



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

Department of Natural Resources

DIVISION OF OIL AND GAS

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November 26, 2018

Jennifer Collins
Regulations and Permitting Lead Advisor
BP Exploration (Alaska) Inc.
900 E. Benson Blvd
Anchorage, AK 99508

RE: LONS 18-004, BPXA, Prudhoe Bay Unit, Kuparuk 7-11-12 Pad, Gas Hydrates Test Well Unit Plan of Operations Decision.

Dear Ms. Collins:

I. INTRODUCTION

On August 14, 2018 BP Exploration (Alaska) Inc. (BPXA) submitted a request to the Division of Oil and Gas (Division) for approval of a Unit Plan of Operations (Plan) to carry out Gas Hydrates Test Well in the Prudhoe Bay Unit (PBU). The Gas Hydrates Statigraphic Test Well is approximately one mile north of Z pad. Approval of this Plan, along with approvals from other state and federal agencies (Agencies), is necessary for BPXA to carry out the Gas Hydrates Statigraphic Test Well. Any further exploration is subject to further review and approval by the Department of Natural Resources (DNR).

II. SCOPE OF DECISION

The DNR Commissioner has delegated authority for approval of Unit Plan of Operations activities to the Division under Department Order: 003 in accordance with Alaska Statute (AS) 38.05 and 11 Alaska Administrative Code (AAC) 83.346. As set forth below, the Division has evaluated the proposed Plan to determine if sufficient information as required by 11 AAC 83.346 is provided. The Division has also considered that criteria set forth in 11 AAC 83.303. In approving a Plan, the Division may require amendments that it determines are necessary to protect the State's interests (11 AAC 83.346(e)).

This decision will authorize surface use of the Kuparuk 7-11-12 Pad and drilling of the gas hydrates statigraphic test well.

The following table includes additional permits and authorizations necessary for BPXA to carry out the proposed project:

Agency	Permit(s)
Alaska Oil and Gas Conservation Commission	Permit to Drill
North Slope Borough (NSB)	Administrative Approval 19-035

III. LAND STATUS

The PBU comprises state lands.

- A. Division's Leased Lands: This section refers to Division managed oil and gas leases regardless of ownership of overlying surface lands.

Affected Oil and Gas Lease: 047450

Oil and Gas Mineral Estate Lessee(s): BP Exploration (Alaska) Inc.

Surface Ownership and Access Agreement: State of Alaska

Special Use Lands: ADL 050666

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Level gravel pad	Umiat, 11N, 12E, 7	70.3166, -149.2033
Drill stratigraphic test well	Umiat, 11N, 12E, 7	70.3166, -149.2033

Affected Oil and Gas Lease: 028262

Oil and Gas Mineral Estate Lessee(s): BP Exploration (Alaska) Inc.

Surface Ownership and Access Agreement: State of Alaska

Special Use Lands: ADL 050666

Jointly Managed Lands: N/A

Other Considerations: N/A

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Z-Pad Project Staging	Umiat, 11N, 12E, 19	70.2977, -149.1980

- B. State of Alaska Surface Lands: This section refers to State owned surface lands where no Division managed oil and gas leases exist.

Not applicable to this project.

- C. Non-State Lands: This section refers to areas where the State does not own the surface land and no Division managed oil and gas leases exist.

Not applicable to this project.

IV. PROPOSED OPERATIONS

The Plan describes the proposed operations in full detail. Set forth below is a summary of the key details.

A. Sequence and Schedule of Events

Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1	Bring in gravel and level the existing pad	11/1/2018	11/30/2018
2	Move drill rig onto pad and drill the well.	12/1/2018	12/15/2018
3	Demobilization	12/15/2018	1/15/2019

BPXA proposed the following schedule for the 2018-2019 drilling season. All dates are approximate and may be altered by weather or logistic requirements. The dates will also change because some of them precede this decision. The schedule provides the Division with an overall idea of the sequence and schedule of events. The Division reviewed this schedule with the expectation that dates early in the sequence would move back and that later dates for finishing drilling, demobilization, and clean up would remain the same.

