



Environmental Assessment
for Drew Point Test Well #1 Well Plugging/Abandonment and Reserve Pit
Remediation Project

EA# DOI-BLM-LLAK010-2010-0001-EA

Preparing Office: Arctic Field Office

Project Title/Type of Action: Drew Point Test Well #1 Well Plugging/Abandonment and Reserve Pit Remediation/ NPR-A Right of Way (2884.01)

Serial/Lease/Case File Number: Serial #FF095631

Land Use Plans/Acts:

Northeast National Petroleum Reserve-Alaska Supplemental Integrated Activity Plan/Environmental Impact Statement (IAP/EIS) dated July 16, 2008

Applicant: Bureau of Land Management

**Address: Fairbanks District Office
Arctic Field Office
1150 University Avenue
Fairbanks, Alaska 99709**

Date: January 22, 2010

Land Description

Northwest Route (A to B)

<u>Section(s)</u>	<u>Township</u>	<u>Range</u>	<u>Meridian</u>
5-24	14N	3W	UM
31(Excluding Private Land)	15N	3W	UM
7,8,15-28,35,36	15N	4W	UM
2-14	15N	5W	UM
31	16N	5W	UM
7-10,15-23,25-28,35,36	16N	6W	UM
1-3,11,12	16N	7W	UM
5-9,16-22,27-29,32-36	17N	7W	UM
31	18N	7W	UM
25-26,35,36	18N	8W	UM

Southwest Route (B to C)

<u>Section(s)</u>	<u>Township</u>	<u>Range</u>	<u>Meridian</u>
26,27,34,35	18N	8W	UM
Offshore	17N	8W	UM
36	17N	9W	UM
2,11,13,14,24,25,36 (Excluding Private Land)	16N	9W	UM
1,25,36	15N	9W	UM
6,7,18,19,30,31	15N	8W	UM
6,7,18,19,20,29,32	14N	8W	UM
6	13N	8W	UM
1,2,11,14,15,16,21,20,19	13N	9W	UM
25	13N	10W	UM

Southern Route (A to C)

<u>Section(s)</u>	<u>Township</u>	<u>Range</u>	<u>Meridian</u>
13-24	14N	3W	UM
13-24 (Excluding Private Land)	14N	4W	UM
25-36	14N	5W	UM
36	14N	6W	UM
1-11,15-22,28-32	13N	6W	UM
4-11,13,14,23-26	13N	7W	UM
1-7	13N	8W	UM
1,2,11,14,15,16,21,20,19	13N	9W	UM

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GLOSSARY

ADEC Alaska Department of Environmental Compliance

ANILCA The Alaska National Interest Lands Conservation Act passed in 1980, modified and established designation of federal lands in Alaska for conservation and wilderness. These lands are managed by the National Park Service, US Fish and Wildlife Service, and US Forest Service.

Cat Camp. A cat-camp is the equivalent of a camper. It is a small, typically 2 to 4 person self-contained, ski-mounted unit with sleeping quarters, generator and kitchenette.

FLPMA – The Federal Land Policy And Management Act of 1976 is a Public Law 94-579 passed by Congress October 21, 1976 that gave direction to the way in which the public lands administered by the Bureau of Land Management are managed.

Graywater - Discharge that includes wastewater from any or all of the following: kitchen sink, shower, drinking water, and laundry.

Legacy Well- Term used for 136 wells and core holes which were drilled by the U.S. Navy and the U.S. Geological Survey during an early exploration program in the NPR-A.

NEPA National Environmental Policy Act. This law, passed in 1969, went into effect on January 1, 1970. It requires all Federal Agencies to disclose the environmental effects of their actions.

NPRA National Petroleum Reserve Alaska, formally named The Naval Petroleum Reserve #4(NPR-4) is an area of more than 23 million acres in the northernmost part of Alaska, and was established by executive order on February 27, 1923.

NPRPA The Naval Petroleum Reserves Production Act of 1976 (PL 94-258), dated April 5, 1976, transferred jurisdiction of NPR-4 to the Secretary of the Interior and renamed it the NPR-A. This act authorized the Secretary to begin further petroleum exploration and closed the NPR-A to all forms of appropriation under the public land laws, including mining and mineral leasing laws.

NPR-4 The Naval Petroleum Reserve No. 4 was established by Executive Order 3797, dated February 27, 1923.

**Environmental Assessment
for Drew Point Test Well #1 Well Plugging/Abandonment and Reserve Pit
Remediation Project
DOI-BLM-LLAK010-2010-0001-EA**

Chapter 1 Introduction

The Bureau of Land Management (BLM) proposes the plugging/abandonment and reserve pit remediation of Drew Point Test Well #1 in the National Petroleum Reserve- Alaska (NPR-A). The Drew Point Test Well #1 is located on the southeast side of Smith Bay, approximately 70 miles southeast of Barrow. The site location is Section 26, Township 18 North, Range 8 West of Umiat Meridian. The Latitude is 70 52' 47.14" and the Longitude is 153 53' 59.93". The well was drilled by the United States Geological Survey (USGS) in 1978 and was drilled to a depth of 7,946 feet.

Drilling related operations started with rig-up on January 1, 1978, and terminated on March 13, 1978. At the conclusion of the drilling evaluation operations, the well was abandoned with cement and mechanical plugs set at selected intervals. Husky Oil NPR Operations, Inc. supervised and directed the drilling and support operations as prime contractor to the United States Geological Survey, Department of the Interior. In 1978, the USGS initiated long-term ecological (sub-surface ground temperature) research and directed that this well be configured to facilitate the research efforts. Following the placement of mechanical plugs, the upper portion of the well bore was filled with diesel fuel to ensure that the well bore remained ice free for research purposes. By necessity, the research effort at this well site will be ended by the proposed action or by shoreline erosion.

On November 9, 2009 the Arctic Field Office requested, of itself, that an NPR-A right of way be granted to conduct this environmental remediation. A Contract was awarded to MarshCreek, LLC to complete all phases of the project. The application was filed in accordance with the regulations contained in 43 Code of Federal Regulations (CFR) 2800, and under the authority in the Naval Petroleum Reserve Production Act of 1976 (NPRPA).

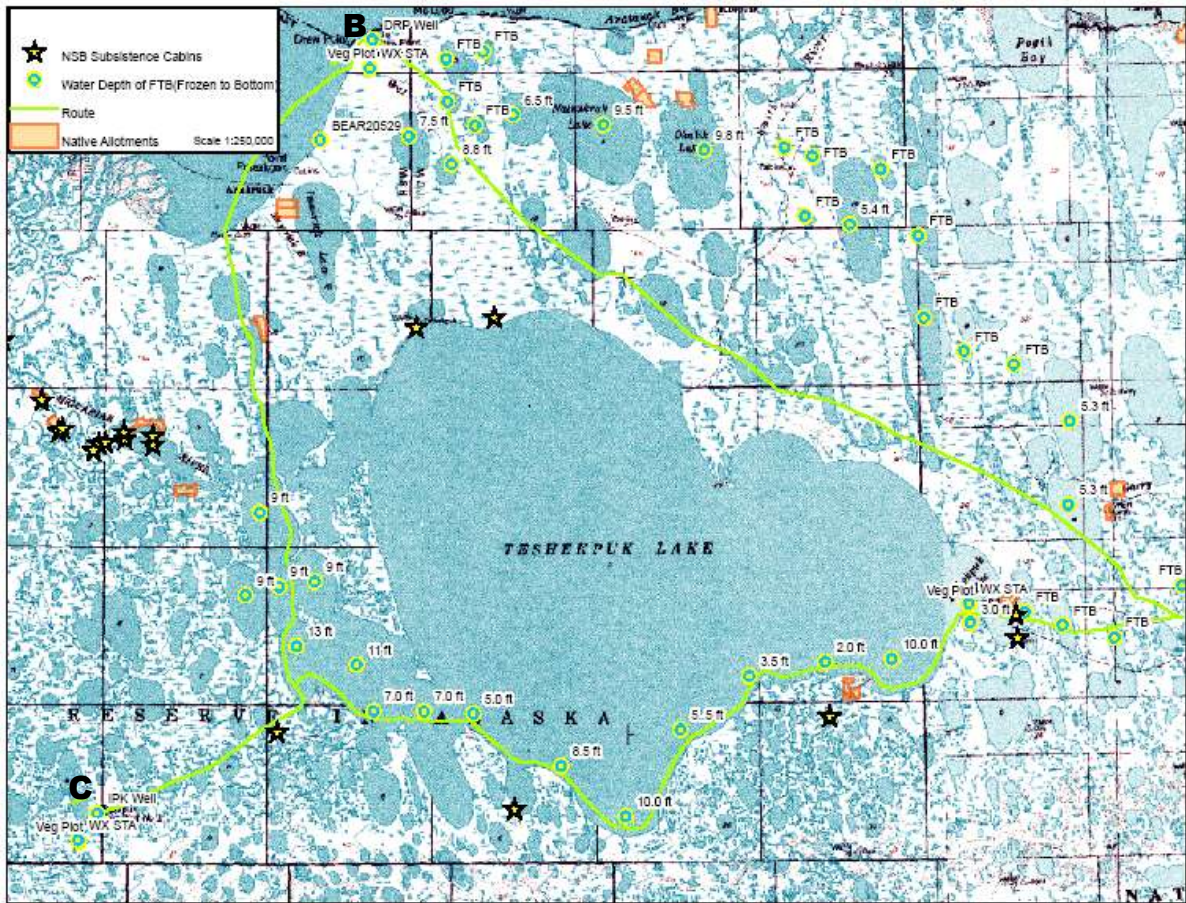


Figure 1: Proposed BLM Project Area Map

1.1 Need for Action

The Drew Point Well Pad Site has been subject to active erosion and mass wasting from the Beaufort Sea. On average, between 50 and 125 feet(ft) of erosion per year has been occurring since 2001. The vertical bank on the north side of the drill pad is approximately 25 ft in height and is unstable. The accelerated shoreline erosion threatens both the legacy well and its reserve pit with near term potential to expose the exploration oil well as a navigational hazard, release thousands of gallons of petroleum well bore fluids, and breach the reserve pit resulting in a release of petroleum and heavy metals contaminated used drilling muds into the Beaufort Sea.

1.2 Purpose of Action

The specific objectives of this project are to:

- Excavate the estimated in place volume of 1,470 cubic yards(cy) of capping materials,
- 1,350 cy in place volume of drilling mud and 3,623 cy of ice covering the capping

materials and drilling mud.

Transport reserve pit contents to an approved disposal facility.

Remove the diesel fuel in the well bore and properly dispose or recycle materials.

Remove the well head and plug and cap and cut the well approximately 5 to 10 ft below the sea level.

Excavate and backfill the well cellar. If contaminated soils are encountered they will be segregated and disposed of properly.

Transport any scrap metals and solid wastes to a State of Alaska permitted landfill.

1.3 Laws, regulations, other EAs that influence this EA

This EA will be based on the findings, management controls, and protective measures of the NE NPR-A Supplemental Integrated Activity Plan/ Environmental Impact Statement (SIAP/EIS) and the 2008 NE NPR-A SIAP/EIS ROD, as well as other laws and regulations. The action, as proposed, is consistent with the objectives outlined in these documents and not in conflict with other resources in the area. The proposed use is in conformance with current policy of the Arctic Field Office, BLM.

The proposed action is in conformance with the NE SIAP/EIS, associated ROD, National Petroleum Reserve Product Act (NPRPA), Federal Land Policy Management Act (FLPMA), Alaska National Interest Lands Conservation Act (ANILCA) Endangered Species Act, Executive Order (EO) 11988, EO 11990, and terms of the federal leases.

