

December 20, 2006

FINAL ENVIRONMENTAL ASSESSMENT

National Petroleum Reserve-Alaska (NPR-A)

ConocoPhillips Alaska, Inc. 5-Year Winter Exploration Drilling Program 2006-2011

Prepared By: USDO I Bureau of Land Management, Alaska Arctic Field Office, Fairbanks District Office, Alaska State Office



It is the mission of the Bureau of Land Management (BLM) to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/AK/PL-07/013+2800+023

EA-AK-023-07-002

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Technical Assistance:

**MWH
Anchorage, Alaska**

ENVIRONMENTAL ASSESSMENT

- Title:** National Petroleum Reserve-Alaska (NPR-A)
Winter Exploration Drilling Program, Northeast and Northwest Planning Areas
- EA Number:** AK-023-07-002
- Serial Number:** AA-081840, AA-084127, AA-081833, AA-081747, AA-081754, AA-081800, FF-92931, FF-93835
- Applicant:** ConocoPhillips Alaska Inc.
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- Date Prepared:** December 20, 2006
- District:** Fairbanks District Office
Planning Unit: NPR-A, Northwest (NW) and Northeast (NE) Planning Areas
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- Lands Involved:** New access corridor totaling about 110 miles, to improve and shorten the existing authorized Rights-of-Way (ROW) from Kuparuk to Barrow, as well a continued use of authorized ROW in the NPR-A. Also proposed are 4 new ice airstrip locations, 11 new drill sites and 9 new water supply lakes in the NE NPR-A. Specific locations are identified in the project plans. The 11 newly proposed drilling pad locations are:
- T12N, R5W, Sec. 21, Umiat Meridian (Noatak 2)
 - T12N, R5W, Sec. 21, Umiat Meridian (Noatak 3)
 - T11N, R4W, Sec. 28, Umiat Meridian (Nugget 1)
 - T11N, R4W, Sec. 28, Umiat Meridian (Nugget 2)
 - T12N, R1W, Sec. 27, Umiat Meridian (Cassin 1)
 - T11N, R1W, Sec. 17, Umiat Meridian (Cassin 2)
 - T12N, R1W, Sec. 31, Umiat Meridian (Cassin 3)
 - T10N, R2E, Sec. 21, Umiat Meridian (Spark DD 9)
 - T10N, R2E, Sec. 21, Umiat Meridian (Spark DD 10)
 - T10N, R2E, Sec. 28, Umiat Meridian (Spark DD 11)
 - T10N, R2E, Sec. 21, Umiat Meridian (Spark DD 12)

This Environmental Assessment (EA) has been prepared to meet requirements of the National Environmental Policy Act (NEPA), and to support U.S. Department of Interior (USDOI) Bureau of Land Management (BLM) decision-making on permits required to construct and implement the proposed project. The scope of this EA includes analysis of the effects of the proposed exploration activity and alternatives. This EA also addresses the impacts of hypothetical oil and gas field development if an economic discovery is made during this activity.

This EA is the most recent in a series of NEPA assessments prepared by the BLM in evaluating potential and proposed oil exploration and development in the NPR-A. Over the past 7 years, the BLM has evaluated construction and drilling at 73 potential exploration drill sites, access via approximately 950 miles of corridor, and construction of ice airstrip at 36 locations in the NPR-A. Impacts of these types of activities have also been evaluated in 3 Integrated Activity Plan (IAP)/Environmental Impact Statements (EIS) for the NPR-A and one EIS for development in the Northeast NPR-A and adjacent Colville River Delta. This EA is tiered from and incorporates relevant portions of the 1998 NE IAP/EIS, the 2003 NW IAP/EIS, and NPR-A Exploration EAs described in more detail in this document.

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APPENDIX A

Related Environmental Analyses, NPR-A Exploration

LIST OF ACRONYMS

ACMP	Alaska Coastal Management Program
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
ANILCA	Alaska National Interest Land Conservation Act
AOGCC	Alaska Oil and Gas Conservation Commission
ASDP	Alpine Satellite Development Plan
BLM	Bureau of Land Management
CAH	Central Arctic Caribou Herd
CEQ	Council of Environmental Quality
CFR	Code of Federal Regulations
CPAI	ConocoPhillips Alaska, Incorporated
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEX	FEX L.P. Incorporated
FLPMA	Federal Land Policy and Management Act of 1976
FONSI	Finding of No Significant Impact
H ₂ S	Hydrogen Sulfide
IAP	Integrated Activity Plan
KSOP	Kuukpik Subsistence Oversight Panel
LCP	Low Centered Polygons
LPV	Low-Pressure Vehicle
LUEA	Land Use Emphasis Area
MMPA	Marine Mammal Protection Act
NE	Northeast
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOS	Notice of Staking
NP	Non Patterned
NPDES	National Pollutant Discharge Elimination System
NPR-A	National Petroleum Reserve – Alaska
NPRPA	Naval Petroleum Reserve Production Act
NSB	North Slope Borough
NW	Northwest
ODPCP	Oil Discharge Prevention and Contingency Plan
OHMP	(ADNR) Office of Habitat Management and Permitting
ROD	Record of Decision
ROP	Required Operating Procedure
ROW	Right of Way
SAP	Subsistence Advisory Panel
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control, and Countermeasures
TAPS	Trans Alaska Pipeline System
TLH	Teshekpuk Lake Caribou Herd
TWUP	Temporary Water Use Permit
USDOJ	U.S. Department of Interior
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service
WAH	Western Arctic Caribou Herd

1 INTRODUCTION

ConocoPhillips Alaska, Inc. (CPAI) has applied for permits to access and drill on valid oil and gas leases during a five-year winter exploration program in the National Petroleum Reserve-Alaska (NPR-A). CPAI (the Applicant) has submitted permit applications, including the Bureau of Land Management (BLM) Right-of-Way (ROW) application and Plan of Exploration (Surface Use Program) to Federal and State agencies and the North Slope Borough (NSB).

This Environmental Assessment (EA) has been prepared to support BLM decision-making, to identify appropriate mitigation measures, and to satisfy requirements of the National Environmental Policy Act (NEPA).

This EA draws heavily from previous BLM analyses of proposed CPAI exploration in the Northeast (NE) NPR-A, documented in:

- EA: AK-023-05-005 (2004)
- EA: AK-023-04-004 (2003)
- EA: AK-023-03-008 (2002)
- EA: AK-023-02-005 (2002)

All of these analyses resulted in Findings of No Significant Impact (FONSI). This EA focuses on new project elements (i.e., exploration drilling at up to 11 new locations; 110 miles of new ROW corridor (crossing both the NE and Northwest [NW] NPR-A, and 10 new water supply lakes), with proposed activities evaluated on the basis of relevant site-specific terms and conditions. See **Figure 1**.

1.1 HISTORY OF ACTIVITY IN THE NPR-A

Following creation of the 23 million-acre Naval Petroleum Reserve Number 4 (later renamed the National Petroleum Reserve-Alaska), the Federal government drilled at 123 sites¹, and private industry drilled at two test sites.² Early exploration resulted in the discovery of oil deposits at Fish Creek (in the NE NPR-A) and Cape Simpson (in the NW NPR-A), as well as gas deposits at Barrow.³ The Walakpa gas field in the Barrow area was developed by the NSB, and is one of the most recently developed gas fields in Alaska. This

field now produces up to 90 percent of Barrow's consumption of natural gas.⁴

In 1998, an Integrated Activity Plan (IAP) with associated Environmental Impact Statement (EIS) for the NE NPR-A Planning Area was released,⁵ followed by a Record of Decision (ROD) adopting the IAP/EIS and making approximately 4 million acres in the NE Planning Area available for oil and gas leasing.⁶ The 1998 ROD includes 79 stipulations as prescriptive measures to ensure environmental protection from activities authorized in the NE Planning Area.

In 2003, a final IAP/EIS for the NW NPR-A Planning Area was published.⁷ In 2004, a ROD was issued, adopting the NW IAP/EIS and making approximately 8.8 million acres in the NW Planning Area available for oil and gas leasing, with approximately 2 million acres deferred, pending further study.⁸ The 2004 ROD includes performance-based environmental protection measures set forth in 11 stipulations and 32 Required Operating Procedures (ROPs) that control activities authorized in the NW Planning Area.

In early 2005, the BLM issued a new IAP/EIS that evaluated a proposal to amend the 1998 NE IAP/EIS. The associated ROD (issued in 2006) has been vacated by the federal court. On the basis of this recent legal decision, the 1998 stipulations are still in force in the NE Planning Area.

The new drill sites, eight new lakes, and segments of the proposed ROW amendment are within the NE Planning Area. As shown on Figure 1, CPAI has staked three exploration drilling sites approximately 20 miles south of Barrow (i.e., Intrepid 1 through 3), on private land, which requires ROW amendments on adjacent federal land and water withdrawal from one lake in the NW NPR-A. While specific environmental safeguards in place for the NE and NW NPR-A are different, the level of environmental protection provided is similar.

As noted above, activities proposed by CPAI are similar to previously authorized exploration activities in the NPR-A. Since 1999, 11 winter exploration drilling programs in the NPR-A have been authorized. For this, the BLM evaluated access and exploratory drilling at 82

¹ U.S. Geological Survey (USGS) Professional Paper 1399 (1988), p. 333.

² USDOl. August 1998. Northeast NPR-A Final Integrated Activity Plan/Environmental Impact Statement (IAP/EIS), Vol. 1, p. III-A-5 (One well drilled by Arctic Slope Regional Corporation (ASRC), and one by CPAI).

³ USGS Professional Paper 1240-C (1985), p. C14.

⁴ USDOl 1998 Northeast IAP/EIS, p. III-A-43.

⁵ USDOl. 1998. Northeast NPR-A /EIS, Vol. 1 and 2.

⁶ Secretary of the Interior. October 1998. Northeast NPR-A IAP/EIS Record of Decision (ROD), p.1.

⁷ USDOl. November 2003. Northwest NPR-A Final Integrated Activity Plan/Environmental Impact Statement (IAP/EIS), Vol. 1, 2, and 3.

⁸ Secretary of the Interior. January 2004. Northwest NPR-A IAP/EIS Record of Decision (ROD), p. 3.

sites, although drilling has only been completed at 20 of these sites (15 of which were drilled by CPAI). The relatively small number of wells drilled is due to contingencies included in most exploration programs (e.g., multiple drilling site locations and wells) to provide operational flexibility, the ability to adapt to changing conditions, and the availability of new geologic data. Drilling is limited to only the most promising prospects, and only a portion of the authorized program is expected to be completed. Exploration drilling by CPAI has led to the discovery of producible reserves at two sites recently evaluated for development in the NPR-A.⁹

1.2 PURPOSE OF AND NEED FOR THE PROJECT

CPAI believes that significant recoverable oil potential exists on lease holdings within the NPR-A. The purpose of the proposed action is to permit CPAI to drill wells and/or sidetracks at any of the 11 newly proposed pad locations, within a flexible timeframe. The project is composed of several elements, and is designed to meet the Applicant's needs and objectives, including:

- Access to drilling sites and water supply lakes in a manner that allows for maximum operations during any one winter season in a cost-effective manner, while minimizing environmental impact.
- Drilling to acquire sufficient subsurface information to satisfy the Applicant's economic and exploration performance criteria.
- Compliance with all related requirements of the NPR-A leases, RODs, and all associated laws, regulations, permits, and approvals.

