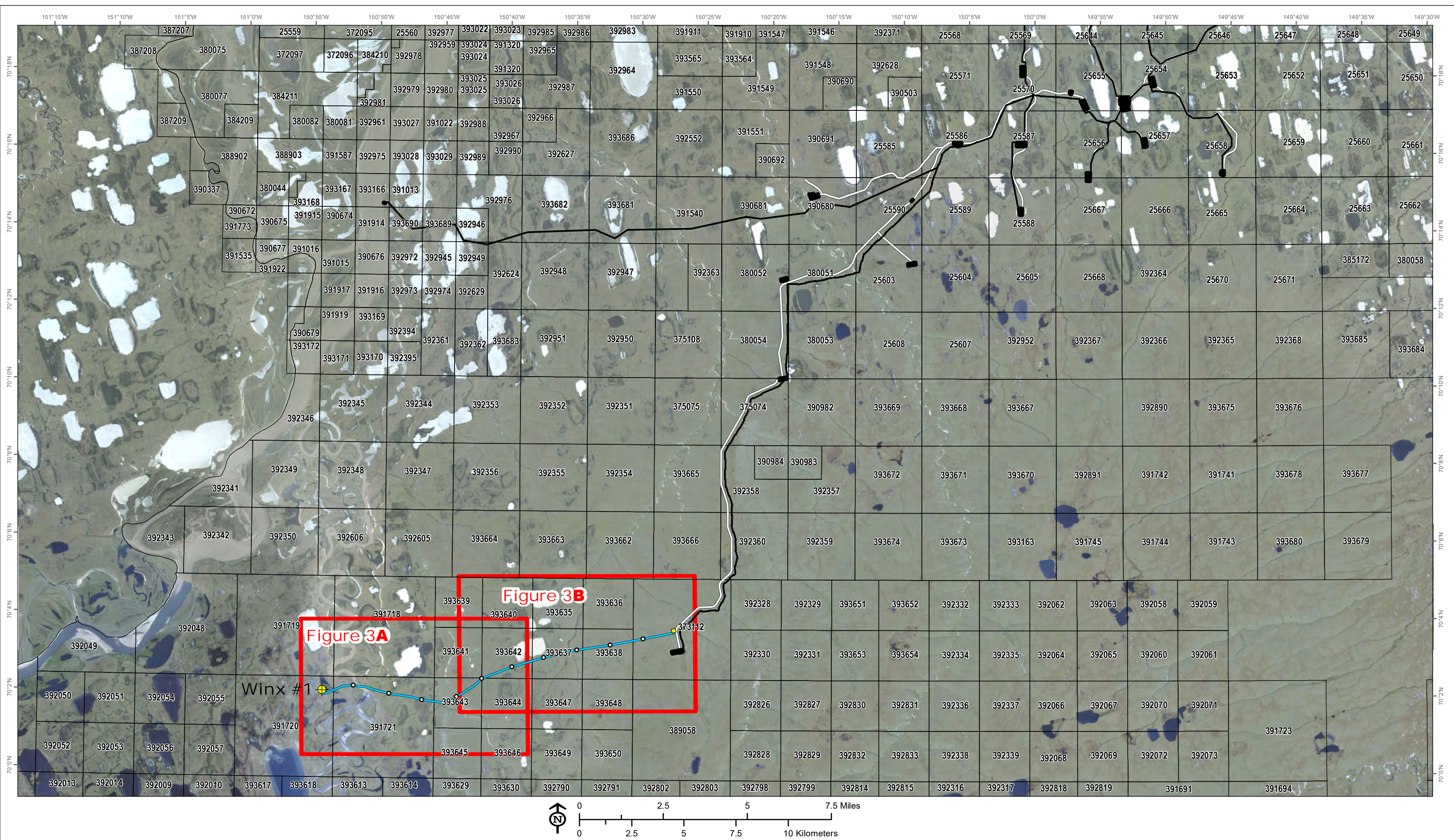
**GREAT BEAR PETROLEUM**



**GREAT BEAR PETROLEUM  
EXPLORATION PROGRAM - WINX #1**









**Project Overview Map**

**Figure 2**





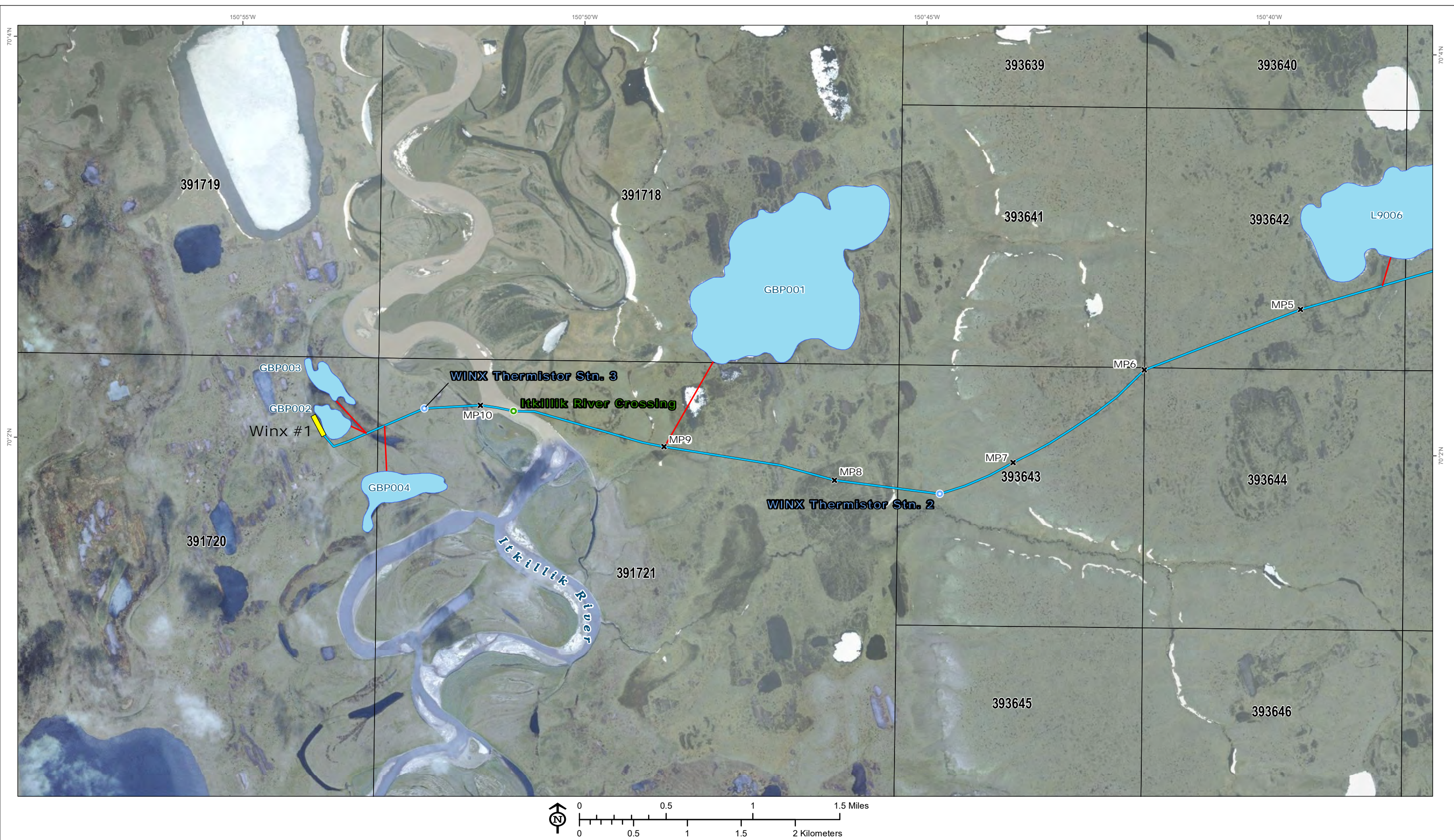


-  Mile Post
-  WINX #1
-  TWR Staging Pad
-  Proposed TWR
-  Pipeline
-  Existing Road
-  Existing Drill Site
-  ADL Lease

**Figure 3**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**

**Proposed TWR Index Map - Aerial ADLs**





**389058** ADL Lease

Proposed Water Source

Water Source Snow Access Road

Proposed Stream Crossing

Thermistors

WINX #1

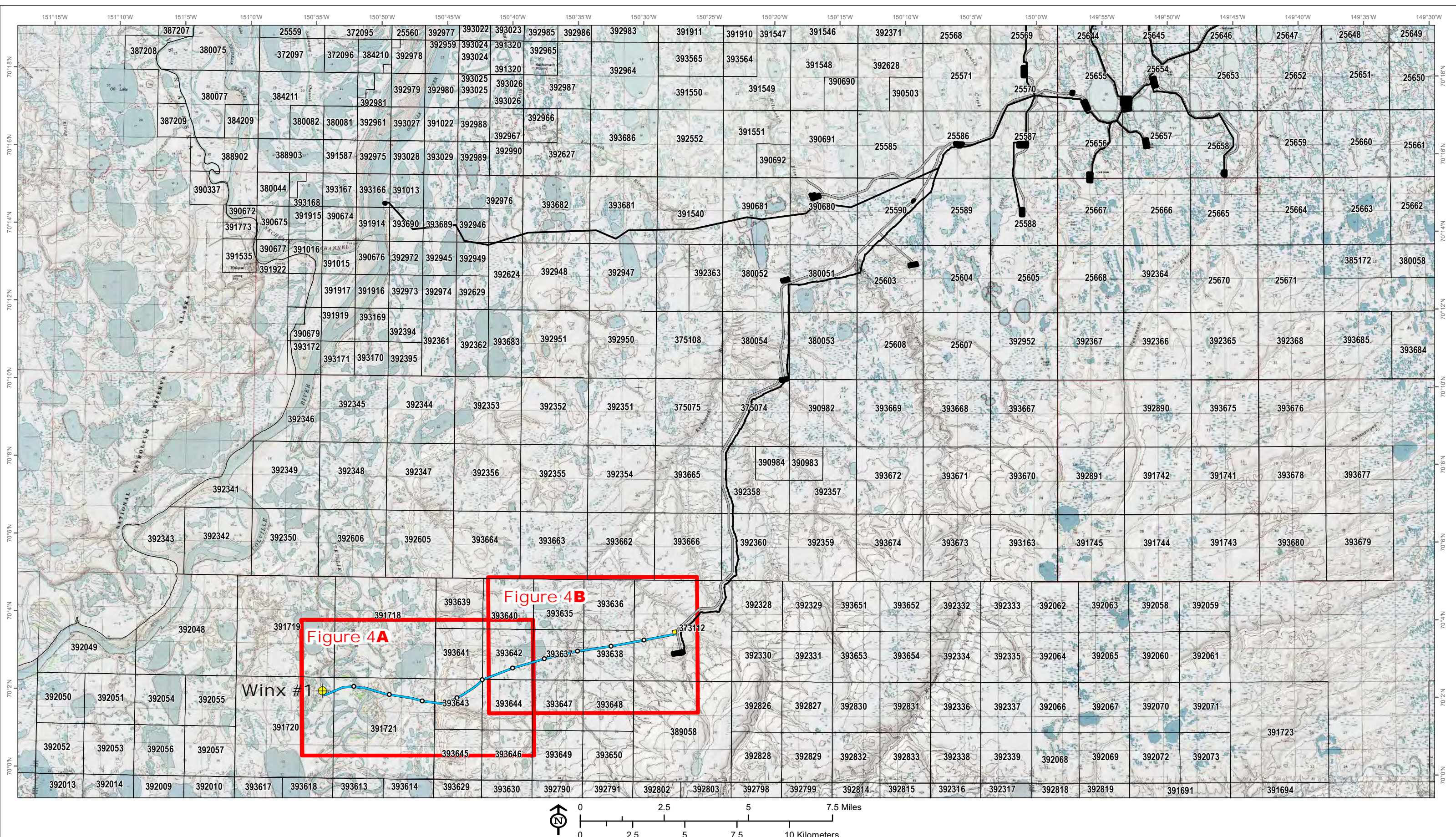
Proposed TWR



**Figure 3A**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Proposed TWR with Water Sources  
and Stream Crossings - Aerial ADLs









