



# GUIDANCE DOCUMENT LAND USE PERMIT 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)



## Land Use Permit Application Package includes the following items:

- A Land Use Permit application form completed and signed by the applicant.
- Applicants proposing the use of tide and submerged lands must also complete the Supplemental Questionnaire for Use of Marine Waters accompanying this application.  
Figures are required in the Supplemental Questionnaire for Use of Uplands and/or Non-Marine Waters as well as the Supplemental Questionnaire for Use of Marine Waters and should show each item labeled so that it corresponds with your description in the Questionnaire. The figures must include:
  - **Location** - Section, Township, and Range lines; North arrow; scale; title; legend (may be attached).
  - **Boundaries** – Boundaries and dimensions of proposed area of use and their relation to geographic features, including water bodies, and existing trails or rights-of-way.
  - **Structures and Storage** - Location and dimensions of buildings, tent platforms, out-buildings and other improvements, and of equipment parking and storage areas, including snow storage areas.
  - **Hazardous substances** – Location and dimensions of storage facilities for hazardous substances, including but not limited to oil, lubricants, fuel oil, gasoline, solvents, and diesel fuel. Include method and dimensions of storage (tank, drum, etc.).
- Other items that must accompany the application package are:
  - **Map** - a topographic map of sufficient scale to show the location of the proposed activity. The map may be either 1:250,000 or 1:63,360.
  - **Filing Fees** - A non-refundable filing fee is required by regulation (11 AAC 05.180(d)(1)(C)). See the current Director's Fee Order for applicable fees. Make checks payable to the "State of Alaska Department of Natural Resources".
  - **Other Miscellaneous Items:** Items specifically identified and required in any of the supplemental questionnaires.

**Pre-Permit Issuance Requirements:** Prior to issuance of a permit, an applicant is required to submit one or more of the following:

**Use Fees** - The use fee depends on the type of activity, length of use and the acreage authorized for use. See the current Director's Fee Order for applicable fees.

**Performance Guaranty (Bond)** - A performance guaranty is held by the state to assure performance and to pay for corrective action if the use of state land fails to comply with the requirements of the permit. The Division of Oil and Gas uses a bonding matrix to determine the amount of a performance guaranty. Acceptable types of performance guaranties include:

- a. cash or check made out to the State of Alaska;
- b. a Certificate of Deposit (CD) in the state's name; or
- c. a corporate surety bond.

**Insurance** - Insurance to protect you and the state from liabilities incurred through the use of state property.

**Survey** - Surveys are generally not required for land use permits. Some authorizations may require a Global Positioning System (GPS) to determine the location of the project.

If you have any questions prior to submitting your application, you are encouraged to meet with a member of the Division of Oil & Gas staff about your proposed activity. Completed applications should be emailed to the Division of Oil & Gas Permitting Section at [dog.permitting@alaska.gov](mailto:dog.permitting@alaska.gov).

**ONLY COMPLETE APPLICATIONS WILL BE ACCEPTED**



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SECTION I: APPLICANT INFORMATION		
<b>1. Applicant:</b>		<b>2. Applicant Contact:</b>
Name: <b>JADE Energy Alaska LLC</b>		First Name: <b>Erik</b> Last Name: <b>Opstad.</b>
Mailing Address: <b>P.O. Box 112212</b>		Name: <b>Erik</b> Title: <b>Managing Director</b>
City: <b>Anchorage</b>		Is the Mailing Address the same as Applicant's Mailing Address? <input checked="" type="checkbox"/> Yes
State: <b>Alaska</b> Zip Code: <b>99511-2212</b>		If "No", please provide information below:
Phone: <b>907-244-5210</b> Fax:		Mailing address:
Email: <b>erik.opstad@jadeenergyllc.net</b>		City: State: Enter State. Zip Code: Enter Zip Code.
		Phone: Enter Phone. Fax: Enter Fax.
		Email: Enter Email.
<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 DIVISION USE ONLY)
Third Party Company Name:		Application Date: 5/22/23
First Name: Enter First Name. Last Name: Enter Last Name.		
Title: Enter Title.		
Mailing Address: Enter Mailing Address.		
City: Enter City.		
State: Enter State. Zip Code: Enter Zip Code.		
Phone: Enter Phone. Fax: Enter Fax.		
Email: Enter Email.		
Describe the affiliation to the Applicant:		Application Number: LAS 34578
Describe your affiliation to the Applicant.		
<b>SECTION IV: PROJECT INFORMATION</b>		
<b>1. Project Name:</b>	JADE Exploration/Appraisal Program	
<b>2. Proposed Duration:</b>	The proposed activity will require the use of state land for: <b>(Check one)</b> <input type="checkbox"/> a single term of less than one year. Starting Date: Enter Date. Ending Date Enter Date. <input checked="" type="checkbox"/> a multi year term for up to 5 years. Starting Date: 1 July 2023 Ending Date 1 July 2027 If multi year and seasonal check months of use in each year: <input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input checked="" type="checkbox"/> Mar <input checked="" type="checkbox"/> Apr <input checked="" type="checkbox"/> May <input checked="" type="checkbox"/> Jun <input checked="" type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sept <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec	
<b>3. Project Location:</b>		
<b>Project Components</b>	<b>Meridian, Township, Range, And Section(s)</b>	<b>GPS Coordinates</b>
JADE Snow Road	See Appendix B OTHER – Supplement 1 MTRS	See Appendix B OTHER – Supplement 2 GPS Coordinates
JADE Ice Road	See Appendix B OTHER – Supplement 1 MTRS	See Appendix B OTHER – Supplement 2 GPS Coordinates

JADE Ice Airstrip	See Appendix B OTHER – Supplement 1 MTRS	See Appendix B OTHER – Supplement 2 GPS Coordinates
JADE #1 Ice Drill Pad	See Appendix B OTHER – Supplement 1 MTRS	See Appendix B OTHER – Supplement 2 GPS Coordinates

Proposed project will require the use of up to 17 acres.

**4. Project Description:**

A. Describe in detail your intended use of state land. (State land also includes all tide and submerged lands beneath coastal waters and all shorelands beneath other navigable water bodies of the state.) Discuss development and activities.

JADE Energy LLC (JADE) plans to drill the JADE 1 exploration/delineation well in ADL 343112, Segment 2 from an ice pad during winter season in 2023/2024. JADE owns & operates ADL 343112 Segment 2 within the PTU, approximately 60 air miles east of Deadhorse and 59 air miles west of Kaktovik (Maps 1 to 5). Drilling and support operations in winter 2023/2024 will be conducted during the open tundra winter travel season and will be supported by using the 61.5-mile JADE Snow Road that runs from Deadhorse to the Point Thomson Unit (PTU). The JADE #1 Ice Drill Pad also will be accessed by the 4.2-mile JADE Ice Road running from PTU gravel lease roads to JADE #1, and by the JADE Ice Airstrip which is adjacent to the pad.

JADE also may opt to drill additional wells and/or re-enter and test existing wells on its lease in the future. This may require revised alignments for snow roads, ice roads and airstrips, and ice pad locations within the Arctic Coastal Plain in an area bounded by the Sag River to the west and the Staines River to the East as shown in Map 3 – Project Area.

**Well Site.** The proposed pad location for JADE 1 was inspected in mid-August 2020 during field work, with the pad located and mapped based on terrain considerations and to avoid damaging willows, which are an important food source and habitat for local wildlife. The ice pad footprint will be 500 feet by 500 feet in plan (Maps 5, 6 & 7), covering approximately 5.7 acres. Temporary facilities on the drill ice pad used to support the project will include a satellite office, rig camp, storage and laydown areas, communication tower and connexes, and maintenance shops. There also will be a 60-80 bed camp. The camp will include offices, restrooms, foodservice & recreation areas. JADE has signed a facility sharing agreement with ExxonMobil Alaska Production Inc. (EMAP) and Hilcorp North Slope LLC (HNS) to use PTU facilities and heavy equipment. Facilities include staging at the Alaska State C-1 Pad and PTU West Pad, a Class I disposal well on the Central Pad, infield gravel lease road system, year-round gravel airstrip, Service Pier for barging & module offloading, and support infrastructure. The PTU Central Pad also has other facilities to support drilling operations, such as crew camps, offices, warehouses, and maintenance shops; electric power-generating and distribution facilities; power and telecommunication cables; treatment systems for drinking water and disposal of wastewater in the Class I disposal well; waste management facilities; communications facilities; and storage for diesel fuel (see below), water, and chemicals.

**Drilling and Testing.** JADE will use a module mobile land drilling rig to drill JADE #1 to a depth of about 11,000 feet true vertical depth (TVD) to test stacked conventional objectives within the Brookian Reservoir, contained within over-pressured reservoir sands found throughout the PTU and nearby Badami Oil Field. The well will be designed and permitted in accordance with the Alaska Oil and Gas Conservation Commission (AOGCC) regulations. All drilling and testing operations will be from the JADE #1 Ice Drill Pad as shown in Maps 6 and 7 in Appendix A.

**Water Withdrawal and Use.** During operations, up to 5,000 gallons per day (gpd) potable water will be required for domestic use in crew camps on the PTU Central Pad. Potable water will be provided by HNS as PTU Operator. For other fresh water uses, JADE is applying for a temporary water use authorization (TWUAs) from the Alaska Department of Natural Resources/Division of Mining, Land and Water (ADNR/DML&W) for withdrawal of ice chips and water from nearby lakes and the former PTP Minesite. Other fresh water uses will total about 13.5 million gallons (Mgal) as follows: 8.5 Mgal for snow road river crossing ice ramps, ice road, ice airstrip and ice pad construction and maintenance (fresh water and ice chips combined) and 2 Mgal for drilling operations and 3 Mgal for stimulating and testing each well.

B. Should a portion of the permitted area be closed to the general public? Yes ☒. No ☐. If yes explain which portion and provide justification for exclusive use:

JADE proposes to implement a 100-foot safety zone around the JADE #1 Ice Drill Pad to protect the public from health and safety hazards that could from drilling and support operations pad. Except for the JADE #1 safety zone, JADE proposes not to restrict traditional and customary subsistence access to and harvesting in the Project area. Additionally, JADE will provide shelter and assistance to subsistence users at JADE #1 in emergency situations.

C. Briefly describe the current condition of the proposed site of use, noting any known garbage, debris or signs of possible site contamination (If significant, we recommend you provide pictures to establish initial conditions):

Photos of the proposed JADE Ice Road alignment, JADE Ice Airstrip and JADE #1 Ice Drill Pad taken during site inspections are included in APPENDIX B – Supplement 3 Project Area Conditions. No development has taken place, and known garbage, debris or signs of possible site contamination were not found. Photos of the JADE Snow Road alignment are not available. Development within 1 mile of this 61.5-mile alignment is limited to the KADLER STATE 15-09-16 gravel airstrip found in U009N016E, Section 15 (0.8 miles north) as shown in Map 5b, and WEST STAINES 2 found in U009N022E, Section 25 and U009N023E, Section 30 (0.3 miles north) as shown in Map 5e. Known contaminated sites within 1 mile of the alignment listed in the Alaska Department of Environmental Conservation/Division of Spill Prevention and Response (ADEC/SPAR) database is at WEST STAINES 2. JADE does not expect to find garbage, debris or signs of possible site contamination as the alignment is undeveloped; but will update ADNR after alignment inspection during July 2023 field studies.