1.4 Decision to be made

The BLM must conduct a project-specific NEPA analysis and determine whether the proposed project to excavate and transport materials and to cap the well so that this site no longer presents an environmental hazard, should be approved, rejected, or approved with modifications, and if additional mitigation is needed. The scope of this EA includes analysis that enables the BLM to select among alternatives that meet the purpose and need, and are within the BLM's jurisdiction (40 Code of Federal Regulations 1506.1(a)(2)).

1.5 Scoping and Issues

Public notification of the Environmental analysis was announced in the NEPA register on file at the Arctic Field Office Environmental Assessment web site.

The BLM has had several meetings with local communities and the NPR-A Subsistence Advisory Panel (SAP) regarding ongoing clean-up activities at Legacy Well sites in the NPR-A. The NPR-A SAP approved the BLM prioritized list of sites needing remediation due to threat of coastal erosion at the April 2006 meeting.

BLM guidelines include a list of issues that are addressed, where applicable, in NEPA assessments, (BLM, 2008, Appendix 1). Some elements are not present in the project area and are, therefore, not discussed further. A summary listing of related issues considered by AFO Field Staff is provided in **Table 1.1**.

Table 1.1 Issues Considered in Evaluating Impacts

Issued Considered	Determination	Basis of Determination (See Note)
Air Quality	No Impact	Protection provided by: State of Alaska Air Non-Point and Mobile Program and regulations (18 AAC 50)
Cultural and Paleontological Resources	No Impact	Protection provided by: Section 106 of the National Historic Preservation Act, ROP E-13, I-1
Subsistence	Potentially Affected	Protection provided by: ANILCA, ROP H-1
Environmental Justice	Not Present	Protection provided by:
Flood Plains/Wetlands and Riparian Zones	No Impact	Protections provided by: ROPs A-4, A-5, C-2, C-3, C-4, EO 11988 and EO 11990
Waste (Hazardous/Solid)	Potentially Affected	Protections provided by State of Alaska 18 AAC 30, 60, 62, 63, 72, and 75; ROPs A-1, A-2a, A-4, and A-5, and 2 mitigating stipulations for blasting/excavation
Invasive, Non-native species	Not Present	Protections provided by:
Native American Religious Concerns	No Impact	Protections provided by: ROP I-1
Water Resources	No Impact	Protections provided by: ROPS A-4, A-5, B-1, B-2, C-3
Recreation	Not Present (See Note 2)	Protections provided by:
Socialcultural Systems	Not Present	Protections provided by:
Vegetation	No Impact	Protections provided by: ROP C-2
Threatened & Endangered Species Spectacled and Steller's eider	Not Present	Protection provided by Section 7 of the Endangered Species Act (J), ROP A-4, A-5, E-9
Visual Resource Management	No Impact	Protections provided by: ROPs A-1, A-4, A-5, C-2, C-3
Wild & Scenic Rivers	Not Present	Protections provided by:
Wilderness	Not Present	Protections provided by:
Threatened & Endangered Species Polar Bear	Potentially Affected	Letter of Authorization for the Incidental and Intentional Take of polar bears issued under sections 101 (a)(4)(A)(c), 109(h) and 112(c) of the Marine Mammal Protection Act. In accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA), issuance of these LOAs also fulfills the requirements for Tier 2 Consultation of the Programmatic Biological Opinion. ROP A-4, A-5, A-8, C-1
ACEC's	Not Present	Protections provided by:

Fish	Potentially Affected	Protection provided by: ROP A-4, A-5, B-1, B-2, C-3, C-4. EFH finding “not likely to adversely affect”. Project-specific stipulations 1-3.
non-T&E birds	No Impact	Protection provided by ROP A-2a, A-4 – A-6, E-9, E-10, E-9-b
non-T&E mammals	No Impact	Protection provided by ROP A-2-a, A-8, C-1, E-9-b and F-1-b

Note1: Determination tiered from: 2008 NE IAP/EIS Vo1. 2, Chapter 4; and 2008 NE ROD, and laws and regulations as noted.

Note 2: There are currently no permitted recreation activities in the timeframe of proposed action.

ROP- Required Operating Procedure

In summary, BLM resource specialists have identified the following issues for further evaluation in this EA: 1) Threatened and Endangered Species-Polar Bears 2) Fish 3) Subsistence 4) Wastes, Hazardous and Solid.

1.6 Public Involvement

Development of the 2008 NE IAP/EIS involved extensive input from other Federal agencies, the State, the NSB, thousands of individuals, and many institutions. A number of permits and approvals are required work in the NPR-A . These are described in the 2008 NE IAP/EIS (Vol. 5, Appendix B), many of which are available for public review prior to agency decision-making. **Table 1.2** summarizes permits and approvals associated with the proposed project.

Table 1.2 List Federal, State, or local permits

Federal	
<i>United States Fish and Wildlife Service</i>	Letter of Authorization (LOA) Polar Bear Incidental Take
State	
<i>Alaska Department of Natural Resources Division of Coastal and Ocean Management</i>	Coastal Zone Questionnaire
<i>Office of Habitat Management and Permitting</i>	Fish Habitat Permit
<i>Alaska Department of Environmental Conservation</i>	Kitchen/Potable Water Permits Individual Permit – Graywater discharge
<i>Alaska Department of Natural Resources</i>	Temporary Water Use Permit Land Use Permit Overland Travel
Local	
<i>North Slope Borough</i>	Administrative Approval (Marsh Creek)

Chapter 2 Alternatives Including the Proposed Action

2.1 Introduction

This chapter both describes the alternatives (potential actions) and compares the alternatives in terms of their environmental impacts (from Section 1.5) and their achievement of objectives (from Section 1.2).

2.2 Description of Alternatives

2.2.1 Alternative A: No Action

Under No Action, the Bureau of Land Management would neither plug and abandon and cut off the Drew Point Test Well #1 below sea level nor remediate the Drew Point Reserve Pit. The current situation as described below would continue. The well casing would likely be enveloped by the Beaufort Sea within a few years and would become a navigational hazard. It is probable that the well casing would become damaged or destroyed by either motor vessel collision, wave action, or ice pressure action, thus releasing thousands of gallons of diesel fuel to the Beaufort Sea. See Chapter III (Affected Environment) for a more detailed profile of the current environmental situation at Drew Point.

The Drew Point Well #1 was originally drilled by Husky Oil (USGS) in 1978 to a depth of 7,946 Feet(ft). The well bore currently contains 2,100 ft of diesel fuel, used to facilitate long-term research by the U.S. Geological Survey. The well site also contains a State of Alaska-regulated excavated and capped (but water covered up to a depth of 5 feet) reserve pit containing diesel-contaminated drilling mud, drill cuttings, scrap metal, and other regulated reserve pit contents. Over the past 10 years, the well site has been subject to severe erosion and mass wasting from the Beaufort Sea. The erosion threatens the release of petroleum contaminated drilling mud into the ocean as well as potential release of thousands of gallons of diesel fuel from the well bore used to facilitate long-term global climate research by the USGS. The vertical bank on the north side of the drill pad is approximately 25 feet in height and is unstable due to exposed massive ice.

Currently Drew Point is visually monitored and has been mapped with Trimble Geographic Positioning System (GPS) equipment each summer since 2005. This monitoring would continue under the no action alternative.

2.2.2 Alternative B: Proposed Action

The proposed action as submitted by the applicant is that of construction, operation, maintenance of an NPR-A right-of-way and an environmental clean-up at the Drew Point Test Well #1. This project has several aspects including plug and abandonment of an oil well, removal of a reserve pit and long-term management/storage of the contaminated materials/muds, etc. from Drew Point Test Well #1. The long-term storage would be at the Ikpikpuk reserve pit.

The applicant is requesting storage and operations at areas closer than the 500 ft mentioned in ROP A-5. The AO has considered and accepted this request, per ROP A-5.

2.2.2.1 Planning and Permitting

The trail to the project starting point (A – Figure 1) would be authorized under a prior right of way authorization held by Marsh Creek.

Water for ice pad construction and personnel camp needs will be acquired from Teshekpuk Lake, Naluakruk Lake, Olalik Lake, and two unnamed lakes south of Drew Point (Figure 2). No more than 1,000,000 gallons would be pumped from the lakes over the duration of the project.

A project-specific safety plan would be maintained on site. Tailgate meetings would be conducted daily by the contractor. The contractor would also ensure workers had appropriate training that is required to work on the North Slope and at the remediation site. Well P&A procedures would be coordinated and approved by the BLM working with the Alaska Oil and Gas Conservation Commission (AOGCC).

Workers would be trained to avoid wildlife that may be in the area in accordance with the Drew Point Well #1 Human/Wildlife Avoidance and Interaction Plan Letter of Authorization (LOA) from the U.S. Fish and Wildlife Service Incidental Take and Intentional Take as a contingency.

If required under the USFWS Letter of Authorization a polar bear detection survey would be conducted with a handheld Forward-looking Infrared (FLIR) imager. The handheld FLIR unit is used as a primary screening tool to identify possible dens (hotspots). This survey would also use Karelian bear dogs from Aklaq Services out of Fairbanks. The dogs' primary function is to identify whether these hotspots are occupied dens or simply a false positive. There would be logistical support for Aklaq Services, to include a survival unit, snowmachines, and air support. The survey would allow travel corridors to be adjusted, if necessary to accommodate the required 1 mile buffer around known dens.

2.2.2.2 Project Execution and Drilling Waste Excavation.

A snow ramp would be constructed to gain safe access to the drill site 15 feet above the sea ice elevation. The snow ramp would be up to 150 feet long, built of snow with water and ice chips added during construction. The trail from Drew Point to Ikpkuk would travel on grounded sea ice along the east shore of Smith Bay before transitioning to the tundra for the approximately 32 miles south to Ikpikpuk. Marsh Creek LLC would exclusively use track-equipped machinery approved by the BLM and the State of Alaska for overland travel. Rubber-tracked Case Steiger tractors and steeltracked units (such as a Cat D7 or Case 977) would be used to establish and maintain trails, with a smaller Tucker tracked vehicle to pioneer the trail checking ice thicknesses for the sea segments along the way. Once trails are established, Challengers may be used to supplement hauling capacity at peak times.