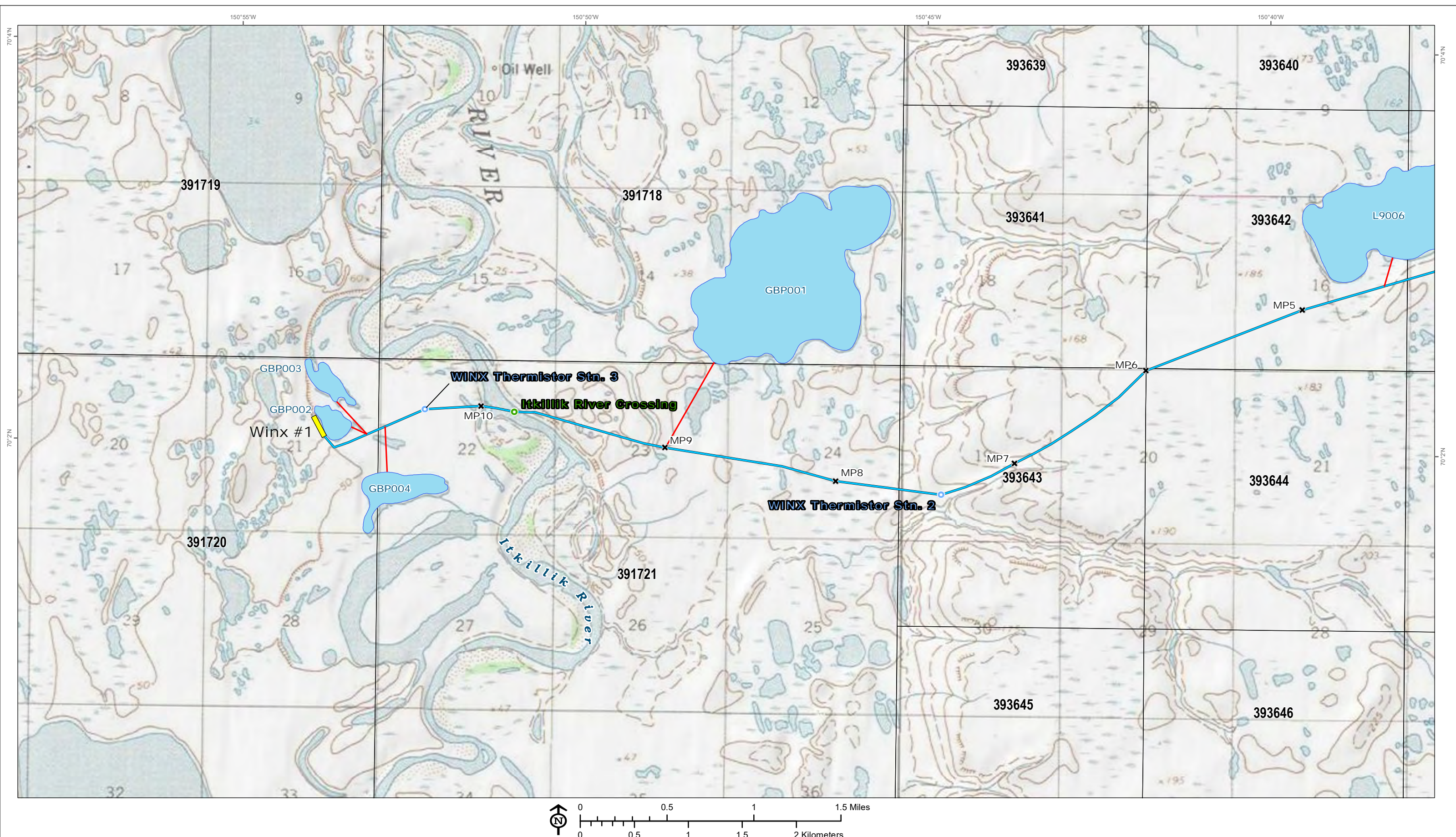



**Map Extent**

- Mile Post
- WINX #1
- TWR Staging Pad
- Proposed TWR
- Pipeline
- Existing Road
- Existing Drill Site
- ADL Lease


**Figure 4**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
**Proposed TWR Index Map - Topographic ADLs**







**Great Bear**  
PETROLEUM



Utqiagvik  
Wainwright  
Atkasuk  
Nuiqsut  
Prudhoe Bay  
Deadhorse  
Kaktovik  
Umiat

**389058** ADL Lease

Proposed Water Source

Water Source Snow Access Road

Proposed Stream Crossing

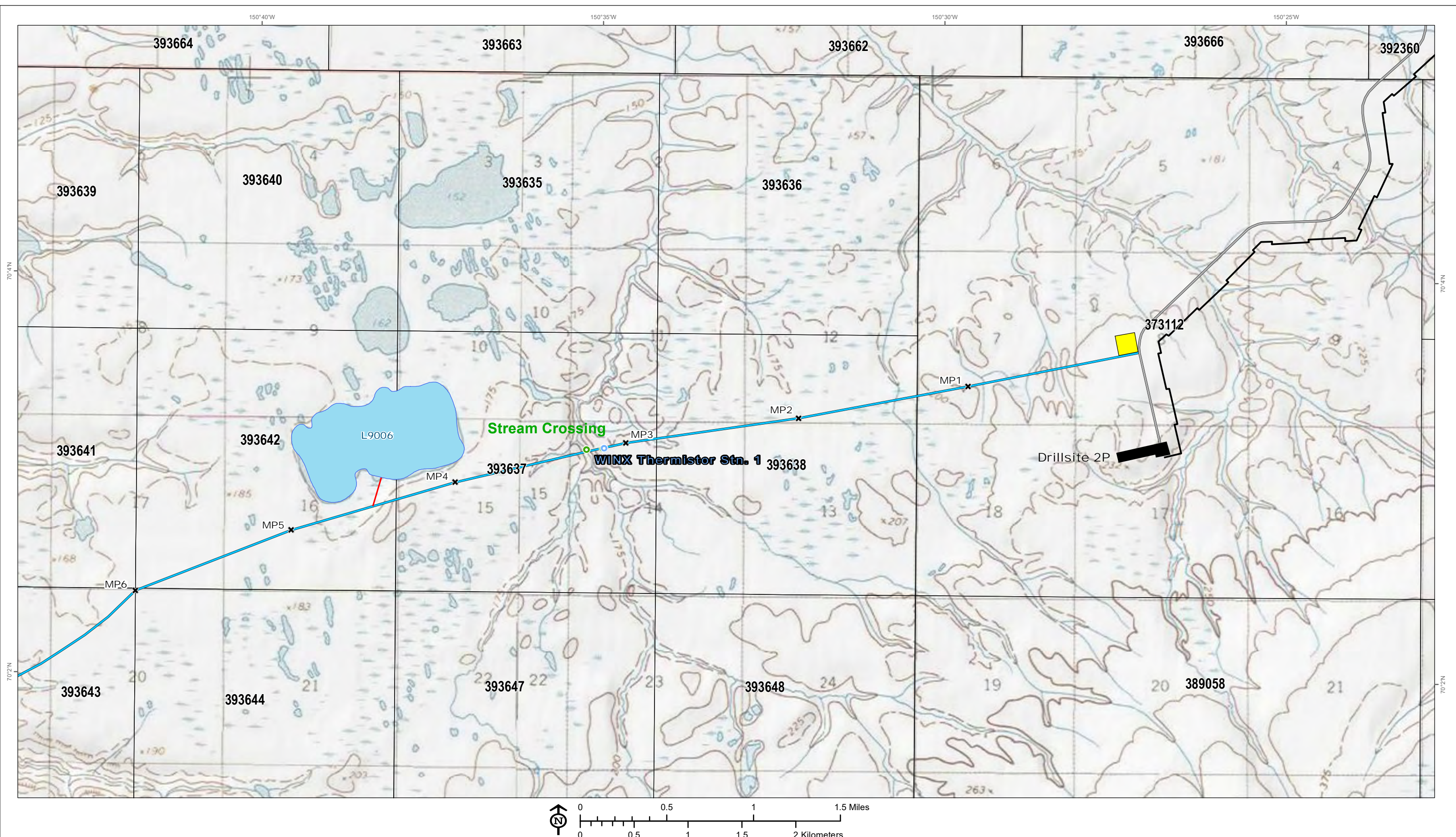
Thermistors



WINX #1











Proposed TWR

**Figure 4A**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Proposed TWR with Water Sources  
and Stream Crossings - Topographic ADLs



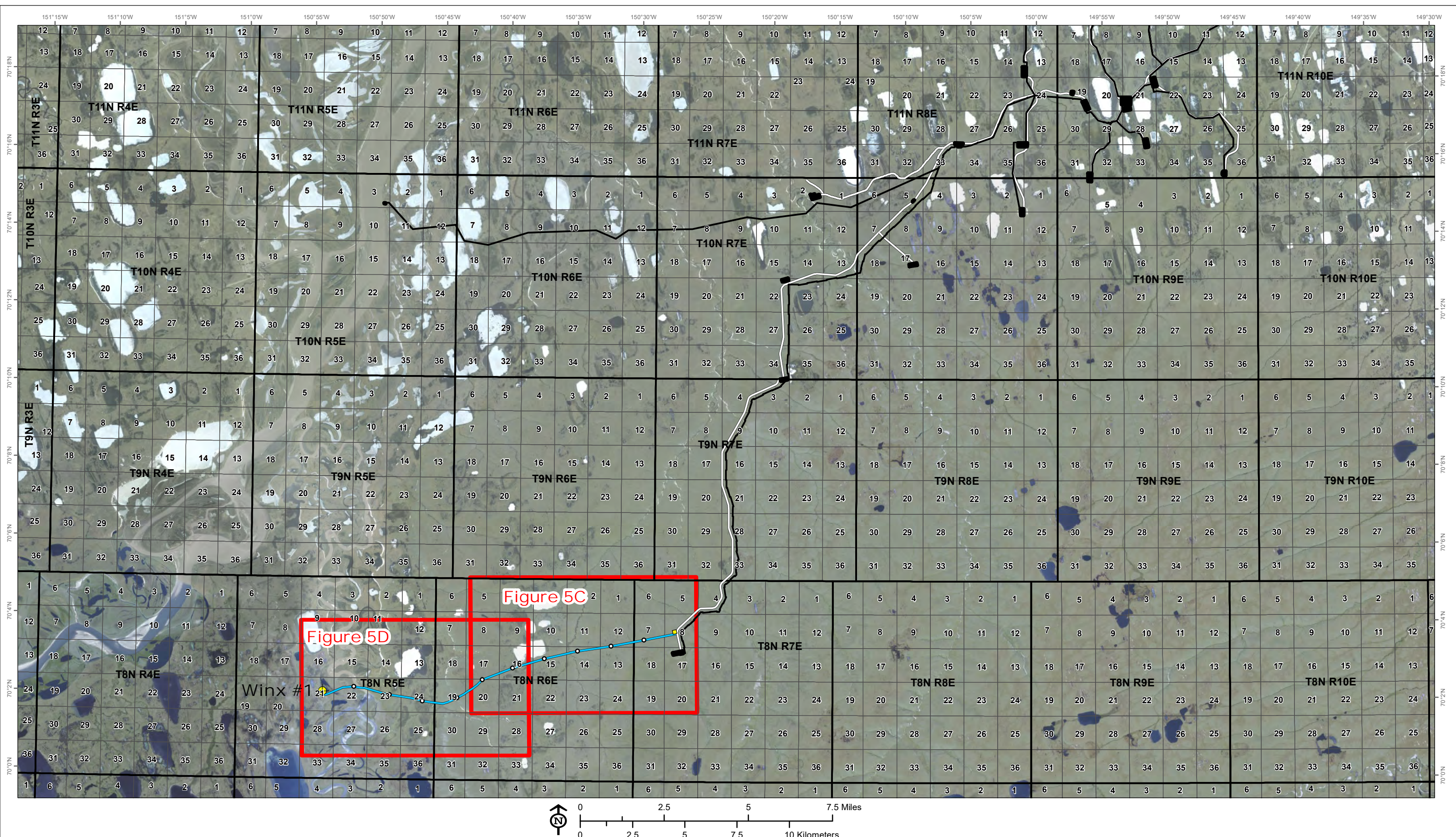






 389058 ADL Lease	 Proposed Stream Crossing	 Existing Road
 Proposed Water Source	 Thermistors	 Proposed TWR
 Water Source Snow Access Road	 TWR Staging Pad	 Pipeline
		 Existing Drill Site








**Figure 4B**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Proposed TWR with Water Sources  
and Stream Crossings - Topographic ADLs