D. Are there improvements or materials on the site now? Yes ☐. No ☒. If yes, briefly describe the improvements, their approximate value, and who owns them (We recommend you provide pictures of improvements):

Photos of the proposed JADE Ice Road alignment, JADE Ice Airstrip and JADE #1 Ice Drill Pad taken during site inspections in APPENDIX B – Supplement 3 Project Area Conditions show no improvements. Photos of the JADE Snow Road alignment are not available, but a review of satellite imagery indicates no improvements as well. JADE will again update ADNR on conditions after alignment inspection during July 2023 field studies.

E. Describe the natural vegetation --- ground cover, trees, shrubs --- and any proposed changes. Describe the location of any estuarine, riparian, or wetlands and any noticeable animal use of area.

The entire Project area is on arctic tundra found in the Arctic Coastal Plan characterized by cold air with low moisture holding capacity, combined with minimal precipitation. This flat area is covered with small thaw lakes and ponds, braided rivers and beaded streams surrounded by polygonal patterned ground and pingos underlain by permafrost up to 2,000 feet in depth. This entire area also is considered wetlands despite limited precipitation due to the confining layer caused by continuous permafrost.

**Natural Vegetation.** The dominant vegetation type across the Project area grows in a thin soil layer and consists of tussock tundra, with willows in the small drainages and wet sedge and grasses tundra in old, drained lakes. Tussocks are formed of cotton grass and other sedges and forbs, with scattered dwarf shrub.

**Animal Use (Wildlife).** Wildlife that may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and over-wintering caribou, and denning grizzly bears. Additionally, all Project components cross or are located adjacent to potential polar bear denning habit (Map 4) with the closest reported polar bear den about 2 miles north of the JADE Snow Road as it crosses No Name Creek.

Bearing this in mind, JADE believes non-interference and avoidance of resident wildlife is crucial to the responsible execution of successful operations on the North Slope. Therefore, JADE is updating its *JADE Exploration/Interaction Program Wildlife Interaction Plan*, *Polar Bear Application for Incidental Harassment Authorization Application* and *Polar Bear Interaction Plan* and submitting all for review and/or approval by the North Slope Borough (NSB), US Fish and Wildlife Service (USFWS) and Alaska Department of Fish & Game (ADF&G) prior to winter 2023/2024 drilling operations. All updated/approved plans are adopted by reference, and all guidance, mitigation measures and procedures outlined in the plan will be included in orientation and training for all field personnel.

**E. Describe how you plan to access the site and your mode of transportation.**

Winter 2023/2024 operations will include pre-packing the JADE Snow Road and pre-packing and constructing the JADE Ice Road and JADE Ice Airstrip to access JADE #1. JADE will build snow and ice roads at least 35-feet wide to accommodate drill rig moves and safely conduct drilling and support operations, and all alignments will be constructed and maintained using accepted practices for the North Slope, subject to ADNOR opening criteria for winter tundra travel in the Coastal Plain. This includes pre-packing to drive frost down and preserve early snow prior to the official tundra opening by using equipment that has passed the ADNOR low-pressure vehicle qualification certification. Additionally, JADE will:

- Construct snow road and ice road approaches and shoulders to allow for smooth and easy transition for snow machines crossing through the Project area.
- Avoid areas along alignments that are potential polar bear and grizzly bear den habitat (especially south-southwest facing stream embankments, pingos and drained lakes), keeping in mind regulatory required buffer zones.
- Provide the ADNOR with an as-built of the ice and snow roads, ice airstrip and ice pad after completion. Data will be in GIS formatted shapefiles referencing the World Geodetic System of 1984 (WGS84).

**JADE Snow Road.** Based on field studies planned for July 2023, JADE will design and locate the snow road to avoid the most sensitive and easily damaged tundra types. Overland transport of drilling and support equipment along the route will be by using Steiger and Pisten Bully tractor trailer units; these units are low-ground-pressure tracked vehicles, sleds and tracked trailers capable of carrying up to 100,000 lbs. with less than 4 psi ground pressure. They will operate in a manner that eliminates direct impacts on the tundra by shearing, scraping, or excessive compaction. The JADE Snow Road will cross lakes, rivers and stream on grounded ice whenever feasible. Ice thickness at all crossings will be confirmed by hand drilling during route pioneering. There may be areas, however, on rivers, streams and lakes that may need to be protected with snow when traversing from tundra to ice. JADE will first construct snow or ice ramps in these areas and then confirm the ice is thick enough to cross. This will eliminate impacts to riverbanks, lake shoreline and/or tundra. If required and upon completion of use, ramped stream crossings along the route will be slotted, breached, or weakened to facilitate breakup and minimize potential impacts to stream banks.

**JADE Ice Road.** Based on field studies completed in 2019 and 2020, JADE has designed and locate the snow road to avoid the most sensitive and easily damaged tundra types. JADE will prepack the ice road alignment similar to the snow road, and then construct a firm, 6-inch-thick ice cap to support the weight and pressure of the vehicles by waterflooding ice chips placed in two lifts and then maintaining this cap by waterflooding. JADE will only operate conventional rolling stock along the ice road. No ice ramped river crossings will occur along this route.

**JADE Ice Airstrip.** Additional details about aviation operations are provided in the *JADE Aircraft Use Plan*, adopted by reference herein. JADE will either use a single-engine Otter (or similar) fixed wing on skis or a Cessna 206 (or similar) on wheels for crew changes and "hot shot" loads and will limit the number of takeoffs and landings to the maximum extent possible. JADE will build the temporary ice airstrip by expanding the JADE Ice Road to at least 50 feet wide and 2500-feet long with capping it with a 1.5-foot lift consisting of at least 1 foot of ice over a minimum 6 inches compacted snow. The ice landing strip also will be oriented NE/SW for taking advantage of prevalent wind directions.

**5. Environmental Risks / Hazardous Substances**

In the course of your proposed activity will you generate, use, store, transport, dispose of, or otherwise come in contact with toxic and/or hazardous materials, and/or hydrocarbons? Yes ☒. No ☐. If yes, please describe below:

**A. The types and volumes of fuel or other hazardous substances present or proposed:**

Hazardous substance present on site will include hazardous materials (hazmat) used to support drilling and testing operations, and hazardous wastes generated during drilling and testing operation.

**Hazmat.**

**Diesel fuel and crude oil** are the two "oils" managed in largest volumes during operations. Diesel fuel will be used at approximately 4,000 gallons per day (gpd) to run the on-site equipment while drilling and testing. Flow testing may be used to confirm production for the wells where up to 3,000 bbls oil per day (bopd) may be generated for a very limited time. **Gasoline** will be used onsite but in limited quantities (<100 gpd). **Other oils (motor oil, lube oil, hydraulic fluids)** and other **chemicals (glycol, methanol, etc.)** may also be used but at lower quantities (normally <100 gpd). A variety of commonly used **water-based mud (WBM) drilling fluids & additives** (<100 gpd) also will be used to provide and maintain the correct drilling mud formulation for the conditions being drilled. **Other drill fluid chemicals** (<250 gallons), required for testing and well stimulation, also may be brought in.

**Hazardous wastes.**

JADE has prepared a Project-specific, comprehensive *JADE Waste Management Plan* (adopted by reference) and will implement it during operations to provide hazardous waste management guidance pursuant to *Alaska Administrative Code Title 18 -Chapter 60 (18 AAC 60)* and *Code of Federal Regulations Title 40-Part 261 Subpart 3 (40 CFR 261.3)*. 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 JADE operations.

All wastes generated during this Project will be classified as defined by 40 CFR 261.3 by JADE into the following three categories with related types and volumes and disposal.

1. **RCRA Hazardous wastes** generated during drilling and testing are further divided into the following subcategories along with types and volumes. These will be hauled for offsite disposal or recycling.
  - **Listed and Characteristic RCRA Hazardous Waste fluids and solids.** Fluids include aerosol can fluids, discarded solvents, gasoline, diesel, xylene, methanol and mud lab reagents, and will total < 5 gal for the Project. Solids include sorbent & rags containing these fluids and will total <0.5 cubic yards (cy).
  - **Universal Wastes** include empty aerosol cans (solvent and non-exempt), Ni-Cad and lithium batteries, lamps (e.g., fluorescent tubes, incandescent light bulbs, mercury vapor lamps) and printer cartridges that combined, will total <0.1 cy.
2. **RCRA-exempt wastes** will include:
  - **Class II RCRA-exempt WBM drill waste fluids and production testing fluids** that will total 18,000 barrels (bbls) and WBM drill waste cuttings that will total 1100 cy. The drill waste cuttings and fluids will be manifested and hauled for disposal by offsite injection into Class I Underground Injection Cell (UIC) disposal wells at the GPBU Waste Disposal Facility (WDF) or MPU Waste Injection Facility (WIF).
  - **RCRA-exempt Domestic Wastewater and Household (Camp) Hazardous Wastes.** Domestic wastewater will average 5,000 gallons per day (gpd) during operations. It will be treated on site and discharged. RCRA-exempt household hazardous wastes generated from camp operations, such as cleaning fluids will be generated at <1 gpd will be combined with the domestic wastewater for treatment and discharge.
3. **RCRA non-exempt and/or non-hazardous waste**
  - **Oily solid waste** consisting of oil filters (punctured and drained), oil filters cloth (drained), plus sorbents, rags, floor sweepings with a combined total of 15 cy. These will be disposed offsite.
  - **Cement rinsate** will total about 400 bbls. These fluids will be manifested and hauled for disposal by offsite injection into Class I UIC disposal wells at the GPBU WDF or MPU WIF.
  - **Used oil** (15 bbls) and **kitchen grease** (3 bbls).

**B. The specific storage location(s):**

Storage locations for bulk hazardous substance are shown in Maps 6 & 7.

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 North Slope Borough Municipal Code Title 19-Chapter 50 (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.

**Fuel and Hazmat**

**Diesel:** three 9,980-gallon (238-bbl) double-walled aboveground storage tanks (DW ASTs) within lined and bermed secondary containment areas (SCAs) capable of holding 110% of a single AST.

**Crude oil:** eight 400-bbl DW ASTs within SCA.

**Gasoline:** one 500-gallon DW AST within SCA.

**Motor oil, lube oil, hydraulic fluids:** 5-gallon pails, 55-gallon drums, and a variety of different sized (250-400 gallons) iso-containers regulated by the US Department of Transportation (DOT) and/or US Environmental Protection Agency (EPA); all stored within SCA.

**Water-based mud (WBM) drilling fluids & additives:** 5-gallon pails, 55-gallon drums and a variety of different sized (250-400 gallons) iso-containers regulated by the DOT and/or EPA; all stored within SCA.

**Hazardous Waste.**

**Listed & Characteristic waste:** All in DOT-approved 5-gallon pails, 20-gallon drums, with batteries in recycling accumulation area and aerosol cans, lamps and printer cartridges in universal accumulation area, all staged w/in a satellite accumulation area within SCA.

**Universal waste:** DOT-approved 5-gallon pails in universal accumulation area, all staged w/in a satellite accumulation area within SCA.

**Class II RCRA-exempt WBM drill waste fluids and production testing fluids:** immediately loaded into and stored in eight double-walled, 144-bbl (30 cy) Arctic Cuttings Boxes (ACBs) hauled for offsite disposal (primary) or in 400-bbl DW ASTs within SCA.