The purpose of CPAI's proposed project is to determine if lease holdings contain economically recoverable oil and gas in a 5-year exploration program. A primary need for the project is implicit in the growing demand for oil and gas worldwide, accompanied by concern in the U.S. over dependence on foreign oil supplies. National energy needs are key issues in authorizing exploration. The project is also needed to replace diminishing North Slope oil supplies and maintain the efficiency of the Trans Alaska Pipeline System (TAPS). Revenues from production are needed to support local, State, and national economies.

Alternatives to the proposed project are evaluated on the basis of their effectiveness in meeting these objectives.

⁹ BLM in cooperation with U.S. Army Corps of Engineers, EPA, USCG, and State of Alaska. Alpine Satellites Development Plan Final EIS. September 2004.

1.3 RELATED STATUES, REGULATIONS, POLICIES, AND PROGRAMS

The 1998 and 2003 IAP/EIS programs were completed to fulfill the BLM's responsibility to manage lands in the NE and NW Planning Areas under the authority of the Naval Petroleum Reserve Production Act, as amended (NPRPA), Federal Land Policy and Management Act of 1976 (FLPMA), NEPA, Alaska National Interest Land Conservation Act (ANILCA), and the Wild and Scenic Rivers Act. Findings in the IAP/EISs and decisions reflected in the 1998 and 2004 RODs were based upon an open and collaborative public process, as well as experience with multiple exploration programs completed in the NPR-A.

1.3.1 Federal Laws and Regulations

The proposed action must comply with numerous Federal laws that govern activities on public lands. Key Federal controls associated with the proposed action have been described in related NEPA documents. These include, but are not limited to the: NPRPA, FLPMA, NEPA, ANILCA, Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), National Historic Preservation Act (NHPA), Clean Water Act, Clean Air Act, Archaeological Resource Protection Act, and Magnuson-Stevens Fishery Conservation and Management Act.

The proposed action is consistent with the 2001 National Energy Policy, which called for increased domestic exploration and production, and directed the BLM to address issues vital to the nation's energy program. The BLM implementation plan directs the agency to continue ongoing operations associated with existing leases (i.e., Applications for Permit to Drill, inspection and enforcement, and NEPA compliance) within the NPR-A. The proposed action is consistent with the Energy Policy Act of 2005, which specifically addresses incentives for exploration in the NPR-A.

1.3.2 Required Permits, Licenses, Authorizations, and Approvals

A number of Federal, State, and local permits and approvals must be obtained before the Applicant can access a drill site and commence drilling. Primary regulatory authorization requirements for the proposed project are listed in **Table 1**.

1.3.3 Related Environmental Analyses

The environmental analyses most closely related to the proposed action are listed in Appendix A. All exploration EAs and associated FONSI documents

findings that the subject project: was in compliance with provisions for protecting subsistence use and access, as required by ANILCA Title VIII; was not likely to adversely affect Essential Fish Habitat (EFH); and was not likely to adversely impact listed Threatened and Endangered Species.

The Council of Environmental Quality (CEQ) Regulation 40 Code of Federal Regulations (CFR) 1502.20 encourages agencies to “tier off their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review.” This EA is tiered from the 1998 NE IAP/EIS and ROD and the 2003 NW IAP/EIS and 2004 ROD, which are incorporated in their entirety by reference per CEQ Regulation 40 CFR 1502.21.

This EA tiers from EAs: AK-023-05-005 and AK-023-06-003 and the associated FONSI. These are the most recent analyses directly related to the proposed action. They evaluate proposed CPAI exploratory drilling operations similar in scope and location to the proposed project and access through the NE and NW

(respectively). This EA also draws heavily from other previous evaluations of NPR-A exploration documented in the drilling EAs and their associated FONSI listed in **Appendix A**.

1.3.4 Land Status

The proposed drill sites are located on NPR-A lease tracts held by CPAI, in whole or in part with Anadarko Petroleum Company, and also Pioneer Natural Resources Alaska, Inc. (Noatak 2 and 3 and Nugget 1 and 2), under the jurisdiction of the BLM. Access to drilling areas (including the Intrepid sites) and water supply lakes requires approximately 110 miles of new access corridor, as well as continued use of ROWs previously authorized by the BLM. The proposed project lies wholly within the NPR-A, inside the boundaries of the NSB. Traditional land use sites (e.g., cabins and campsites) are avoided. The BLM does not authorize use of private property; access over private lands requires authorization of the land owner. Within both the NE and NW Planning Areas, the BLM has designated areas where special stipulations apply.

Table 1. Permits and Authorizations for Proposed Project ^a

Federal Authorizations and Approvals	
Bureau of Land Management (BLM)	<ul style="list-style-type: none"> ▪ Application for Permit to Drill ▪ Amended Rights-of-Way FF92931 and FF93835 ▪ Threatened and Endangered Species “No Effect” Determination ▪ Essential Fish Habitat Assessment (No consultation with National Marine Fisheries Service required) ▪ Alaska National Interest Land Conservation Act 810 Evaluation and Findings
U.S. Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> ▪ Letter of Authorization (LOA) for Incidental Take of Polar Bears; Polar Bear/Personnel Encounter Plan ▪ Concurrence on BLM Threatened and Endangered Species “No Effect” Determination
U.S. Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> ▪ Domestic Wastewater Discharge, under National Pollutant Discharge Elimination System (NPDES) General Permit No. AKG-33-0000 (drilling/camp contractor) ▪ Spill Prevention, Control, and Countermeasures Plan (drilling/testing contractor)
State Authorizations and Approvals	
Alaska Department of Natural Resources (ADNR)	<ul style="list-style-type: none"> ▪ Program General Concurrence Determinations (e.g., General Concurrence Determination 5 and 8) for related elements ▪ Temporary Water Use Permit ▪ Cultural Resources Coordination/Consultation with the State Historic Preservation Office ▪ Fish Habitat Permit (Office of Habitat Management and Permitting) ▪ Alaska Coastal Management Program Consistency Determination
Alaska Department of Environmental Conservation (ADEC)	<ul style="list-style-type: none"> ▪ Temporary Storage of Drilling Wastes ▪ Air Quality Minor Source General Permit ▪ Oil Discharge Prevention and Contingency Plan ▪ Certificate of Financial Responsibility ▪ Wastewater and Water Treatment System Approval (drilling/camp contractor)
Alaska Oil and Gas Conservation Commission (AOGCC)	<ul style="list-style-type: none"> ▪ Permit to Drill ▪ Approval for annular disposal of drilling wastes (optional)
Local Authorizations and Approvals	
North Slope Borough (NSB)	<ul style="list-style-type: none"> ▪ NSB Coastal Zone Consistency Determination ▪ Development Permit (for related elements)

^a The Federal Aviation Administration issues “no objection to proposed airstrips”

1.4 PUBLIC INVOLVEMENT

Development of the 1998 NE IAP/EIS and the 2003 NW IAP/EIS involved extensive input from other Federal agencies, the State, the NSB, thousands of individuals, and many institutions.¹⁰ The BLM consulted with Federally-recognized tribes, and drafted measures to protect tribal interests. Since the 1999 lease sale in the NE Planning Area, a number of meetings and consultations have been held with residents of Nuiqsut, Barrow, Anaktuvuk Pass, Atqasuk, Point Lay, and Wainwright to discuss NPR-A exploration plans. All recent NPR-A exploration drilling programs have been public-noticed by the BLM. Public and agency comments have been considered, and required Federal, State, and local permits have been issued – some with stipulations to mitigate specific issues of concern. There was also extensive public involvement in the 2004 Alpine Satellites Development Plan (ASDP) Final EIS associated with development in the NE NPR-A and adjacent Colville River Delta.¹¹

The proposed project reflects input gained from meetings with local communities, the NSB, NPR-A Subsistence Advisory Panel (SAP), and other agencies and entities. CPAI hosted meetings and open houses in Barrow, Wainwright, Atqasuk, Nuiqsut, and Anaktuvuk Pass to continue consultation and public comment (details are provided in Section 5.2). CPAI also has an ongoing program to provide additional opportunities for public involvement (e.g., newsletters, radio, and local meetings).

1.5 BLM DECISION PROCESS

The BLM's decision on the proposed action will be based on statutory and regulatory authority. Prior to authorizing the proposed project, the BLM must conduct a project-specific NEPA analysis and determine whether the proposed project should be approved, rejected, or modified, and if additional mitigation is needed.

The 1998 IAP/EIS and ROD serve as required NEPA documentation for lease sales in the NE NPR-A. This EA will be based on management controls and relevant stipulations in the 1998 NE ROD, as well as actual experience with exploration activity in the NPR-A. Analysis of segments of the new access corridor within the NW NPR-A are based on relevant stipulations and ROPs of the 2004 NW ROD.

The proposed action represents an extension of CPAI exploration activity in the NE NPR-A. The Applicant is the same, the plan of operations is essentially the same, and the proposed drill sites, local access roads, and water supply lakes are in the same area. Overland transport through the NW NPR-A to Barrow has also been evaluated and completed in several previous programs. The 10 winter exploration programs completed in the NPR-A over the past 7 years were based on similar plans and methods of operation. Expected effects of associated activities (i.e., overland transport, water use, ice road/pad construction, drilling, other operations and maintenance, and abandonment and restoration) are known.

As shown on Figure 1, the proposed project involves a low ground pressure vehicle (LPV) trail from Barrow that may provide access by local residents in passenger vehicles and pickup trucks to the Dalton Highway. Concern has been raised that use of private vehicles may pose both a safety and environmental damage risk. Some private use of LPV trails and ice roads has occurred previously without significant environmental impact. This co-use of an access corridor authorized for winter exploration will be considered in the cumulative effects analysis.

There have been no significant direct, indirect, or cumulative adverse impacts associated with the 10 authorized winter exploration programs in the NPR-A. The environmental protection measures that reasonably apply to the proposed drilling area and associated activities are not substantially different than those applied to these previous exploration programs. The BLM field inspections have identified no significant impacts resulting from the CPAI authorized winter drilling program in the same area as the proposed action. The current analysis will focus primarily on differences in proposed activities and locations that might result in impacts different from those evaluated in previous NEPA analyses, including cumulative impacts.

¹⁰ 1998 NE IAP/EIS, Vol. 2, Section V; 2003 NW IAP/EIS, Vol. 2, Sec. VI.

¹¹ Alpine Satellites Development Plan FEIS Vol. 2, Sec. 5.