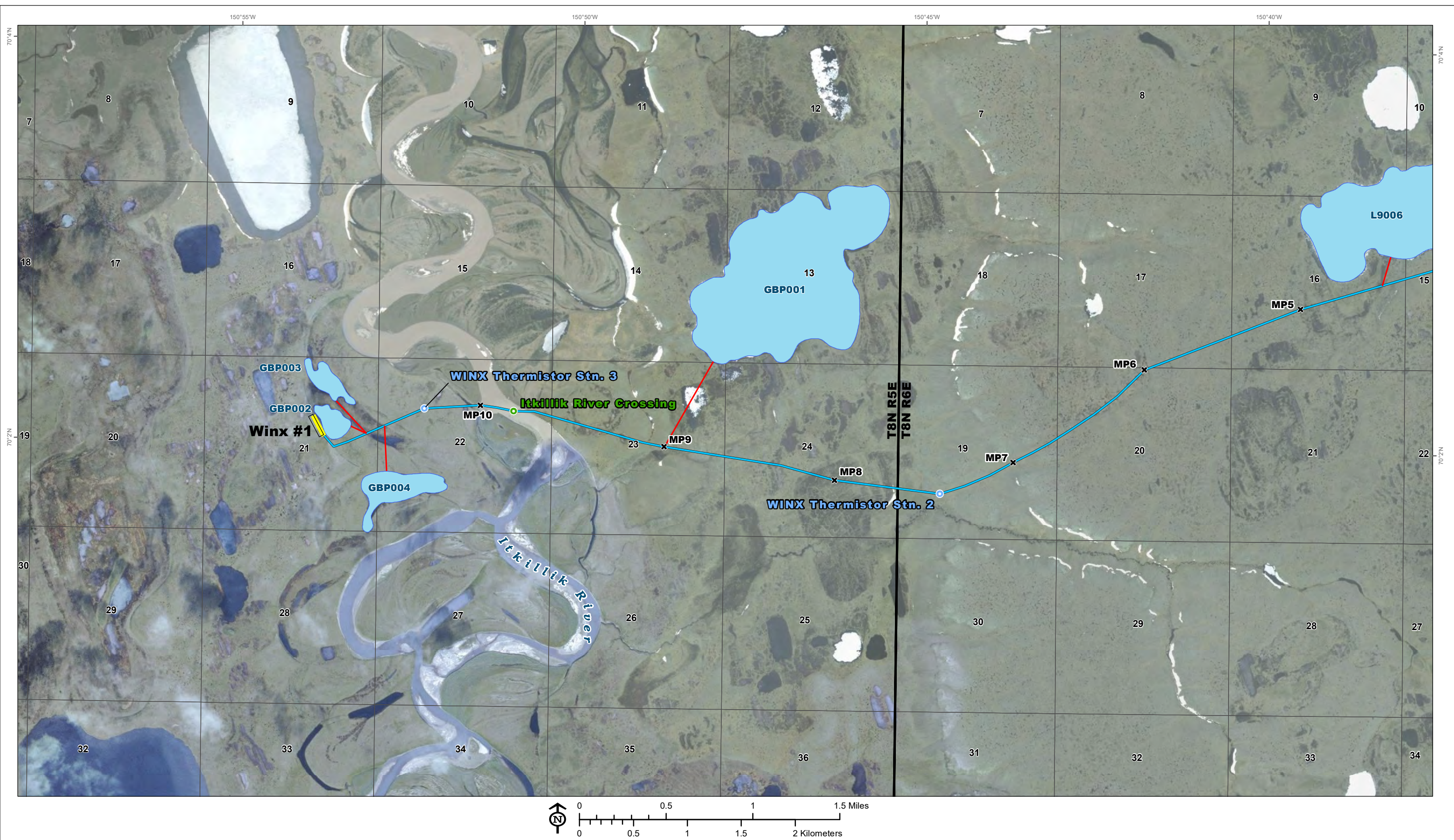



**Map Extent**

-  Mile Post
-  WINX #1
-  TWR Staging Pad
-  Proposed TWR
-  Pipeline
-  Existing Road
-  Existing Drill Site


**Figure 5**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
**Proposed TWR Index Map - Aerial MTRs**



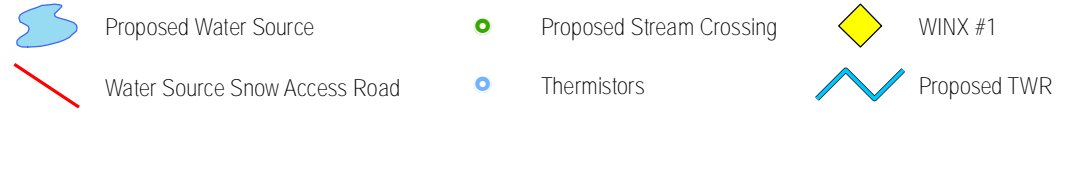




**Great Bear**  
PETROLEUM



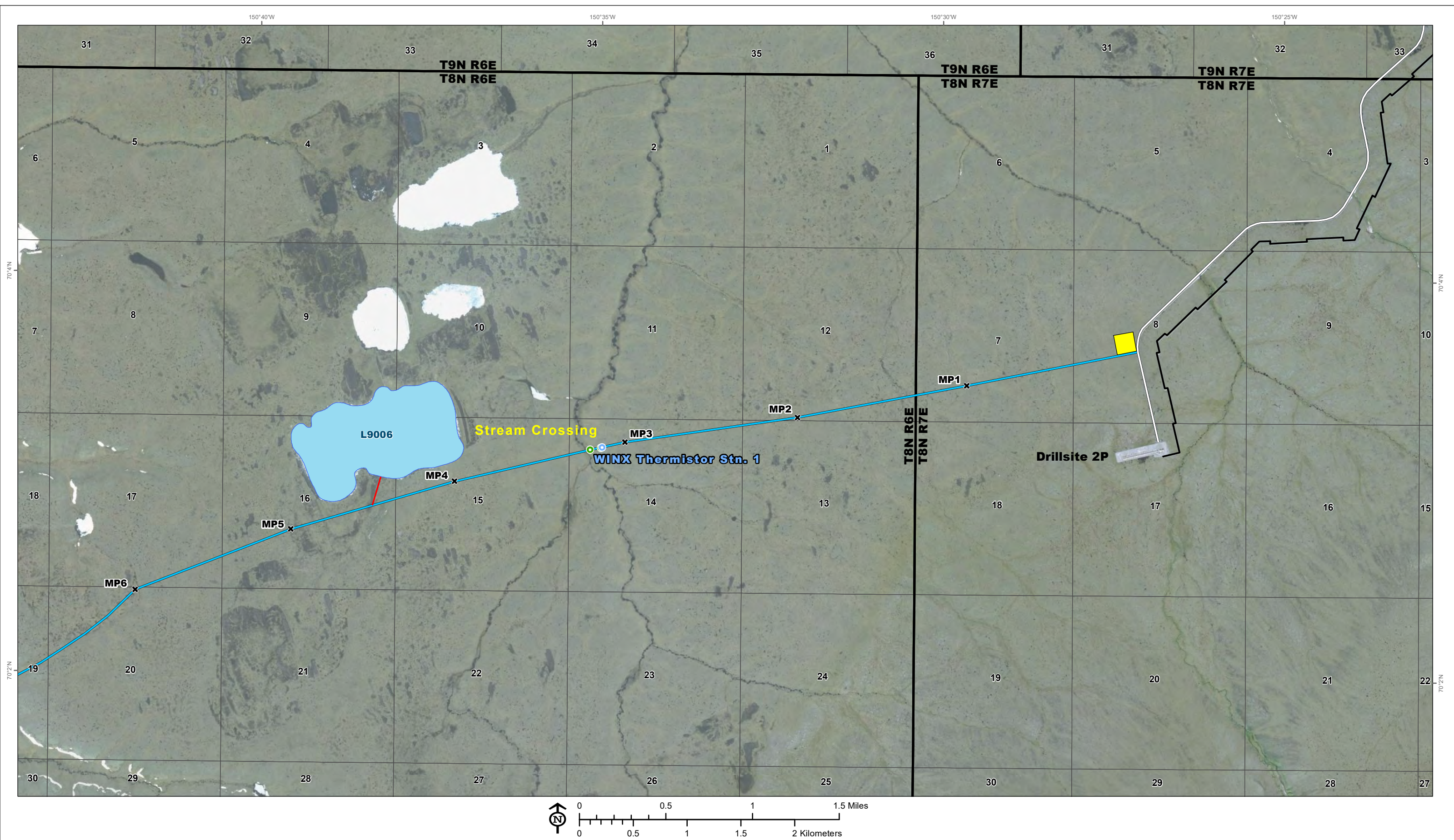
Utqiagvik  
Wainwright  
Atkasuk  
Nuiqsut  
Umiat  
Prudhoe Bay  
Deadhorse  
Kaktovik













- Proposed Water Source
- Water Source Snow Access Road
- Proposed Stream Crossing
- Thermistors
- WINX #1
- Proposed TWR

**Figure 5A**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Proposed TWR with Water Sources  
and Stream Crossings - Aerial MTRSS



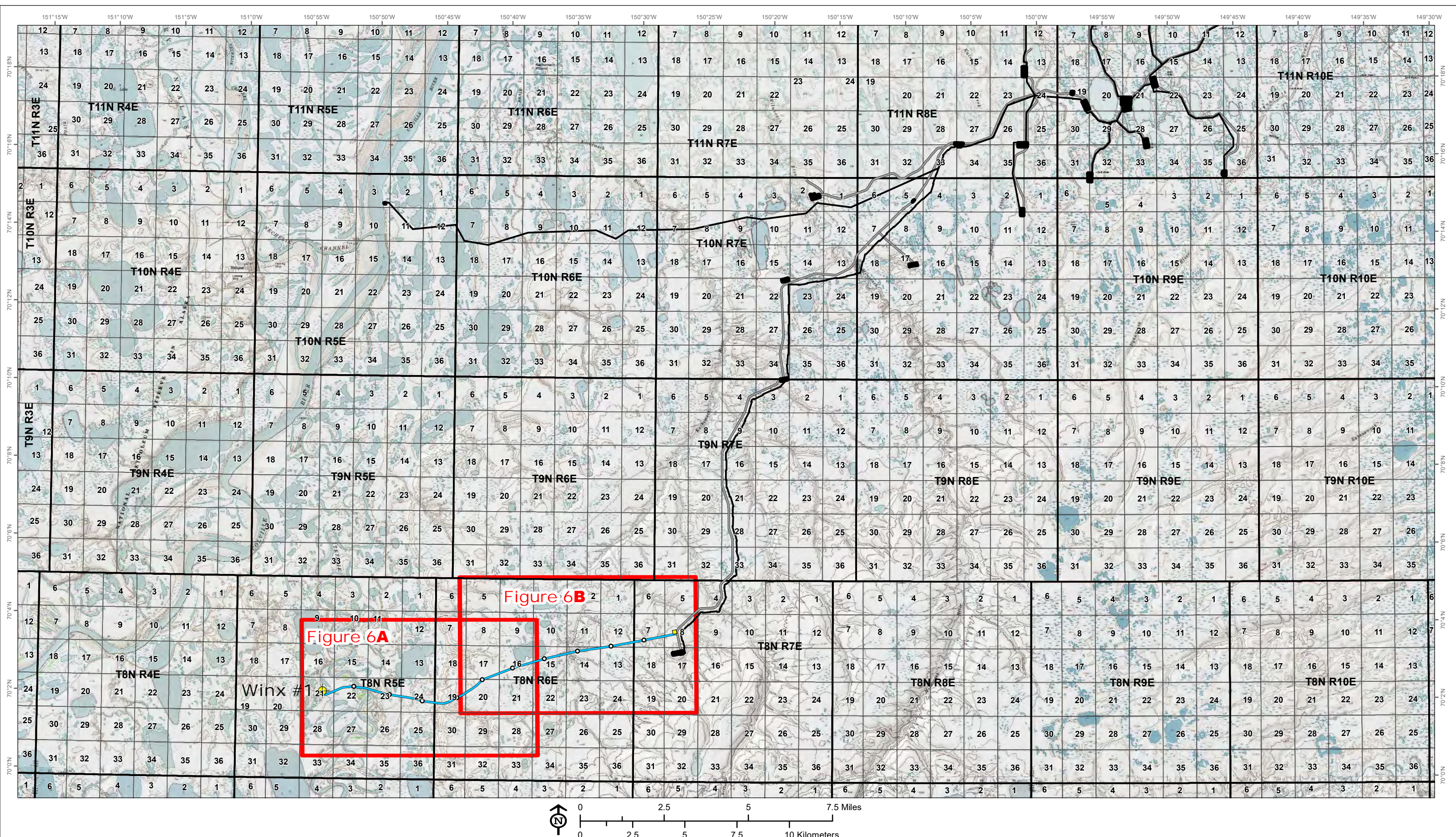






 Proposed Water Source	 Proposed Stream Crossing	 Existing Road
 Water Source Snow Access Road	 Thermistors	 Proposed TWR
	 TWR Staging Pad	 Pipeline

**Figure 5B**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Proposed TWR with Water Sources  
and Stream Crossings - Aerial MTRSS