**Class II RCRA-exempt WBM drill waste fluids and production testing solids (cuttings):** immediately loaded into & stored in eight double-walled, 30-cy (144-bbl) ACBs hauled for offsite disposal (primary), or in five 60-cy shale bins within SCA (contingency) or two 100-cy storage cells within SCA (emergency).

**RCRA-exempt Domestic Wastewater and Household (Camp) Hazardous Wastes:** in sealed tanks within wastewater treatment facility until treated and discharged.

**RCRA non-exempt and/or non-hazardous waste:**

- Oily solid waste: double-bagged in oil resistant poly waste bags placed within lined 1-cy cardboard box within SCA.
- Cement rinsate in double-walled, 144-bbl (30 cy) ACBs immediately hauled offsite for disposal.
- Used oil in closed top 55-gallon drums and kitchen grease in open top 55-gallon drums staged within SCA prior to recycling.

**C. The spill plan and prevention methods:**

Fuel handling, transfers, spill prevention, spill response and spill reporting will be conducted in accordance with *JADE Exploration/Appraisal Oil Discharge Prevention and Contingency Plan (ODPCP)* which has been approved by the ADEC (*ODPCP 19-CP-5253*) and is adopted by reference.

**Spill Prevention Measures.** JADE will design and develop the Project to avoid and minimize the possibility of spills. Spill prevention measures include a maintenance and inspection program as well as employee spill prevention training programs by JADE and onsite contractors. These are presented in the *ODPCP 19-CP-5253*. *ODPCP 19-CP-5253* will be available onsite for review, along with the JADE Well Control Emergency Response Plan (PEP WCERP).

As noted, fluid transfer operations will be performed by two trained operators in accordance with the JADE Fluid Transfer Procedures which are included Appendix B in *ODPCP 19-CP-5253*. Fuel-resistant liners, or "duck ponds" also will be placed under all valves or connections during fuel and chemical transfers. Duck ponds will be placed under pickup trucks, loaders, and all other equipment when stopped or idling for more than 5 minutes.

**Spill Response Measures.** Spills of fuels, hydrocarbons, or chemicals on ice pads and snow roads will be cleaned up immediately, and to the satisfaction of the ADNIR, ADEC and NSB to prevent damage to the underlying snow-covered lakes and tundra during spring break up.

In response to the unlikely event of a major blowout, JADE will follow response tactics and procedures presented in the *ODPCP 19-CP-5253*. A copy of tactics



used in response can be found in the [Alaska Clean Seas \(ACS\) Technical Manual, Volume 1: Tactical Descriptions](#) (latest versions incorporated by reference) that is supplemented by additional tactics in the [Spill Tactics for Alaska Responders \(STAR\) Manual](#) published by the ADEC (again latest version incorporated by reference). The ODPCC also provides lists of oil spill cleanup materials (sorbent pads, containment devices, etc.) to be stored at the drill rig, fueling points and maintenance areas sufficient to cleanup a spill of 82,500 bbls.

Additionally, Alaska Clean Seas will supply an Arctic Spill Response Equipment Connex and a Senior Emergency Response Technician (ERT) to manage spill response and cleanup. The ACS Senior ERT will be supported by a dedicated JADE Field Environmental Coordinator.

#### SECTION V: PERFORMANCE GUARANTY

Bonded Company: [To be provided prior to field ops](#)

Type: Enter Bond Type. Number: Enter Bond Number. Amount: Enter Bond Amount.

Bonding Company: Enter Bonding Company.

Mailing Address: Enter Mailing Address.

City: Enter City. State: Enter State. Zip Code: Enter Zip Code.

Phone: Enter Phone. Fax: Enter Fax. Email: Enter Email.

#### SECTION VI: INSURANCE

##### Comprehensive General Liability Insurance:

Amount of Insurance: [To be provided prior to field ops](#)

Insurer Name: Enter Insurer Name.

Mailing Address: Enter Mailing Address.

City: Enter City. State: Enter State. Zip Code: Enter Zip Code.

Phone: Enter Phone. Fax: Enter Fax. Email: Enter Email.

#### SECTION VII: GLOSSARY OF TERMS

Is a Supplemental Questionnaire included in Appendix B? ☒ Yes ☐ No

Term #	Term	Term Definition
1.	<a href="#">18 AAC 60</a>	<a href="#">Alaska Administrative Code Title 18 - Environmental Conservation Chapter 60</a>
2.	<a href="#">40 CFR 261.3</a>	<a href="#">Code of Federal Regulations Title 40-Part 261 Subpart 3</a>
3.	<a href="#">AAC</a>	<a href="#">Alaska Administrative Code</a>
4.	<a href="#">ACS</a>	<a href="#">Alaska Clean Seas</a>
5.	<a href="#">ADEC</a>	<a href="#">Alaska Department of Environmental Conservation</a>
6.	<a href="#">ADEC/SPAR</a>	<a href="#">ADEC/Division of Spill Prevention and Response</a>
7.	<a href="#">ADF&amp;G</a>	<a href="#">Alaska Department of Fish &amp; Game</a>
8.	<a href="#">ADL</a>	<a href="#">Alaska Division of Land (lease)</a>
9.	<a href="#">ADNR</a>	<a href="#">Alaska Department of Natural Resources</a>
10.	<a href="#">ADNR/DML&amp;W</a>	<a href="#">ADNR Division of Mining, Land and Water</a>
11.	<a href="#">ADNR/OHA</a>	<a href="#">ADNR Division of Parks &amp; Recreation, Office of History and Archaeology</a>
12.	<a href="#">ADNR/DOG</a>	<a href="#">ADNR Division of Oil and Gas</a>
13.	<a href="#">ASH</a>	<a href="#">Alaska Safety Handbook</a>
14.	<a href="#">AST</a>	<a href="#">Aboveground storage tank</a>
15.	<a href="#">bbls</a>	<a href="#">barrels</a>
16.	<a href="#">BOPD</a>	<a href="#">barrels oil per day</a>
17.	<a href="#">DOT</a>	<a href="#">US Department of Transportation</a>
18.	<a href="#">EMAP</a>	<a href="#">ExxonMobil Alaska Production Inc.</a>

19.	EPA	US Environmental Protection Agency
20.	ERT	Emergency Response Technician
21.	gal	gallons
22.	gpd	gallons per day
23.	HNS	Hilcorp North Slope LLC
24.	IFC	International Fire Code
25.	JADE	JADE Energy LLC
26.	Mgal	Million gallons
27.	NSB	North Slope Borough
28.	NSBMC	North Slope Borough Municipal Code
29.	NSEFH	North Slope Environmental Field Handbook
30.	ODPCP	Oil Discharge and Contingency Plan
31.	PTU	Point Thomson Unit
32.	RCRA	Resource Conservation and Recovery Act
33.	Redbook	Alaska Waste Disposal & Reuse Guide
34.	SCAs	Secondary containment areas
35.	STAR	Spill Tactics for Alaska Responders
36.	TVD	True vertical depth
37.	TWUAs	Temporary Water Use Authorizations
38.	UIC	Underground Injection Cell (Disposal Injection Well)
39.	USFWS	US Fish and Wildlife Service
40.	WBM	Water-based mud
41.	WDF	Waste Disposal Facility
42.	WGS84	World Geodetic System of 1984
43.	WIF	Waste Injection Facility

APPLICANT CONTACT signature:



Signature

Erik Opstad

Name

Managing Director.

Title

22 May 2023

Date

## LAND USE PERMIT APPLICATION SUPPLEMENTAL QUESTIONNAIRE FOR: Off Road Travel

Answer the following questions if your proposed activity includes off-road travel:

**Terrain:** Check the following terrain type(s) that best describes your route of travel:

- ☐ Wetlands
- ☐ Open, non-tundra or wetland areas
- ☐ Rivers or other waterbodies
- ☐ Wooded areas with trees of 6" or greater diameter (at breast height)
- ☒ Tundra areas

**Vehicles and Weight:** List the number and kinds of vehicles to be used for motorized travel, the weight of each vehicle and the weight of each trailer or sled (including loaded weight) to be carried by that vehicle:

JADE proposes to haul drilling tangibles, support facilities, materials, supplies and equipment overland by Steiger and Pisten Bully tractor trailer units. JADE estimates drilling support by overland transport only will require 263 roundtrip loads as follows.

- 13 initial loads of ice road equipment to build and then maintain the JADE Ice Road and JADE #1 Ice Pad.
- 146 loads of rig modules, tubulars, drilling equipment, support facilities, drilling supplies and materials prior to drilling startup.
- 104 line haul loads during drilling (including 8 line haul loads of testing equipment).

**Mileage:**

- State the average total miles traveled in one round trip: 123
- State the number of trips proposed: 263

**Season:** Proposed date(s) of travel will be: **From:** 15 December each season **To:** 24 April each season

**Stream and Waterbody Crossings:** Note who you contacted in the ADF&G, Division of Habitat:

Date: 28 April 2023 Person: Maria Wessel: Habitat Biologist, Region 3

**Fuel and Hazardous Substance Factor:** The volume of fuel and hazardous substances to be used is the total volume in gallons to be carried on one vehicle and any trailers or sleds that vehicle is towing.

- Maximum volume of fuel (in gallons) that is being transported by one vehicle and any trailers or sleds it is towing: 4000 gallon.
- Hazardous substances other than fuel:

Substance: Please see JADE Land Use Permit Application

Substance: \_\_\_\_\_

LAS # \_\_\_\_\_



- Do you have an Oil Discharge Prevention and Contingency Plan approved by the Alaska Department of Environmental Conservation? **Yes** ☐ **No** ☐
  - Do you have either a trained spill response team or a contract with a spill response company? **Yes** ☐ **No** ☐
- 

This form must be filled out completely and submitted with the applicable fees. Failure to do so will result in a delay in processing your permit. AS 38.05.035(a) authorizes the director to decide what information is needed to process an application for the sale or use of state land and resources. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested or AS 45.48). Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 40.25.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210.

In submitting this form, the applicant certifies that he or she has not changed the original text of the form or any attached documents provided by the Division. In submitting this form, the applicant agrees with the Department to use “electronic” means to conduct “transactions” (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 – AS 09.80.195) that relate to this form and that the Department need not retain the original paper form of this record: the department may retain this record as an electronic record and destroy the original.