B. Well Sites

A gas hydrates test well will be drilled from the gravel pad known as Kuparuk State 7-11-12 located in the western portion of the PBU.

C. Buildings

A mudlogging unit, mud chiller, and envirovacs will be on site temporarily during the drilling operations. Depending on space requirements, some equipment may be staged at Z pad located one mile south of the 7-11-12 drill site.

D. Fuel and Hazardous Substances

Fuel and hazardous substances to be used onsite will be stored and handled according to state requirements, permits, and approvals for operating the PBU.

E. Solid Waste Sites

Solid waste will be collected and delivered to a permitted solid waste site.

F. Water Supplies

Approximately 350,000 gallons of water will be trucked to the drill site to support drilling operations. Water will be sourced from permitted sources within the PBU.

G. Utilities

On site generators will be used to power the drill rig, lights, and heaters.

H. Material Sites

Gravel used to level and prepare the pad will be from an existing material site supporting the PBU.

I. Roads

No new roads will be constructed. Existing roads will support operations.

J. Airstrips

Not applicable.

K. All Other Facilities and Equipment

Z Pad may be used for temporary staging.

L. Rehabilitation Plan

The drill rig and associated equipment will be onsite temporarily. If gas hydrates are intersected and it is decided that future gas hydrates testing is required, the well will not be plugged and abandoned; it will be completed as a monitoring well and future operations will be permitted separately.

M. Operating Procedures Designed to Minimize Adverse Effects

The project is located on an existing gravel pad located in the PBU development. Adverse Effects have been minimized utilizing existing infrastructure within the PBU.

Fish and Wildlife Habitats: This project will not affect fish and wildlife habitats.

Historic and Archeological Sites: This project will not affect historic or archaeological sites.

Public Use Areas: This project will not affect public use areas.

Other Uses: Not applicable.

In approving a Plan, DNR may require amendments necessary to protect the State's interest (11 AAC 83.346). The Division has determined that to protect the State's interest, it is necessary to incorporate the 2018 North Slope Best Interest Finding Mitigation Measures. BPXA addressed these mitigation measures in the application process, but it is necessary to amend the Plan to make clear that the Plan incorporates the 2018 North Slope Best Interest Finding Mitigation Measures.

All plan applicants must complete a mitigation measure analysis form demonstrating that each mitigation measure is satisfied or inapplicable to the proposed Plan, or that the applicant is seeking an exception. The 2018 North Slope Best Interest Finding Mitigation Measures allow for the Division to grant an exception if the applicant shows that compliance with the measure is not practicable or that the applicant will undertake an equal or better alternative to satisfy the intent of the mitigation measure. BPXA completed the mitigation measure analysis for the 2018 North Slope Best Interest Finding areawide and no exceptions were requested.

The Division has determined that to protect the State's interest, it is necessary to incorporate the 2018 North Slope Best Interest Finding Mitigation Measures as amendments and stipulations to this Plan (11 AAC 83.346(e)). By utilizing an existing gravel pad and available PBU resources, disturbance to adjacent tundra and undeveloped areas are avoided.

V. CONSIDERATION OF UNIT PLAN OF OPERATIONS REQUIREMENTS UNDER 11 AAC 83.346(c-d) and 11 AAC 83.390

A. Full Payment of Damages to the Surface Owner 11 AAC 83.346(c)

The State owns the surface and full payment of damages to the State are accomplished through a bond posted by the applicant discussed in subsection C below. Thus, BPXA has provided for full payment of damages prior to starting operations (11 AAC 83.346(c)).

B. Plan Sufficiency 11 AAC 83.346(d)

A proposed plan must include statements, maps, or drawings setting forth

- (1) the sequence and schedule of operations;
- (2) the projected use requirements directly associated with the proposed operations;
- (3) plans for rehabilitation;
- (4) a description of operating procedures to prevent or minimize adverse effects on natural resources and concurrent uses of the area (11 AAC 83.346(d)).