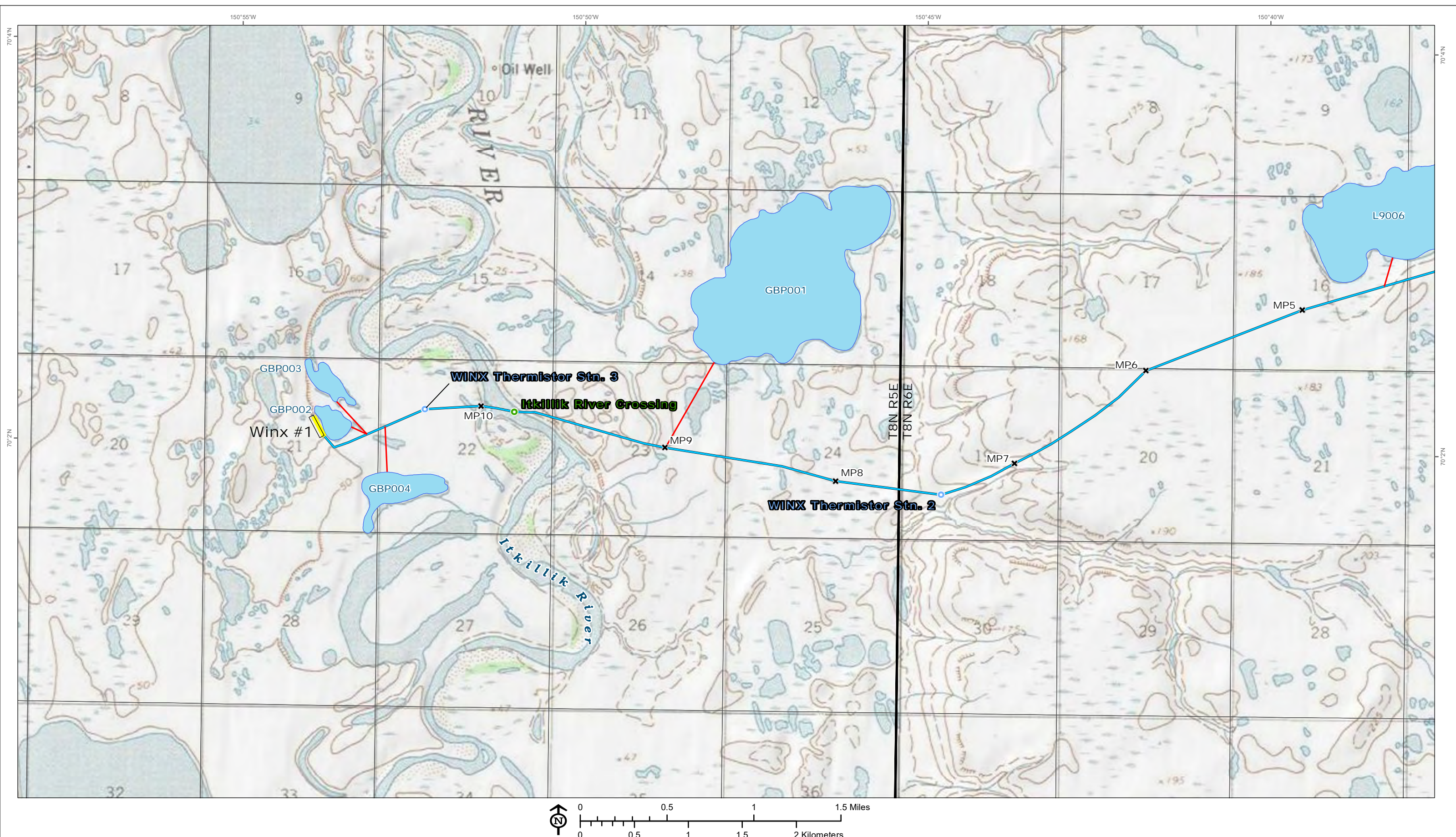
**Map Extent**

- Mile Post
- WINX #1
- TWR Staging Pad
- Proposed TWR
- Pipeline
- Existing Road
- Existing Drill Site

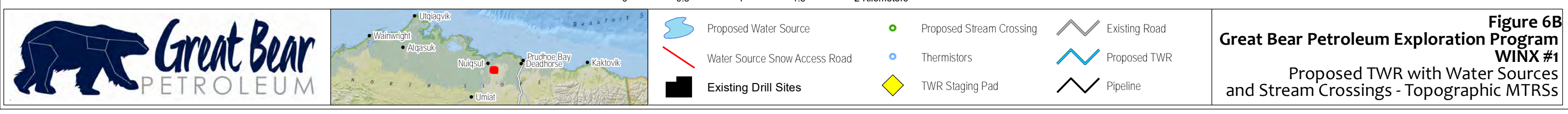
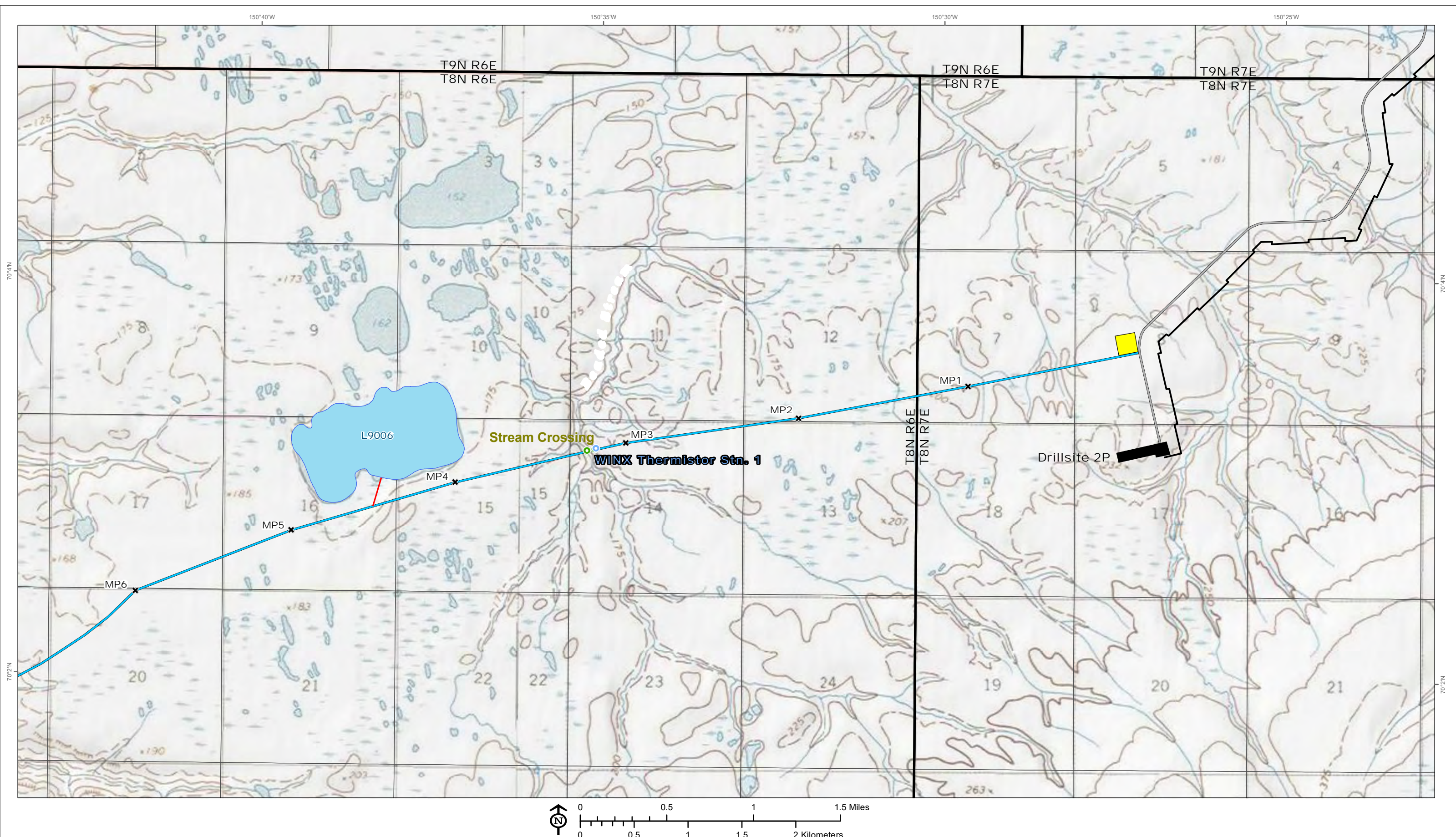
**Figure 6**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**

**Proposed TWR Index Map - Topographic MTRs**

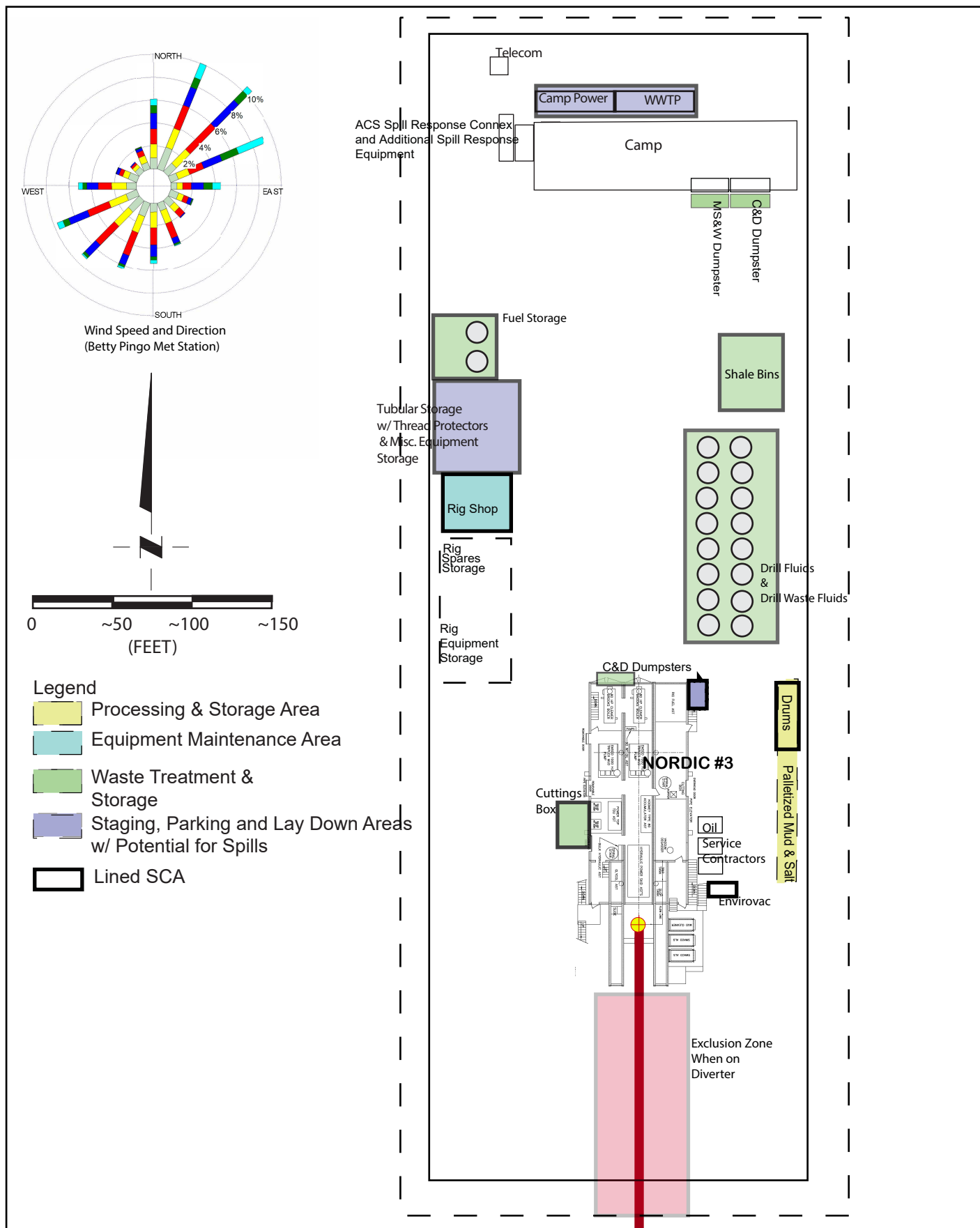


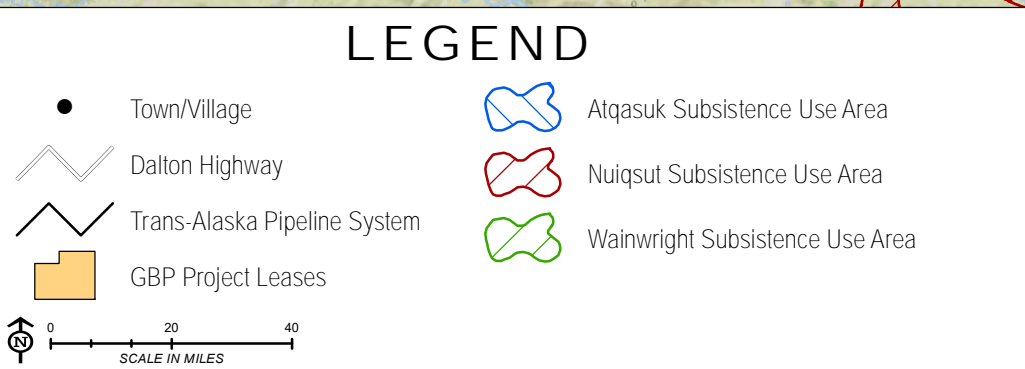
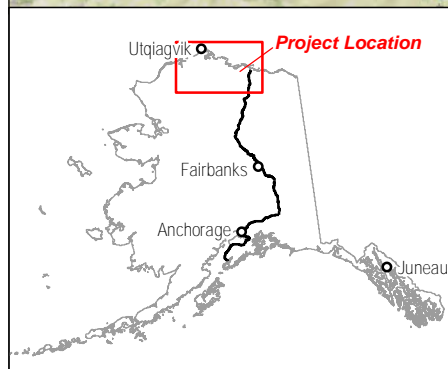
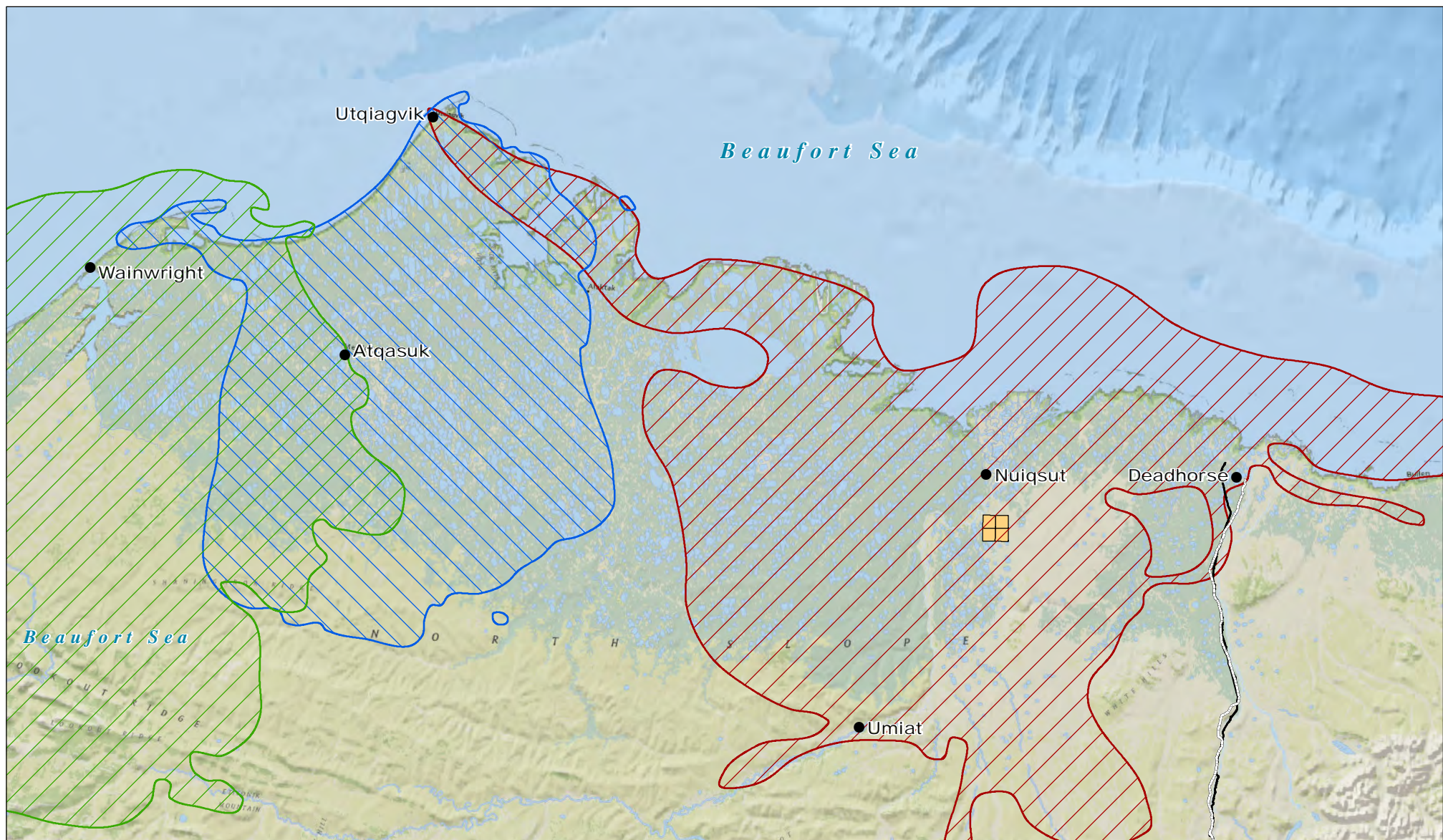