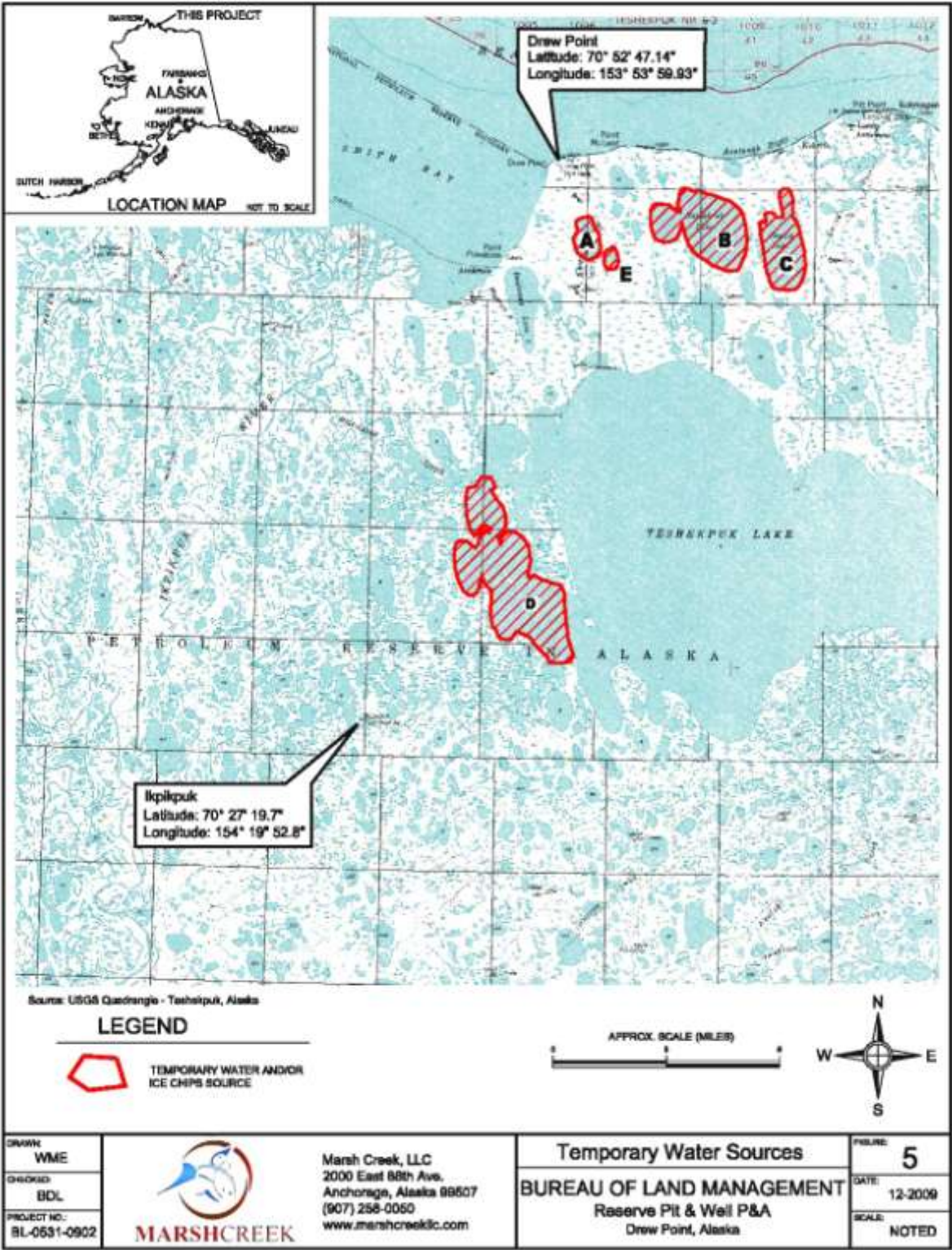


Figure 2: Proposed Water Withdrawal Locations

Onsite transportation would include pickup trucks, tundra-capable track-mounted vehicles, and heavy equipment. After mobilization is complete, traffic along the resupply trail between Oliktok Point and Drew Point/Ikpikpuk would consist of two Steigers pulling fuel sleighs making one round trip every 5 to 7 days during the 60 day project. The maximum fuel stored at the remote camps at one time would be 10,000 gallons in two or three mobile double-walled fuel sleighs. Pink dye would be added to all diesel fuel prior to transport to the Project to aid in spill detection.

A mobile 25-person camp would be established on the sea ice near the Drew Point well site. A smaller 20-person camp would be established at Ikpikpuk, near the excavation site and/or the winter airstrip. An easily moveable cat camp would be placed near the head of the Kogru River embayment to serve as emergency quarters. A survival unit would accompany the resupply crew. Each of the main camps would consist of hard sled-mounted units including a kitchen/diner, sleeping areas, washrooms, generator rooms, and storage compartments.

Potable water would be produced with a skid-mounted snow melter. At each camp, greywater (up to 1500 gallons/day) would be filtered and discharged onto sea ice, gravel pad, or tundra as authorized by ADEC/EPA's Alaska Pollutant Discharge Evaluation System general permit. A skid-mounted incinerator would be used for garbage. Ash from the incinerator would be back-hauled to the North Slope Borough disposal facility in Deadhorse, Alaska.

Air transportation support for the contractor would entail chartered single-engine, ski-equipped turbine Otter aircraft based in Deadhorse landing on a prepared ice airstrip on grounded sea ice north of Drew Point serving as a visual flight rules (VFR) airstrip to support routine camp resupply and crew changeout. A second snow/ice airstrip may be constructed on grounded ice on the large freshwater lake west of Ikpikpuk. Air transportation support for Bureau, Interior, and State or North Slope Borough personnel would consist of wheeled single or dual engine aircraft capable of landing on ice runways less than 3000 feet in length, or ski-equipped aircraft if no ice runway is available.

Camp food resupply would occur once per week via air transport. Two additional flights are anticipated to be required for personnel and parts per week. If, after the camps and runways are established, the project runs 60 days, there would be an estimated 25 lands and takeoffs to conduct the winter work. Approximately 30 landings for government compliance and oversight purposes is anticipated at each winter runway from February 4th to April 30th.

Summer access to the site would be via helicopter transportation. Summer transport would be needed for pre-final inspection, final inspection, possible follow-up surveying and/or hand pickup of debris.

Project communications would include satellite phones, cellular phones (intermittent reception available in the east project area), and VHF radios for communications during mobilization/demobilization by cat-train and during activities at the project work site. A directory with the various contact numbers and radio frequencies would be distributed to project

team members before mobilization.

Ikpikuk reserve pit excavation would be accomplished with the use of a trimmer (a loader with a trimmer attachment) and an excavator equipped with a frost bucket. The trimmed ice would be stockpiled separately from the trimmed soils. Storage would be placed to facilitate vehicle operations and the camp facilities. The east half of the reserve pit would be used for storage as well as a portion of the Ikpkuk pad.

Drew Point reserve pit excavation would be accomplished with the use of a 40,000 pound excavator equipped with a frost bucket, and a trimmer. If necessary, an ice pad would be constructed to create a base for temporary stockpile of drilling waste before the waste is transferred to the interim storage facility at Ikpkuk. The proposed sampling and analysis of materials would be consistent with ADEC requirements. It is anticipated that field screening would be necessary to identify the true lateral and vertical extent of drilling waste in the reserve pit to meet the site cleanup objectives.

2.2.2.3 Drilling Waste Transport and Disposal

Transportation of the drilling waste from Drew Point to Ikpkuk would be conducted with tundra-capable low-ground-pressure rubber-tracked Case Steiger tractors pulling rubber track equipped side dump trailers. Traffic between Drew Point and Ikpkuk would consist of four Steigers pulling double 20-cubic yard capacity side dump units making a complete roundtrip once every 12 hours. Current scope volumes (estimated 4000 cubic yards) would require about 25 days (24 hour operations) of hauling. Additional traffic might include A Tucker with project inspector personnel. No ice road construction is planned, therefore no use of highway vehicles will occur, except on gravel pads or sea ice.

The well pit corrective action task would involve the removal and transportation of the reserve pit drilling wastes for temporary storage in the Ikpkuk reserve pit by:

- Establishing a 4,000 ft lighted ice airstrip on grounded sea ice, weather observation station, and 25 person (approximate) primary man camp at Drew Point; and a 20 person camp and 2,500 ft snow/ice airstrip at Ikpkuk reserve pit
- Excavating and transporting an estimated 1,470 cubic yards (cy-in place volume) of capping materials commingled with drilling muds, 1,350 cy (in place volume) of drilling mud, and possibly ice commingled with drilling muds from Drew Point for temporary storage at Ikpkuk reserve pit (Figure 3). In place volumes are anticipated to have a 30% “fluff” factor upon excavation, resulting in slightly larger transport volumes.

Removing large pieces of metallic debris and solid waste to a State of Alaska-permitted landfill, likely the Oxbow Landfill in Deadhorse, for disposal or recycling materials as applicable

Operating and closing the Ikpkuk temporary storage cell (Figure 4)