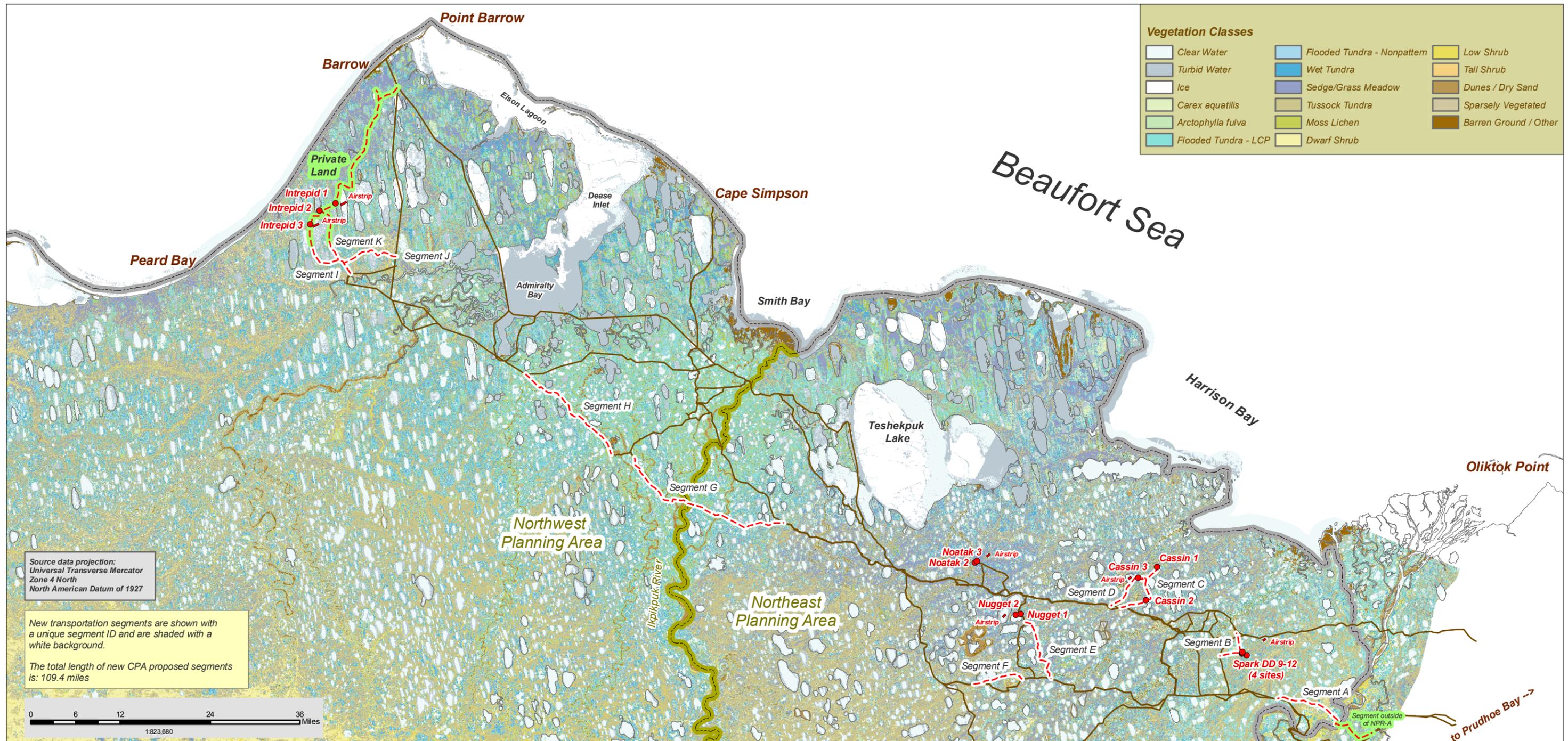


Figure 1: Proposed CPAI Project Area Map

BLM EA: AK-023-07-002
 (2006 - 2011 Permitting Period)

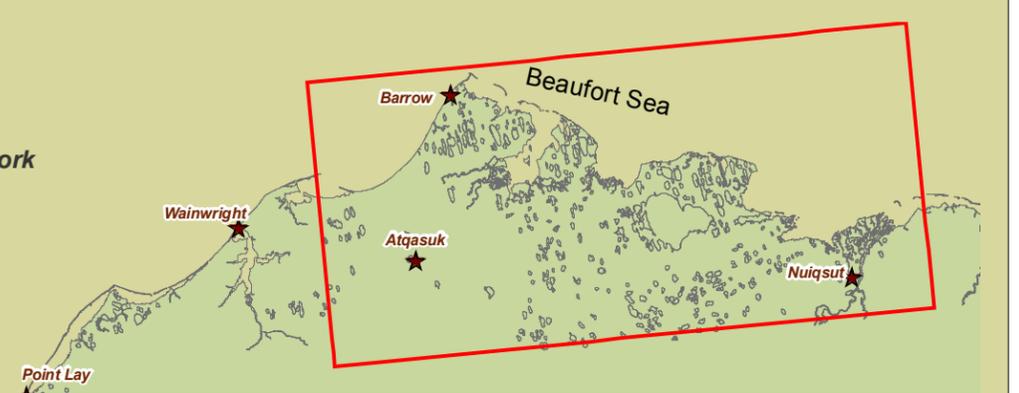


December 8, 2006

Legend

- NPR-A Boundary Segment
- ConocoPhillips Proposed Drill Site
- ConocoPhillips Transportation Network**
- Proposed Right-of-Way
- Previously Authorized Right-of-Way
- Proposed Ice Airstrip

Note: All authorized ice roads / trails are not depicted



2 PROPOSED ACTION AND ALTERNATIVES

The proposed project includes exploration drilling at any of 11 drill sites, during a 5-year winter exploration program in the NE NPR-A. The proposed exploration program will begin in winter 2006-2007, with the drilling schedule contingent upon permitting, weather, ongoing data analysis, and funding.

Table 2 documents the Notices of Staking (NOSs) with field inspections, as required for BLM approval of the CPAI surface use plan. A NOS for Noatak 1 was originally filed in 2004, with a new NOS and field inspection completed in 2006. Only the 11 new drill sites are considered part of the proposed project.

Table 2. Staking and Field Inspection

Drill Site	Notice of Staking date	Field Inspection date
Noatak-2	10/22/06	8/24/06
Noatak-3	10/22/06	8/24/06
Nugget-1	10/22/06	8/24/06
Nugget -2	10/22/06	8/24/06
Cassin -1	10/22/06	8/24/06
Cassin -2	10/22/06	8/24/06
Cassin- 3	10/22/06	8/24/06
Spark DD- 9	10/22/06	8/24/06
Spark DD -10	10/22/06	8/24/06
Spark DD-11	10/22/06	8/24/06
Spark DD-12	10/22/06	8/24/06

Access routes and stream crossings have been identified and field examined. Locations of the drill sites and local access routes are depicted on **Figure 2**.

2.1 PROPOSED ACTION

The proposed project is described below, with main project components summarized in **Table 3**. The proposed project is similar to exploration programs completed in the NPR-A during the past 7 winter seasons. The description of project components is tiered from the 1998 NE IAP/EIS, the 2004 NW IAP/EIS, and the NPR-A exploration drilling EAs listed in **Appendix A**.¹²

¹² 1998 NE IAP/EIS. Vol 1, Sec. IV.A.1.b ; 2003 NW IAP/EIS, Vol. 1, Sec. IV.A.1. a.(3) and (5) and Sec. IV.A.1.b(2) and (3); Sec. II/2 of the EAs in Appendix A.

Table 3. Summary of Proposed Project

Project Component	Program Total ^a
Ice Drill Pads and Wells	Up to 11 drill pads; totaling approximately 63 acres. Construction estimate of up three pads per season Up to 44 total penetrations (wells and sidetracks); multiple wells may be drilled from a single pad. Drilling camps typically accommodate 60 to 70 people on the pad.
Construction/ drilling support ice pads	May be constructed to support ice construction crews and/or drilling. Approximately 2-acre ice pad may be constructed near any drill site, and one approximately 1.4-acre ice storage pad may be built along access corridor.
Access	Approximately 110 miles of new access corridor to drill pads and water supply lakes.
Ice Airstrip	An estimated three airstrips (each up to 5,000 feet long) per season on lake surface locations.
Water requirement	Approximately 15.5 million gallons per drill site; for all 11 project sites, approximately 201.5 million gallons.

^a Mileage/acreage estimated for comparative impact analysis.

2.1.1 Access and Construction

Drill site locations are listed in **Table 4**. These sites are in the same general area as drill sites evaluated in 2004.¹³ Approval to drill at any of the proposed sites over the 5-year period was requested to accommodate changes in exploration strategy and funding priorities as new data become available.

Table 4. Drilling Locations (All Federal Land)

Name	BLM Lease No.	Section Location (Umiat Meridian)
Noatak-2	AA-081840	T12N, R5W, Sec. 21
Noatak-3	AA-081840	T12N, R5W, Sec. 21
Nugget-1	AA-084127	T11N, R4W, Sec. 28
Nugget-2	AA-084127	T11N, R4W, Sec. 28
Cassin-1	AA-081833	T12N, R1W, Sec. 27
Cassin-2	AA-081747	T11N, R1W, Sec. 17
Cassin-3	AA-081754	T12N, R1W, Sec. 31
Spark DD-9	AA-081800	T10N, R2E, Sec. 21
Spark DD-10	AA-081800	T10N, R2E, Sec. 21
Spark DD-11	AA-081800	T10N, R2E, Sec. 28
Spark DD-12	AA-081800	T10N, R2E, Sec. 21

Noatak 1 (AA -081939; T12N, R5W, Section 22) was authorized in December 2004

¹³ EA: AK-023-05 -005.

Temporary ice airstrips are planned for construction each year on lake ice up to 5,000 feet by 150 feet to accommodate large aircraft (e.g., Herc) or 3,000 feet by 100 feet to accommodate smaller aircraft (e.g., Otter). Sites in the NE Planning Area proposed at this time are listed below; several have been previously authorized.

<u>Drill Site:</u>	<u>Ice Air Strip Location:</u>
Noatak 2–3 and Nugget 1–2	Lake M4010* Lake M4015 Lake B84057
Cassin 1–3	Lake M0305* Lake Z06001
Spark DD 9–12	Lake M9923

* *Previously authorized ice airstrip locations. Lake M9922, approximately 1 mile west of M9923, has also been previously authorized as an airstrip location.*

In the NW NPR-A Planning Area, CPAI proposes to construct an ice airstrip on Kilusiktok Lake to provide access to the Intrepid drill sites which are located on private land. This lake extends to the south, across the border into the NPR-A.

Primary access to the drilling areas will be via packed snow trail/ice road ROWs authorized by the BLM and extending from Barrow, eastward across the NPR-A to the Colville River. CPAI has proposed several new ROW corridor segments to more effectively reach proposed drilling locations (See **Figure 1**).

Rolligon units and other LPVs will be used to transport equipment and personnel to construct ice roads/pads/airstrips associated with a particular years' winter exploration program. The final routes will be within a 1-mile corridor along the alignment depicted on **Figure 1**. This flexibility is needed to accommodate minor rerouting due to field conditions, animal dens, changes in creek crossing characteristics, or other field conditions.

CPAI proposes up to 110 miles of new access corridor (ice roads/packed snow trails). Ice spur roads will connect drilling pads, staging pads, airstrips, and permitted water sources. Rolligons/LPVs may be used to pre-pack the ice road, or sidecast water on the ice road route to expedite the penetration of frost. Ice roads will be approximately 25 to 35 feet wide or smaller, depending on rig and vehicle requirements. Pullout or widened sections may be constructed at certain locations along the ROW depending on field conditions. These areas are used to protect the tundra

during rig moves, where heavy equipment is required to help pull the rigs up hills or to temporarily stage material. Rig mats will be used, if needed, but will be removed prior to the end of the operating season.

Ice roads, pads, airstrips, and packed snow trails will be constructed and maintained using generally accepted North Slope practices developed over time to protect the tundra and support safe operations. Biodegradable traction material may be applied sparingly to high foot traffic areas to reduce slickness for safety purposes.

The proposed new ROW segments cross channels and tributaries of several rivers and unnamed streams in the NPR-A. Typically, an ice bridge is required when ice roads cross major stream/rivers. Crossings with fish habitat must comply with the Alaska Department of Natural Resources (ADNR) Office of Habitat Management and Permitting (OHMP) requirements for fish protection.

Road and pad construction may be concurrent. The ice pads will be constructed to approximately 500 feet by 500 feet (5.7 acres). A remote camp and staging area pad may also be built near the ice pad to facilitate construction and support during operations. This pad will be approximately 300 feet by 300 feet (2.1 acres). An ice lay down pad, approximately 250 feet by 250 feet (1.4 acres) may also be built on the west side of the Ublutuoch River (Sections 1, 2, 3, 10, 11, and 12 of T10N, R3E UM). Access to project locations may be controlled for public safety. Well sites will be closed to the general public for purposes of safety and confidentiality.