The information in section IV. Proposed Operations, above, and additional information contained in BPXA's proposed Plan satisfy the requirements for a plan under 11 AAC 83.346(d) and thus provide the Division with sufficient information available at this time to determine the surface use requirements and impacts directly associated with the proposed operations.

C. Oil and Gas Lease Bond 11 AAC 83.390

The State owns all the surface land where the proposed Plan activities will be located. The State owns all the mineral estate within which the Applicant proposes to explore. For the State, a lessee provides for payment of damages by posting a bond, and remains liable for full damages under the lease. BPXA has a Statewide Oil and Gas Bond in the amount of \$500,000 and continuing liability under the lease.

VI. CONSIDERATION 11 AAC 83.303 CRITERIA

A. Protection of Public Interest

The Division has considered the public interest, considering statutory provisions that provide for conserving natural resources through unitized development (11 AAC 83.303(a); AS 38.05.180(p)). The legislature has declared the public's interest in oil and gas development as an interest in developing oil and gas resources to maximize economic and physical recovery, maximize competition, and maximize use of Alaska's human resources (AS 38.05.180(a)(1)).

B. Conservation of Natural Resources

The Division has considered whether the Plan promotes conservation of all natural resources, including all or part of an oil or gas Plan, field, or area (11 AAC 83.303(a)(1)). Conservation, in this context, means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources (11 AAC 83.395(1)). Development within a unit is

intended to provide more efficient development than on the individual leases that make up the unit, and this Plan considers the development of the Unit, not single leases. Efficient development creates less impact on the land and promotes maximum use of all natural resources in the area, consistent with the public interest.

There are a number of ways in which the Plan seeks to minimize adverse impacts on natural resources. This Plan incorporates the mitigation measures set forth in the 2018 North Slope Areawide Oil and Gas Lease Sale Final Finding and the 2018 North Slope Best Interest Finding Mitigation Measures. These mitigation measures include measures to protect habitat, fish, and wildlife, protect subsistence resources, and limit the impact from fuel and hazardous substances. The Plan also includes operating procedures to prevent or minimize adverse effects, including effects on the environment, wildlife, and subsistence resources discussed in section IV.M of this decision.

C. Prevention of Economic and Physical Waste

The Division has considered whether the Plan promotes the prevention of economic and physical waste (11 AAC 83.303(a)(2)). Issues of economic and physical waste are carefully considered during Unitization and annually thereafter in the Prudhoe Bay Plan of Development. Although not mentioned explicitly, this Plan conforms to the current Prudhoe Bay Plan of Development on file with the Division's Units Section.

D. Protection of All Parties of Interest, Including the State

The Division has considered whether the Plan provides for the protection of all parties of interest, including the State (11 AAC 83.303(a)(3)). The parties of interest to a unit plan are the unit operator and working interest owners. The State has an economic interest in the oil and gas resources because it receives royalties from production. It is further in the State's best interest to encourage assessment of oil and gas resources, recognize the costs of exploring in varied geographic regions, and minimize the adverse impact of exploration, development, production, and transportation activity (AS 38.05.180(a)(2)).

Without approval of a Plan, BPXA cannot develop or evaluate Gas Hydrates, and the State cannot recover royalties from that development. The Plan thus protects the Unit Operators, working interest owners' and the State's interests in developing the resources.

E. Environmental Costs and Benefits

The Division has considered the environmental costs and benefits of unitized development outlined in this Plan and through the Prudhoe Bay Plan of Development and annual updates, on file with the Units Section (11 AAC 83.303(b)(1)); this Plan conforms to the current Prudhoe Bay Plan of Development on file with the Division.

The 2018 North Slope Areawide Oil and Gas Mitigation Measures, incorporated into this Plan by amendment, include measures to protect habitat, fish, and wildlife in areawide sections A.2.a - A2.f. Additional operating procedures designed to minimize adverse effects on other natural resources and other uses of the unit area and adjacent areas are discussed in section IV.M of this decision.