## JADE Exploration/Appraisal Program Typical Heavy Equipment, Configurations and Ground Pressure

	Vehicle / Equipment Weight (Lbs)	Max Load Weight (Lbs)	Total Surface Area of wheels/ tracks/sled (in <sup>2</sup> )	Ground Pressure (psi)	Max Load Ground Pressure (psi)	Quantity (Up to)
<b>Conventional Ice Road/Ice Airstrip/Ice Pad Construction and Maintenance Kit (Typical)</b>						
Ford F-150 Pick-up	6,000	7,000	400	15.0	17.5	4
Ford F-250 Pick-up	7,000	8,000	484	14.5	16.5	2
Ford F-350 Pick-up	11,000	12,000	484	22.7	24.8	2
ESI-700 Heater	4,500	4,500	192	23.4	23.4	2
Allmand Heater	4,500	4,500	192	23.4	23.4	2
Allmand Light Plant	3,500	3,500	192	18.2	18.2	3
Case Magnum - Ice Chipper	44,300	44,300	3,552	12.5	12.5	1
CAT 14 Series Motor Grader	46,000	46,000	3,072	15.0	15.0	1
CAT 16 Series Motor Grader	60,000	60,000	4,992	12.0	12.0	1
CAT 730 Ejector on LGP	56,000	76,000	3,024	18.5	25.1	2
CAT 730 Buffalo on LGP	53,750	103,750	3,024	17.8	34.3	1
Volvo A250 on LGP	66,500	86,500	3,024	22.0	28.6	3
Volvo 120 Loader	42,000	43,800	2,496	16.8	17.5	1
CAT 962 Loader	43,000	45,000	2,496	17.2	18.0	1
CAT 966 Loader	50,000	52,000	2,496	20.0	20.8	1
<b>Overland Transport/Off Road All Terrain Vehicles and Trailers</b>						
Cat D5K Low Ground Pressure Dozer	21,347	21,347	4,726	4.5	4.5	1
Tucker - Model Terra 2000 or Model 1600 Sno-Cat	16,000	18,500	8,840	1.8	2.1	2
Steiger/Case Tractor	50,000	50,000	9,240	5.4	5.4	12
Marcep 5000-gallon, double-walled fuel sleigh	20,000	60,000	10,560	1.9	5.7	4
45' Marcep Deck Trailer ("45' Flat Deck")	20,000	60,000	10,560	1.9	5.7	4
Marcep Scissor Neck 60 Ton Trailer "60-ton Scissor Neck")	25,000	85,000	10,560	2.4	8.0	2
Marcep Sub-Trailer Tracks	25,000	115,000	10,560	2.4	10.9	2
Snozad 70 ton ATV Double Drop trailer ("70-ton Low Boy")	25,000	115,000	10,560	2.4	10.9	2
Pisten Bully Tractor	16,182	19,882	15,866	1.0	1.3	8
Refrigeration Container on 53' Freight Sled	22,000	72,000	16,200	1.4	4.4	2
53' Freight Sled	21,000	88,500	16,200	1.3	5.5	2
49' Sled w/ 29' running area	9,880	65,000	37,799	0.3	1.7	6
Arctic Cuttings Box on 49' Sled w/ 29' running area	9,880	38,120	37,799	0.3	1.0	8

**Project Heaviest Load: Drill Rig substructure hauled by two Steigers on 70-ton Lowboy Trailer supplemented by**



LAS # \_\_\_\_\_

Land Use Permit Supplemental Questionnaire for  
Off-Road Travel – Form 102-1084E (Rev 09/21)



JADE Exploration/Appraisal Program Number and Kinds of Equipment

Drilling and Testing Equipment Spread (Typical)					
Equipment	Quantity	Weight	Equipment	Quantit	Weight
Conductor Auger Drill Rig (Texoma 500 or	1	20	Cat 966C loader or	2	25
Nordic #3 modular drill rig or similar	1	2000	Hot oil truck	1	33
Cement pumping unit	1	30	80-ton Rough Terrain	1	32
5000-gal fuel "spreader" truck	1	26	E-line logging Unit	2	30
Ford F-150 Pick-up	6	3.5	Mobile Heaters	8	2.2
Volvo A25 water buffaloes on LGP tires	1	33.2	Light Towers	8	1.7
Tractor/trailer and Roll-off Winch Tractor	4	40	28 Passenger Shuttle	1	5

LAS # \_\_\_\_\_

Land Use Permit Supplemental Questionnaire for  
Off-Road Travel – Form 102-1084E (Rev 09/21)

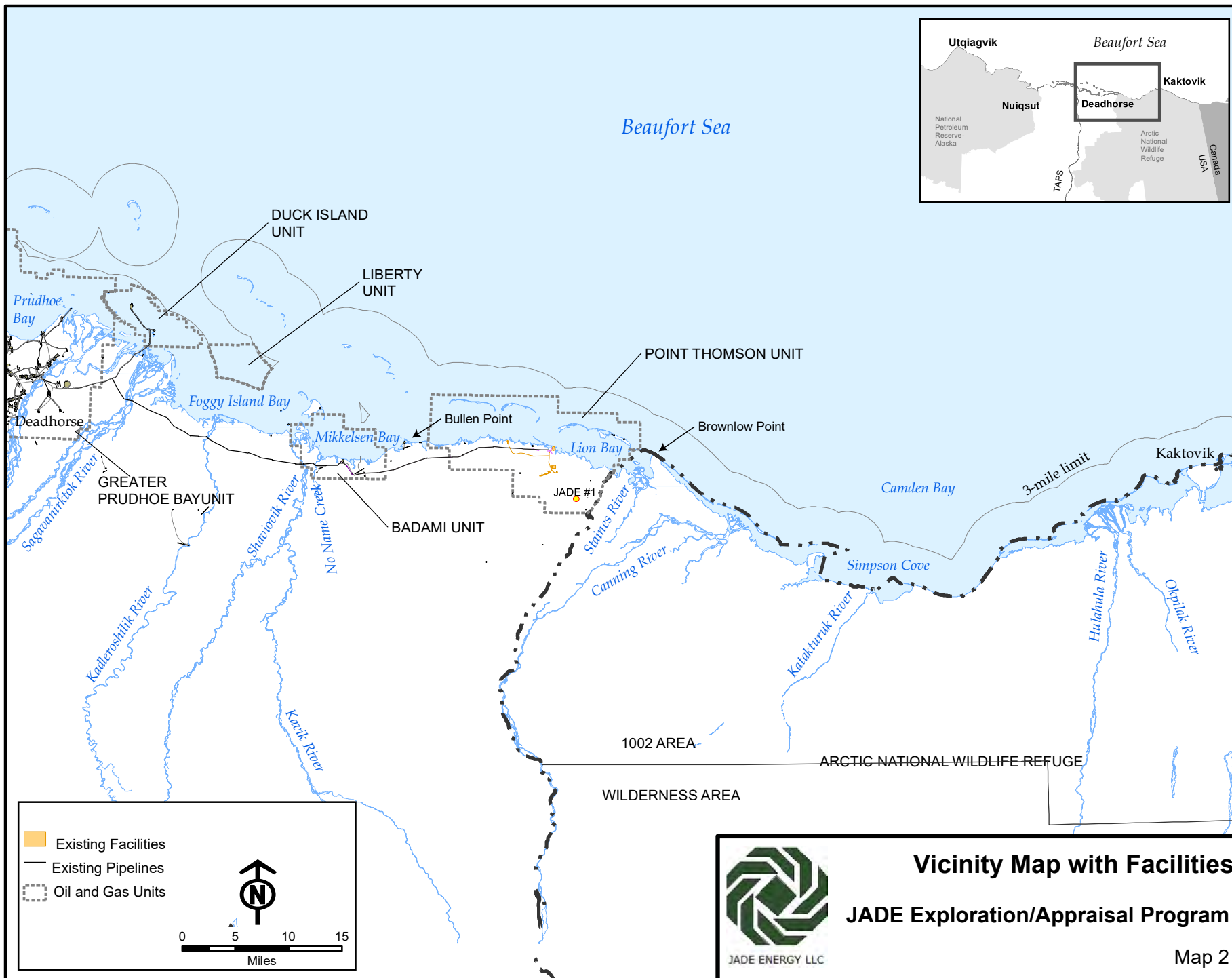
## APPENDIX A: MAPS

Include maps here.