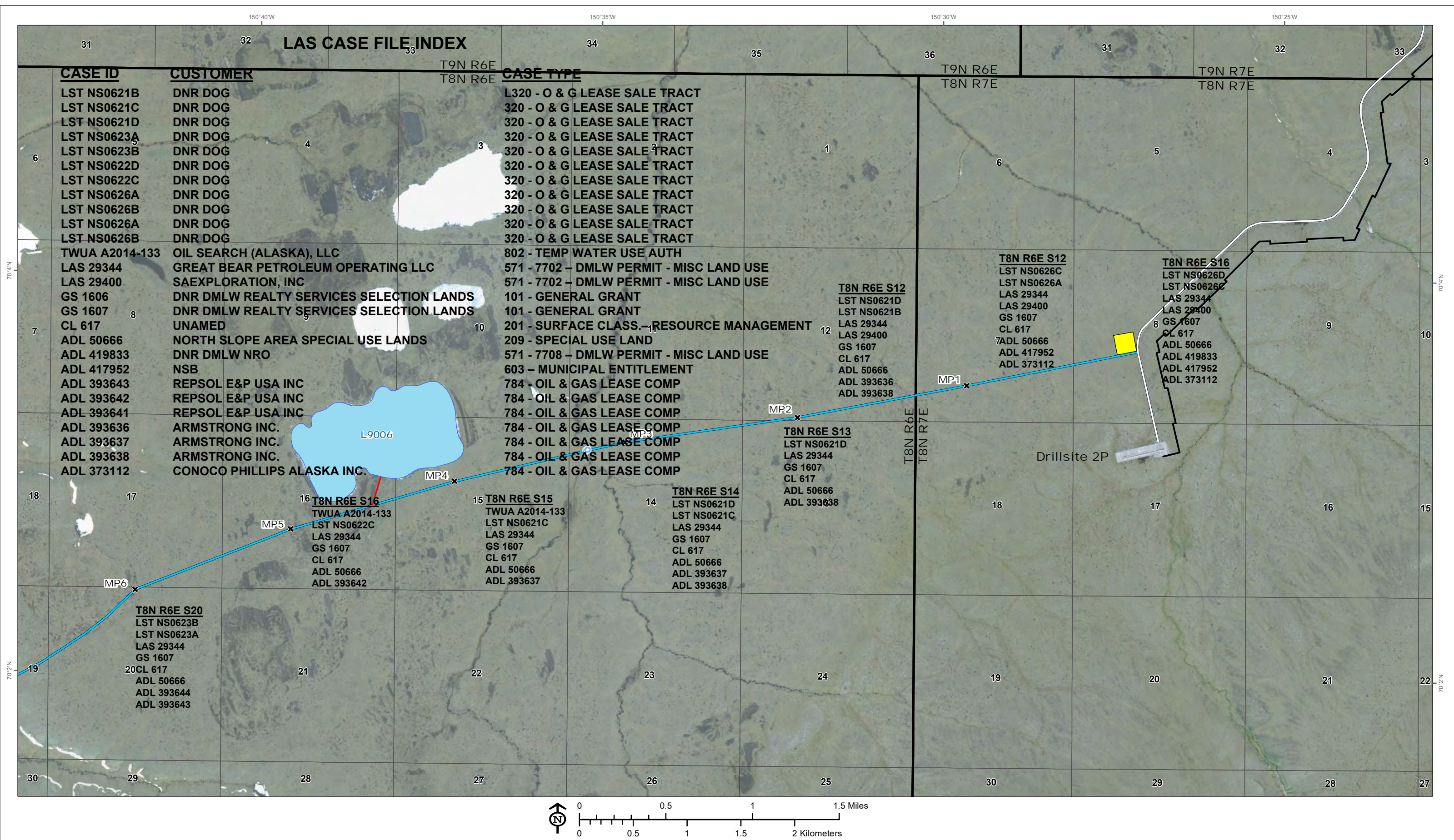




**GREAT BEAR PETROLEUM  
EXPLORATION PROGRAM - WINX #1  
Subsistence Use Areas  
Figure 8**



















Proposed Water SourceProposed Stream CrossingExisting RoadWater Source Snow Access RoadThermistorsProposed TWRTWR Staging PadPipeline

**Figure 9B**  
**Great Bear Petroleum Exploration Program**  
**WINX #1**  
Land Estate Information Summary by MTRS  
along Proposed TWR Alignments



## APPENDIX B: MITIGATION MEASURES

Include mitigation measures here.

## MITIGATION MEASURE ANALYSIS: NORTH SLOPE

The following instructions are provided for guidance to adequately complete the Mitigation Measure Analysis form.

1. The applicant shall respond to each Mitigation Measure, and all subsets of mitigation measures; i.e. A.2.d.i should be addressed and A.2.d.ii, and so forth.
2. The applicant's response shall begin by clearly indicating if the **mitigation measure is satisfied**, an **exception is requested**, or if the mitigation measure is **not applicable**.
3. The applicants' response shall then address how the proposed project clearly satisfies the mitigation measure, meets the intent of the mitigation measure, is not practicable, or is not applicable.
4. The applicant shall verify working 'in consultation with' parties other than Department of Natural Resources (DNR), Division of Oil and Gas (DO&G) by reporting meeting dates and parties present for Mitigation Measures which require consultation with parties other than DNR, DO&G; i.e. Mitigation Measure 1.b.

Please note that this form, along with the Plan of Operations Application form and the Plan of Operations, must be adequately completed before DNR DO&G will review an application for potential approval.

NORTH SLOPE	Company Response
<b>A. Mitigation Measures</b>	
<b>1. Facilities and Operations</b>	<b>Great Bear Petroleum (GBP)-Western Block-WINX #1 Exploration &amp; Test Well Project</b>
a. Oil and gas facilities, including pipelines, shall be designed using industry-accepted engineering codes and standards. Technical submittals to the Division of Oil and Gas (DO&G) that reflect the "practice of engineering," as defined by AS 08.48.341, must be sealed by a professional engineer registered in the State of Alaska.	A.1.a. MITIGATION MEASURE is NOT APPLICABLE.  No oil and gas facilities, including pipelines, are being designed for this Project that require technical submittal to the ADNR/DOG that reflect the "practice of engineering," as defined by AS 08.48.341, must be sealed by a professional engineer registered in the State of Alaska.
b. A plan of operations shall be submitted and approved before conducting exploration, development, or production activities in accordance with 11 AAC 83.	A.1.b. MITIGATION MEASURE is SATISFIED.  A Lease Plan of Operations for the Great Bear Exploration Program for WINX #1 is being submitted to ADNR. ADNR, representing the

	State of Alaska, is the only surface owner in the Project area whose property will be entered.
c. Facilities shall be designed and operated to minimize sight and sound impacts in areas of high residential, recreational, and subsistence use and important wildlife habitat.	<p>A.1.c. MITIGATION MEASURE is SATISFIED.</p> <p>Planned operations are &gt;12 miles south of Nuiqsut, the closest community. The tundra winter ice road (TWR) alignment will not intersect historic winter trails. GBP also will coordinate with and update local interests on Project siting, timing and activities as well as measures to minimize impacts to subsistence users.</p> <p>Finally, GBP is obtaining applicable permits from ADNRR, ADF&amp;G, ADEC, NSB and other federal, state, and local agencies.</p>
d. The siting of facilities, including roads, airstrips, and pipelines, is prohibited within one-half mile of the coast as measured from the mean high water mark and 500 feet of all fish bearing waterbodies.	<p>A.1.d. EXCEPTION IS REQUESTED</p> <p>All facilities are temporary and are not within 1,500 feet of current surface drinking water sources.</p> <p>But the east edge of the drill site ice pad is within 500 feet of Lake GB002 (Figures 3A,4A,5A &amp; 6A). According to the ADF&amp;G and based on bathymetry, this lake may be a fish bearing water body containing "resistant" fish such as the Ninespine Stickleback.</p> <p>The project area, however, will only be used to drill a temporary well during the winter when ice thickness greater than 3 feet is present on all waterbodies. Other than cleanup activities during the following summer, no activities will occur at the location after completing the winter drilling operations. The drill site ice pad location inside of the buffer is the most environmentally preferred when compared to other alternatives in order to avoid sensitive willow habitat while still being able to reach drilling targets within the Nanushuk Formation.</p> <p>GBP also is working with the ADF&amp;G through its Fish Habitat Permit process to determine a water withdrawal volume that is protective of the lake based on its bathymetry.</p> <p>Finally, gravel roads, utilities and pipeline crossing are not part of this Project.</p>
e. Notwithstanding (d) above, the siting of facilities is prohibited within one-half mile of the banks of the Colville, Canning, Sagavanirktok, Kavik, Shaviovik, Kadleroshilik, Echooka, Ivishak, Kuparuk, Toolik, Anaktuvuk and Chandler Rivers as measured from the ordinary high water mark. Facilities may be sited, on a case-by-case basis, within the one-half mile buffer if the lessee demonstrates that siting of such facilities outside this buffer zone is not feasible or prudent, or that a location within the buffer is environmentally preferable.	<p>A.1.e. MITIGATION MEASURE is SATISFIED.</p> <p>Facilities are not within one-half mile of the banks of the main channel of the Colville River or other rivers mentioned in A.1.e.</p> <p>Finally, gravel roads, utilities and pipeline crossing are not part of this Project.</p>