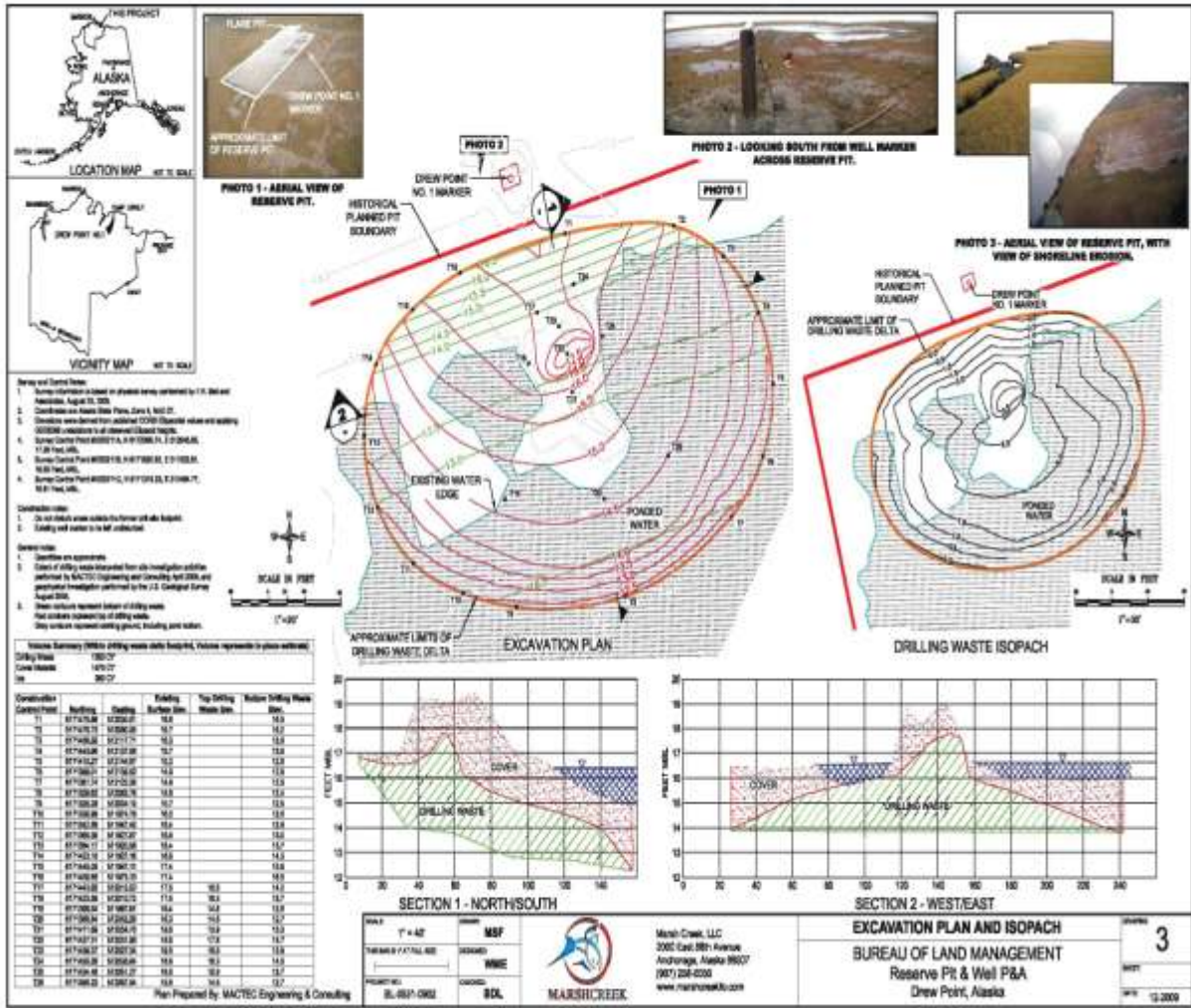


Figure 3: Excavation Plan

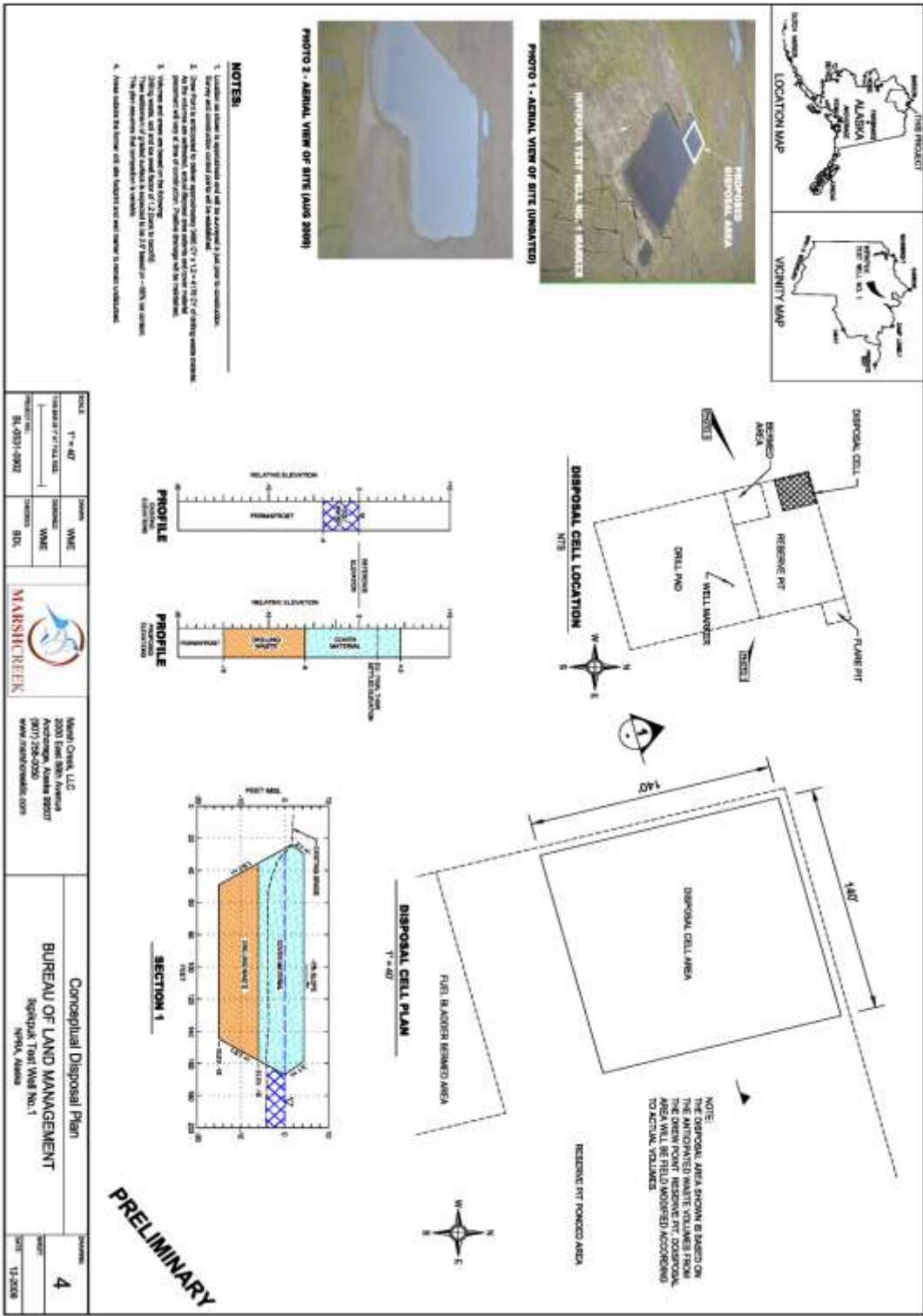


Figure 4: Disposal Plan

Preparing final reports to document project activities and close project permits and authorizations

Blasting would occur following the approved blasting plan, completely within the existing pad area and would be designed to limit material spread to the pad area. The closest lake that is not frozen to the bottom would be approximately 3 miles away, and the nearby sea ice would be grounded to approximately 0.5 miles offshore. Blasting would conform with Alaska Department of Fish and Game blasting standards which limit instantaneous pressures to an increase of 2.7 pounds per square inch and a peak particle velocity of no more than 0.5 inches per square inch. Seismometers would be used to document blast parameters.

2.2.2.4 Plugging and Abandonment of the well

Solid waste generated during the P&A activities would be demobilized to Prudhoe Bay for disposal at Service Area 10's Oxbow Landfill.

Recovering diesel from the well bore and setting a minimum 200-foot plug of permafrost cement

Removing the well head and plug and cap and cutting the well approximately 5 to 10 ft below sealevel

Excavating the two adjacent casing pipes buried near the well bore (the "mouse" and "rat" holes) and completely removing or cutting the pipes at approximately 5 to 10 ft below sea level

Transporting recovered well fluids (diesel, water) to Prudhoe Bay or Anchorage for proper disposal or recycling

In accordance with a State of Alaska regulated/approved blasting plan, blasting removal of gravel pad and subsurface would occur to a depth of approximately 14 ft below ground surface (bgs) to facilitate excavation to roughly 30 ft bgs around the well head in order to cut the well casing off below sea level.

2.2.2.4 Removal of solid waste/scrap metal.

Marsh Creek would mobilize a container from Deadhorse dedicated to recyclable metals and general solid waste to store and transport the material.

Schedule

Project mobilization is dependent on suitable ice thickness along the sea ice travel routes. A preliminary schedule is presented below (minor changes may occur due to weather or ice conditions).

- Late January-Begin staging at the end of the Prudhoe Bay road system at Oliktok Point
- Early February-Depart the Oliktok Point area for Drew Point and Ikpikpuk
- Mid February-Establish camps, runways, and begin ice road construction
- Mid April-Complete site activities
- Mid to Late April-Demobilize to the Prudhoe Bay road system

A site visit to document post-corrective action conditions would be conducted late June/early July. After the site visit is conducted, a completion report will be prepared to document corrective action activities.

2.2.3 Alternative C (Alternative to blasting plan)

This alternative would be implemented for Phase 3 (Drilling Waste Transport and Disposal) of the proposed action, if the blasting does not take place. Alternative B would be followed as written with the exception of use of blasting technology to expose the well casing. The difference between this alternative and the proposed action would be the use of mechanical means versus the blasting. For this alternative Marsh Creek would use mechanical means (such as the excavator, trimmer, loader) to dig the hole. Configuration of the final excavation if strictly mechanical means are used would be the same as that presented for the blasting approach. The difference is the length of time required to complete the excavation would be significantly longer and necessary equipment (such as the casing cut-off saw borrowed from another company for the purpose) would likely not be available for the duration. Due to casing weight, three or four cuts with the saw would be required as the excavation is advanced.

2.3 Description of Alternatives Considered but Eliminated from Detailed Study

The Interdisciplinary Team (ID) Team considered the possibility of cutting off the drill pipe without excavating around it, with the idea that it would reduce the disturbance of blasting and excavation. Under this alternative the pipe would likely be impossible to remove until it became inundated by the sea, and the ground around it thawed. This alternative was not analyzed in detail because of the difficulty of cutting off the drill pipe and conductor. Chemical, mechanical, or explosive cutting was thought to be difficult and perhaps not possible, due to cement around the pipe.

The ID Team also considered plugging the well, but leaving the pipe in place, with the idea that it would reduce the disturbance of blasting and excavation. This alternative was not analyzed in detail because of the uncertainty about what would happen to the pipe as it became exposed by erosion. The effect of ice and ice movement on a standing pipe in that area is simply not predictable.

Chapter 3 Affected Environment

Environmental characteristics of the general project area have been extensively described in the 2008 NE NPR-A IAP/EIS (Vol. 1, Chapter 3), to which this analysis is tiered, with some site-specific features described below.

Based on the proposed project and the issues analysis in Section 1.5, the following discussion of the affected environment covers 1) Threatened and Endangered Species-Polar Bear 2) Fish 3) Subsistence and 4) Wastes, Hazardous and Solid..

3.1.1 Threatened and Endangered Species-Polar Bear

The polar bear, listed as threatened in May 2008, is the only listed animal species likely to be present in the Drew Point Well #1 and Ikpikpuk reserve pit disposal areas during project activities. Polar bears may be found all year along the Beaufort Sea coast or on off-shore ice. Pregnant female polar bears select denning sites on land or on sea-ice in October or November, giving birth in the December or January time and abandoning their dens and moving offshore with their cubs by the end of March or beginning of April. Den sites have previously been identified at the Eskimo Islands, Atigaru Point, Point Lonely and Cape Halkett. According to the USGS there is a polar bear currently denning southwest of the Drew Point Well #1 site. **The project contractor (Marsh Creek LLC) has applied for a Letter of Authorization (LOA) for the Incidental and Intention Take of polar bears from USF&WS, and has agreed to comply with USF&WS mitigation measures and to provide BLM with a copy of the Service issued Letter of Authorization for the Incidental and Intentional Take of polar bears issued under sections 101 (a)(4)(A)(c), 109(h) and 112(c) of the Marine Mammal Protection Act prior to beginning on the ground activities. In accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA), issuance of this LOA also fulfills the requirements for Tier 2 Consultation of the Programmatic Biological Opinion for the activities described within.**

3.1.2 Fish

Details on fish species, distribution, and life histories can be found in the NE NPR-A Supplemental IAP/EIS (USDOJ 2008). The most common fish species found in streams, rivers, and lakes in the area of proposed action include Alaska blackfish, Arctic cisco, Arctic grayling, broad whitefish, burbot, humpback whitefish, lake trout, least cisco, ninespine stickleback, round whitefish, slimy sculpin. However, other less common Arctic fish species may also be found in the region. Overwintering fish habitat in the Arctic is extremely limited; freezing temperatures reduce stream habitat by up to 95 percent, portions of the low salinity near-shore coastal habitat freeze, and unfrozen coastal waters are supercooled (i.e. $<0^{\circ}$ C) (Craig 1989). Because waterbodies typically freeze to about 6 feet in depth during winter, water depths of 7 feet or more are considered the minimum for supporting overwintering freshwater fish.

There are no Arctic fish species on the BLM Species of Special Concern list. The primary species in the area of proposed action that is targeted in the local summer and fall subsistence harvest is broad whitefish.

3.1.3. Subsistence

The proposed Drew Point Remediation project is located within both the Barrow and the Nuiqsut subsistence use areas (USDOJ-BLM 2008a, Map 3-38). Barrow, a community of over 4,500 residents is located approximately 70 miles to the northwest of the project area. Nuiqsut, a community of 403 residents, is located approximately 125 miles southeast of the project area. The primary subsistence use of the area during the proposed project dates of February 2010

through May 2010 will be for the purposes of caribou, small mammal, and furbearer hunting. Under ice fishing and spring bird hunting may also occur during the latter part of the project timeline. Many residents may simply travel through the project area in order to access hunting cabins or camps located outside of the project area, or as part of their winter over-ice travel between Deadhorse and Barrow. Access will primarily be by snow machine.