The freshwater requirements for constructing the project features (ice road/pads construction, maintenance, drilling operations, and camp use) are provided in **Table 3**. CPAI plans to utilize previously permitted water sources, as well as some new water sources, for this exploration program. The proposed new water source lakes in the NPR-A are listed in **Table 5**. Methods are summarized below.

Snow cover will be removed from a portion of all water source lakes to provide access for water trucks and ice chippers, installation of temporary water houses, and truck turnaround areas. Lake water intake structures will comply with OHMP requirements for fish protection, with screen integrity monitored, even on lakes with no fish. CPAI has requested approval to harvest ice aggregate from all new lakes.

Table 5. New Water Sources

Lake ID ^a	Town-Ship	Range	Sections	Surface Area (acres)	Depth (feet)	Calculated Total Lake Volume ^b (MG)	Volume for Ice removal (MG)	30% of volume deeper than 5 ft (MG)	15% of volume deeper than 7 ft (MG)	Fish Present ^d	Proposed water withdrawal (max) (MG)	Authorized Water withdrawal (max) (MG) (DNR TWUP)
NE NPR-A												
Z06001 ^c	11N 12N	2W	1/2; 25/26/35/36	750.34	6.6	445.04	421.37	0	0	Yes-S	Ice only	15% of under ice volume of water below 7ft. depth; Ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06002	12N 12N	1W 2W	31/31 36	50.67	8.2	59.76	16.21			No	30.0	20% total lake volume of water; Ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06003	11N 12N	1W 1W	3 34	161.31	11.6	245.50	77.63		0.75	Yes-S	0.75	15% of under ice volume of water below 7ft. depth. Ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06004	11N	1W	9/10/15/16	217.85	10.9	378.10	237.07	28.39	2.67	Yes-R ^e	28.39	30% of under ice volume of water below 5ft; ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06005	10N	2E	22/23/26/27	81.24	7.6	116.74	90.68	2.79	0.08	Yes-R ^e	2.79	30% of under ice volume of water below 5ft; ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06006	10N	2E	22	22.53	7.7	39.05	26.54	2.11	0.03	Yes-R ^e	2.11	30% of under ice volume of water below 5ft; ice aggregate removal restricted to grounded ice only; total water/ice withdrawal limited to 20% total volume of lake
Z06007	12N	5W	22/27	16.43	6.3	15.46	14.76			No	7.75	Total water and ice withdrawal limited to 20% total volume of lake; ice aggregate removal restricted to grounded ice only
M0415 ^c	12N	5W	14	209.2	6.1	183.44	157.46			No	25.98	Total water and ice withdrawal limited to 20% total volume of lake; ice aggregate removal restricted to grounded ice only
NW NPR-A												
Z06010 ^g	19N 12N	20W 20W	21/27/28/33/3 45/9/10	1705.74	7.9	3349.40	2086.21 ^f	237.08	8.87	Yes-R	237.08	30% of under ice volume of water below 5ft; ice aggregate removal restricted to grounded ice only

Key:

- a. Source: CPAI Temporary Water Use Permit (TWUP) applications and ADNR TWUP permits A2006-131, A2206-132 and A2006-133
- b. MG = million gallons
- c. Lake designated as an ice airstrip location. Note: The four other lakes proposed as ice airstrip locations have been previously evaluated for water withdrawal
- d. No = No fish caught; Yes = fish present during survey; S = Sensitive fish species; R = Resistant fish species only
- e. Exceeds 15 percent (%) of free water under the ice when fish are present (NE Stipulation 20)
- f. Exceeds 15%/30% rule for water/ice aggregate removal (NW ROP B-2)
- g. Lake is located on both Federal and Non-federal lands.

Potable water will be hauled from an approved source, or taken from local lakes, and processed through the approved water purification system in the drilling contractors' camp.

2.1.2 Drilling Operations and Support

Ancillary facilities include camps to support drilling and ice construction, pump houses on water sources (lakes), light plants near pump houses and along ice roads, and a warm-up shelter near the airstrip, if needed. Communication antennas and satellite dishes will be portable and attached to camp structures or freestanding. Drilling camps will accommodate approximately 60 people. Small camps (housing up to about 30 people) may be utilized on well sites where well testing is conducted with the rig off site. Up to four reservoir penetrations (e.g. two wells and/or sidetracks) may be completed at each drill site.

The proposed drilling and testing operations will be used to determine future drilling plans in the NPR-A. Testing may include extended flow periods to determine productivity of the well. Produced fluids will pass through an adequately sized separator system to prevent oil carryover into the gas stream. Oil from testing will be held in tanks until testing is completed. After testing, the oil will either be injected back into the formation or hauled to Alpine or Kuparuk and processed through their facilities. Produced gas will be flared.

Drilled wells will be temporarily suspended or plugged and abandoned prior to end of the winter drilling season.¹⁴ When operations are completed, the drill rig will be transported out of the project area. For drilling multiple years, the rig may be stored over the summer on an existing gravel pad, or at another suitable, authorized storage location.

Data for vertical seismic profiles may be collected in the vicinity of the well. The vibroseis trucks will probably remain on the roads and pads; these trucks are off-road vehicles approved for tundra travel. If the truck leaves a pad, all vertical seismic profiles lines will lie within a 2-mile radius of the well or along the road.

Up to approximately 40,000 gallons of diesel fuel will be stored in multiple tanks, contained in lined, bermed storage areas on ice pads. Fuel may be stored at airstrip locations, but not on lake ice. Light plants will be refueled on frozen lakes following CPAI standard procedures for fuel transfer, as discussed with the BLM and ADNDR in previous exploration programs in the NE

NPR-A. All light plants will have 110 percent (%) containment.

2.1.3 Waste Management

Procedures described in the CPAI NPR-A waste management plan will conform to State and Federal requirements. Excess drilling mud that cannot be reused will be transported to an approved injection well at Alpine, Kuparuk, or Prudhoe Bay, or potentially disposed of down an approved disposal site/well. Prior to hauling, cuttings will be stored in an ice-bermed storage cell or tanks at the drill sites; liquids will be temporarily stored in tanks. Upon completion of well site activities, the drilling waste storage cells will be cleaned of any residual contamination. Drilling waste storage plans must be approved by the Alaska Department of Environmental Conservation (ADEC). Crude oil and other produced fluids from production testing will be stored in tanks, and then re-injected or hauled out of the NPR-A for processing at an approved facility, as described above.

Approximately 6,500 gallons per day of domestic wastewater could be generated at a rig camp. Domestic wastewater will be processed and discharged under North Slope General Permit AKG-33-0000, or hauled to an approved disposal facility at Alpine or Kuparuk.

Waste management may include onsite incineration. Solid, non-burnable wastes will be deposited in large dumpsters, or other suitable containers, which will be backhauled to the NSB landfill or taken to the Kuparuk incinerator. Food waste will be stored in enclosed connex containers pending periodic hauling, or will be hauled daily to a secured disposal site.

2.1.4 Air Emissions

Sources of air emissions may include: drill rig engines, camp generator engines, stream generators, mobile non-road engine and construction equipment, used oil burners, hot-air heaters, light plants, incinerators, and (potentially) well test flaring equipment. CPAI will operate under the ADEC Minor General Permit 1 and will implement a public access control plan, with entry by unauthorized personnel restricted, as required during the project period, and as approved by BLM. Evaluation of the potential for hydrogen sulfide (H₂S) release indicates that significant quantities are not expected at any drilling location. Measures and precautions associated with H₂S are addressed in the Application for Permit to Drill filed with the BLM. Produced gas will be flared in accordance with the ADEC air permit requirements.

¹⁴ Drilling process most recently described in NW IAP/EIS, pp. IV-53 and 54.

2.1.5 Contingency Plans

Applicant contingency plans are described below.

Oil Discharge Prevention and Contingency Plan (ODPCP or C-Plan)

The Applicant is required to have approved oil spill response measures in place to meet Federal and State requirements. For the proposed activity, CPAI must have a site-specific ODPCP approved by ADEC, which is considered sufficient to meet BLM requirements. Additionally, the BLM inspects the wells and pads during construction and drilling.

CPAI has requested a minor amendment to their North Slope Exploration ODPCP for the proposed exploration locations. Information related to immediate response actions, spill cleanup (e.g., fuels, lubricants, or produced fluids) is found in the ODPCP. Elements of the 2006 amended ODPCP are essentially the same as those previously evaluated in EA: AK-023-05-005.

The Applicant's approved ODPCP, along with approved spill control equipment and supplies, will be kept on site. Phone service will be available 24-hours a day at the drilling camp. North Slope operators regularly participate in spill drills to improve practices and techniques for responding to an emergency event. When needed, CPAI will call on resources of other North Slope operators through Alaska Clean Seas, Mutual Aid, spill response cooperatives, and contractors, as available.¹⁵

No drilling will begin until the well pad is fully constructed and accessible by packed snow trail or ice road; the period of active drilling is subject to seasonal restrictions set in the ODPCP. CPAI has designated deadlines to stop drilling operations, depending on the location and access available.

Spill Prevention Control and Countermeasures (SPCC) Plans

An SPCC Plan provides guidelines for pollution prevention and addresses secondary containment. The drilling contractor will have an SPCC Plan for fuel storage facilities, and the well testing contractor will have an SPCC Plan for its testing tanks. Additionally, CPAI has a SPCC Plan for exploration activities.

Wildlife Protection and Encounter Plans

CPAI has a Polar Bear/Personnel Encounter Plan approved by the U.S. Fish and Wildlife Service (USFWS). This plan, along with CPAI's Wildlife Avoidance and Interaction Plan, provides appropriate wildlife protection measures. CPAI will also have an approved orientation program, required for all personnel working in the NPR-A, to increase awareness of related environmental, social, and cultural concerns. Project personnel will be instructed not to feed wildlife or attempt to attract, harass, or hunt them at drill sites or along transportation routes.

Other Plans

CPAI has an established Incident Management Team that follows the Incident Command System on call 24-hours a day. Contractors and employees will complete an 8-hour North Slope environmental and safety training program, in addition to specialized training as required. Additionally, an Environmental Health and Safety Policies and Procedures manual is available on CPAI's intranet web page, and Emergency Response Plans are available at individual facilities.

2.1.6 Operations and Maintenance

The proposed schedule calls for mobilization and ice construction to begin as soon as required authorizations and weather conditions allow, with drilling from ice pads expected to begin in January 2007. Operations and maintenance plans for roads and pads are similar to those previously evaluated and incorporated by reference.¹⁶

2.1.7 Abandonment and Restoration

Upon completion of drilling operations, all equipment and supplies will be removed and ice surfaces cleaned. Debris will be hauled to an approved disposal site. Dirty ice will be hauled to an approved disposal well. Ice road and pad sites will be inspected to insure proper cleanup. Wells are planned to be plugged and abandoned prior to the end of the winter drilling season. Well suspensions, if needed, will comply with applicable BLM and Alaska Oil and Gas Conservation Commission (AOGCC) regulations. Final site closure will be approved by all appropriate agencies. Well heads left in place will be covered to prevent attracting wildlife.

¹⁵ Plan No. 024-CP-5096 is available at ADEC.

¹⁶ EA: AK-020-00-011, Sec. II.A.1, II.A.3 and II.A.9.