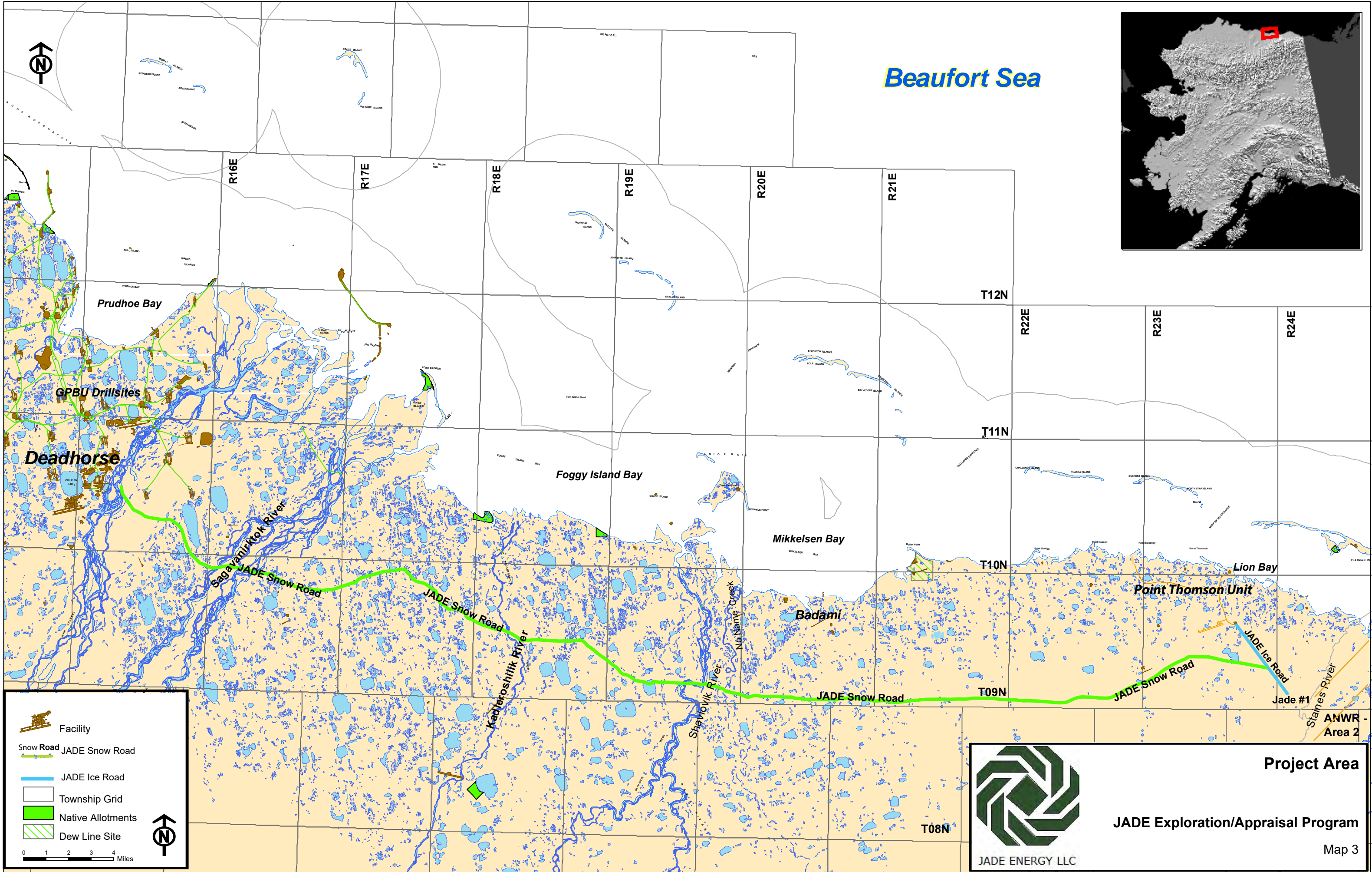






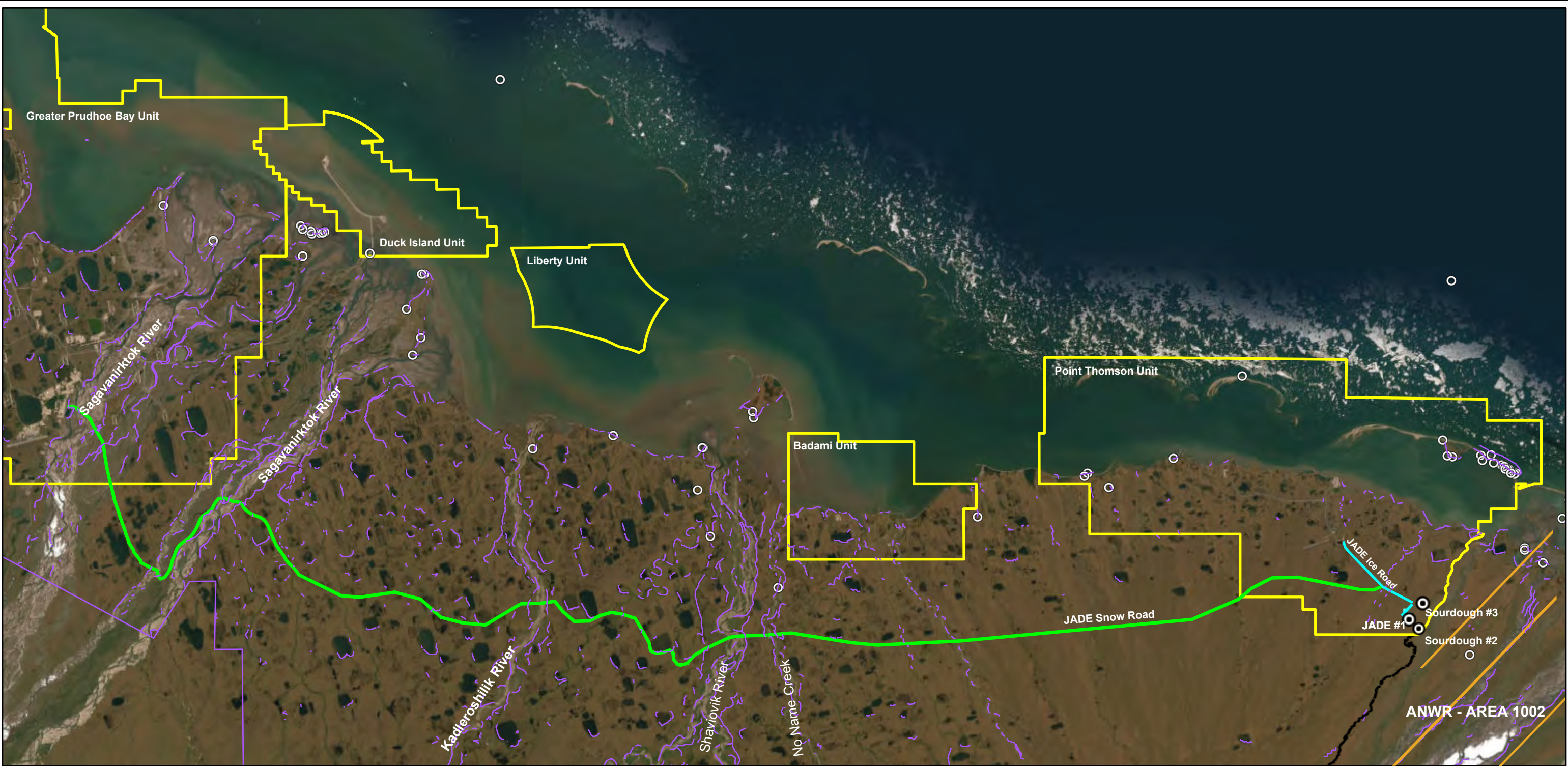




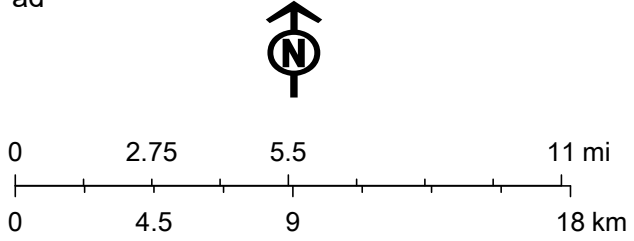


Map based on Figure 3 from JADE USACOE POA-2020-00347, Eng\_Form\_4345 FIGS & SUPPLEMENTAL SHEETS\_FINAL





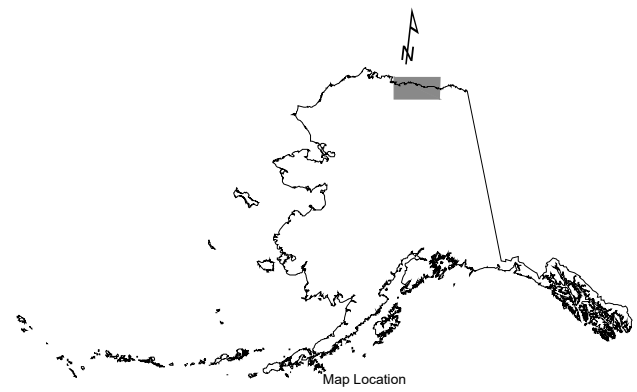
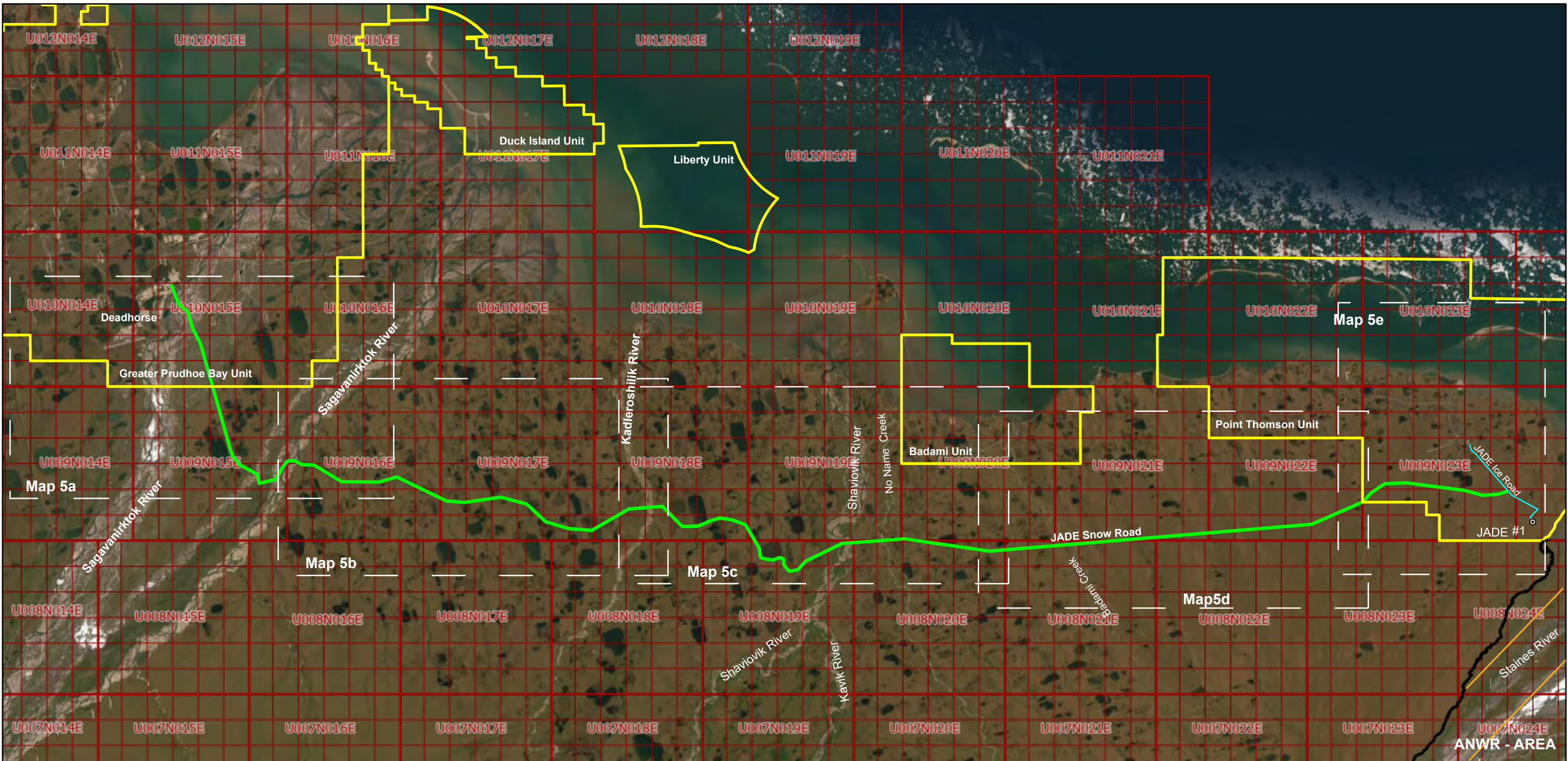
- Well
- JADE Snow Road Subprogram Area
- JADE Ice Road & JADE #1 Ice Pad Subprogram Area
- Reported Polar Bear Den
- Potential Polar Bear Den Habitat
- ANWR



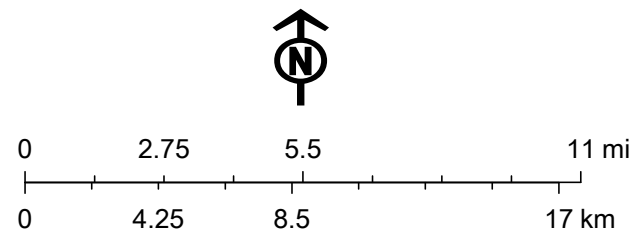
**JADE Project Area with Reported Dens and Potential Den Habitat**