F. Geological and Engineering Characteristics of Hydrocarbons

DNR previously considered the geological and engineering characteristics of a potential hydrocarbon accumulation or reservoir when it approved the unit agreement (11 AAC 83.303(b)(2)); this Plan conforms to the current Prudhoe Bay Plan of Development on file with the Division's Units Section.

G. Prior Exploration Activities

The Division has considered prior exploration activities in the Plan area pursuant to 11 AAC 83.303(b)(3). The drilling of this gas hydrates test well is in conjunction with the US Department of Energy National Energy Technology Laboratory, the Japan Oil, Gas and Metals National Corporation, the US Geological Survey and Petrotechnical Resources of Alaska and will further evaluate oil and gas resources owned by the State.

H. Plan of Development

The Division has considered the plans for development set forth in and approved by DNR in the POD (11 AAC 83.303(b)(4)). The 2018 Prudhoe Bay Plan of Development approved on 6/13/2018 does not explicitly mention or address operations in the proposed Plan.

I. Economic Costs and Benefits to the State

The Division has considered the economic costs and benefits to the State (11 AAC 83.303(b)(5)). Without approval of a plan, BPXA will be unable to proceed with developing gas hydrate resources, which will cost the State the economic benefit of the royalties, as well as other economic benefits that flow from production.

J. Other Relevant Factors to Protect the Public Interest

The Division has considered other relevant factors necessary or advisable to protect the public interest (11 AAC 83.303(b)(6)). These other factors consist of the mitigation measures (section IV.M of this document) that will apply to this Plan; and the necessity to obtain other permits and approvals by different Agencies and landowners.

VII. CONSULTATION WITH OTHER GOVERNMENT ENTITIES

In reviewing the proposed Plan, the Division considered the fact that BPXA may require approvals from Agencies for other elements of its project. Although mentioned in the Plan and above, these aspects of the project are not operations being approved by this decision and the Division offers no opinion on whether an agency should or should not approve these activities.

In addition to considering the approvals required by Agencies as they relate to this decision, the Division provided an Agency review and comment opportunity for the activities proposed for authorization under this decision. The following government entities were notified on 10/22/2018 for comment on the Plan: ADF&G, DMLW, ADEC, and the NSB. The comment deadline was 4:30 pm Alaska time on 11/5/2018 No Agency comments were received.

VIII. CONDITIONS OF APPROVAL

Having considered the proposed project, the Division approves the Plan as amended and modified by this decision and subject to the below conditions of approval:

To protect the State's interest, the Division finds that it is necessary to amend the Plan to incorporate the following Conditions of Approval:

- a) The applicant shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this approval by the applicant, its contractors, subcontractors and their employees.
- b) The applicant shall inform and ensure compliance with any and all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.
- c) Unless pre-authorized by a general permit, amendments and modifications to this approval require advance notice and must be approved in writing by the DNR.
- d) The Commissioner of the DNR may require that an authorized representative be on-site during any operations conducted under this approval. This stipulation is required to ensure that the Divisions of Oil and Gas and Mining, Land and Water meet their statutory responsibilities for monitoring activities taking place on State-owned lands.
- e) A status report for the activities conducted under this approval must be filed with this office on May 1 and November 1 each year, from the date this approval is issued and until a final completion report is filed with the Division. If a lessee requests an assignment, a status report must also be submitted during the assignment process. Failure to file in a timely manner may result in revocation of this approval.
 - a. Each status report shall include a statement describing and map(s) depicting all operations actually conducted on the leased area as of the date the report is prepared, which includes the location, design and completion status of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment installed.
 - b. Upon completion of operations, the applicant will submit a completion report which will include all information required of a status report described in (a) above as well as a statement indicating the date of operations completion, any noncompliance with the terms of this plan approval of which a reasonable lessee would have knowledge of, clean-up activities conducted, the method of debris disposal, and a narrative description of known incidents of surface damage.
- f) Notification. The applicant shall notify the DNR of all spills that must be reported under 18 AAC 75.300 under timelines of 18 AAC 75.300. All fires and explosions must be reported to DNR immediately. The DNR 24 hour spill report number is (907) 451-2678; the fax number is (907) 451-2751. The Department of Environmental Conservation (DEC) oil spill report number is (800) 478-9300. DNR and DEC shall be supplied with all follow-up incident reports.
- g) A certified As-Built survey of the improvement shall be provided within one year of placement of the improvement. This As-Built must be submitted in both electronic and physical format.