2.1.8 Community Relations

CPAI regularly meets with local communities, regulatory agencies, and other interest groups. The BLM and CPAI have conducted a series of community meetings and consultations with residents of potentially affected communities, as noted in Sections 1.4 and 5.2. In addition to meetings, CPAI will keep the public informed in a variety of ways, including newsletters, radio and television announcements, and reports from local subsistence observers that may be employed by CPAI. CPAI posts permit applications on an internet web site to provide additional opportunity for public input and involvement.¹⁷

Cultural and Paleontological Resources

New road and pad locations were selected to avoid known archaeological and cultural resources and traditional land use sites. CPAI conducted a cultural and paleontological resources survey at pad locations and along new access corridors. According to this survey, no known cultural resources will be affected by the proposed exploration activities. A report of survey findings has been submitted to the BLM.

The proposed routing may be altered in the field due to terrain, stream crossing conditions, or wildlife. Any re-routing outside the corridor that has been examined for cultural and paleontological resources will require site-specific authorization by the BLM.

Subsistence

The project area is recognized as a subsistence use area, particularly for Nuiqsut and Barrow, and many of the public meetings and consultations have included discussions on subsistence. The Applicant also plans to continue consultation with subsistence users and implement mitigation measures, as necessary. CPAI has a NPR-A Subsistence Plan and Orientation program that will be implemented as required.

The Applicant has presented plans to the NPR-A SAP, Kuukpik Subsistence Oversight Panel (KSOP), and the NSB. Data from those consultations is considered in Section 4. Prior to issuing development permits, the NSB solicits public review including State and Federal agencies, local officials, residents, and private property owners in the affected area.

¹⁷ www.conocophillips.com/permits/

Economic Opportunity

CPAI will provide local residents with access to job applications and economic opportunity. In previous years, CPAI has participated in job fairs held in the Village of Nuiqsut, including the job fair held in October 2006. CPAI also maintains a 24-hour Jobs Hotline and an external job posting Website.

2.2 POSSIBLE FUTURE ACTION

Exploration drilling is the only reliable method of verifying the presence of oil, but drilling may or may not result in discovery of potentially producible resources. If a discovery is made, it typically takes an additional 4 to 10 years for further study, design, and installation of facilities before production can begin. Each phase of decision-making requires additional, site-specific environmental review and potential mitigation, as well as additional environmental protection measures.

BLM regulations provide the option of deferring plans for proposed facilities. Based on the uncertainties associated with wells to be drilled in the proposed program, CPAI has elected to defer planning for future facilities. Potential field development in and around the NPR-A has been discussed in previous evaluations and is incorporated by reference.¹⁸

The area likely would be developed and operated in a manner similar to that recently approved for the Alpine Satellite Development Project, incorporating relevant design and environmental protection measures required by the 1998 NE IAP/EIS and the associated ROD.

2.3 ALTERNATIVES

This EA is tiered from the broader alternatives analyzed in both the 1998 NE IAP/EIS and 2003 NW IAP/EIS and to more specific alternatives evaluated in exploration EAs, as discussed below.¹⁹

The 1998 NE IAP/EIS evaluated a defined exploration model, and developed extensive, site-specific protective measures for that concept. As a result, the 1998 ROD includes 79 stipulations that substantially limit the range of alternatives possible for this EA. The NW ROD has similar protective measures that narrow the range of

¹⁸ 1998 IAP/EIS, Vol. I, Section IV.A; 2003 NW IAP/EIS, Vol. 1, Sec. IV.A.b.4; and ASDP FEIS, Vol. 1, Sec. 2.2.2 and Sec. 2.2.3 and Vol. 2, Sec. 4.G.4.4.

¹⁹ 1998 IAP/EIS, Vol. 1, Section II.C.1-6; 2003 NW IAP/EIS, Vol. 1, Sec. II and EA's cited in Table 2, Sec. II.C/2.3, Alternatives.

possible access alternatives. The proposed action itself (i.e., drilling a specified number of exploration wells on specific oil and gas prospects, with access to those specific sites) significantly limits alternatives for the location and timing of exploration. Therefore, only a few alternatives are possible.

Alternatives to the proposed project are evaluated at several levels: alternatives considered, but eliminated from detailed analysis; functional alternatives; and the no action alternative. In summary, all but two alternatives were eliminated because they do not meet the purpose of the proposed action, fail to reduce environmental impact or provide an environmental advantage, or are technically infeasible or unreliable.

2.3.1 Alternatives Considered but Eliminated from Detailed Analysis

Some alternatives considered but eliminated from detailed analysis have been described in previous evaluations. One of these alternatives involves a constructed water supply to eliminate water withdrawal from multiple fish-bearing lakes, which is still under consideration by the BLM.²⁰

The second alternative initially considered in this EA involves drilling to different target locations from a single ice pad (i.e., directional drilling). This alternative might be technologically feasible for extended reach drilling to multiple targets from a single location (e.g., drilling all Spark DD wells from one drill site). However, extended reach drilling methods are rarely employed for exploration wells when practicable alternatives are available, because it adversely affects data collection. Limitations of this alternative have been previously addressed.²¹ In summary, drilling a vertical well provides far better exploration data than drilling a deviated well, and there appears to be no environmental advantage to altering the proposed winter exploration plan accordingly. Therefore, this alternative was eliminated from further analysis.

Another option considered was access via a sea ice road from Harrison Bay (i.e., similar to the Trailblazer project²²). This option was rejected as an alternative because it does not offer an environmental advantage for access to all drilling sites along the proposed ROW (from Spark DD to the Barrow area) for the entire 5-year CPAI exploration program. Similarly, use of only previously authorized access routes that go to the same general areas as new proposed segments was initially

considered. However, this offers no distinct environmental advantage and the proposed route changes will shorten and improve access. Both of these options were, therefore, eliminated from detailed analysis.

Other alternatives previously considered, but rejected from further consideration in this EA include primary access by air, packed snow trail, or ice road only.²³ Primary access by aircraft and/or packed snow trail would eliminate the requirement for water for ice road construction (1 to 1.5 million gallons/mile); however, there are other impacts associated with both alternatives. Primary access by aircraft would substantially increase the number of flights required, with the associated noise and visual impacts. Additionally, only a small number of drill rigs can be transported by air, which limits the number of wells that could be drilled in any one year, and emergency response would depend primarily on the availability of aircraft and flight conditions (e.g., weather). Use of only ice roads would involve substantially more water for construction of access required to reach the more distant drilling sites. Use of only packed snow trails limits the Applicant's ability to move associated equipment, supplies, and personnel.

For flexibility, the proposed project includes a combination of access via air, ice road, and/or packed snow trail. The applicant has proposed to use previously authorized ROW corridors to points of common destination. Previous winter exploration EAs have evaluated these alternatives and found that none of them would result in significant adverse direct, indirect, or cumulative effects; and that none of them offer a distinct environmental advantage over the others.²⁴

No unusual factors are present that would make exclusive use of air, ice road, or packed snow trail more environmentally viable for the CPAI exploration plan, which incorporates all of these transportation modes.

In summary, these action alternatives to the proposed project were eliminated because they do not meet the purpose of the proposed action, are technically infeasible or unreliable, fail to reduce environmental impact or provide an environmental advantage, or fail to comply with protective measures of the NE and NW RODs.

²⁰ EA: AK-023-02-005, p. IV-27.

²¹ EA: AK 023-04-004, p. 2-6.

²² EA: AK-023-01-001, Sec. II.A.

²³ EA: AK-023-00-011, p. II-12.

²⁴ EA: AK-023-03-008, p. 4-26; AK-020-00-011, pp. IV-26 and IV- 27, and Table 12; and AK-023-01-001, pp. IV-28 – IV-32,.

2.3.2 Alternatives to the Proposed Action

Based on limitations imposed by lease stipulations and the flexibility included in the proposed project, only two alternatives warrant further detailed consideration at this time: shared use of ice roads/ice airstrips in the project area and “no action.”

Alternative 1 – Shared Ice Road/Airstrip

In the future, if another applicant proposes activity in the same general area, shared facilities such as ice roads and ice airstrips would be considered as a way to reduce environmental impacts (e.g. water use, footprint). Other operators hold leases in the general vicinity of the CPAI project area (including areas accessed by the ROWs). At present, no related applications have been submitted; however, another exploration may be proposed concurrent with proposed CPAI activity in the future.

Alternative 2 –No Action

With the no-action alternative, exploratory drilling by CPAI under existing valid oil and gas lease would not be allowed as proposed. CPAI permit applications to the BLM would be denied; no access, drilling, or drilling support activities would occur on Federal lands in the NE NPR-A; and no amended access corridor in the NE and the NW NPR-A would be allowed.

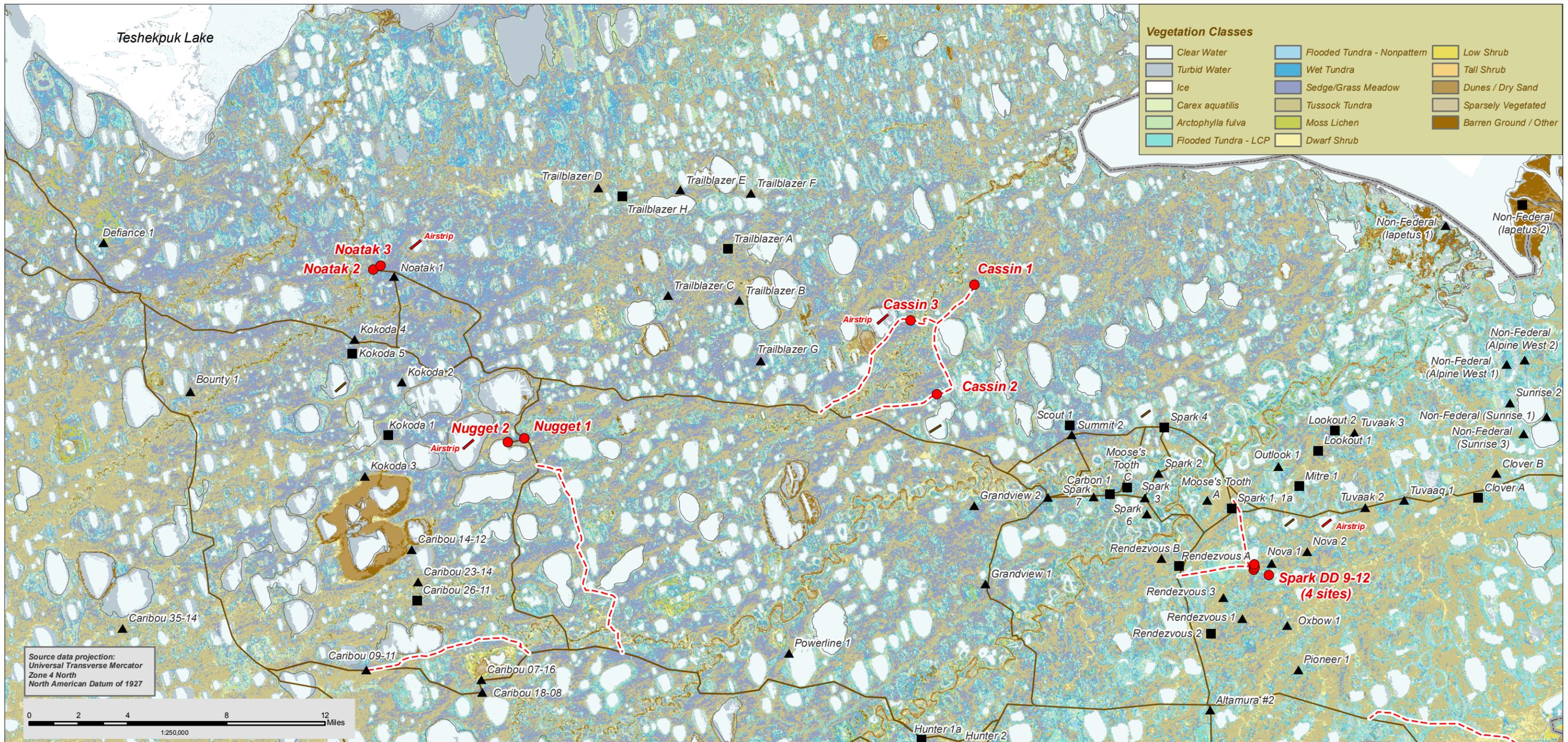


Figure 2: Proposed Drill Sites & Access

BLM EA: AK-023-07-002
(2006 - 2011 Permitting Period)