<p>f. No facilities will be sited within one-half mile of identified Dolly Varden overwintering and/or spawning areas on the Canning, Shaviovik, and Kavik rivers. Notwithstanding the previous sentence, road and pipeline crossings may only be sited within these buffers if the lessee demonstrates to the satisfaction of the Director and Alaska Department of Fish and Game (ADF&amp;G) in the course of obtaining their respective permits, that either (1) the scientific data indicate the proposed crossing is not within an overwintering or spawning area; or (2) the proposed road or pipeline crossing will have no significant adverse impact to Dolly Varden overwintering or spawning habitat.</p>	<p>A.1.f. MITIGATION MEASURE is SATISFIED.</p> <p>Facilities are not within one-half mile of identified Dolly Varden overwintering and/or spawning areas on the Canning, Shaviovik, and Kavik rivers.</p>
<p>g. Impacts to important wetlands shall be minimized to the satisfaction of the Director, in consultation with ADF&amp;G and Alaska Department of Environmental Conservation (ADEC). The Director will consider whether facilities are sited in the least sensitive areas.</p>	<p>A.1.g. MITIGATION MEASURE is SATISFIED.</p> <p>GBP winter activities are temporary and will take place on ice pads and ice roads. No wetland impacts are expected.</p> <p>Additionally, Jack Hewitt at the USACOE/Alaska was contacted on 1 August 2017 for another project and asked if construction of an ice constitutes the discharge of fill into Water of the US requiring a CWA Section 404 Permit. Hewitt responded “...<i>It is NOT necessary to obtain a DA permit to construct an ice road on the North Slope, or anywhere else for that matter. Ice roads do not constitute a discharge of fill material, they are not within the Corps jurisdiction, and we do not regulate them...</i>”</p>
<p>h. Exploration roads, pads, and airstrips shall be temporary and constructed of ice. Use of gravel roads, pads, and airstrips may be permitted on a case-by-case basis by the Director, in consultation with Division of Mining, Land, and Water (DMLW) and ADF&amp;G.</p>	<p>A.1.h. MITIGATION MEASURE is SATISFIED.</p> <p>Exploration roads, pads, and airstrips are temporary &amp; constructed of ice. Gravel roads, utilities and pipeline crossing are not part of this Project.</p>
<p>i. Road and pipeline crossings shall be aligned perpendicular or near perpendicular to watercourses.</p>	<p>A.1.i. MITIGATION MEASURE is SATISFIED.</p> <p>Temporary TWR crossings are consolidated and perpendicular to watercourses and to the extent practicable will be in areas that ground naturally to avoid impacts to overwintering fish. All stream crossings will be permitted by ADF&amp;G.</p> <p>Finally, gravel roads, utilities and pipeline crossing are not part of this Project.</p>
<p>j. Pipelines</p> <p>i. Shall use existing transportation corridors and be buried where soil and geophysical conditions permit.</p>	<p>A.1.j. MITIGATION MEASURE is NOT APPLICABLE. Pipelines are not part of this Project.</p> <p>A.1.h.i. MITIGATION MEASURE is NOT APPLICABLE. Pipelines are not part of this Project.</p>

<p>ii. In areas with above ground placement, pipelines shall be designed, sited, and constructed to allow for the free movement of wildlife and to avoid significant alteration of caribou and other large ungulate movement and migration patterns.</p> <p>iii. At a minimum, above ground pipelines shall be elevated seven feet, as measured from the ground to the bottom of the pipeline, except where the pipeline intersects a road, pad, or a ramp installed to facilitate wildlife passage. A lessee shall consider snow depth in relation to pipe elevation to ensure adequate clearance for wildlife.</p> <p>iv. Pipelines and gravel pads shall facilitate the containment and cleanup of spilled fluids.</p>	<p>A.1.j.ii. MITIGATION MEASURE is NOT APPLICABLE. Pipelines are not part of this Project.</p> <p>A.1.j.iii. MITIGATION MEASURE is NOT APPLICABLE. Aboveground pipelines are not part of this Project.</p> <p>A.1.j.iv MITIGATION MEASURE is NOT APPLICABLE. Pipelines and gravel pads are not part of this Project.</p>
<p>k. Causeways and docks shall not be located in river mouths or deltas. Approved causeways shall be designed, sited, and constructed to prevent significant changes to nearshore oceanographic circulation patterns and water quality characteristics (e.g., salinity, temperature, suspended sediments) that result in exceedances of water quality criteria, and must maintain free passage of marine and anadromous fish.</p>	<p>A.1.k. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>Causeways and docks are not part of this Project.</p>
<p>l. Artificial gravel islands and bottom founded structures shall not be located in river mouths or active stream channels on river deltas, except as provided for in (m) below.</p>	<p>A.1.l. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>Artificial gravel islands are not part of this Project and stream crossings that may ground due to shallow are not located in river mouths or active stream channels on river deltas.</p>
<p>m. Each proposed structure will be reviewed on a case-by-case basis. Causeways, docks, artificial gravel islands and bottom founded structures may be permitted if the Director, in consultation with ADF&amp;G and ADEC, determines that a causeway or other structures are necessary for field development and that no practicable alternatives exist. A monitoring program may be required to address the objectives of water quality and free passage of fish, and mitigation shall be required where significant deviation from objectives occurs.</p>	<p>A.1.m. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>Causeways, docks and artificial gravel islands are not part of this Project and stream crossings that may ground due to shallow are not located in river mouths or active stream channels on river deltas.</p>
<p>n. Upon abandonment of material sites, drilling sites, roads, buildings or other facilities, such facilities must be removed and the site rehabilitated to the satisfaction of the Director, unless the Director and any non-state surface owner, determines that such removal and rehabilitation is not in the state's interest.</p>	<p>A.1.n. MITIGATION MEASURE is SATISFIED.</p> <p>The proposed winter operations are temporary activities conducted on TWR alignments and ice pads where temporary surface facilities will be removed prior to breakup. The wells will be either be P&amp;A or suspended per AOGCC regulations.</p> <p>Remaining debris and potentially contaminated materials will be removed and disposed at approved facilities by completion of site closure.</p>

<p>o. Material sites required for exploration and development activities shall be:</p> <ul style="list-style-type: none"> <li>i. restricted to the minimum necessary to develop the field efficiently and with minimal environmental damage,</li> <li>ii. where practicable, designed and constructed to function as water reservoirs for future use, and</li> <li>iii. located outside active floodplains of a watercourse unless the Director DMLW, after consultation with ADF&amp;G, determines that there is no practicable alternative, or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed.</li> </ul>	<p>A.1.o. MITIGATION MEASURE is NOT APPLICABLE. A.1.o.i. MITIGATION MEASURE is NOT APPLICABLE. Material sites are not part of this Project. A.1.o.ii. MITIGATION MEASURE is NOT APPLICABLE. Material sites are not part of this Project. A.1.o.iii. MITIGATION MEASURE is NOT APPLICABLE. Material sites are not part of this Project.</p>
<p>p. The Director may include plan stipulations if necessary to reduce or eliminate adverse impacts to fish and wildlife or to protect the environment.</p>	<p>A.1.p. MITIGATION MEASURE is SATISFIED. GBP understands the necessity of sometimes including plan stipulations to reduce or eliminate adverse impacts to fish and wildlife or to protect the environment. GBP will include the stipulations as part of site orientation training.</p>
<p><b>2. Fish and Wildlife Habitat</b></p>	
<p>a. The lessee shall consult with the North Slope Borough (NSB) before proposing the use of explosives for seismic surveys. The Director may approve the use of explosives for seismic surveys after consultation with the NSB.</p>	<p>A.2.a. MITIGATION MEASURE is NOT APPLICABLE. Use of explosives for seismic surveys are not part of this Project.</p>
<p>b. Any water intake structures in fish bearing or non-fish bearing waters shall be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury. All water withdrawal equipment must be equipped and must use fish screening devices approved by ADF&amp;G.</p>	<p>A.2.b. MITIGATION MEASURE is SATISFIED. GBP will obtain ADF&amp;G Title 16 Fish Habitat Permits (FHPs) and ADNR Temporary Water Use Authorization (TWUAs) for water withdrawal from several lakes that may contain fish. GBP will meet conditions on water intake in these permits, including screen size &amp; velocity requirements plus using screened fish pump inlets inspected &amp; approved by ADF&amp;G.</p>
<p>c. Removal of snow from fish-bearing rivers, streams, and natural lakes shall be subject to prior written approval by ADF&amp;G. Compaction of snow cover overlying fish-bearing waterbodies is prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, then ice or snow bridges may be required.</p>	<p>A.2.c. MITIGATION MEASURE is SATISFIED. All activities in fish-bearing water bodies, including snow removal, will be authorized under issued ADF&amp;G Title 16 Fish Habitat Permits. Crossing fish and non-fish bearing streams will be at approved crossings only. Where necessary, ice or snow bridges will be constructed and then slotted/removed after completion of operations.</p>

<p>d. Bears:</p> <p>i. Brown bears</p> <p>A. A lessee must consult with ADF&amp;G before commencing any activities to identify the locations of known brown bear den sites that are occupied in the season of proposed activities.</p> <p>B. Exploration and production activities shall not be conducted within one-half mile of occupied brown bear dens unless alternative mitigation measures are approved by ADF&amp;G.</p> <p>C. A lessee who encounters an occupied brown bear den not previously identified by ADF&amp;G shall report it to the Division of Wildlife Conservation, ADF&amp;G, within 24 hours. The lessee will avoid conducting mobile activities one-half mile from discovered occupied dens unless alternative mitigation measures are approved by the Director, with concurrence from ADF&amp;G. Non-mobile facilities will not be required to relocate.</p> <p>ii. Polar bears</p> <p>A. Consultation with the US Fish and Wildlife Service (USFWS) is required prior to commencement of any activities as required by the Endangered Species Act, and also to identify the locations of known polar bear den sites.</p> <p>B. Operations shall avoid known polar bear dens by at least one mile.</p> <p>C. A lessee who encounters an occupied polar bear den not previously identified by USFWS shall report it to the USFWS within 24 hours and subsequently avoid the new den by at least one mile.</p> <p>D. If a polar bear should den within an existing development, off-site activities shall be restricted to minimize disturbance.</p>	<p>A.2.d. MITIGATION MEASURE is SATISFIED.</p> <p>A.2.d.i. MITIGATION MEASURE is SATISFIED.</p> <p>A.2.d.i.A. MITIGATION MEASURE is SATISFIED. GBP will consult with ADF&amp;G on locations of known occupied brown bear den sites in the Project area before beginning operations.</p> <p>A.2.d.i.B. MITIGATION MEASURE is SATISFIED. GBP has spotted ice road and ice pads to avoid areas of prime brown bear den habitat (especially S-SW facing stream embankments), pingos and drained lakes) keeping in mind required buffer zones of one-half mile along the alignments.</p> <p>A.2.d.i.C. MITIGATION MEASURE is SATISFIED. Reporting requirements in GBP's approved Bear Avoidance and Interaction Plan (see below) also include reporting newly discovered occupied brown bear dens to ADF&amp;G/DW within 24 hours.</p> <p>A.2.d.ii. MITIGATION MEASURE is SATISFIED</p> <p>A.2.d.ii.A. MITIGATION MEASURE is SATISFIED. Consultation with the USFWS is required under 2016-2021 Beaufort Sea Incidental Take Regulations (ITRs) only if operations take place within the onshore Beaufort Sea ITRs Action Area which extends 25 miles inland from the Beaufort Sea Coastline. Nonetheless, GBP's Bear Avoidance &amp; Interaction Plan also addresses polar bears, and provides info and training complete with reporting forms.</p> <p>A.2.d.ii.B MITIGATION MEASURE is SATISFIED. GBP has communicated with USFWS on locations of known polar bear dens sites of the Project area; none are within 1 mile.</p> <p>A.2.d.ii.C. MITIGATION MEASURE is SATISFIED. GBP's Bear Avoidance &amp; Interaction Plan also addresses reporting newly identified polar bear dens with 24 hours and provides info and training with reporting forms on how to do this as well as what to do afterwards.</p> <p>A.2.d.ii.D. MITIGATION MEASURE is SATISFIED. GBP's Bear Avoidance &amp; Interaction Plan also addresses polar bear denning within an existing development and how off-site activities shall be restricted to minimize disturbance</p>
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<p>iii. For projects in proximity to areas frequented by bears, the lessee is required to prepare and implement a human-bear interaction plan designed to minimize conflicts between bears and humans. The plan shall include measures to:</p> <p>A. minimize attraction of bears to facility sites;</p> <p>B. organize layout of buildings and work areas to minimize interactions between humans and bears;</p> <p>C. warn personnel of bears near or on facilities and the proper actions to take;</p> <p>D. if authorized, deter bears from the drill site;</p> <p>E. provide contingencies in the event bears do not leave the site;</p> <p>F. discuss proper storage and disposal of materials that may be toxic to bears; and</p> <p>G. provide a systematic record of bears on the site and in the immediate area.</p>	<p>A.2.d.iii. MITIGATION MEASURES are SATISFIED. GBP has recently updated its Bear Avoidance and Interaction Plan to include measures to protect brown bears and avoid human encounters. Further, GBP also has added additional procedures to its plan and training during orientation.</p> <p>A.2.d.iii.A. minimize attraction of bears to facility sites through proper waste management procedures;</p> <p>A.2.d.iii.B. organize drill pad layout to minimize bear hiding places and dark areas of limited visibility;</p> <p>A.2.d.iii.C. warn personnel of bears near or on facilities and the proper actions to take through notification procedures;</p> <p>A.2.d.iii.D. deter bears from the drill site and other facilities by using trained staff;</p> <p>A.2.d.iii.E. if deterrence is unsuccessful trained staff will monitor the bear's location and workers will be instructed to avoid the area. GBP will contact and coordinate with ADF&amp;G and the USFWS on alternative actions;</p> <p>A.2.d.iii.F. know, properly label, store, and dispose of materials that are toxic to bears (glycol and hydraulic oil be example); and</p> <p>A.2.d.iii.G. provide a systematic record of bears on ice road and pads by reporting all sightings to ADF&amp;G and USFWS as required in the plan.</p>
<p>e. Permanent, staffed facilities shall be sited to the extent practicable outside identified brant, white-fronted goose, snow goose, tundra swan, king eider, common eider, Steller's eider, spectacled eider, and yellow-billed loon nesting and brood rearing areas.</p>	<p>A.2.e. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>There are no permanent facilities (staffed or not staffed) associated with this Project.</p>
<p>f. The Director, in consultation with ADF&amp;G, may impose additional and seasonal restrictions on activities located in, or requiring travel through or overflight of, important caribou or other large ungulate calving and wintering areas during the plan of operations approval stage.</p>	<p>A.2.f. MITIGATION MEASURE is SATISFIED.</p> <p>Based on research neither important caribou calving or winter areas are found within the Project area. Nonetheless, GBP understands the necessity of sometimes imposing seasonal restrictions.</p>