IX. FINDINGS AND DECISION

Having considered the proposed project and based on the foregoing discussion and consideration of issues and conditions of approval, the Division makes the following findings:

1. The Plan provides sufficient information, based on reasonably available data, for the Division to determine the surface use requirements and impacts directly associated with the proposed operations.
2. The Plan includes statements, maps, or drawings setting forth the sequence and schedule of operations, projected use requirements, description of operating procedures, and a plan of rehabilitation designed to prevent or minimize adverse effects.
3. To protect the State's interest and mitigate potential adverse social and environmental effects associated with the Plan, the Division finds it necessary to amend the Plan to incorporate the mitigation measures set forth in the 2018 North Slope Best Interest Finding Areawide Oil and Gas Lease Sale Final Finding.
4. All oil and gas activities conducted under oil and gas leases are subject to numerous local, state and federal laws and regulations with which BPXA is expected to comply.
5. The people of Alaska have an interest in developing the state's oil and gas resources and maximizing the economic and physical recovery of those resources. AS 38.05.180(a).
6. Alaska's economy depends heavily on revenues related to oil and gas production and government spending resulting from those revenues. The related revenue sources include bonus payments, rentals, royalties, production taxes, income taxes, and oil and gas property taxes.
7. The potential benefits of approving this Plan outweigh the possible adverse effects, which have been minimized through imposition of mitigation measures, conditions of approval, and project specific stipulations, and thus approval of this Plan as modified is in the State's best interest.

Based upon the Plan, supporting information provided by the applicant and the Division's review, determination of applicable statutes and regulations, consultation with other agencies, relevant entities and individuals, public comment, and the above findings related to that Plan, the Division hereby approves the Plan as modified.

Sincerely,

for Nathaniel Emery
Graham Smith
Permitting Section Manager
Division of Oil and Gas