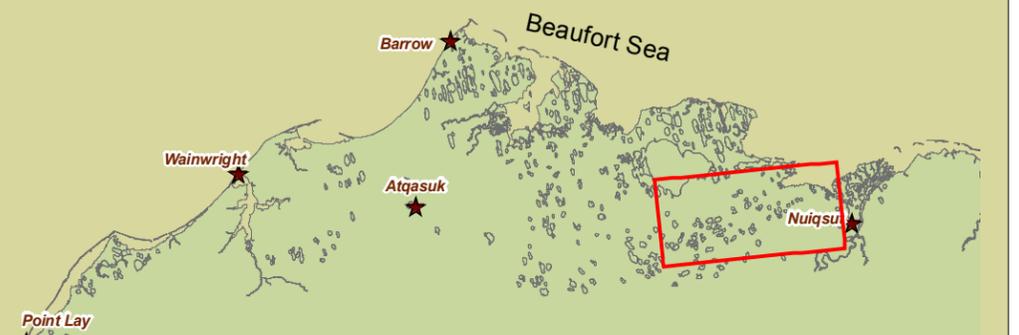


November 30, 2006

Legend

- NPRA Boundary
- ConocoPhillips Proposed
- 1999-2006 Drilled
- 1999-2006 Permitted, Not Drilled
- ConocoPhillips Transportation Network**
- Proposed Right-of-Way
- Proposed Ice Airstrip
- Previously Authorized Airstrip

Note: All authorized ice roads / trails are not depicted



3 AFFECTED ENVIRONMENT

The proposed CPAI exploratory drilling operations, ice roads, and ice airstrips are in the NE Planning Area. Access corridors and water supply lakes are in both the NE and NW Planning Areas. Environmental characteristics of the general project area have been extensively described in the 1998 NE IAP/EIS and the 2003 NW IAP/EIS (Vol. 1, Sections III), which are incorporated by reference, with some site-specific features summarized below.

The proposed drill pads are located approximately 9 to 28 miles inland from Harrison Bay, between Teshekpuk Lake and the Colville River. The general relation of the project area to existing oil and gas fields on the North Slope is shown on **Figure 3**.

Drill sites Noatak 2 and 3 are in the Teshekpuk Lake Special Area and Teshekpuk Lake Watershed Land Use Emphasis Area (LUEA). Drill sites Nugget 1 and 2 are in the Deep Water Lakes Fish Habitat LUEA. Drill Sites Spark DD 9 through 12 are in the Kuukpik Selection Area and are also adjacent to the boundary of the Judy Creek Sensitive Area Consultation zone. Exploration drilling and associated access is permitted in all of these areas.

New access route segments cross tributaries and channels of several major rivers and a number of unnamed streams. The route is also near several deep water lakes. All authorized stream crossings, including those previously evaluated and authorized for other NPR-A exploration programs, may continue to be used during the proposed 5-year exploration program. New access route segments also cross through the: Colville River Special Area, Colville River Fish Habitat LUEA, Potential Colville Wild & Scenic River LUEA, Deep Water Lakes Fish Habitat LUEA, Teshekpuk Lake Special Area, and Teshekpuk Lake Caribou Habitat LUEA/Special Caribou Stipulations Area in the NE NPR-A.²⁵ New route segments in the NW NPR-A cross the Brant Survey Area and the Caribou Study Area.

3.1 PHYSICAL CHARACTERISTICS

Proposed activities will take place on the Arctic Coastal Plain, where temperatures average below freezing for 8 months of the year. A dramatic change to higher temperatures and longer day length occurs during the other 4 months. Annual precipitation is low, averaging 8 inches per year, with more than half falling as snow. Snow cover is typically established in late

September/October and disappears late May/mid-June. Recent changes in weather patterns have reduced the winter exploration season from 208 days (1970) to 103 days (2002).²⁶ North Slope air quality meets the National Ambient Air Quality Standards and State of Alaska air quality regulations. Concentrations of regulated air pollutants are far less than the maximum allowable levels.²⁷

Topography is generally flat to gently rolling, dominated by permafrost-related geomorphic features including polygonal patterned ground, shallow lakes, and extensive areas of wetland interlaced with small, meandering streams. Permafrost ranges from 650 to 1,330 feet deep, with an active thaw layer typically 1 to 2 feet deep.

In *Exploratory Soil Survey of Alaska* (Rieger, Schoephorster, and Furbush, 1970), soil types that exist in the NE Planning Area are described in EA: AK-023-05-005, Section 3.1 (p. 3-1), which is incorporated by reference and summarized herein. Surficial deposits of the general area are marine silts and sands, aeolian sands, and outwash gravels. Soils are shallow, poorly drained, and constantly wet over permafrost. There are undulating and rolling sand dunes, especially in areas bordering the floodplains of major streams and some larger lakes. Most of the dunes are stabilized by vegetation, though some dunes adjacent to streams are active.

The proposed new ROW segments cross channels and tributaries of several rivers and unnamed streams in the NPR-A, including the Ikpikpuk, Chipp, Topagoruk, and Kalikpik rivers and Inigok Creek.

CPAI has identified eight new lakes for water withdrawal in the NE NPR-A, and one in the NW NPR-A (**Table 5**). The volume of water withdrawal authorized is based on depth and habitat value for fish. Based on available data, water quality of potential sources for this project appear to be within the general ranges of water quality discussed in the 1998 NE IAP/EIS and reviewed by the BLM in previous analyses, which are incorporated by reference. None of the conductivity measurements available for potential water sources exceed 4,000 micromhos (μmhos) per centimeter, which is used as a guideline for water use on tundra.²⁸

²⁵ 1998 NE ROD, Figure II.C.1.

²⁶ G. Schultz, ADNR. Tundra Access Symposium, sponsored by AOGA, ADNR, and BLM. October 7, 2003.

²⁷ 1998 NE IAP/EIS, Vol. 1, p. III-A-53; 2003 NW IAP/EIS, Vol. 1, p. III-43.

²⁸ Pers. Comm. Jack Winters, OHMP. October 5, 2005.

3.2 BIOLOGICAL RESOURCES

Biological resources in the project area within the NPR-A are described in both the 2003 NW IAP/EIS and the 1998 NE IAP/EIS,²⁹ as well as in previous BLM assessment documents. Key elements are discussed in more site-specific detail below.

3.2.1 Vegetation

The project area is located in the Arctic Coastal Plain, which is generally characterized as a mosaic of tundra wetlands with low relief. However, even small-scale relief features can influence vegetation patterns. Land cover in the NE and NW Planning Areas has been mapped by the BLM in cooperation with Ducks Unlimited, the NSB, and USFWS. Land cover is classified into 17 cover types (**Table 6**), with the percent cover in the Planning Areas.³⁰ Ground cover in the proposed project area, as shown on Figures 1 and 2, is summarized in **Tables 7 and 8**.

The inventory of ground cover in the project area in Tables 7 and 8 shows a variety of vegetation types present, with tussock tundra and sedge/grass meadow are predominant at drill sites. Tussock tundra, flooded tundra-low centered polygon (LCP), sedge/grass meadow are common along the new corridor segments.

There are no known Federally-designated threatened or endangered plants in the project area. Several plant species are considered to be rare or sensitive within the project area. As used here, this classification can include species with small or declining populations or species for which there is little information or plant survey work.

One such species (*Pleuropogon sabenei*, an aquatic grass) was reported to occur in the general vicinity of Noatak and Nugget prospects.³¹ A review of the Alaska inventory indicated that rare plants potentially present have been previously analyzed regarding impacts associated with exploration drilling activity. No further vegetation survey was required for the proposed project, because no ground disturbing activity is expected, except for the de minimis disturbance (approximately 0.0006-acre) at each completed well cellar.

Table 6 Land Cover in the NPR-A

Land Cover Category	% cover NW NPR-A	% cover NE NPR-A
WATER:		
Ice	2.3	2.2
Clear Water	7.6	10.8
Turbid Water	6.8	8.4
AQUATIC:		
<i>Carex aquatilis</i>	2.0	3.8
<i>Arctophylla fulva</i>	0.6	0.4
FLOODED TUNDRA:		
Flooded Tundra LCP (LCP = low centered polygons)	5.9	6.5
Flooded Tundra NP (NP=non patterned)	4.0	2.7
WET TUNDRA:		
Wet Tundra	6.4	5.0
MOIST TUNDRA:		
Sedge Meadow	6.6	10.1
Tussock Tundra	23.5	29.1
Moss Lichen	1.7	1.6
SHRUB:		
Dwarf Shrub	27.0	15.5
Low Shrub	4.1	1.7
Tall Shrub	0.0	0.1
BARREN GROUND:		
Sparsely Vegetated	0.3	2
Dunes / Dry Sand	0.4	0.7
Barren Ground / Other (e.g., clouds)	0.7	1.0

3.2.2 Fish and Wildlife

Fish found within the area of the proposed action include: Pacific salmon (primarily pink, chum and Chinook), lake trout, Arctic char, Arctic grayling, Alaska blackfish, northern pike, longnose sucker, broad whitefish, humpback whitefish, round whitefish, least cisco, Arctic cisco, Bering cisco, burbot, slimy sculpin, Arctic lamprey, ninespine stickleback, and (possibly) threespine stickleback. Nearly all species may utilize lakes as well as streams and rivers.³² More specific details on life history and distribution are available in the 1998 NE IAP/EIS and the 2003 NW IAP/EIS.

²⁹ 2003 NW IAP/EIS, Vol. 1, Sec. III.B; 1998 NE IAP/EIS, Vol. 1, Sec. III.B.

³⁰ 2003 NW IAP/EIS, Vol.3, Table III-06. 1998 NE IAP/EIS, Vol. 1, Table III.B.2-1.

³¹ EA: AK-023-05-005, p 3-2.

³² 1998 NE IAP/EIS, Vol. 1, p. III-B-6 ; 2003 NW IAP/EIS, Vol. 1, pp. 54-56.