<b>3. Subsistence, Commercial and Sport Harvest Activities</b>	
<p>a. Lease-related use will be restricted if necessary to prevent unreasonable conflicts with subsistence, commercial, or sport fish and wildlife harvest activities. Traditional and customary access to subsistence areas will be maintained unless reasonable alternative access is provided to subsistence users. "Reasonable access" is access using means generally available to subsistence users. Lessees will consult the NSB, nearby communities, and native organizations for assistance in identifying and contacting local subsistence users.</p>	<p>A.3.a. MITIGATION MEASURE is SATISFIED.</p> <p>GBP operations are within the Nuiqsut subsistence use area (Figure 9 in Appendix A). Therefore, GBP will minimize effects on subsistence users and avoid conflicts with private, commercial &amp; industrial users. GBP has consulted with the NSB Planning Department and potentially affected villages when applying for Development Permits for past program exploration wells. And GBP will again consult with the NSB for the WINX #1 exploration well.</p> <p>With respect to access, GBP will not restrict traditional and customary subsistence access to the Project area, except for a 100-foot safety zone around each ice pad and the TWR alignment. Note that although public access to these ice pads must be restricted due to safety concerns, GBP will provide shelter and assistance to subsistence users in emergency situations.</p>
<p>b. Before submitting a plan of operations that has the potential to disrupt subsistence activities, the lessee will consult with the potentially affected subsistence communities and the NSB (collectively "parties") to discuss the siting, timing, and methods of proposed operations and safeguards or mitigating measures that could be implemented by the operator to prevent unreasonable conflicts. The parties will also discuss the reasonably foreseeable effect on subsistence activities of any other operations in the area that they know will occur during the lessee's proposed operations. Through this consultation, the lessee will make reasonable efforts to ensure that exploration, development, and production activities are compatible with subsistence hunting and fishing activities and will not result in unreasonable interference with subsistence harvests.</p>	<p>A.3.b. MITIGATION MEASURE is SATISFIED.</p> <p>GBP will work together with the Director of the NSB Planning Department to prevent conflicts with local subsistence, commercial and sport harvest activities. GBP also will contact representatives from subsistence organizations if potential subsistence issues are identified during drilling and testing operations to minimize impacts.</p> <p>GBP also will carry out most operations during winter; this helps prevent unreasonable conflicts with subsistence harvest activities as most are not conducted during this season.</p> <p>Finally, GBP will request the Commissioner of DNR or his/her designee to intercede if parties cannot agree during the NSB consultation process.</p>
<b>4. Fuel, Hazardous Substances and Waste</b>	
<p>a. The lessee will ensure that secondary containment is provided for the storage of fuel or hazardous substances and sized as appropriate to container type and according to governing regulatory requirements in 18 AAC 75 and 40 CFR 112. Containers with an aggregate storage capacity of greater than 55 gallons that contain fuel or hazardous substances will not be stored within 100 feet of a waterbody, or within 1,500 feet of a current surface drinking water source.</p>	<p>A.4.a. MITIGATION MEASURE is SATISFIED.</p> <p>For additional information, see a description of the proposed operations, including the location and design of Fuel and Hazardous Substances in the Lease Plan of Operation application, as well as Figures 7 and 8 in Appendix A for SCA locations during drilling and testing.</p>

	<p>Fuel and hazardous substances will be stored within lined and diked secondary containment areas (SCAs) that hold 110% or more of the largest tank volume within plus seasonal precipitation. Secondary containment is discussed in detail in GBP's Oil Discharge Prevention and Contingency Plan ("Spill Plan"), which is approved by the State (ADEC Plan No. 16-CP-5191). Finally, based on planned TWR alignment, ice pad locations and operations, fuel or hazardous substances will not be stored within 100 feet of a waterbody. Additionally, no surface drinking water sources are within 1,500 feet of the proposed operations.</p>
<p>b. During equipment storage or maintenance, the site must be protected from leaking or dripping fuel and hazardous substances by the placement of drip pans or other surface liners designed to catch and hold fluids under the equipment, or by creating an area for storage or maintenance using an impermeable liner or other suitable containment mechanism.</p>	<p>A.4.b. MITIGATION MEASURE is SATISFIED.</p> <p>For additional information, see a description of the proposed operations, including the location and design of Fuel and Hazardous Substances in the Lease Plan of Operation application.</p> <p>GBP has adopted the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH), and the Alaska Waste Disposal and Reuse Guide (Red Book) as guidance for standard operating procedures and best management practices for workplace health, safety and environmental and waste management. Drip pans or liners will be placed under parked vehicles of equipment to capture fluids.</p>
<p>c. During fuel or hazardous substance transfer, secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends. Appropriate spill response equipment, sufficient to respond to a spill of up to five gallons, must be on hand during any transfer or handling of fuel or hazardous substances.</p>	<p>A.4.c. MITIGATION MEASURE is SATISFIED.</p> <p>For additional information, see a description of the proposed operations, including the location and design of Fuel and Hazardous Substances in the Lease Plan of Operation application.</p> <p>GBP's spill response program requires all oil handlers to have spill response kits on hand during transfers, use a minimum of two personnel during fuel transfers &gt;500 gallons, and undergo training prior to conducting fuel transfers. Fuel and hazardous substance transfers will be performed in accordance with Fluid Transfer Procedures included GBP's Spill Plan and NFESH Fluid Transfer Guidelines. This includes:</p> <ul style="list-style-type: none"> <li>• Using surface liners under all potential spill points.</li> <li>• Verifying adequate sorbent and other spill response materials are on hand during fuel transfers</li> <li>• Training oil handler and other personnel in proper procedures for handling and transferring fuel and other hazardous fluids.</li> </ul>

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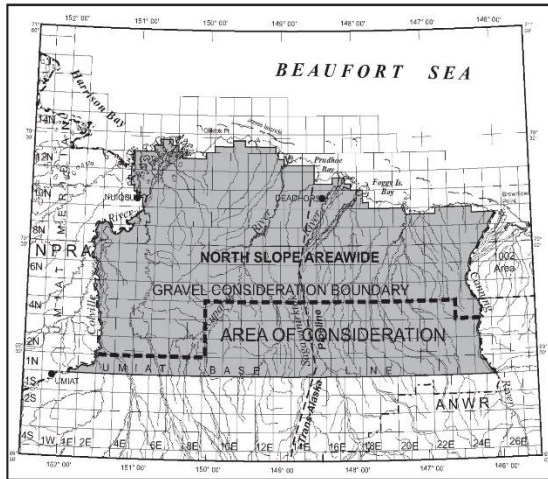
d. Vehicle refueling will not occur within the annual floodplain, except as addressed and approved in the plan of operations. This measure does not apply to water-borne vessels.	A.4.d. MITIGATION MEASURE is SATISFIED.  Based on planned TWR alignments, ice pad locations and operations, refueling will not occur within the annual floodplain of streams and rivers crossed during GBP's winter drilling program.
e. All independent fuel and hazardous substance containers must be marked with the contents and the lessee's or contractor's name using paint or a permanent label.	A.4.e. MITIGATION MEASURE is SATISFIED.  Per GBP's spill response program and OSHA-required HAZCOM program, all fuel and hazardous substance containers will be permanently marked (labeled) with the contents and GBP's name.
f. A fresh water aquifer monitoring well, and quarterly water quality monitoring, is required down gradient of a permanent storage facility, unless alternative acceptable technology is approved by ADEC.	A.4.f. MITIGATION MEASURE is NOT APPLICABLE.  There are no permanent storage facilities proposed for this Project.
g. Waste from operations must be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustibles must be incinerated whenever possible or disposed of at an approved site in accordance with 18 AAC 60.	A.4.g. MITIGATION MEASURE is SATISFIED.  See description on the proposed operations, including the location and design of Solid Waste Sites in the Plan of Operation for more information. Additionally, GBP has worked with both the NSB and ADEC on preparing and implementing an approved solid waste management program utilizing approved recycling and disposed facilities.
h. Proper disposal of garbage and putrescible waste is essential to minimize attraction of wildlife. The lessee must use the most appropriate and efficient method to achieve this goal. The primary method of garbage and putrescible waste is prompt, on-site incineration in compliance with State of Alaska air quality regulations. The secondary method of disposal is on-site frozen storage in animal-proof containers with backhaul to an approved waste disposal facility. The tertiary method of disposal is on-site non-frozen storage in animal proof containers with backhaul to an approved waste disposal facility. Daily backhauling of non-frozen waste is required unless safety considerations prevent it.	A.4.h. MITIGATION MEASURE is SATISFIED.  See description on the proposed operations, including the location and design of Solid Waste Sites in the Lease Plan of Operation application for more information. Additionally, GBP has worked with both the NSB and ADEC as well as other North Slope operators on preparing and implementing an approved solid waste management program utilizing approved recycling and disposed facilities.
i. New solid waste disposal sites, other than for drilling waste, will not be approved or located on state property for exploration.	A.4.i. MITIGATION MEASURE is NOT APPLICABLE.  There are no new solid waste disposal sites proposed for this Project. Designed and approved temporary drilling waste storage sites will be used as part of GBP's solid waste management program. These meet requirements promulgated in 18 AAC 60.
j. The preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Drilling mud and cuttings will not be discharged into lakes, streams, rivers, or wetlands. On-pad temporary cuttings storage may be allowed as necessary to	A.4.j. MITIGATION MEASURE is SATISFIED.

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<p>facilitate annular injection and backhaul operations. Injection of non-hazardous oilfield wastes is regulated by Alaska Oil and Gas Conservation Commission through its Underground Injection Control Program for oil and gas wells.</p>	<p>See description on the proposed operations, including the location and design of Solid Waste Sites in the Plan of Operation for more information.</p> <p>Additionally, GBP has worked with both the NSB and ADEC as well as other North Slope Operators on preparing and implementing a solid waste management program utilizing approved recycling and disposed facilities.</p> <p>Waste drilling fluids and solids (cuttings) will either be hauled to the Pad 3 or Greater Prudhoe Bay Grind and Inject (G&amp;I) waste facilities in the Prudhoe Bay Unit, the Hilcorp G&amp;I facility in the Milne Point Unit, or other approved facility for processing and disposal.</p> <p>Wastes disposed at these facilities will be handled in accordance with the terms of the North Slope Ballot Agreements between GBP and BPXA, CPAI, or Hilcorp and conditions found in GBP's 3rd party Waste Analysis Plans (WAPs). . Drilling waste will be transported as it is generated to the extent practicable. Temporary Storage Permits will be obtained from ADEC for temporary storage of drilling waste if necessary.</p>
<p><b>5. Access</b></p>	
<p>a. Exploration activities must be supported only by ice roads, winter trails, existing road systems, or air service. Wintertime off-road travel across tundra and wetlands may be approved in areas where snow and frost depths are sufficient to protect the ground surface</p>	<p>A.5.a. MITIGATION MEASURE is SATISFIED.</p> <p>GBP's winter drilling program will be supported only by approved TWRs (ice roads), winter trails, existing road systems or air service.</p>
<p>b. Summertime off-road travel across tundra and wetlands may be authorized subject to time periods and vehicle types approved by DMLW.</p>	<p>A.5.b. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>Summertime off-road travel across tundra &amp; wetlands is not part of this Project.</p>
<p>c. Emergency exceptions may be granted by the Director of DMLW, and the Director, if it is determined that travel can be accomplished without damaging vegetation or the ground surface on a site-specific basis.</p>	<p>A.5.c. MITIGATION MEASURE is NOT APPLICABLE.</p> <p>Summertime off-road travel across tundra &amp; wetlands is not part of this Project.</p>

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d. Gravel use may be authorized on a site-specific basis if it is determined, after consulting with ADF&G and DMLW, that no practicable alternatives exist for constructing an exploration road or pad in the area south of the boundary described below and depicted in the map below:



Beginning at the NPR-A boundary, from the northeast corner of T 1N, R 2E, then east to the northwest corner of T 1N, R 9E, then north to the northwest corner of T 4N, R 9E, then east to the northwest corner of T 4N, R 23E, then south to the southwest corner of T 4N, R 23E, and then east along the top of T 3N to the ANWR boundary.

**Figure 0.1.— Gravel Consideration Boundary**

A.5.d. MITIGATION MEASURE is NOT APPLICABLE.

Construction will be limited to the TWR (ice road) and ice pads. Additionally, this Project is located north of the “Gravel Consideration Boundary.”

e. Public access to, or use of, the lease area may not be restricted except within the immediate vicinity of drill sites, buildings, and other related structures. Areas of restricted access must be identified in the plan of operations.

A.5.e. MITIGATION MEASURE is SATISFIED.

GBP is requesting a 100-foot safety buffer zone around the TWR alignments and ice pads.

Winter drilling and exploration operations will be located so that access to public waters is not blocked.

## 6. Prehistoric, Historic, and Archeological Sites

a. Before the construction or placement of any structure, road, or facility supporting exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archeological sites within the area, including a detailed analysis of the effects that might result from that construction or placement.