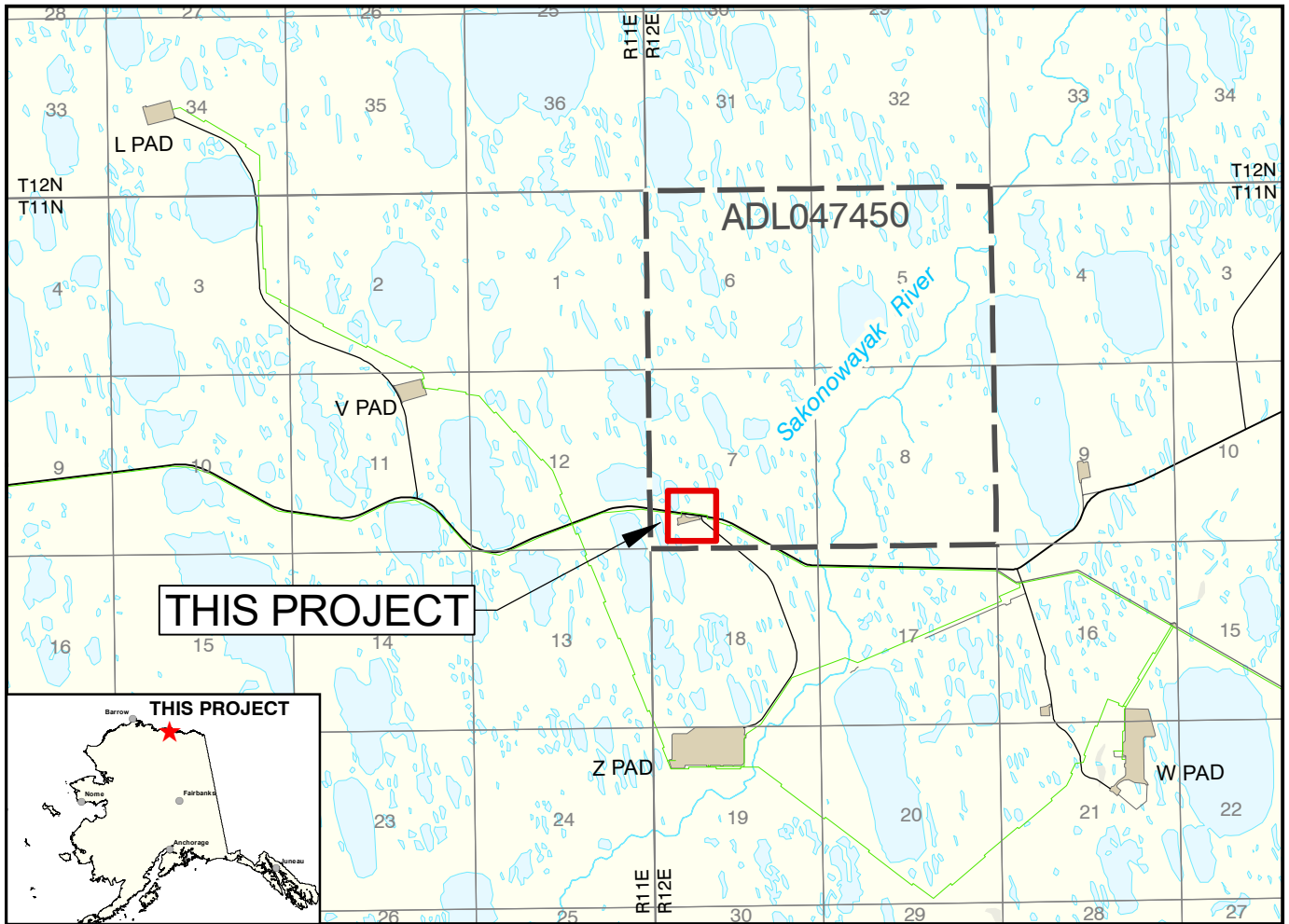
11/26/2018
Date

Appeal

An eligible person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of issuance of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Attachments: Appendix A: Maps and Figure(s)
2018 North Slope Mitigation Measures

ecc: DOG: Graham Smith, Nathaniel Emery, James Hyun, Mark Henspeter
DMLW: Jeanne Proulx, Melissa Head, Becky Baird, Kimberly Maher, Clif Enochs
ADF&G: Jack Winters
ADEC: dec.water.oilandgas@alaska.gov
Borough: Josie Kaleak, Matt Dunn, Jason Bergerson



This map is based on U.S.G.S quad Beechey Point (B-4) and on the Unit Operator's Facility Maps.



PROJECT LOCATION:

PRUDHOE BAY UNIT - KUPARUK STATE 07-11-12

NAD83

LAT. = 70° 18' 59.79" / DD 70.316608

LONG. = -149° 12' 11.97" / DD -149.203325

ALASKA STATE PLANE ZONE 4, NAD83

X = 1,738,699.04 FEET

Y = 5,965,870.81 FEET

SEC. 7 T11N, R12E UMIAT M.