3.1.4 Wastes, Hazardous and Solid

The major concerns are regulated reserve pit contents, petroleum product contamination in the soils surrounding the Drew Point Well head, and regulated exploration well plugging and abandonment materials. Both the reserve pits (Drew Point and Ikpikpuk) are State of Alaska Department of Environmental Conservation (ADEC) regulated special solid waste facilities (18 AAC 60.440). Reserve pits can contaminate soil, groundwater, and surface water with metals and hydrocarbons if breached or otherwise compromised. The reserve pit at Drew Point is threatened by coastal erosion. Waters and sediments of the Beaufort Sea could become contaminated if the Drew Point reserve pit contents are released.

Drilling muds, and drill cuttings along with caustic soda, rig wash, diesel fuel, waste oil from machinery, and other refuse were commonly placed in 1970's era reserve pits. These past practices potentially have left sources of benzene, lead, arsenic, and fluoride, even when these contaminants were not detected or were not present in the drilling mud system." Other additives typically used in drilling fluids include: polymers; drilling detergents; and sodium carbonate (soda ash).

The Drew Point well bore contains approximately 2,100 gallons of off-specification diesel fuels. Untreated wood pilings driven deep into the subsurface (10 feet or deeper) exist at the Drew Point well pad.

4 ENVIRONMENTAL IMPACTS

Because the proposed activities are not substantially different from those previously evaluated, and because no significant new scientific information or analyses have been developed since the most recent related evaluation (i.e., May 2008), this NEPA analysis will focus on impacts due to the project-specific/site-specific differences of the proposed action.

4.1 Direct and Indirect Effects

The proposed action is built on experience gained from decades of similar operations on the North Slope. This EA is tiered from the 2008 NE IAP/EIS and its ROD. Related discussions of impacts is found in: 2008 NE NPR-A IAP/EIS, Vol. 2, Chapter 4.6 (Environmental Consequences of Alternative D, the preferred alternative).

Issues specifically identified in Section 1.5 for further analysis in this EA are discussed below.

4.1.1 Threatened and Endangered Species-Polar Bear

4.1.1.1 No Action Alternative Alternative A

The potential for disturbance impacts would not be a factor under the no action alternative, and polar bears would not be at risk of ingesting contaminated reserve pit contents. However, if the erosion were allowed to continue there is potential for a breach of the existing well and for a subsequent spill of well contents (diesel oil) and reserve pit materials (barium, chromium and bentonite clay) into the environment. If these compounds become exposed into the environment they could get into the food chain, and eventually such chemicals could be ingested by polar bears.

4.1.1.2 Proposed Action Alternative B

There is potential for direct effects (incidental take) to polar bears from this project through disturbance (by vehicle traffic and human activities during project mobilization, Drew Point Well #1 plugging and abandonment, reserve pit corrective action and material disposal and demobilization) of denning female bears. Disturbance may cause premature abandonment of den sites and may result in the death of cubs. Bears could also be attracted to garbage and debris at camps, and are at risk of ingesting chemicals during the reserve pit content removal process. The USGS reported that a satellite tagged polar bear is denning within 3 miles of the Drew Point Well #1 along the southeast shore of Smith Bay. Intentional take of denning polar bears will be mitigated using measures specified in the Letter of Authorization from the USF&WS. There would be no long term effects from contamination because the well would be capped and sealed.

4.1.1.3 Alternative C

The analysis of potential for direct effects (incidental take to polar bears under Alternative C would not be different from Alternative B. The only difference between the two alternatives is the mechanical removal of materials under Alternative C, rather than blasting. Intentional take of denning polar bears will be mitigated using measures specified in the Letter of Authorization from the USF&WS.

4.1.2 Fish

4.1.2.1 No Action Alternative Alternative A

Under the No-Action Alternative there would be no water withdrawn from any fish-bearing lakes in the region of proposed activity and no risk to fish from blasting activities. However, if no action is taken petroleum-contaminated drilling mud and other regulated reserve pit contents could eventually be released into the Beaufort Sea due to active erosion and mass wasting along the coastline. This could result in contaminated fish habitat until materials disperse and are effectively diluted and could impact individual fish utilizing the local coastline during the time that breaching occurs.

4.1.2.2 Proposed Action Alternative B

Under the Proposed Action, Alternative B, the potential impacts on fish that require further analysis include those from water withdrawals and blasting activities. Direct impacts could occur by having fish killed or injured from water pumping or from detonations as related to pressure changes and particle velocities. Possible indirect impacts include changes in water quality (e.g. dissolved oxygen concentrations) or water quantity in lakes used as water sources. BLM ROPs, ADFG Division of Habitat permits and guidelines, and project-specific stipulations will mitigate these potential impacts.

The BLM requires that water intake screens (approved by ADFG Division of Habitat) be used in all water sources, even where no fish have been documented (ROP B-2g), in order to avoid the accidental removal of fish from lakes where they are believed to be absent. This has proven effective in numerous lakes over many years, with only a few isolated incidents where fish have been killed or injured around a screen. Slightly reducing the pumping rate or moving the pumping location in these instances provided an effective solution. **Project-specific stipulation 1** will help to further monitor and mitigate this impact concern.

BLM protective measures also limit water withdrawals from lakes and prohibit winter water withdrawals from streams (ROPs B-1, B-2a-h). BLM limits on lake water removal follow current guidelines established by the State. ADFG Division of Habitat issues water use permits on a case by case basis and normally requires additional monitoring if volumes are permitted in excess of standard guidelines. In the existing areas of oil exploration and development on the Arctic coastal plain, lakes pumped for winter exploration activities have not demonstrated detectable impacts to fish habitat regarding water quality or water quantity recharged in the spring when permitted volumes are not exceeded (Baker 2002; Hinzman et al. 2006; Baker 2007; Chambers et al. 2008; Holland et al. 2008). **Project-specific stipulation 2** will help to further monitor and mitigate this impact concern.

Fish with swim bladders (all Arctic freshwater fish) and fish eggs and larvae can all be potentially harmed by compression waves created by explosions such as those that will be used for this project. The propensity for injury or death is related to the proximity of the explosion to water that provides fish habitat. As such, ADFG has standard guidelines and limitations for blasting in order to avoid these impacts (ADFG 1991). For the proposed action at Drew Point, ADFG Division of Habitat has reviewed the blasting plan and determined that there are no concerns regarding fish due to the distance to any fish-bearing waterbody or liquid seawater (email communication January 15, 2010). The proposed action is in response to coastal erosion and the threat of unintentional negative consequences the environment due to the release of contaminated drilling muds into the Beaufort Sea, the small amount of potential displacement of resources by the activity is much less of an impact when compared to what could occur should the remediation not take place.

An Essential Fish Habitat (EFH) Assessment for salmon was completed for the proposed action, as required by the National Marine Fisheries Service. The finding is “*not likely to adversely affect*” and no EFH consultation is required.

4.1.2.3 Alternative C

The analysis of potential environmental impacts on fish under Alternative C would not be different from Alternative B. The only difference between the two alternatives is the mechanical removal of materials under Alternative C, rather than blasting. As no overwintering fish habitat is in close enough proximity to the blasting area to be of concern, the absence of blasting does not alter the propensity for impacts.

4.1.3. Subsistence

4.1.3.1 No Action Alternative A

Under the No-Action Alternative, the BLM would not remediate the Drew Point site. No activity would occur within the subsistence use areas for the communities of Barrow and Nuiqsut, therefore, no potential displacement of resources from the area would occur. Given the likelihood that coastal erosion would expose the well casing, resulting in a navigational hazard in the Beaufort Sea; and would also breach the Drew Point reserve pit, resulting in the potential release of contaminants into the sea environment; therefore, the impacts to subsistence use that would result from the no action alternative are comparable to those for the proposed activity.

4.1.3.2 Proposed Action Alternative B

The proposed project involves winter well-site remediation activity in an area with important subsistence value. While the wintertime is not the primary season for subsistence harvesting, it is the principal time period for furbearer harvesting. Other subsistence activities that occur during the winter and could be impacted by the proposed activity include caribou, small mammal, and bird hunting. These activities are frequently based from subsistence cabin or camp locales, which are accessed during the winter by snow machine. Ice fishing may also occur.

The Drew Point site is located in the area utilized by subsistence harvesters from Nuiqsut and Barrow. The primary activities associated with the project that could affect subsistence use are the overland movement associated with the drilling and solid wastes excavation, transport and disposal; and the blasting associated with the plugging and abandonment of the well. Local knowledge, as elicited through public testimony at NPR-A SAP meetings, indicates that overland travel displaces resources from the area of effect, which may also result from the use of explosives during the removal of the well casing. The displacement of animals such as caribou can lead to hunters having to travel further to harvest resources. In most cases, these activities are expected to cause only short-term, minor displacement and/or disturbance, usually only the time period in which the activity will occur.

Given that this remediation project is in response to coastal erosion and the threat of unintentional negative consequences to subsistence users and the environment due to the release of contaminated drilling muds into the Beaufort Sea, the small amount of potential displacement of subsistence resources by the activity is much less of an impact when compared to what could

occur should the remediation not take place. The BLM has had several meetings with local communities and the NPR-A Subsistence Advisory Panel (SAP) regarding ongoing clean-up activities at Legacy Well sites in the NPR-A. The NPR-A SAP approved the BLM prioritized list of sites needing remediation due to the threat of coastal erosion at the April 2006 meeting. The BLM will also follow the standard set of stipulations and ROPs derived from the Northeast NPR-A Supplemental ROD (USDOI-BLM 2008b), which include mitigation measures that minimize impacts to subsistence use such as winter-only activity and measures that protect fish and wildlife.

4.1.3.3 Alternative C

The effects of Alternative C on subsistence use are comparable to the effects of the proposed activity, given that the only difference is the method in which the well casing would be removed.

4.1.4. Wastes, Hazardous and Solid

4.1.4.1 No Action Alternative A

Under the No-Action Alternative, the BLM would not remediate the Drew Point site. Coastal erosion is expected to expose the well casing within the next one to ten years, resulting in a navigational hazard in the Beaufort Sea and possibly releasing 2100 gallons of diesel; and would also breach the Drew Point reserve pit, resulting in the potential release of contaminants into the sea environment. Both releases of wastes or contaminants to the environment would be in violation of State of Alaska regulations, the Clean Water Act, the Resource Conservation and Recovery Act, and the Oil Pollution Prevention regulations.

4.1.4.2 Proposed Action Alternative B

The transportation, storage, and use of blasting materials is regulated to assure safety. However, as proposed, an area (172 feet east to west by 67 feet north to south by 14 feet deep) would be blasted to provide access for digging down approximately to 30 feet below current ground surface to cut off the well casing below sea level. Based upon the vertical profile exposed at the shoreline, roughly 3 feet of surficial pad gravels and soils overlay 18 feet of ice. If blasting is conducted, the 3 feet of surficial gravels would be commingled with the ice and also would be of variable sizes. When the gravels and ice are placed back into the excavated area themokarsting (melting of the ice and subsequent water ponding) would occur due to significant amounts of ice being commingled with the insulating soil/gravel matrix. This would lead to even greater sea erosion rate at this vulnerable location. This would also make follow-up inspections and/or monitoring of the success of the proposed remedial action difficult or impossible.

The proposed blast/excavation area contains numerous legacy well wood pilings (untreated), which would be commingled with the gravels and ice and considered to be a solid waste. Some of the wood pieces may be large enough to segregate out, but the bulk of the wood would be inextricably commingled with the soil/gravel/ice matrices. Wood splinters in the backfilled

surface could pose a physical puncture threat to human and animal foot traffic on the gravel pad, while the pad exists.