**JADE Exploration/Appraisal Program**





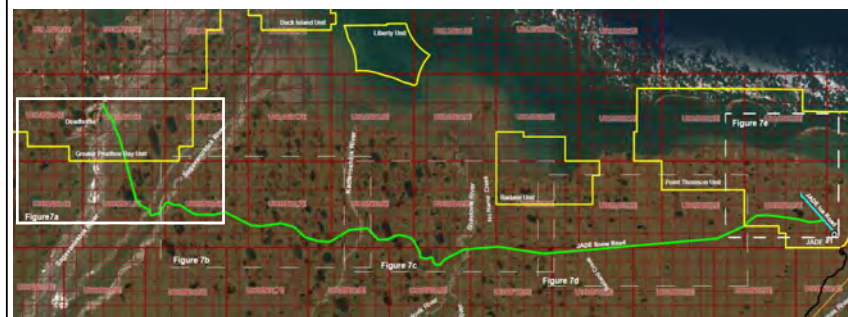
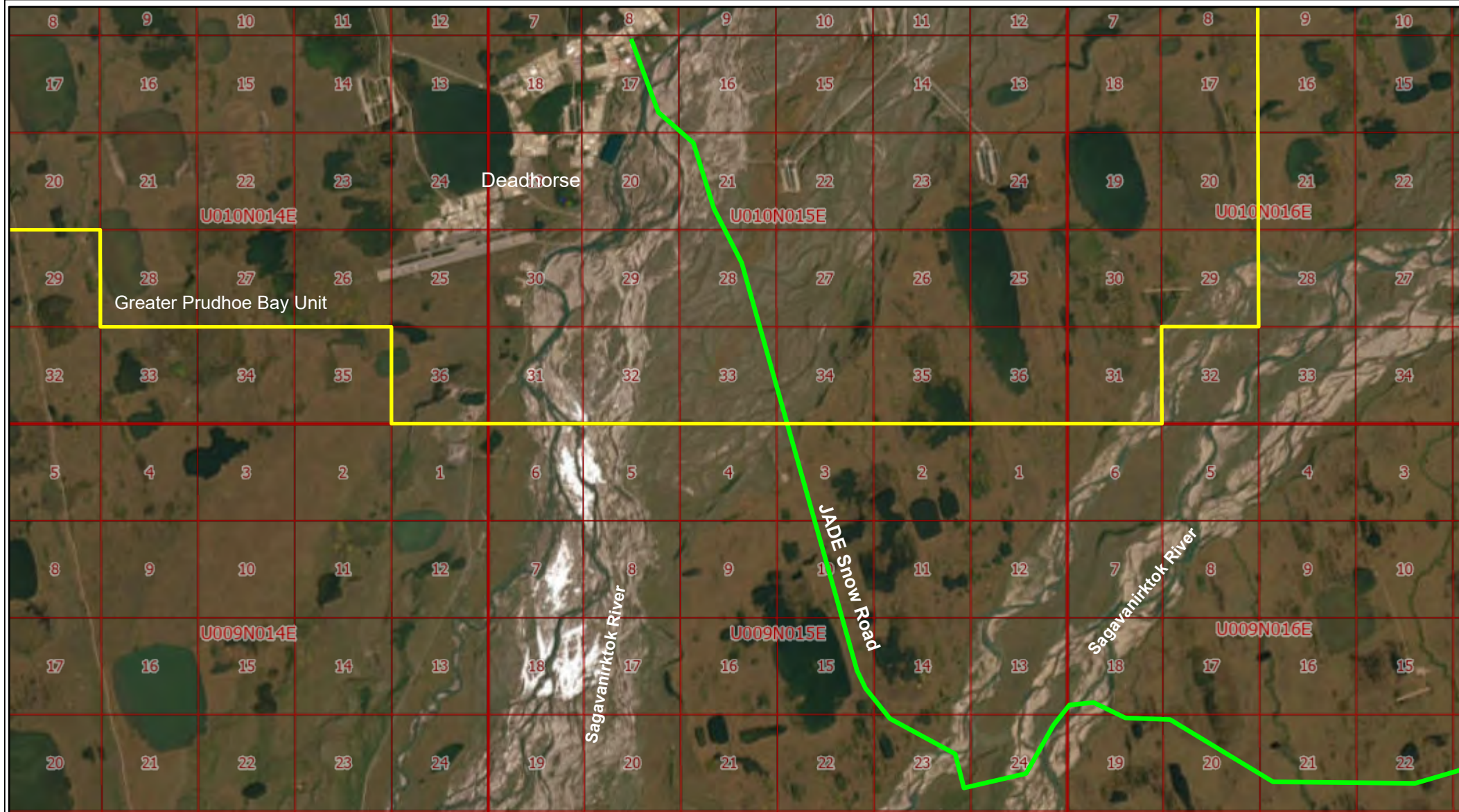
- Unit Boundary
- JADE Snow Road
- JADE Ice Road
- JADE #1
- Umiat T009N/R023E Section 24
- ANWR - Area 1002



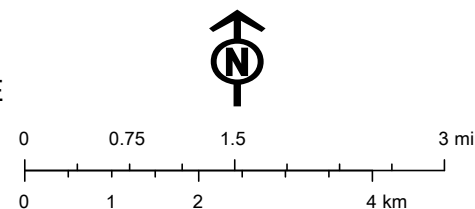
**JADE Project Area: MTRS Index Map**

**JADE Exploration/Appraisal Program**





Unit Boundary JADE  
 Snow Road  
U009N023E Umiat T009N/R023E  
 Section 24



## JADE Project Area MTRS

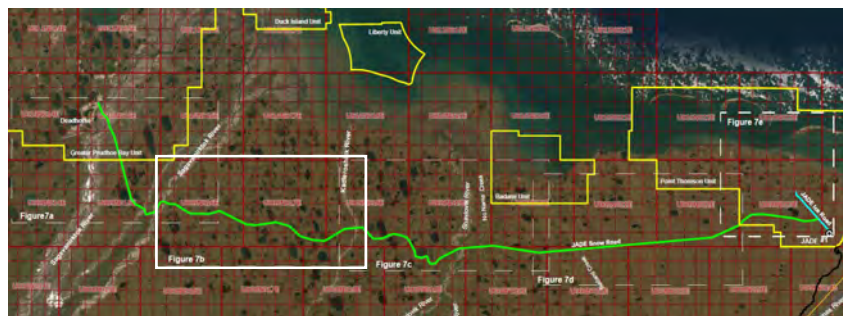
JADE Exploration/Appraisal Program



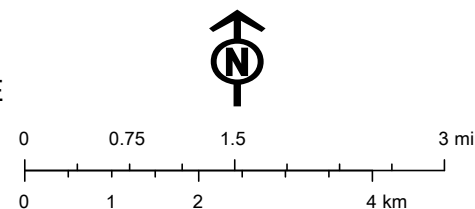
JADE ENERGY LLC

Map 5a





- Unit Boundary JADE
- Snow RoadJ
- Umat T009N/R023E  
Section 24
- ANWR - Area 1002



## JADE Project Area MTRS

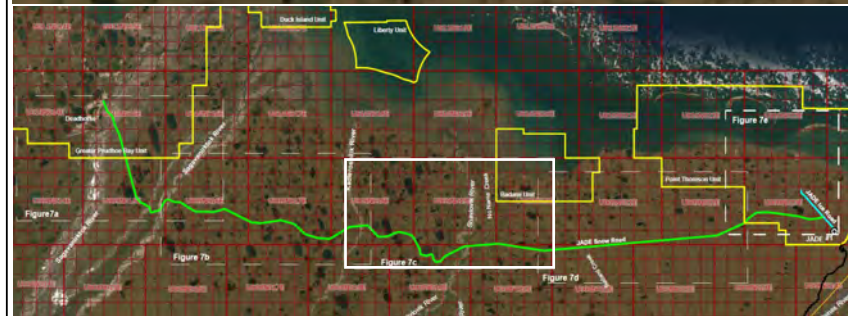
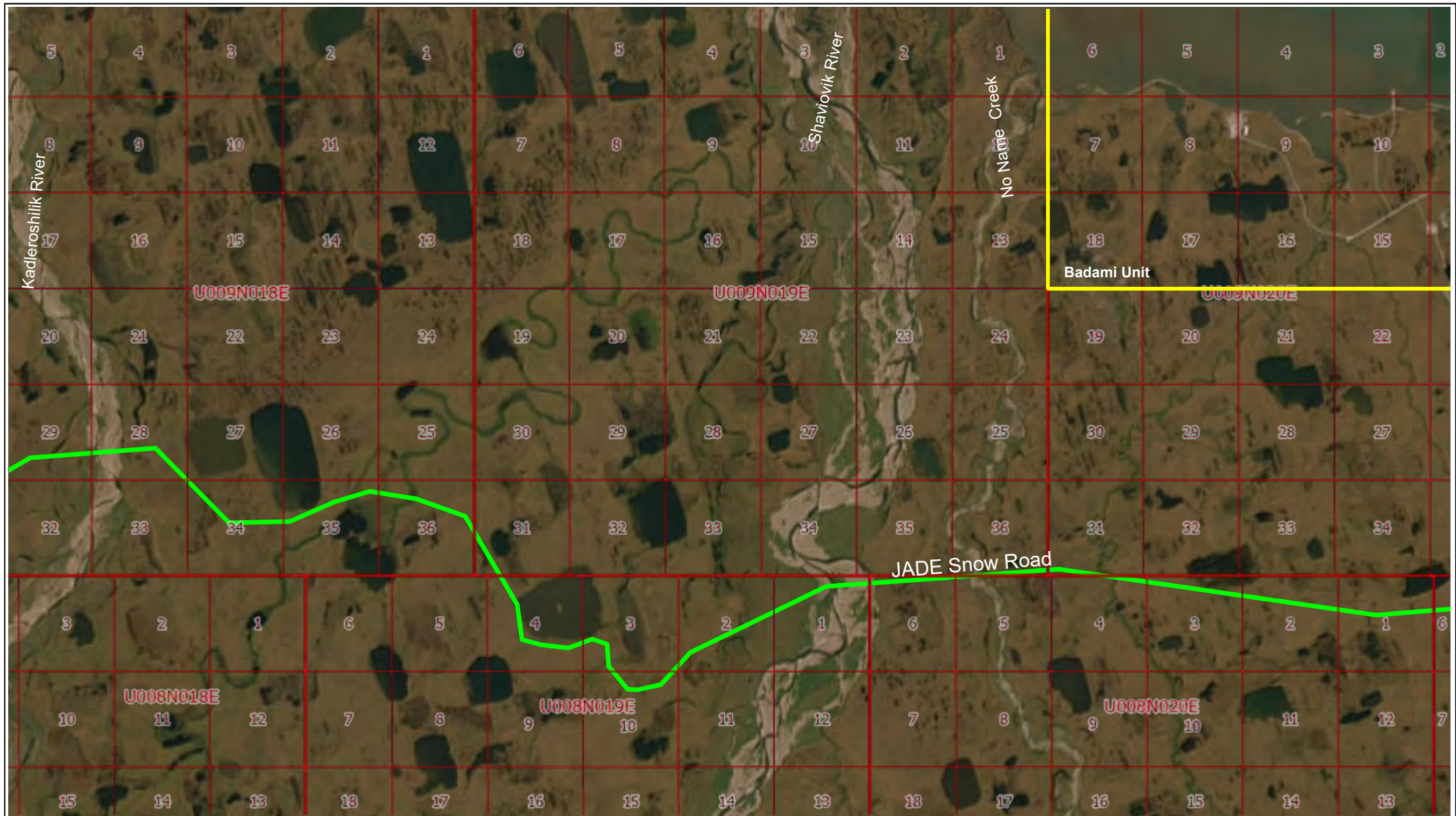
JADE Exploration/Appraisal Program



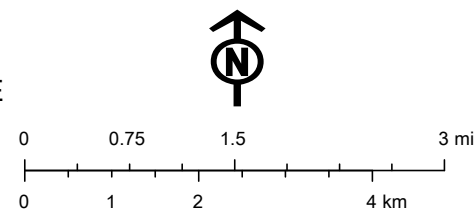
JADE ENERGY LLC

Map 5b





- Unit Boundary JADE
- Snow RoadJ
- Umiat T009N/R023E Section 24
- ANWR - Area 1002