ADL # 047450

DATUM: MEAN SEA LEVEL

PURPOSE: KUP ST 07-11-12 GAS HYDRATES

ADJACENT PROPERTY OWNER:
STATE OF ALASKA

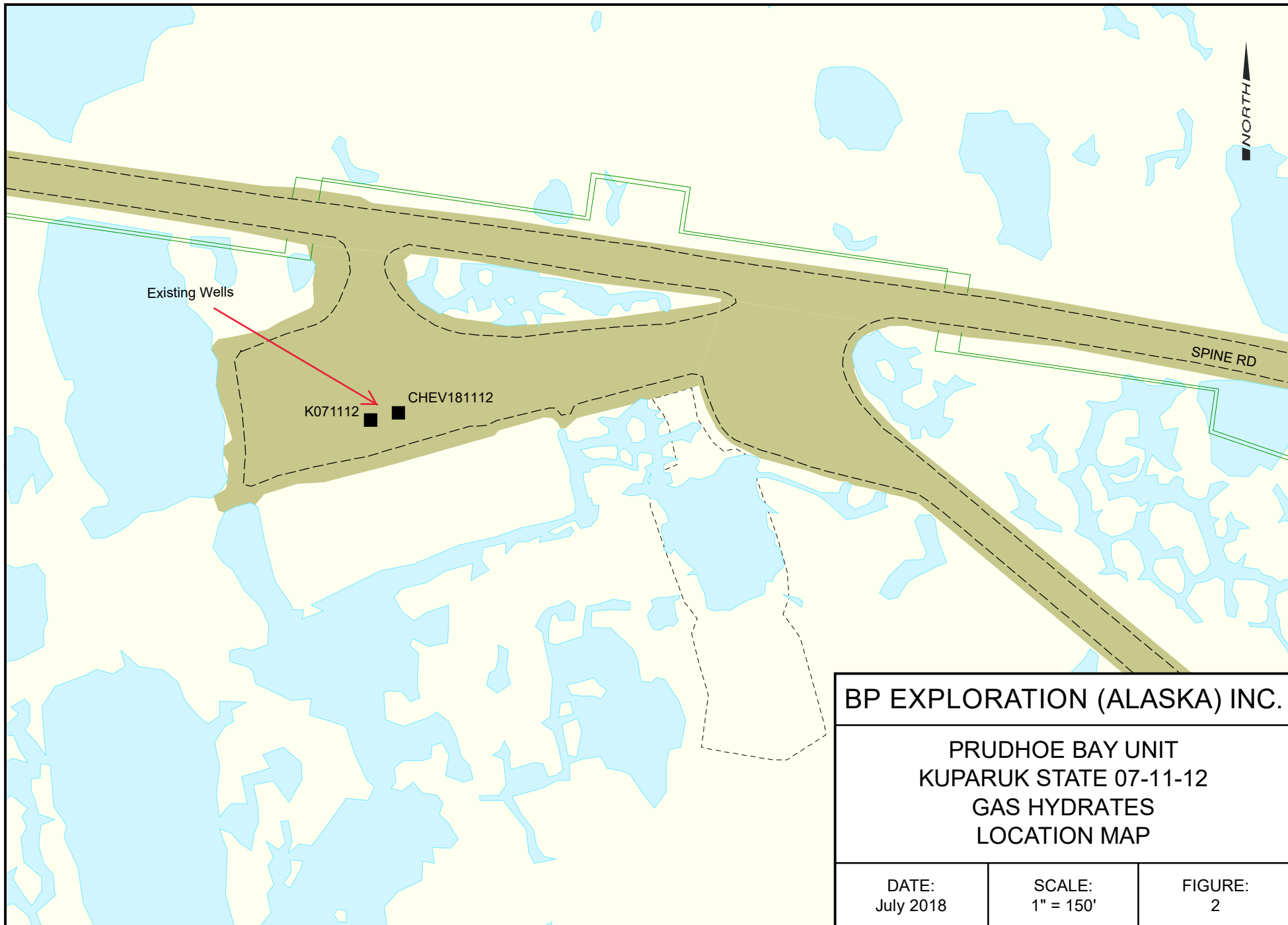
BP EXPLORATION (ALASKA) INC.

**PRUDHOE BAY UNIT
KUPARUK STATE 07-11-12
GAS HYDRATES
VICINITY MAP**

DATE:
July 2018

SCALE:
1" = 1 Mile

FIGURE:
1



Existing Wells

K071112 CHEV181112

SPINE RD

NORTH

BP EXPLORATION (ALASKA) INC.

PRUDHOE BAY UNIT
KUPARUK STATE 07-11-12
GAS HYDRATES
LOCATION MAP

DATE:
July 2018

SCALE:
1" = 150'

FIGURE:
2