The benefits of excavation/removal of the material at Drew Point outweigh the cost of not taking action.

4.1.4.3 Alternative C

Mechanical excavation utilizing an excavator, a trimmer unit, and/or a dozer with ripper teeth would have to be used to excavate approximately 30 below ground surface to cut off the well casing below sea level. The same excavation footprint proposed under Alternative B would most likely have to be modified as a trimmer cannot be used where wood pilings have been driven into the ground. This alternative would require about two to three weeks more equipment, labor, and camp support time than Alternative B, thus expanding the costs of the project by several million dollars. Also, since the winter operating seasons have become extremely truncated in recent years (April 30th was the end of the 2009 operating season), it is highly likely that the successful completion of the project would be threatened due to time limitations. Segregation of gravels and soils from massive ice could be realized in this alternative, although driven wood pilings would also have to be destroyed.

4.2 Cumulative Effects

Cumulative impacts result from the incremental addition of past, present, and reasonably foreseeable actions. Each action may be individually minor by itself, but when added to others could become significant over a period of time.

The time frame for the proposed action for the project area is 1977 (designation of NPR-A) to 10 years into the future, assuming that the relatively low level of activity and management would remain at about the same level as present. Due to the limited scope and intensity of the proposed action the geographic area would be limited within 1 mile of the proposed use area. Additional past, present, and future activities in the area include recreation, subsistence, and research and monitoring. While the level of such activities may increase slightly within the next 10 years, there are no development proposals that would substantially add to the current levels. The incremental addition of the proposed action would be short-term and highly localized and would not add to increased cumulative effects.

The proposed action is not anticipated to result in cumulative impacts due to the remoteness of the portion of the area where the activity would occur, the low impact levels associated with the activity.

4.2.1 Threatened and Endangered Species-Polar Bear

Polar bears could be affected cumulatively from oil and gas exploration, subsistence activities, as well as research and monitoring activities from scientists, industry, and agency personnel. The increased activity associated with this project would add a slight, temporary increase in potential disturbance to polar bears. Mitigation measures described in the USFWS issued Letter of

Authorization would reduce the frequency and proximity of disturbance. There would be no incremental increase in human activity with the no action alternative.

4.2.2 Fish

As discussed in the 2008 NE IAP/EIS (Section 4.7.7), restricted winter habitat for fish in the Arctic makes many species highly vulnerable to the impacts of surface activities. Some effects such as oil and gas exploration, clean-up work and research, may accumulate, but due to protective measures, effects to fish at the population level are not likely.

4.2.3 Subsistence

BLM protective measures have been applied in the NPR-A during the winter operational season without any significant individual or collective direct, indirect, or cumulative impacts to subsistence resources. Activity levels are expected to be similar in the future, such that cumulative impacts are expected to remain insignificant. In addition, a stipulations and ROPs have been developed to avoid the potential for significant restriction of subsistence uses or access to subsistence resources (USDOI BLM 2008b).

Winter Legacy Well clean-up projects and the potential for concurrent operations within and adjacent to the NPR-A have been discussed with local residents through meetings with the local communities, NSB, regulatory and resource agencies in order to minimize project-specific and cumulative effects to subsistence resources or access.

In addition to winter activities such as oil and gas exploration, clean-up work and research,, summer activities including studies, monitoring, and recreational use occur in the NPR-A. These include aircraft support for fish and wildlife studies, as well as inspections of proposed drilling sites and abandonment inspections. Helicopters are frequently used as the basic means of air support. Helicopter activity can result in deflection of wildlife and disturbance to people engaged in subsistence activities. This disturbance is usually localized to the area in which the helicopter is operating, and temporary in nature, in that it only occurs during the period in which the activity is taking place. Fixed wing aircraft are used for local passenger and freight transportation, subsistence, and recreation. Although every effort is made to minimize the effects of aircraft activity, aircraft transportation is crucial to many activities. Summer activities in the NPR-A require separate BLM authorization(s), with associated assessment of potential environmental impact.

4.2.4 Wastes, Hazardous and Solid

BLM protective measures have been applied in the NPR-A during the winter operational season without any significant individual or collective direct, indirect, or cumulative impacts to regulated solid, human, or hazardous wastes to human health or the environment. The proposed action is designed to assure that cumulative impacts from legacy-era research oil and gas exploration activities will remain insignificant. In addition, two stipulations and ROPs have been developed to avoid the potential for significant impact from wastes upon human health and

natural resources (USDOI BLM 2008b).

Winter Legacy Well clean-up projects have been negotiated and reviewed/approved by appropriate regulatory and resource agencies in order to minimize project-specific and cumulative effects to natural resources or public access.

In addition to the proposed winter activities, future and continuing summer activities involving the use of helicopters, fixed wing aircraft, or small boat access to the Drew Point and Ikpikpuk areas for continued studies and monitoring of drilling sites and abandonment inspections. Thirty reserve pit sites and up to 110 exploration drilling sites will continue to be inspected, monitored and/or studied. Approximately up to 1/3 of these sites may need removal/abandonment as a result of threats of release of reserve pit contents, well bore contents, or other hazards due to shoreline erosion or other environmental or physical degradation. Removal/abandonments would similarly occur during winter frozen ground conditions with the roadless NPR-A. Both future winter and summer activities in the NPR-A require separate BLM authorization(s), with associated assessments of potential environmental impact.

4.3 MITIGATION AND MONITORING

The stipulations (Appendix A) for the proposed action are a subset of the 2008 NE NPR-A SIAP/EIS ROD, BLM Alaska State Office Stipulations for Seismic Activity and project specific stipulations developed in the NEPA process.

The BLM will incorporate the following additional mitigation measures into approval for the ConocoPhillips Alaska Seismic Permit. ConocoPhillips Alaska shall:

- 1.) Notify BLM personnel on-site within 24 hours of any observation of dead or injured fish on water intake screens or in the hole being used for pumping water from lakes. Avoid further impacts by reducing the pumping rate and/or moving the pumping site. If additional dead or injured fish become visible, cease operations until consulting with the BLM.
- 2.) Maintain a daily record of water removed lakes (liquid and ice chips). Notify BLM personnel on-site within 24 hours if water/ice removal exceeds the volume approved at any water source lake.
- 3.) A 24 to 30 inch compacted lift of ice-free, spreadable gravel, silt, or soil --obtained either from first trimming the gravels in the excavation area or obtained from clean capping materials existing within the reserve pit-- shall be placed on top of the backfilled blasted excavation area to (a) cover wood splinters which may pose a physical threat; and (b) provide a insulating cap to prevent or minimize thermokarsting of the excavation area during the summer months.
- 4.) Wood pilings debris large enough to be segregated from the excavated pad and underlying soils and ice contents but too small to be utilized by subsistence users, should be either burned to ashes or hauled out of NPR-A to an ADEC-approved solid waste facility (e.g. Oxbow Landfill).
- 5.) Permittee and their contractor are required to adhere to the United States Fish and Wildlife requirements found in ConocoPhillips Alaska's Letter of Authorization for the incidental take of polar bears.

4.4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential issues that were identified in the evaluation of the proposed action for this EA were Threatened and Endangered Species-Polar Bears, Fish, Subsistence, and Wastes, Hazardous and Solid. The analysis found that impacts would be short term and localized and that mitigation measures in Appendix A would adequately reduce any adverse effects to identified issues in the area. Likewise, the analysis also found that mitigation measures would adequately reduce any adverse effects to Threatened and Endangered Species-Polar Bears, Fish, Subsistence, and Wastes, Hazardous and Solid., which would also be short term and localized. The proposed action would not contribute to significant cumulative effects to Threatened and Endangered Species-Polar Bears, Fish, Subsistence, or Wastes, Hazardous and Solid in the proposed project areas

Chapter 5 Consultation and Coordination

5.1 Agencies, Organization, Persons Consulted

Public notification of the Environmental analysis will be on file at the Arctic Field Office and available on the Arctic Field Office Environmental Assessment web site. The BLM has had several meetings with local communities and the NPR-A Subsistence Advisory Panel (SAP) regarding ongoing clean-up activities at Legacy Well sites in the NPR-A. The NPR-A SAP approved the BLM prioritized list of sites needing remediation due to threat of coastal erosion at the April 2006 meeting.

5.2 List of Preparers

Dave Yokel, Wildlife Biologist
 Michael Kunz, Archaeologist
 Susan Flora, Environmental Scientist
 Richard Kemnitz, Hydrologist
 Donna Wixon, Natural Resource Specialist
 Debbie Nigro, Wildlife Biologist
 Matthew Whitman, Fish Biologist
 Stacie McIntosh, Anthropologist/Subsistence Specialist
 Roger Sayre, NEPA Specialist

ANILCA Requirements

Section 810 Subsistence Evaluation

This action is not likely to cause any significant restriction to the subsistence resources of the area (see ANILCA section 810 Evaluation within this case file).

Bibliography

- Alaska Department of Fish and Game (ADFG). 1991. Blasting standards for the protection of fish. Available online at: <http://www.habitat.adfg.alaska.gov/explosives.php>.
- Baker (Michael Baker, Jr.). 2002. Alpine Facility and Vicinity 2002 Lake Monitoring and Recharge Study. Report prepared for ConocoPhillips Alaska, Anchorage.
- Baker (Michael Baker, Jr.). 2007. 2007 Colville River Delta Lakes Recharge Monitoring and Analysis. Report 110919-MBJ-RPT-001, prepared for ConocoPhillips Alaska, Anchorage.
- Chambers, Molly K., Daniel M. White, Michael R. Lilly, Larry D. Hinzman, Kristie M. Hilton, and Robert C. Busey, 2008. Exploratory Analysis of the Winter Chemistry of Five Lakes on the North Slope of Alaska. *Journal of the American Water Resources Association* 44(2):316-327.
- Craig, P.C. 1989. An Introduction to Amphidromous Fishes in the Alaskan Arctic. *Biological Papers of the University of Alaska* 24:27-54.
- Hinzman, L.D., M.R. Lilly, D.L. Kane, D.D. Miller, B.K. Galloway, K.M. Hilton, and D.M. White. 2006. Physical and Chemical Implications of Mid-Winter Pumping of Tundra Lakes – North Slope, Alaska. December 2006, University of Alaska Fairbanks, Water and Environmental Research Center, Report INE/WERC 06.15, Fairbanks, Alaska.
- Holland, K., Reichardt, D., Cormack, C., Derry, J., Myerchin, G., Toniolo, H., and Lilly, M.R. 2008. Snowmelt and lake recharge monitoring for selected North Slope, Alaska, lakes: May/June 2008. University of Alaska Fairbanks, Water and Environmental Research Center, Report INE/WERC 08.13, Fairbanks, Alaska.

APPENDIX A: FF095631 BLM Arctic Field Office Right of Way Stipulations/Required Operating Procedures January 22, 2010

- 1.) Notify BLM personnel on-site within 24 hours of any observation of dead or injured fish on water intake screens or in the hole being used for pumping water from lakes. Avoid further impacts by reducing the pumping rate and/or moving the pumping site. If additional dead or injured fish become visible, cease operations until consulting with the BLM.
- 2.) Maintain a daily record of water removed lakes (liquid and ice chips). Notify BLM personnel on-site within 24 hours if water/ice removal exceeds the volume approved at any water source lake.
- 3.) A 24 to 30 inch compacted lift of ice-free, spreadable gravel, silt, or soil --obtained either from first trimming the gravels in the excavation area or obtained from clean capping materials existing within the reserve pit-- shall be placed on top of the backfilled blasted excavation area to (a) cover wood splinters which may pose a physical threat; and (b) provide a insulating cap to prevent or minimize thermokarsting of the excavation area during the summer months.
- 4.) Wood pilings debris large enough to be segregated from the excavated pad and underlying soils and ice contents but too small to be utilized by subsistence users, should be either burned to ashes or hauled out of NPR-A to an ADEC-approved solid waste facility (e.g. Oxbow Landfill).
- 5.) Permittee and their contractor are required to adhere to the United States Fish and Wildlife requirements found in ConocoPhillips Alaska's Letter of Authorization for the incidental take of polar bears.