## JADE Project Area MTRS

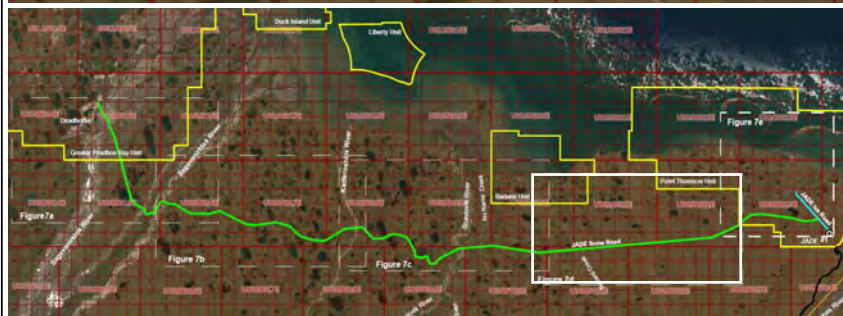
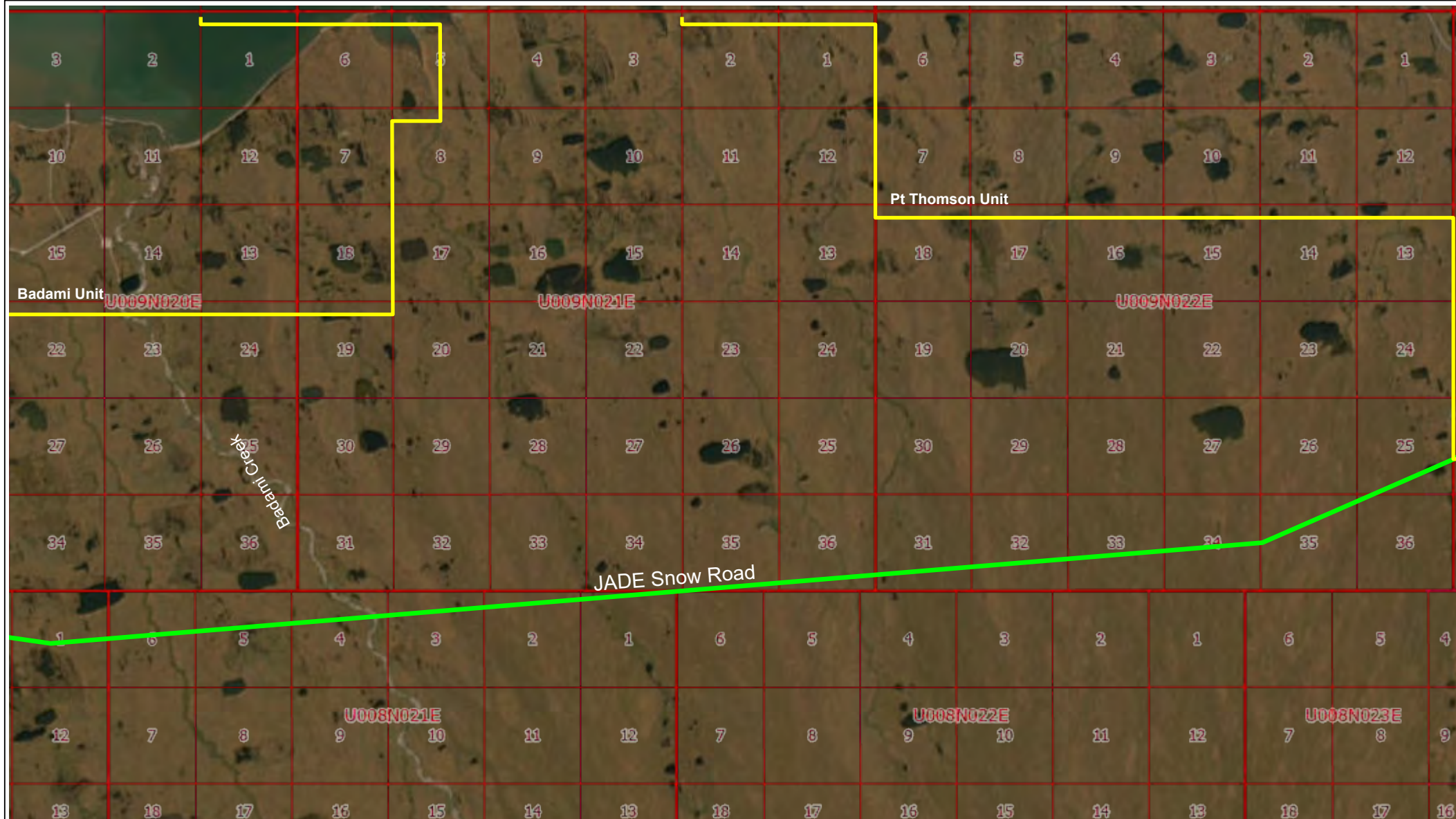
JADE Exploration/Appraisal Program



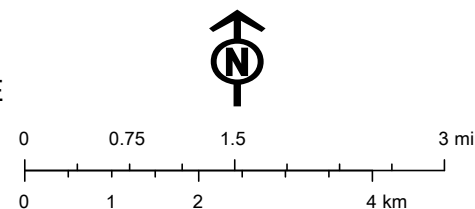
JADE ENERGY LLC

Map 7c





- Unit Boundary JADE
- Snow RoadJ
- U009N023E Umiat T009N/R023E Section 24
- ANWR - Area 1002



## JADE Project Area MTRS

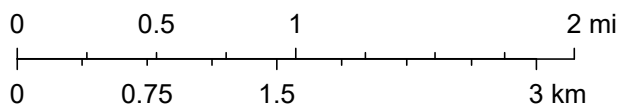
JADE Exploration/Appraisal Program



JADE ENERGY LLC

Map 5d





- Unit Boundary
- JADE Snow Road
- JADE Ice Road
- JADE Ice Airstrip
- JADE #1 Ice Pad
- JADE #1
- Umiat T009N/R023E Section 24
- ANWR - Area 1002