Table 8 Land Cover Along New Transportation Corridor Segments (in acres)

Land Cover	Segment A (10.0 miles)	Segment B (5.7 miles)	Segment C (9.2 miles)	Segment D (7.2 miles)	Segment E (10.0 miles)	Segment F (7.1 miles)	Segment G (25.1 miles)	Segment H (16.9 miles)	Segment I (7.8 miles)	Segment J (8.0 miles)	Segment K (2.3 miles)	Total Acres
<i>Arctophylla fulva</i>	49.8	18.6	5.9	3.6	11.6	7.2	84.2	102.5	38.6	30.3	24.6	376.8
Barren Ground / Other	44.8	1.1	73.1	139.0	54.1	66.8	313.8	242.1	0.4	0.9	0.7	936.8
<i>Carex aquatilis</i>	273.6	458.3	346.2	267.4	375.8	206.7	1011.0	512.5	178.8	100.6	98.4	3829.4
Clear Water	480.3	311.5	523.9	550.7	937.5	433.7	1296.7	1111.2	246.0	125.7	105.3	6122.5
Dunes / Dry Sand	132.4		7.5	174.8	16.2	22.0	724.9	500.4				1578.2
Dwarf Shrub	882.0	104.0	115.6	163.4	159.6	181.5	9.5	0.2	326.9	605.2	136.8	2684.6
Flooded Tundra - LCP	920.0	778.2	385.7	287.6	563.0	354.0	4106.4	2963.5	607.9	503.0	203.2	11672.4
Flooded Tundra - NP	274.1	208.8	163.2	130.8	165.3	136.2	1232.3	674.5	376.7	196.3	107.4	3665.8
Ice							3.9	2.7				6.5
Low Shrub	391.5	0.7		0.9			226.0	524.9	128.7	232.0	42.8	1547.4
Moss Lichen	5.3	21.8	80.6	93.4	106.2	102.4	2037.5	1592.8	163.6	142.2	52.0	4397.8
Sedge / Grass Meadow	61.3	221.2	1773.2	993.6	1869.6	1105.6	1077.0	273.8	493.4	768.7	173.8	8811.2
Sparsely Vegetated	45.8	0.2	38.0	139.7	29.9	64.1	359.1	151.8				828.6
Turbid Water	294.0	137.9	324.4	333.6	396.9	386.9	1419.8	1203.3	882.7	339.0	368.5	6087.1
Tussock Tundra	2486.6	1518.3	2080.6	1245.9	1569.7	1664.9	814.7	451.2	1373.3	2028.6	447.7	15681.5
Wet Tundra	466.2	286.8	430.1	386.8	496.6	280.5	1642.6	919.2	693.1	540.1	208.0	6350.0
Grand Total	6807.7	4067.5	6348.0	4910.9	6752.0	5012.4	16359.3	11226.6	5510.2	5612.8	1969.2	74576.7

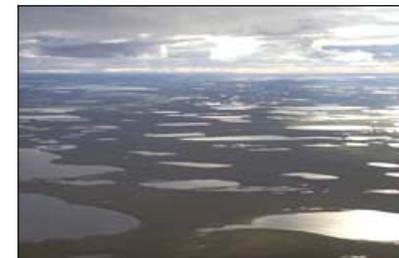
*1/2-mile buffer around proposed segment (1-mile corridor width total)

NOTES for Tables 7 and 8

LCP = Low centered polygons; NP = Non-patterned

Acresages computer calculated using BLM/Ducks Unlimited digitized vegetation association map. The computer adds a buffer to both ends of each segment; therefore the values shown are conservative. Totals may differ due to rounding of computer generated values.

Values reflect vegetation coverage for drill sites 500 feet by 500 feet, and along transportation corridor segments 1 mile wide (within which only a small proportion will be used)



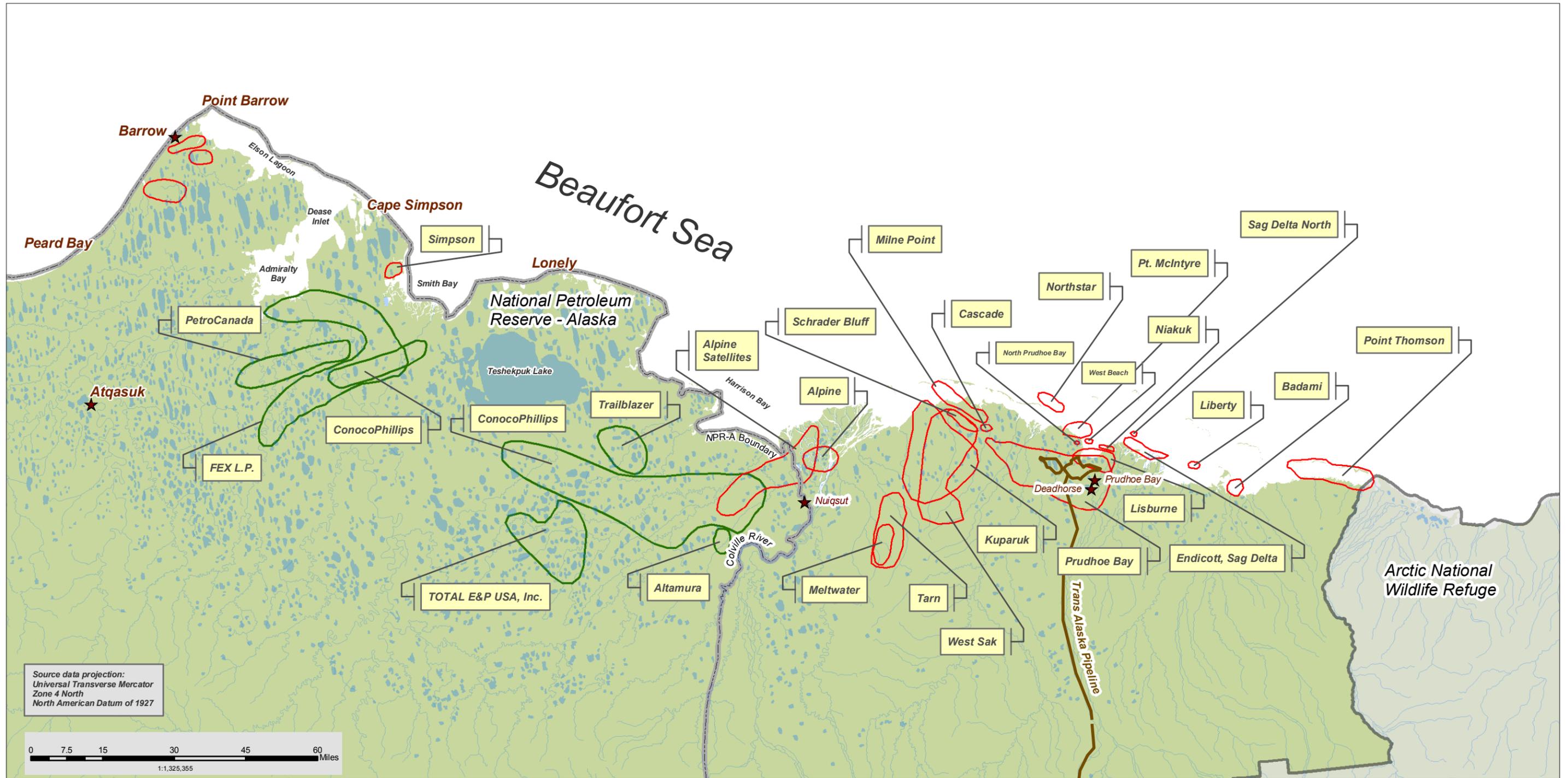


Figure 3: Existing/Proposed Oil & Gas Activities on the North Slope

BLM EA: AK-023-07-002



November 27, 2006

Legend

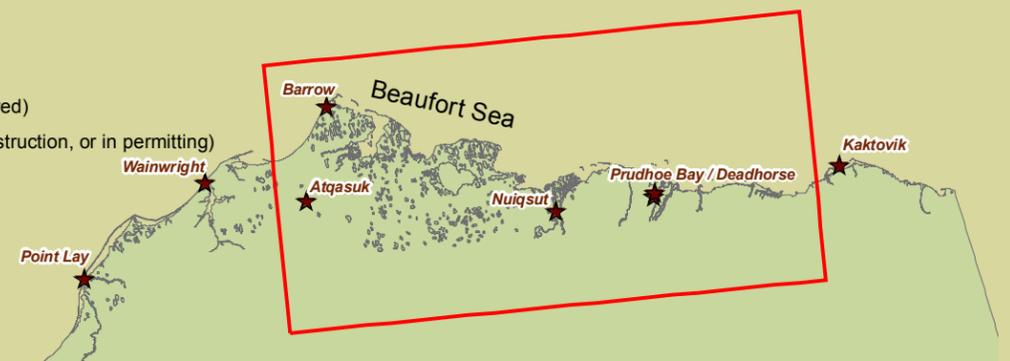
~ NPRA Boundary

Activity Areas

▭ Exploration Area (proposed or approved)

▭ Oil / Gas Field (producing, under construction, or in permitting)

— Trans Alaska Pipeline



APPENDIX A

RELATED ENVIRONMENTAL ANALYSES, NPR-A EXPLORATION

APPENDIX A

**Related Environmental Analyses
NPR-A Exploration**

Environmental Analysis^a	Decision Document	Related Activity^b <i>(proposed exploration drilling sites, access route corridors, and water supply associated with the total program, unless otherwise noted)</i>	Special Areas and Other Designated Land Use Areas Evaluated
Northeast National Petroleum Reserve-Alaska Integrated Activity Plan/Environmental Impact Statement. USDO I BLM. August 1998.	Record of Decision, Northeast National Petroleum Reserve-Alaska Integrated Activity Plan/Environmental Impact Statement. BLM, October 1998	Multi-use management of the Northeast NPR-A, including oil and gas leasing, exploration and development	All within the NE Planning Area
EA: AK-020-00-011. Environmental Assessment, 1999-2000 Winter Exploration Drilling Program in the National Petroleum Reserve-Alaska (NPR-A). USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. January 2000. [ARCO]	Finding of No Significant Impact and Decision Record AA-081794. Application for Permit to Drill and Right-of-Way. BLM. January 2000	Spark 1, Lookout A, Clover A, Clover B, Moose's Tooth A, Moose's Tooth C, Rendezvous A, and Rendezvous B. 30-mi ice road corridor; 20-mi packed snow trail corridor; 1 ice airstrip/yr; 137 MG water (23 lakes in NPR-A). 3-year program over 5 years	Colville River Special Area; Fish Creek, Judy Creek and Colville River Fish Habitat LUEAs, Colville River Raptor, Passerine and Moose LUEA
EA: AK-023-01-001. Environmental Assessment, Trailblazer Exploration Drilling Program, 2000-2005, National Petroleum Reserve-Alaska (NPR-A). USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. November 2000 (minor revision January 2001). [BPX]	Finding of No Significant Impact and Decision Record AA-081752. Application for Permit to Drill and Right-of-Way. BLM. January 2001	Trailblazer A-H. 34-mi ice road corridor; 18-mi packed snow trail corridor; 1 ice airstrip/yr; 525 MG water (52 lakes in NPR-A); 54-mi non-federal offshore ice road. 5-year program	Teshekpuk Lake Special Area; Teshekpuk Lake Watershed LUEA; Teshekpuk Lake Caribou Habitat LUEA; No Surface Activity Area
EA: AK 023-01-003. Environmental Assessment, National Petroleum Reserve-Alaska (NPR-A) Exploration Program, Winter Drilling 2000-2006. USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. December 2000 (minor revision March 2001). [Phillips]	Finding of No Significant Impact and Decision Record AA-081780. Application for Permit to Drill and Right-of-Way. BLM. March 2001	Spark 2, Spark 3, Spark 4, Spark 5, Rendezvous 1, Rendezvous 2, Outlook 1, Oxbow 1, Hunter 1, and Sunrise 2. Up to 5 temporary camp/storage ice pads; 56-mi ice road corridor (+20 mi existing ROW); 0-mi packed snow trail corridor (+20 mi existing ROW); 1 ice airstrip/yr; 500 MG water (83 lakes in NPR-A). 5-year program	Colville River Special Area; Fish Creek, Judy Creek, and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine and Moose LUEA
EA: AK-023-02-004. Environmental Assessment, National Petroleum Reserve-Alaska (NPR-A) Altamura Prospect Exploration Program. December 2001 (Minor revision January 2002). [Anadarko]	Finding of No Significant Impact and Decision Record AA-081736. Application for Permit to Drill. BLM. January 2002.	Altamura 1 and Altamura 2. 7-mi ice road corridor; 4-mi packed snow trail corridor (+15 mi existing ROW); 1 ice airstrip/yr; 19 MG water (9 lakes in NPR-A). 2-year program	Colville River Special Area; Colville River Raptor, Passerine, and Moose LUEA; Colville River Fish Habitat LUEA
EA: AK-023-02-005. Environmental Assessment, National Petroleum Reserve-Alaska (NPR-A) 2001-2006 Exploration Drilling Program. USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. December 2001 (Minor revision January 2002). [Phillips]	Finding of No Significant Impact and Decision Record AA-081780. Application for Permit to Drill and Right-of-Way. BLM. January 2002.	Spark 6, Spark 7, Spark 8, Hunter A, Hunter 2, Lookout 2, Mitre 1, Rendezvous 3, Nova 1, Nova 2, Pioneer 1, Grandview 1, Tuvaq 1, Tuvaq 2, and Tuvaq 3. 30-mi ice road (+40 mi existing ROW); 100-mi packed snow trail (+31 mi existing ROW); 2 ice airstrip sites; 120 MG water (14 lakes in NPR-A). 5-year program	Colville River Special Area; Fish Creek and Judy Creek and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine, and Moose LUEA
EA: AK-023-02-033. Environmental Assessment, Puviaq Storage Site Project, National Petroleum Reserve-Alaska. USDO I BLM, Northern Field Office, Arctic Management Team. March 2002. [CPAI]	Finding of No Significant Impact and Decision Record FF-093572. BLM NPR-A Permit 298401. March 28, 2002.	Access to and rig storage near Puviaq; 1 over-summer ice storage pad; 80-mi packed snow trail corridor. 1-year program	Teshekpuk Lake Special Area; Teshekpuk Lake Watershed LUEA; Spectacled Eider Breeding Range LUEA; Teshekpuk Lake Caribou Habitat LUEA