NE IAP/EIS ROD Stipulations and Required Operating Procedures

Waste Prevention, Handling, Disposal, Spills, Air Quality, and Public Health and Safety:

A-1 Required Operating Procedure

Objective: Protect the health and safety of oil field workers and the general public by disposing of solid waste and garbage in accordance with applicable Federal, state, and local law and regulations.

Requirement/Standard: Areas of operation shall be left clean of all debris.

A-2 Required Operating Procedure (Modified)

All feasible precautions shall be taken to avoid attracting wildlife to food and garbage.

A-4 Required Operating Procedure (Modified)

Objective: Minimize the impact of contaminants on fish, wildlife, and the environment, including wetlands, marshes and marine waters, as a result of fuel, crude oil, and other liquid chemical spills. Protect subsistence resources and subsistence activities. Protect public health and safety.

Requirement/Standard: Before initiating any oil and gas or related activity or operation, including field research/surveys and/or seismic operations, lessees/permittees **shall develop a comprehensive spill prevention and response contingency plan** per 40 CFR § 112 (Oil Pollution Act). The plan shall consider and take into account the following requirements:

a. On-site Clean-up Materials. Sufficient oil-spill-cleanup materials (absorbents, containment devices, etc...) shall be stored at all fueling points and vehicle-maintenance areas and shall be carried by field crews on all overland moves, seismic work trains, and similar overland moves by heavy equipment.

b. Storage Containers. Fuel and other petroleum products and other liquid chemicals shall be stored in proper containers at approved locations. Oil product storage will be conducted as allowed by the SPCC Rule.

e. Proper Identification of Containers. All fuel containers, including barrels and propane tanks, shall be marked with the responsible party's name, product type..

f. Notice of Reportable Spills. Notice of any reportable spill (as required by 40 CFR § 300.125 and 18 AAC § 75.300) shall be given to the AO as soon as possible, but no later than 24 hours after occurrence.

g. Identification of Oil Pans (“duck ponds”). All oil pans shall be marked with the responsible party's name.

A-5 Required Operating Procedure

Objective: Minimize the impact of contaminants from refueling operations on fish, wildlife and the environment.

Requirement/Standard: Refueling of equipment within 500 feet of the active floodplain of any water body is prohibited. Fuel storage stations shall be located at least 500 feet from any water body with the exception of small caches (up to 210 gallons) for motor boats, float planes, ski planes, and small equipment, e.g. portable generators and water pumps, will be permitted. The AO may allow storage and operations at areas closer than the stated distances if properly designed to account for local hydrologic conditions. The AO has approved storage and useage closer than 500 ft.

A-8 Required Operating Procedure

Objective: Minimize conflicts resulting from interaction between humans and bears during leasing and associated activities.

Requirement/Standard: Oil and gas lessees and their contractors and subcontractors will, as a part of preparation of lease operation planning, prepare and implement bear-interaction plans to minimize conflicts between bears and humans. **These plans shall include measures to:**

- a. Minimize attraction of bears to the drill sites.
- b. Organize layout of buildings and work areas to minimize human/bear interactions.
- c. Warn personnel of bears near or on drill sites and identify proper procedures to be followed.
- d. Establish procedures, if authorized, to discourage bears from approaching the drill site.
- e. Provide contingencies in the event bears do not leave the site or cannot be discouraged by authorized personnel.
- f. Discuss proper storage and disposal of materials that may be toxic to bears.
- g. Provide a systematic record of bears on the site and in the immediate area.
- h. Encourage lessee/permittee to participate and comply with the Incidental Take Program under the Marine Mammal Protection Act.

Water Use for Permitted Activities:

B-1 Required Operating Procedure

Objective: Maintain populations of, and adequate habitat for, fish and invertebrates.

Requirement/Standard: Water withdrawal from rivers and streams during winter is prohibited.

B-2 Required Operating Procedure

Objective: Maintain natural hydrologic regimes in soils surrounding lakes and ponds, and maintain populations of, and adequate habitat for, fish and invertebrates, and waterfowl.

Requirement/Standard: Water withdrawal from lakes may be authorized on a site-specific basis depending on water volume, and depth, and fish population and species diversification. Current water withdrawal requirements specify:

- a. Lakes that are ≥ 7 feet with sensitive fish (any fish except ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 15% of calculated volume deeper than 7 feet; lakes that are between 5 and 7 feet with sensitive fish, water available for withdrawal would be calculated on a case by case basis.
- b. Lakes that are ≥ 5 feet with only non-sensitive fish (i.e., ninespine stickleback or Alaska blackfish), water available for withdrawal is limited to 30% of calculated volume deeper than 5 feet.
- c. Any lake with no fish present, regardless of depth, water available for withdrawal is up to 35% as specified within the permit.
- d. A water-monitoring plan may be required to assess draw down and water quality changes before, during, and after pumping any fishbearing lake or lake of special concern.
- e. The removal of naturally grounded ice may be authorized from lakes and shallow rivers on a site-specific basis depending upon its size, water volume, and depth, and fish population and species diversification.
- f. Removed ice aggregate shall be included in the 15% or 30% withdrawal limits—whichever is

the appropriate case—unless otherwise approved.

g. Any water intake structures in fish bearing or non-fish bearing waters shall be designed, operated, and maintained to prevent fish entrapment, entrainment, or injury. Note: All water withdrawal equipment must be equipped and must utilize fish screening devices approved by the Alaska Department of Natural Resources (ADNR).

h. Compaction of snow cover or snow removal from fish-bearing water bodies shall be prohibited except at approved ice road crossings, water pumping stations on lakes, or areas of grounded ice.

The following lease stipulations and ROPs apply to overland moves, seismic work, and any similar cross-country vehicle use of heavy equipment on nonroaded surfaces during the winter season. These restrictions do not apply to the use of such equipment on ice roads after they are constructed.

Winter Overland Moves and Seismic Work:

C-1 Required Operating Procedure

Objective: Protect grizzly bear, polar bear, and marine mammal denning and/or birthing locations.

Requirement/Standard:

a. Cross-country use of heavy equipment and seismic activities is prohibited within ½ mile of occupied grizzly bear dens identified by the ADFG unless alternative protective measures are approved by the AO in consultation with the ADFG.

b. Cross-country use of heavy equipment and seismic activities is prohibited within 1 mile of known or observed polar bear dens or seal birthing lairs. Operators shall consult with the USFWS and/or NOAA Fisheries, as appropriate, before initiating activities in coastal habitat between October 30 and April 15.

C-2 Required Operating Procedure

Objective: Protect stream banks, minimize compaction of soils, and minimize the breakage, abrasion, compaction, or displacement of vegetation.

Requirement/Standard:

a. Ground operations shall be allowed only when frost and snow cover are at sufficient depths to protect the tundra. Ground operations shall cease when the spring snowmelt begins (approximately May 5 in the foothills area where elevations reach or exceed 500 feet and approximately May 15 in the northern coastal areas). The exact dates will be determined by the AO.

b. Only low-ground-pressure vehicles shall be used for on-the-ground activities off ice roads or pads. A list of approved vehicles can be obtained from the AO. Limited use of tractors equipped with wide tracks or “shoes” will be allowed to pull trailers, sleighs or other equipment with approved undercarriage. Note: This provision does not include the use of heavy equipment such as front-end loaders and similar equipment required during ice road construction.

c. Bulldozing of tundra mat and vegetation, trails, or seismic lines is prohibited; however, on

existing trails, seismic lines or camps, clearing of drifted snow is allowed to the extent that the tundra mat is not disturbed.

d. To reduce the possibility of ruts, vehicles shall avoid using the same trails for multiple trips unless necessitated by serious safety or superseding environmental concern. This provision does not apply to hardened snow trails for use by low-ground-pressure vehicles such as Rolligons.

e. The location of winter ice roads shall be designed and located to minimize compaction of soils and the breakage, abrasion, compaction, or displacement of vegetation. Offsets may be required to avoid using the same route or track in the subsequent year.

f. Motorized ground-vehicle use within the CRSA associated with overland moves, seismic work, and any similar use of heavy equipment shall be minimized within the Colville River Raptor, Passerine, and Moose Area from April 15 through August 5, with the exception that use will be minimized in the vicinity of gyrfalcon nests beginning March 15. Such use will remain ½ mile away from known raptor nesting sites, unless authorized by the AO.

C-3 Required Operating Procedure

Objective: Maintain natural spring runoff patterns and fish passage, avoid flooding, prevent streambed sedimentation and scour, protect water quality and protect stream banks.

Requirement/Standard: Crossing of waterway courses shall be made using a low-angle approach. Snow and ice bridges shall be removed, breached, or slotted before spring breakup. Ramps and bridges shall be substantially free of soil and debris. Except at approved crossings, operators are encouraged to travel a minimum of 100 feet from known overwintering fish streams and lakes.

C-4 Required Operating Procedure

Objective: Avoid additional freeze-down of deep-water pools harboring over-wintering fish and invertebrates used by fish.

Requirement/Standard: Travel up and down streambeds is prohibited unless it can be demonstrated that there will be no additional impacts from such travel to over-wintering fish or the invertebrates they rely on. Rivers and streams shall be crossed at shallow riffles from point bar to point bar whenever possible.

Facility Design and Construction:

E-9 Required Operating Procedure

Objective: Avoidance of human-caused increases in populations of predators of ground nesting birds.

Requirement/Standard:

a. Lessee shall utilize best available technology to prevent facilities from providing nesting, denning, or shelter sites for ravens, raptors, and foxes. The lessee shall provide the AO with an annual report on the use of oil and gas facilities by ravens, raptors and foxes as nesting, denning, and shelter sites.

b. Feeding of wildlife is prohibited and will be subject to noncompliance regulations.

E-10 Required Operating Procedure

Objective: Prevention of migrating waterfowl, including species listed under the Endangered Species Act, from striking oil and gas and related facilities during low light conditions.

Requirement/Standard: Illumination of all structures between August 1 and October 31 shall be designed to direct artificial exterior lighting inward and downward, rather than upward and outward, unless otherwise required by the Federal Aviation Administration.

E-13 Required Operating Procedure

Objective: Protect cultural and paleontological resources.

Requirement/Standard: Lessees shall conduct a cultural and paleontological resources survey prior to any ground-disturbing activity. Upon finding any potential cultural or paleontological resource, the lessee or their designated representative shall notify the AO and suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the AO.

Use of Aircraft for Permitted Activities:

F-1 Required Operating Procedure

Objective: Minimize the effects of low-flying aircraft on wildlife, traditional subsistence activities, and local communities.