A.6.a. MITIGATION MEASURE is SATISFIED.

GBP is in the process of a Section 106 review and consultation with ADN/OHA-SHPO. This included identifying historic properties (consisting of prehistoric, historic, and archeological sites) within the Project area by reviewing Alaska Heritage Resources Survey (AHRs) and files at SHPO and consulting with other operators who have conducted field surveys covering the project area in the last 6 years.

GBP also will be obtaining Traditional Land Use Inventory (TLUI) data from the NSB Inupiat Heritage and Language Center (IHLC) as part of a TLUI certificate of clearance.



	<p>GBP then prepared a letter report detailing the Area of Potential Effect (APE) as required by Section 106. The APE includes the TWR alignment and both pads with a 500-foot buffer zone around all sides. All activities will take place within the buffer zone. No reported sites are within the APE, with the closest located 0.4 mile from the buffer zone boundary. This means these reported sites will be unaffected by field operations.</p> <p>Therefore, GBP is requesting that cultural clearance be granted by NSB TLUI and that a determination of “no historic properties adversely affected” is the outcome of the Section 106 consultation.</p>
b. The inventory of prehistoric, historic, and archeological sites must be submitted to the Director and the Office of History and Archeology (OHA) who will coordinate with the NSB for review and comment. If a prehistoric, historic, or archeological site or area could be adversely affected by a lease activity, the Director, after consultation with OHA and the NSB, will direct the lessee as to the course of action to take to avoid or minimize adverse effects.	<p>A.6.b. MITIGATION MEASURE is SATISFIED.</p> <p>GBP will submit a cover letter, AHRS file cards and map set to OHA with results of the review of AHRS files with results of archaeological surveys, including potential impacts to ADNR SHPO and the NSB IHLC as part of the exploration drilling program authorization process for this Project.</p>
c. If a site, structure, or object of prehistoric, historic, or archaeological significance is discovered during lease operations, the lessee shall report the discovery to the Director as soon as possible. The lessee shall make all reasonable efforts to preserve and protect the discovered site, structure, or object from damage until the Director, after consultation with the State Historic Preservation Office and the NSB, has directed the lessee on the course of action to take for its preservation.	<p>A.6.c. MITIGATION MEASURE is SATISFIED.</p> <p>GBP will notify ADNR/OHA-SHPO and NSB IHLC if prehistoric, historic, or archaeological resources are discovered during winter drilling program operations. GBP also will stop all work in the vicinity until an archaeologist, ADNR-SHPO, and NSB-IHLC can provide guidance. Additionally, GBP will include training procedures covering the above as part of required onsite orientation.</p>
<b>7. Hiring Practices</b>	
a. The lessee is encouraged to employ local and Alaska residents and contractors, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan of operations, a hiring plan that shall include a description of the operator's plans for partnering with local communities to recruit, hire, and train local and Alaska residents and contractors. As a part of this plan, the lessee is encouraged to coordinate with employment and training services offered by the State of Alaska and local communities to train and recruit employees from local communities.	<p>A.7.a. MITIGATION MEASURE is SATISFIED.</p> <p>GBP will provide local employment opportunities and offer contracting opportunities to Alaska and North Slope Native-owned firms, partners, and corporate subsidiaries. This has started by placing Nordic-Calista Services' Nordic #3 drill rig under contract. GBP also is working North Slope labor and services contractors to maximize employment of qualified Alaskans.</p> <p>In summary, GBP will make the hiring of local Alaskans a priority in the planning process.</p>

<p>b. In accordance with Administrative Order 278, the lessee is encouraged to employ apprentice labor to perform at least 15 percent of total work hours, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan of operations, a hiring plan detailing the means by which the lessee might incorporate apprentice labor.</p>	<p>A.7.b. MITIGATION MEASURE is SATISFIED.</p> <p>Oil service contractors on the Project will be asked about the apprentice programs. Informal programs exist in heavy equipment operations and drilling operations.</p>
<p>c. A plan of operations application must describe the lessee's past and prospective efforts to communicate with local communities and interested local community groups.</p>	<p>A.7.c. MITIGATION MEASURE is SATISFIED.</p> <p>As part of the permitting process, GBP has published public notices detailing planned winter drilling program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFI) from individuals and non-government organizations interested in the Project.</p>
<p>d. A plan of operations application must include a training program</p> <ul style="list-style-type: none"> <li>i. for all personnel including contractors and subcontractors;</li> <li>ii. designed to inform each person working on the project of environmental, social, and cultural concerns that relate to that person's job;</li> <li>iii. using methods to ensure personnel understand and use techniques necessary to preserve geological, archeological, and biological resources; and</li> <li>iv. designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.</li> </ul>	<p>A.7.d.i. to A.7.d.iv. MITIGATION MEASURE is SATISFIED.</p> <p>As described in Section X, Training Programs, GBP has prepared and implemented an extensive training program for all personnel and contractors working along the TWR alignment and on the ice pads. This training is being updated and customized to reflect this upcoming winter drilling program and related support operations to ensure that all North Slope based Project workers (e.g., employees, contractors, subcontractors) have appropriate training.</p>

8. Definitions	
<p>a. In this document:</p> <p>i. <b>Facilities</b> – Any structure, equipment, or improvement to the surface, whether temporary or permanent, including, but not limited to, roads, pads, pits, pipelines, power lines, generators, utilities, airstrips, wells, compressors, drill rigs, camps, and buildings.</p> <p>ii. <b>Hazardous substance</b> – As defined under 42 USC 9601 – 9675 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980).</p> <p>iii. <b>Important wetlands</b> – Those wetlands that are of high value to fish, waterfowl, and shorebirds because of their unique characteristics or scarcity in the region or that have been determined to function at a high level using the hydrogeomorphic approach.</p> <p>iv. <b>Minimize</b> – To reduce adverse impacts to the smallest amount, extent, duration, size, or degree reasonable in light of the environmental, social, or economic costs of further reduction.</p> <p>v. <b>Plan of operations</b> – A lease plan of operations under 11 AAC 83.158 and a unit plan of operations under 11 AAC 83.346.</p> <p>vi. <b>Practicable</b> – Feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the mitigation measure.</p> <p>vi. <b>Secondary containment</b> – An impermeable diked area, portable impermeable containment structure, or integral containment space capable of containing the volume of the largest independent container. The containment shall, in the case of external containment, have enough additional capacity to allow for local precipitation.</p> <p>vii. <b>Temporary</b> – No more than 12 months.</p>	

Appendix C Supplemental Pages Summary

Section V LAND STATUS

Land Status Supplemental Sections for State Mineral Estate for TWR, Pads & Water Source Access Snow Road

Section VIII PROJECT USE REQUIREMENTS

Section 10: All Other Facilities and Equipment – Heavy Equipment List

Section XII GLOSSARY of TERMS

Glossary of Terms Supplemental Section

Appendix C Supplemental Pages

**Section V LAND STATUS:**

**Land Status Supplemental Sections for State Mineral Estate  
for WINX #1 TWR and Pads, and Water Source Access  
Snow Roads**

LAND STATUS: SUPPLEMENTAL SECTION				
<b>1. State Mineral Estate:</b>				
Affected ADL:	393642	Date Effective:	Affected ADL:	393642
Oil & Gas Lessee(s):	REPSOL E&P USA INC			
Surface Ownership:	State of Alaska			
Do you have, or anticipate having an Access Agreement:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Special Use Lands:	ADL 50666			
Jointly Managed Lands:	None			
Other Considerations:	See Fig. 9A in Appendix A for Land Status Summary. See Figs. 3A & 4A for ADLs and 5A & 6A for MTRS in Appendix A.			
<b>Project Components</b>		<b>Meridian, Township, Range, And Section(s)</b>		
Lake L9006 Water Source Access Snow Road		Umiat T008N, R006E, Sect. 16		N/A (linear)
TWR		Umiat, T008N, R006E, Sect. 16 & 17		70.0480°/150.6326° to 70.0401°/150.6957°
Affected ADL:	393637	Date Effective:	6/29/2018	Date Assigned:
Oil & Gas Lessee(s):	ARMSTRONG ENERGY, LLC			
Surface Ownership:	State of Alaska			
Do you have, or anticipate having an Access Agreement:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Special Use Lands:	ADL 50666			
Jointly Managed Lands:	None			
Other Considerations:	See Fig. 9B in Appendix A for Land Status Summary. See Figs. 3B & 4B for ADLs and 5B & 6B for MTRS in Appendix A.			
<b>Project Components</b>		<b>Meridian, Township, Range, And Section(s)</b>		<b>GPS Coordinates</b>
TWR		Umiat, T008N, R006E, Sect. 14 & 15		N/A (linear)
Affected ADL:	393638	Date Effective:	6/29/2018	Date Assigned:
Oil & Gas Lessee(s):	ARMSTRONG ENERGY, LLC			
Surface Ownership:	State of Alaska			
Do you have, or anticipate having an Access Agreement:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Special Use Lands:	ADL 50666			
Jointly Managed Lands:	None			
Other Considerations:	See Fig. 9B in Appendix A for Land Status Summary. See Figs. 3B & 4B for ADLs and 5B & 6B for MTRS in Appendix A.			
<b>Project Components</b>		<b>Meridian, Township, Range, And Section(s)</b>		<b>GPS Coordinates</b>
Main TWR		Umiat T008N, R006E, Sect. 12, 13 & 14		N/A (linear)
Affected ADL:	373112	Date Effective:	3/1/2005	Date Assigned:
Oil & Gas Lessee(s):	CONOCOPHILLIPS ALASKA, INC.			
Surface Ownership:	State of Alaska			
Do you have, or anticipate having an Access Agreement:	<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	
Special Use Lands:	ADL 50666			
Jointly Managed Lands:	None			
Other Considerations:	See Fig. 9B in Appendix A for Land Status Summary. See Figs. 3B & 4B for ADLs and 5B & 6B for MTRS in Appendix A.			
<b>Project Components</b>		<b>Meridian, Township, Range, And Section(s)</b>		<b>GPS Coordinates</b>
Ice Staging Pad		Umiat T008N, R007E, Sect. 8		N/A (linear)
TWR		Umiat T008N, R007E, Sect. 7 & 8		N/A (linear)



Appendix C Supplemental Pages

**Section VIII PROJECT USE REQUIREMENTS:**  
**Subsection 10: All Other Facilities and Equipment – Heavy**  
**Equipment List**

## **Section VIII Project Use Requirements**

### **Section 10: All Other Facilities and Equipment – Heavy Equipment List**

The number and types of vehicles and equipment generally used in construction and maintenance of the ice road, and drilling operations include the following:

- Tucker Snow-Cats with portable ice auger drills (2)
- Caterpillar motor graders (1)
- Caterpillar 966 loaders (4)
- Snow blowers and ice trimmers – loader mounted (2)
- Caterpillar D-6 dozers (1)
- Tractor/Maxi-Haul (30cy) dump trailers and Cat hard tail end dumps (6)
- Crew buses, vans and pickups (8)
- Tractor/325-bbl vacuum trucks (3) and
- 15 cy super suckers (3)
- 130-bbl conventional water tanker trucks and 200-bbl water buffaloes (3)
- Mechanic field service trucks (1)
- 5000-gal fuel tanker trucks (1)

Appendix C Supplemental Pages

## **Section XII GLOSSARY of TERMS**

GLOSSARY OF TERMS: SUPPLEMENTAL SECTION		
Term #	Term	Term Definition
11	ADL	Alaska Division of Land (lease)
12	ADNR	Alaska Department of Natural Resources
13	ADNR/DML&W	ADNR Division of Mining, Land and Water
14	ADNR/DML&W NRO	ADNR Division of Mining, Land and Water Northern Region Office
15	ADNR/OHA	ADNR Division of Parks & Recreation, Office of History and Archaeology
16	ADNR/DOG	ADNR Division of Oil and Gas
17	ADOT&PF	Alaska Department of Transportation & Public Facilities
18	AOGCC	Alaska Oil and Gas Conservation Commission
19	APDES	Alaska Pollutant Discharge Elimination System
20	ASH	Alaska Safety Handbook
21	AST	Aboveground storage tank
22	bbls	barrels
23	BMPs	Best Management Practices
24	C&D	Construction & Demolition
25	CFR	Code of Federal Regulations
26	CPAI	Conoco Phillips Alaska, Inc.
27	CWA	Clean Water Act
28	E&P	Exploration & Production
29	ft	feet
30	GBP	Great Bear Petroleum
31	G&I	Grind & Inject
32	gpd	gallons per day
33	IFC	International Fire Code
34	ILHC	Inupiat Heritage and Language Center
35	ITRS	Incidental Take Regulations
36	KRU	Kuparuk River Unit
37	LNO	Letter of non-objection
38	LUP	Land Use Permit
39	MD	Measured Depth
40	MP	Mile Post
41	MSW	Municipal Solid Waste
42	NRO	Northern Regions Office
43	NS	North Slope
44	NSB	North Slope Borough
45	NSB/Planning	NSB Department of Planning
46	NSB SA-10	North Slope Borough Service Area 10
47	NSBMC	North Slope Borough Municipal Code
48	NSEFH	North Slope Environmental Field Handbook
49	NSTC	NS Training Cooperative
47	ODPCP	Oil Discharge and Contingency Plan
48	P&A	Plugged and abandoned

## GLOSSARY OF TERMS: SUPPLEMENTAL SECTION

[illegible]