## JADE Project Area MTRS

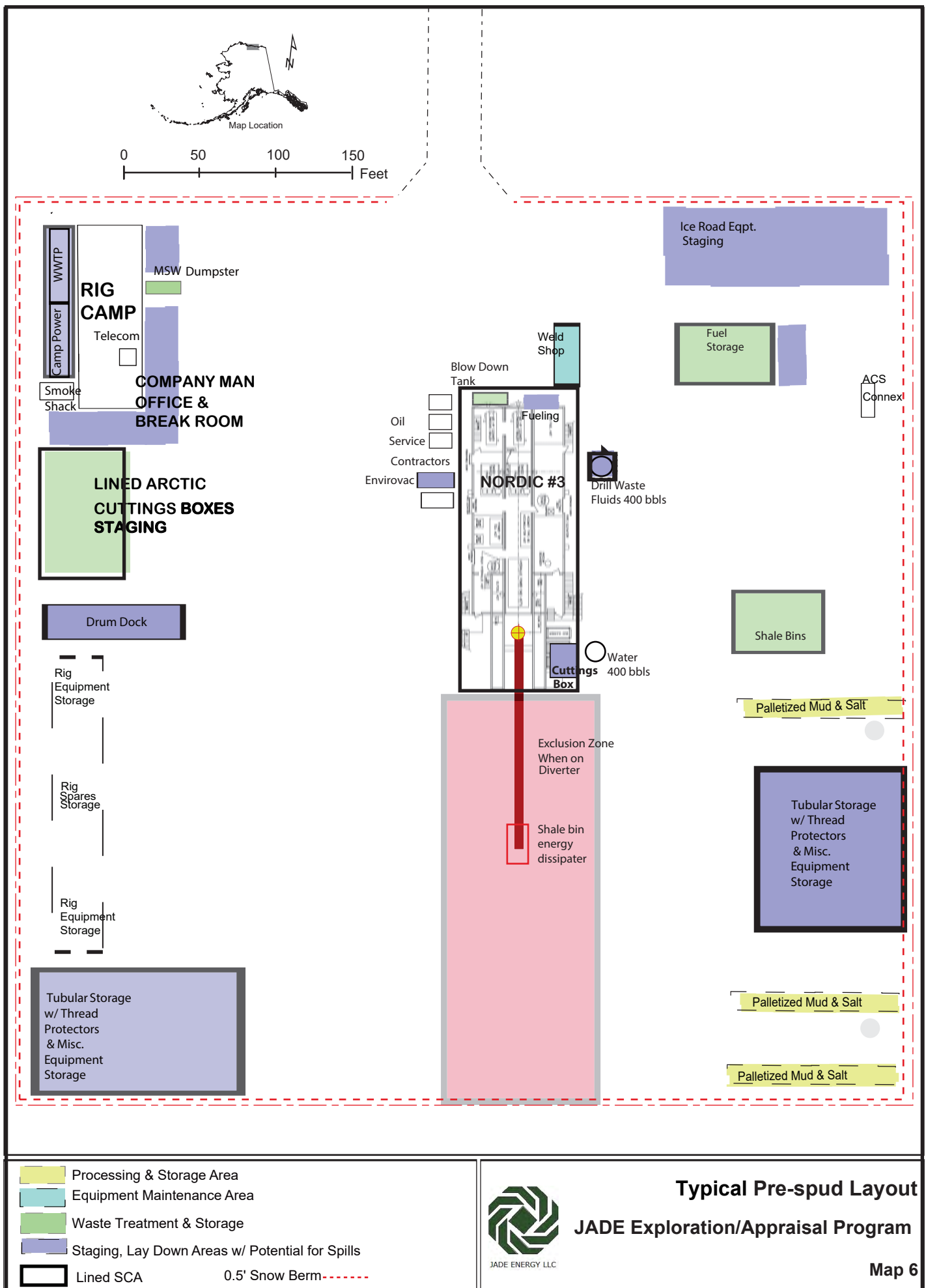
### JADE Exploration/Appraisal Program



JADE ENERGY LLC

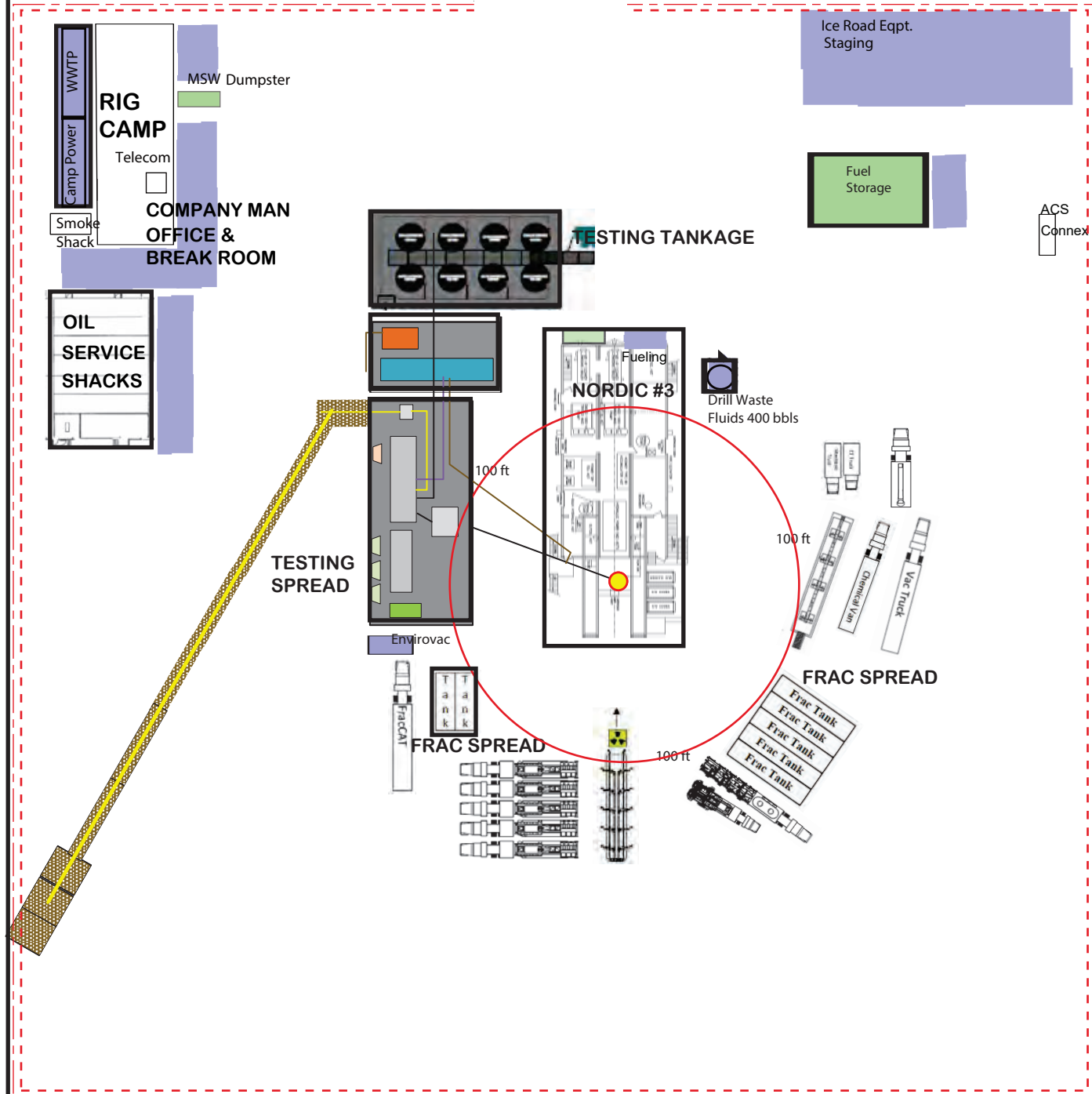
Map 5e







0 50 100 150 Feet



- Processing & Storage Area
- Equipment Maintenance Area
- Waste Treatment & Storage
- Staging, Lay Down Areas w/ Potential for Spills
- Lined SCA
- 0.5' Snow Berm

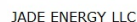


**Typical Frac and Testing Spread**  
**JADE Exploration/Appraisal Program**

**Map 7**

## APPENDIX B: OTHER

Include other information here.



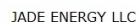
## Appendix B OTHER Supplement 1

Umiat Meridian, Township, Range, Section(s)



MTRS					
Project Component	Description	Umiat Meridian	Sections	Land Status	Notes
JADE Snow Road	61.5/ 99 (mi / km)	T10N/R15E T9N/R15E T9N/R16E T9N/R17E T9N/R18E T9N/R19E T8N/R19E T8N/R20E T8N/R21E T9N/R22E T9N/R23E T9N/R24E	17, 20, 28, 33 3, 10, 15, 14, 23, 24 18 to 24 30, 29, 28, 27, 35, 36 30, 31, 29, 28, 33 to 36 31, 35, 36 4, 3, 10, 1 6 to 1 6 to 1 31 to 35, 26 & 25 30 to 25 30 & 31	State Land State Land State Land State Land State Land State Land State Land State Land State Land State Land State Land State Land	MP0: Start Snow Road in Deadhorse            End at MP61.5 at JADE Ice Road
JADE Ice Road	4.2 / 6 (mi / km)	T9N/R23E T9N/R24E	14, 23 to 25 30 & 31	State Land State Land	MP0: Start JADE Ice Road at PTU lease road End MP4.2 at JADE #1
JADE Ice Airstrip	0.48 / 0.77 (mi / km)	T9N/R24E	30	State Land	Temporary ice airstrip
JADE #1 Ice Pad	5.7 acres	T9N/R24E	31	State Land	Drill pad for JADE #1

Umiat MTRS for Project Components also are show on Maps 5a to 5e



## GPS Coordinates

### JADE Snow Road GPS Coordinates (WGS84)

MILE POST	Latitude°	Longitude°
MP0	70.2200	-148.3812
MP0.5	70.2148	-148.3693
MP1	70.2090	-148.3576
MP2	70.2022	-148.3501
MP2.5	70.1957	-148.3409
MP3	70.1890	-148.3339
MP4	70.1749	-148.3222
MP5	70.1603	-148.3094
MP6	70.1468	-148.2996
MP7	70.1330	-148.2870
MP7.6	70.1264	-148.2747
MP8.3	70.1209	-148.2451
MP8.7	70.1161	-148.2409
MP9.4	70.1182	-148.2141
MP10.2	70.1286	-148.1949
MP10.6	70.1290	-148.1843
MP10.8	70.1264	-148.1708
MP11.3	70.1267	-148.1508
MP12.6	70.1170	-148.1048
MP14	70.1170	-148.0423
MP14.8	70.1199	-148.0150
MP16.9	70.1059	-147.9321
MP17.6	70.1053	-147.9029
MP19	70.1083	-147.8451
MP20.1	70.1042	-147.7991
MP21.1	70.0946	-147.7672
MP22.9	70.0897	-147.6934
MP22.6	70.1017	-147.6322
MP25.9	70.1028	-147.5756
MP27	70.0919	-147.5445
MP27.6	70.0922	-147.5162
MP28.5	70.0964	-147.4808
MP29.6	70.0922	-147.4355
MP30.6	70.0794	-147.4189
MP31	70.0736	-147.4140
MP31.6	70.0727	-147.3908
MP31.9	70.0736	-147.3754
MP32.2	70.0699	-147.3747
MP32.5	70.0668	-147.3667
MP32.9	70.0678	-147.3503
MP33.3	70.0722	-147.3393
MP34.9	70.0821	-147.2781
MP37.3	70.0851	-147.1738
MP40.7	70.0783	-147.0345
MP53.3	70.0931	-146.503
MP56.6	70.1157	-146.3820
MP61.5	70.1118	-146.1769

### JADE 1 Ice Road GPS Coordinates (WGS84)

MILE POST	Latitude°	Longitude°	Description
MP0	70.1382	-146.2456	Start at PTU Gravel Road System
MP0.5	70.1325	-146.2342	
MP1	70.1275	-146.2195	
MP1.5	70.1219	-146.2049	
MP2	70.1168	-146.1906	
MP2.5	70.1118	-146.1766	
MP2.7	70.111	-146.1743	Crossing "MP3" Creek
MP3	70.1081	-146.1574	
MP3.7	70.1035	-146.1312	Enter & run down JADE Ice Airstrip
MP4.1	70.0994	-146.1436	Exit JADE Ice Airstrip
MP4.2	70.0984	-146.1416	End JADE #1 Ice Pad

### JADE 1 ICE Airstrip GPS Coordinates (WGS84)

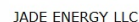
MILE POST	Latitude°	Longitude°	Description
Start Runway	70.1037	-146.1301	
End Runway	70.099	-146.1446	

### PROPOSED WELL BORE LOCATION GPS Coordinates (WGS84)

MILE POST	Latitude°	Longitude°	Description
NA	70.0976	-146.1412	JADE 1 Surface Hole

### MAJOR RIVER CROSSINGS GPS Coordinates (WGS84)


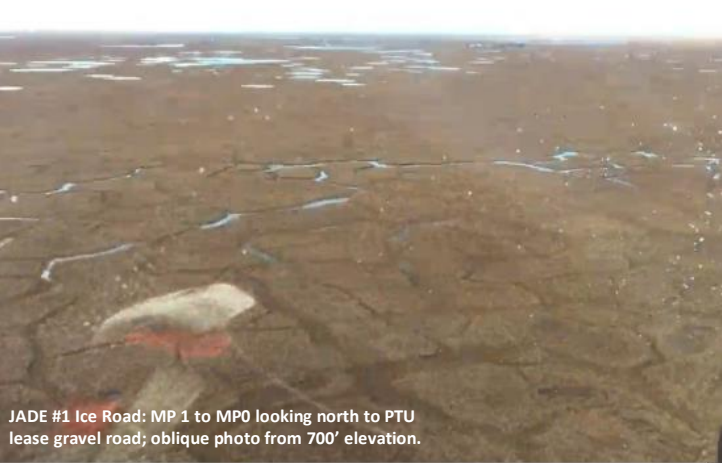





MILE POST	Latitude°	Longitude°	Description
MP0.7	70.2163	-148.3737	Sagavanirktok (Sag) River West Channel
MP8.2	70.1203	-148.2450	Sag River East Channel, West Branch
MP9.4	70.1191	-148.2123	Sag River East Channel, Middle Branch
MP10.7	70.1283	-148.1818	Sag River East Channel, East Branch
MP23.4	70.1023	-147.6008	Kadleroshilik River
MP35.4	70.0827	-147.2590	Shaviovik River



## Appendix B OTHER

## Supplement 3

## Project Area Conditions

	Well Name: JADE #1	Contractors:	Pollux Aviation	Well Type:		Exploration	Report #:	1
	Personnel: Rob Crotty crottyroby@gmail.com 907.952.6803		Penco				Report Date:	9/3/2019
				Field:		Pt. Thomson Unit - Brookian		AFE No.
24 hour Summary:	Fly and map ice road alignment and proposed JADE #1 drill pad						Weather	
Ops @15:00 hrs:	SIMOPs, weather advisories with PTU Logistics.						Gen Conditions:	Clear
							Phase:	NA
							Wind Speed:	15 knots gusts to 20 knots
24 hour Forecast:	Meet with EAO and fly for additional mapping						Wind Direction:	NE
							Temp:	40
HSE Events:	No issues.						Time	9:00
SAFETY and ADMIN								
<input type="checkbox"/> Safety meeting lead by Pollux Pilot; focus on working around helicopter, emergency equipment and how to shut down helicopter.								
<input type="checkbox"/> Notified both PTU control room (907-685-3500) and PTU logistics (907-865-3551 and Freq. 122.9 hz) prior to leaving Colville fuel ramp.								
From	To	Operational Details (06:00 - 06:00)						
15:35	15:55	Head to JADE #1 from Colville fuel ramp; moderate headwinds.						
15:55	16:45	Fly ice road route and land at JADE #1 proposed drill pad. Video and photo all. Immediate notes:						
		Patterned, high centered polygonal tundra from start to MP1.8; essentially flat grade. Patterned, low centered polygonal tundra from MP1.8 to drillsite; again fairly flat grade. Unnamed creek at MP2.5 is shallow, with gravel banks on each side along alignment; good crossing along alignment. JADE #1 drill pad is flat, patterned, low centered polygonal tundra.						
16:45	15:35	Head back to Colville ramp and begin attaching Garmin fathometer.						
<div><div><p>JADE #1 Ice Road: MP 1 to MP0 looking north to PTU lease gravel road; oblique photo from 700' elevation.</p></div><div><p>JADE #1 Ice Road: MP 2.4 to MP1 looking north; oblique photo from 700' elevation.</p></div><div><p>JADE #1 Ice Road: MP 3 to MP2.4 looking north with creek at MP2.5; oblique photo from 700' elevation.</p></div><div><p>JADE #1 Ice Road: proposed creek crossing at MP2.5 looking south; oblique photo from 700' elevation.</p></div><div><p>JADE #1 Ice Road: Drill Site to MP3 looking north with creek at MP2.5; oblique photo from 700' elevation.</p></div><div><p>JADE #1 Ice Road: Drill Site looking south at ground level.</p></div></div>								
Action Items	No. Item Status							
	1							