Requirement/Standard: The lessee shall ensure that aircraft used for permitted activities maintain altitudes according to the following guidelines (Note: This ROP is not intended to restrict flights necessary to survey wildlife to gain information necessary to meet the stated objective of the stipulations and ROPs. **However, flights necessary to gain this information will be restricted to the minimum necessary to collect such data):**

- a.** Aircraft shall maintain an altitude of at least 1,500 feet above ground level (AGL) when within ½ mile of cliffs identified as raptor nesting sites from April 15 through August 15 and within ½ mile of known gyrfalcon nest sites from March 15 to August 15, unless doing so would endanger human life or violate safe flying practices. Permittees shall obtain information from the BLM necessary to plan flight routes when routes may go near falcon nests.
- b.** Aircraft shall maintain an altitude of at least 1,000 feet AGL (except for takeoffs and landings) over caribou winter ranges from December 1 through May 1, unless doing so would endanger human life or violate safe flying practices. Caribou wintering areas will be defined annually by the AO. The AO will consult directly with the Alaska Department of Fish and Game in annually defining caribou winter ranges.
- d.** Use of aircraft, especially rotary wing aircraft, near known subsistence camps and cabins or during sensitive subsistence hunting periods (spring goose hunting and fall caribou and moose hunting) should be kept to a minimum.
- e.** Aircraft used for permitted activities shall maintain an altitude of at least 2,000 feet AGL (except for takeoffs and landings) over the Teshekpuk Lake Caribou Habitat Area (Map 1) from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices. Aircraft use (including fixed wing and helicopter) by oil and gas lessees in the Goose Molting Area (Map 2) should be minimized from May 20 through August 20, unless doing so would endanger human life or violate safe flying practices.

Subsistence Consultation for Permitted Activities:

H-1 Required Operating Procedure

Objective: Provide opportunities for participation in planning and decision making to prevent unreasonable conflicts between subsistence uses and oil and gas and related activities.

Requirement/Standard: Lessee/permittee shall consult directly with affected communities using the following guidelines:

c. A subsistence plan addressing the following items must be submitted:

1. A detailed description of the activity(ies) to take place (including the use of aircraft).
2. A description of how the lessee/permittee will minimize and/or deal with any potential impacts identified by the AO during the consultation process.
3. A detailed description of the monitoring effort to take place, including process, procedures, personnel involved and points of contact both at the work site and in the local community.
4. Communication elements to provide information on how the applicant will keep potentially affected individuals and communities up-to-date on the progress of the activities and locations of possible, short-term conflicts (if any) with subsistence activities. Communication methods could include holding community meetings, open house meetings, workshops, newsletters, radio and television announcements, etc.
5. Procedures necessary to facilitate access by subsistence users to conduct their activities. In the event that no agreement is reached between the parties, the AO shall consult with the directly involved parties and determine which activities will occur, including the timeframes. During development, monitoring plans must be established for new permanent facilities, including pipelines, to assess an appropriate range of potential effects on resources and subsistence as determined on a case-by-case basis given the nature and location of the facilities. The scope, intensity, and duration of such plans will be established in consultation with the AO and Subsistence Advisory Panel. Permittees that propose barging facilities, equipment, supplies, or other materials to NPR-A in support of oil and gas activities in the planning area shall notify, confer, and coordinate with the Alaska Eskimo Whaling Commission, the appropriate local community whaling captains' associations, and the NSB to minimize impacts from the proposed barging on subsistence whaling activities.

H-2 Required Operating Procedure

Objective: Prevent unreasonable conflicts between subsistence activities and geophysical (seismic) exploration.

Requirement/Standard: In addition to the consultation process described in ROP H-1 for permitted activities, before applying for permits to conduct geophysical (seismic) exploration, the applicant shall 1) consult with local communities and residents and 2) notify the local Search and Rescue organizations of current and recent seismic surveys. For the purpose of this standard, a potentially affected cabin/campsite is defined as any camp or campsite within the boundary of the area subject to proposed geophysical exploration and/or within 1 mile of actual or planned travel routes used to supply the seismic operations while it is in operation.

a. Because of the large land area covered by typical geophysical operations and the potential to impact a large number of subsistence users during the exploration season, the permittee/operator

will **notify in writing** all potentially affected long-term cabin and camp users.

- b. The official recognized list of cabin and campsite users is the NSB's 2001 (or most current) inventory of cabins and campsites.
- c. A copy of the notification letter and a list of potentially affected users shall also be provided to the office of the appropriate Native Tribal government.
- d. The AO will prohibit seismic work within 1 mile of any known, long-term, cabin or campsite unless an alternate agreement between the cabin/campsite owner/user is reached through the consultation process and presented to the AO. (Regardless of the consultation outcome, the AO will prohibit wintertime seismic work within 300 feet of a known long-term cabin or campsite.)
- e. The permittee shall notify the appropriate local Search and Rescue (e.g., Nuiqsut Search and Rescue, Atqasuk Search and Rescue) of their current operational location within the NPR-A on a weekly basis. This notification should include a map indicating the current extent of surface use and occupation, as well as areas previously used/occupied during the course of the operation in progress. The purpose of this notification is to allow hunters up-to-date information regarding where seismic exploration is occurring, and has occurred, so that they can plan their hunting trips and access routes accordingly. Identification of the appropriate Search and Rescue offices to be contacted can be obtained from the NPR-A Subsistence Advisory Panel.

Orientation Programs Associated with Permitted Activities:

I-1 Required Operating Procedure

Objective: Minimize cultural and resource conflicts.

Requirement/Standard: All personnel involved in oil and gas and related activities shall be provided information concerning applicable stipulations, ROPs, standards, and specific types of environmental, social, traditional, and cultural concerns that relate to the region. The lessee/permittee shall ensure that all personnel involved in permitted activities shall attend an orientation program at least once a year. **The proposed orientation program shall be submitted to the AO for review and approval and should:**

- a. provide sufficient detail to notify personnel of applicable stipulations and ROPs as well as inform individuals working on the project of specific types of environmental, social, traditional and cultural concerns that relate to the region.
- b. Address the importance of not disturbing archaeological and biological resources and habitats, including endangered species, fisheries, bird colonies, and marine mammals, and provide guidance on how to avoid disturbance.
- c. Include guidance on the preparation, production, and distribution of information cards on endangered and/or threatened species.
- d. Be designed to increase sensitivity and understanding of personnel to community values, customs, and lifestyles in areas in which personnel will be operating.
- e. Include information concerning avoidance of conflicts with subsistence, commercial fishing activities, and pertinent mitigation.
- f. Include information for aircraft personnel concerning subsistence activities and areas/seasons that are particularly sensitive to disturbance by low-flying aircraft. Of special concern is aircraft use near traditional subsistence cabins and campsites, flights during spring goose hunting and fall

caribou and moose hunting seasons, and flights near North Slope communities.

g. Provide that individual training is transferable from one facility to another except for elements of the training specific to a particular site.

h. Include on-site records of all personnel who attend the program for so long as the site is active, though not to exceed the 5 most recent years of operations. This record shall include the name and dates(s) of attendance of each attendee.

i. Include a module discussing bear interaction plans to minimize conflicts between bears and humans.

k. Include training designed to ensure strict compliance with local and corporate drug and alcohol policies. This training should be offered to the NSB Health Department for review and comment.

l. Include training developed to train employees on how to prevent transmission of communicable diseases, including sexually transmitted diseases, to the local communities. This training should be offered to the NSB Health Department for review and comment.

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Finding of No Significant Impact

Type of Action: Seismic Permit

Serial Number: FF095631

Environmental Assessment Number: DOI-BLM-LLAKF010-2010-0001-EA

Applicant: Bureau of Land Management
Fairbanks District Office
Arctic Field Office
1150 University Avenue
Fairbanks, Alaska 99709

District: Arctic Field Office

Planning Unit: Northeast National Petroleum Reserve in Alaska (NPR-A)

Lands Involved: (See EA for map)

Context and Intensity of Environmental Impacts

Based upon a review of the EA prepared by the Arctic Field Office and the supporting documents, I have determined that the proposed action will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance as defined at 40 CFR 1508.27. Therefore, an environmental impact statement is not required. We reviewed the context of the proposed action and found that it would not result in any significant effects to resources and values in NPR-A. The mitigation measures and environmental protections would ensure that the Proposed Action would not add significantly to incremental impacts to NPR-A and surrounding lands.

The following factors have been considered in evaluating significance for this proposal (40 CFR 1508.27):

1. Impacts that may be both beneficial and adverse: The beneficial effects of the Proposed Action include clean-up of contaminated soils and debris at a well drilled by the United States Geological Survey in 1978 in the NPR-A. This site is particularly vulnerable to coastal erosion and removal would prevent migration of contaminants into the environment. Adverse impacts could occur to landfill waste (hazardous and solid), fish, subsistence users and threatened / endangered species.

2. Degree of effect on public health and safety: The proposed action would have no effect on public health and safety.

3. Unique characteristics of the geographic area such as proximity to cultural or ecologically critical areas: The Proposed Action, which would be implemented with mitigation and existing protections, would not impact any cultural or ecologically critical areas. In addition the proposed action would not impact park lands or prime farmlands. Impacts to wetlands and floodplains would be highly localized and not significant, based on impact analysis done in compliance with Executive Orders 11990 and 11988. The long-term effects of the clean up to the environment are expected to be insignificant (minimal to negligible) in this area and would be mitigated to the greatest extent practicable.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial: There is no scientific controversy over the nature of the environmental impacts of the proposed action.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk: No highly uncertain or unknown risks to the human environment were identified.

6. Degree to which the action may establish a precedent for future actions with significant effect: The proposed action was considered within the context of past, present, and reasonably foreseeable actions and no significant cumulative effects are expected.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: No individually or cumulatively significant impacts were identified for the proposed action. The cumulative effects are analyzed in Section 4.2 of the EA.

8. Degree to which the action may adversely affect district, sites, highways, structures, or other objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources. The proposed action will not adversely affect any historic, cultural, or scientific resources in the planning area. All of the excavation will occur in previously disturbed locales. The overland transportation

routes avoid all known cultural sites and have been laid out so as to avoid any areas where cultural sites might be reasonably expected to occur.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat: A *no effect* determination for spectacled eider (*Somateri fischeri*), Steller's eider (*Polysticta stelleri*) and a *not likely to adversely affect* determination for polar bear (*Ursus maritimus*) for a 1 season winter operation to plug and abandon the Drew Point Well #1 and move reserve pit contents to the Ikpikpuk Well site on land within the Northeast (NE) National Petroleum Reserve-Alaska (NPR-A) during the winter of 2009 – 2010 was made by BLM, with concurrence from U.S. Fish and Wildlife Service.

The proposed action is not expected to impact salmon or their habitat and is assigned the EFH determination: *not likely to adversely affect*. No further EFH consultation is required.

10. Whether the action threatens a violation of federal, state, local or tribal law, regulation or policy imposed for the protection of the environment, where non-federal requirements are consistent with federal requirements: The proposed action does not violate any known federal, state, local, or tribal law or requirement imposed for the protection of the environment. The evaluation and finding completed to comply with Section 810 of ANILCA found that “This proposed action will not significantly restrict subsistence uses. No reasonably foreseeable and significant decrease in the abundance of harvestable resources or in the distribution of harvestable resources, and no reasonably foreseeable limitations on harvester access will result from the proposed action.

Monitoring and Mitigation

BLM will monitor on the ground activities periodically during the winter season. When winter activity ceases, BLM will continue to monitor the project area through periodic on-site inspections to ensure that all standards have been met and that the areas of operations are clean and free of debris.

Mitigation measures will be implemented as described in the attached authorization stipulations.

APPROVED:

/s/Lon Kelly (Stacie McIntosh Acting)
Arctic Field Office Manager

Date: January 22, 2010