APPENDIX A

**Related Environmental Analyses
NPR-A Exploration**

Environmental Analysis^a	Decision Document	Related Activity^b <i>(proposed exploration drilling sites, access route corridors, and water supply associated with the total program, unless otherwise noted)</i>	Special Areas and Other Designated Land Use Areas Evaluated
EA: AK-023-03-008. Environmental Assessment. National Petroleum Reserve-Alaska (NPR-A) Exploration Drilling Program, Puviaq #1 and #2 Exploration Wells. USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. December 2002. [CPAI]	Finding of No Significant Impact and Decision Record AA-081854. Application for Permit to Drill and Right-of-Way. BLM. December 2002.	Puviaq 1 and Puviaq 2. 76-mi ice road corridor; 168 mi packed snow trail corridor (+107 mi existing ROW); one over-summer ice storage pad, 2 ice airstrip sites; 124 MG water (28 lakes in the NPR-A). 2-year program	Teshekpuk Lake Special Area; Teshekpuk Lake Watershed LUEA, Spectacled Eider Breeding Range LUEA, Teshekpuk Lake Caribou Habitat LUEA; Goose Molting Habitat LUEA Ikipkuk River Paleontological Sites LUEA; Teshekpuk Lake and Miguakiak River Fish Habitat LUEAs; No Permanent Facility Use Area
EA: AK-023-03-027. Environmental Assessment, Storage Ice Pads, USDO I BLM, Northern Field Office, Arctic Management Team. February 2003. [CPAI]	Finding of No Significant Impact and Decision Record FF-093905. Permit 298401. February 2003.	Alternate trail access to and rig storage near Kokoda/Carbon. 11-mi packed snow trail corridor; over-summer ice storage pad. 1-year program	Teshekpuk Lake Special Area; Teshekpuk Lake Watershed LUEA, Spectacled Eider Breeding Range LUEA, Teshekpuk Lake Caribou Habitat LUEA; Fish Habitat LUEAs
EA: AK-023-03-032. Environmental Assessment, Access To and Drill Stacking at Inigok. USDO I BLM, Northern Field Office, Arctic Management Team. February 2003. [TOTAL E&P USA, Inc.]	Finding of No Significant Impact and Decision Record FF-093906. BLM NPR-A Permit 281001. February 2003.	Access to and rig storage at existing facility at Inigok; 30-mi packed snow trail corridor (+27 mi existing ROW). Access to lease; 6-mi hardened trail corridor. 1-year program	No Permanent Facility Use Area
Northwest National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement. USDO I BLM. November 2003.	Record of Decision, Northwest National Petroleum Reserve-Alaska Integrated Activity Plan/ Environmental Impact Statement. BLM. January 2004.	Multi-use management of the Northwest NPR-A, including oil and gas leasing, exploration and development	All within the NW Planning Area
EA: AK-023-04-005. Environmental Assessment, National Petroleum Reserve-Alaska (NPR-A) 2003-2008 Exploration Drilling. USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. November 2003 (Minor revision December 2003). [CPAI]	Finding of No Significant Impact and Decision Record AA-084161. Application for Permit to Drill and Right-of-Way. BLM. December 2003.	Caribou 07-16, Caribou 09-11, Caribou 14-12, Caribou 18-08, Caribou 23-14, Caribou 26-11, Caribou 35-05, and Caribou 35-14. One temporary staging ice pad; 60-mi ice road corridor (+22 mi existing ROW); 31-mi packed snow trail corridor (+ 27 mi existing ROW); corridor; 170 MG water (35 lakes in NPR-A). 5-year program	Teshekpuk Lake and Colville River Special Areas; Teshekpuk Lake Watershed LUEA, Pik Dunes LUEA; Fish Creek, Judy Creek and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine, and Moose LUEA; Permanent Facility Use Area
EA: AK-023-04-004. Environmental Assessment National Petroleum Reserve-Alaska (NPR-A) 2003-2008 Exploration Drilling Program, USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. November 2003 (Minor revision December 2003). [CPAI]	Finding of No Significant Impact and Decision Record AA-084129. Application for Permit to Drill and Right-of-Way. BLM. December 2003.	Kokoda 1, Kokoda 2, Powerline 1, Grandview 2, Carbon 1, Summit 2, and Scout 1. 62-mi ice road corridor (+ 22 mi existing ROW); 5 ice airstrip sites; 92 MG water (12 lakes in NPR-A). 5-year program	Teshekpuk Lake Special Area; Colville River Special Area; Teshekpuk Lake Watershed LUEA; Fish Creek and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine, and Moose LUEA
Final Environmental Impact Statement. Alpine Satellite Development Plan. USDO I BLM, Alaska State Office, in cooperation with U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Coast Guard, and the State of Alaska Anchorage, Alaska. September 2004.	Record of Decision, Final Environmental Impact Statement, Alpine Satellite Development Plan. Prepared by BLM, October 2004.	Production Development	Teshekpuk Lake and Colville River Special Areas

APPENDIX A

Related Environmental Analyses NPR-A Exploration

Environmental Analysis ^a	Decision Document	Related Activity ^b <i>(proposed exploration drilling sites, access route corridors, and water supply associated with the total program, unless otherwise noted)</i>	Special Areas and Other Designated Land Use Areas Evaluated
EA: AK-023-05-005. Environmental Assessment National Petroleum Reserve-Alaska (NPR-A) Northeast Planning Area, Winter Exploration Drilling Program. USDO I BLM, Alaska, Northern Field Office and Anchorage Field Office. December 2004 [CPAI]	Finding of No Significant Impact and Decision Record AA-081727. Application for Permit to Drill and Right-of-Way. BLM. December 2004.	Kokoda 3, Kokoda 4, Kokoda 5, Noatak 1, Bounty 1, Defiance 1; up to 10 temporary camp/storage ice pads; 26-mi ice road corridor (+84 mi existing ROW); 8-mi packed snow trail corridor (+88 mi existing ROW); 2 ice air strips/yr; 80 MG water (58 lakes in NPR-A). 5-year program	Teshekpuk Lake Special Area; Colville River Special Area; Teshekpuk Lake Watershed LUEA; Pik Dunes LUEA; Teshekpuk Lake Caribou Habitat LUEA, Fish Creek, Judy Creek, Kealok Creek and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine and Moose LUEA
Final Northeast National Petroleum Reserve-Alaska Amended Integrated Activity Plan/Environmental Impact Statement. USDO I BLM. January 2005 – remanded for further action	ROD – vacated by federal court	Multi-use management of the Northeast NPR-A, including oil and gas leasing, exploration and development	
EA: AK-023-06-003. Environmental Assessment National Petroleum Reserve-Alaska (NPR-A) Northwest Planning Area, Winter Exploration Drilling Program 2005-2007. USDO I BLM, Alaska, Fairbanks District Office, Arctic Field Office. December 2005 [FEX]	Finding of No Significant Impact and Decision Record AA-085574. Application for Permit to Drill, 3100.00 and Right-of-Way, 2884.01. BLM. December 2005.	Aklaq 1, Aklaq 1A, Aklaq 2, Aklaq 2A, Aklaq 2B, Aklaqyaaq 1, Amaguq 1; 31-mi ice road corridor; 78-mi packed snow trail corridor (+399 mi existing ROW); 2 ice air strips/year; up to 4 temporary camp/storage ice pads, 85 MG water (28 lakes in NPR-A). 2-year program	Teshekpuk Lake and Colville River Special Areas, Deep Water Lakes, Ipkipuk, Chipp, Alaktak Inaru, Meade, Topogoruk, Oumalik, Miguakiak, and Titaluk rivers; Teshekpuk Lake Caribou Habitat LUEA; Fish Creek and Judy Creek and Colville River Fish Habitat LUEAs; Colville River Raptor, Passerine and Moose LUEA
EA: AK-023-07-001. Environmental Assessment National Petroleum Reserve-Alaska (NPR-A) Northwest Planning Area, Winter Exploration Drilling Program 2006-2008. USDO I BLM, Alaska, Fairbanks District Office, Arctic Field Office. December 2006 [FEX]	Finding of No Significant Impact and Decision Record AA-085574. Application for Permit to Drill, 3100.00 and Right-of-Way, 2884.01. BLM. December 2006.	Aklaq 3, Aklaq 4, Aklaq 5, Aklaq 6, Aklaq 7, Aklaq 7A, Aklaqyaaq 2, Amaguq 2; Uugaq 1; 62 -mi new access corridor, 2ice air strips/year; 113 MG water (34 lakes in NPR-A). 2-year program	Teshekpuk Lake Special Areas, Deep Water Lakes, Caribou Study Area, kpiqkuk, Chipp, Topogoruk, and Alaktak rivers.

Key:

^a Documents are available for review at the Fairbanks District Office, BLM, 1150 University Avenue, Fairbanks, Alaska 99709.

^b All mileage and water volumes are approximate for comparative impact analysis purposes. NOTE: Distance and volume values were updated in 2006, based on a standardized approach to estimate new elements of the proposed program (i.e., maximum program total new length of ice roads and trails and volumes of water potentially used); also estimated existing ice road and snow trail corridor ROWs proposed for possible use).

ARCO – Arco Alaska Incorporated
BLM – Bureau of Land Management
BPXA – BP Exploration (Alaska) Incorporated
CPAI – ConocoPhillips Alaska, Incorporated
EA – Environmental Assessment
FEX – FEX L.P. Incorporated
LUEA – Land Use Emphasis Area
MG – Million gallon(s)

Mi – Mile(s)
NE – Northeast
NPR-A – National Petroleum Reserve – Alaska
NW – Northwest
ROD – Record of Decision
ROW – Right-of-Way
USDO I – U.S. Department of the Interior
yr – year(s)

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