



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

SEP 15 2009

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: Regional Director, Great Plains Regional Office 

SUBJECT: Environmental Assessment and Finding of No Significant Impact

In compliance with the regulations of the National Environmental Policy Act (NEPA) of 1969, as amended, for the proposed exploratory drilling by Petro-Hunt on *Fort Berthold 148-94-9D-04-1H* the Fort Berthold Reservation, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued.

All the necessary requirements of the National Environmental Policy Act have been completed. Attached for your files is a copy of the EA, FONSI and Notice of Availability. The Council on Environmental Quality (CEQ) regulations require that there be a public notice of availability of the FONSI (1506.6(b)). Please post the attached notice of availability at the agency and tribal buildings for 30 days.

If you have any questions, please call Marilyn Bercier, Regional Environmental Scientist, Division of Environment, Safety and Cultural Resources Management, at (605) 226-7656.

Attachment

cc: Marcus Levings, Chairman, Three Affiliated Tribes (with attachment)

ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

**Great Plains Regional Office
Aberdeen, South Dakota**



Petro Hunt, LLC

One Bakken Formation Exploratory Well at One Location:

FORT BERTHOLD 148-94-9D-04-1H

Fort Berthold Indian Reservation

September 2009

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources
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Finding of No Significant Impact

PETRO HUNT, LLC

FORT BERTHOLD 148-94-9D-04-1H

**Fort Berthold Indian Reservation
Dunn County, North Dakota**

The U.S. Bureau of Indian Affairs (BIA) has received a proposal for one oil/gas well, access road and related infrastructure on the Fort Berthold Indian Reservation to be located in Section 9 of Township 148 North, Range 94 West. Associated federal actions by BIA include determination of effect regarding cultural resources, approval of leases, rights-of-way and easements, and a positive recommendation to the Bureau of Land Management regarding the Application for Permit to Drill.

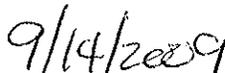
Potential of the proposed action to impact the human environment is analyzed in the attached Environmental Assessment (EA), as required by the National Environmental Policy Act. Based on the recently completed EA, I have determined that the proposed project will not significantly affect the quality of the human environment. No Environmental Impact Statement is required for any portion of the proposed activities.

This determination is based on the following factors:

1. Agency and public involvement was solicited and environmental issues related to the proposal were identified.
2. Protective and prudent measures were designed to minimize impacts to air, water, soil, vegetation, wetlands, wildlife, public safety, water resources, and cultural resources. The remaining potential for impacts was disclosed for both the proposed action and the No Action alternative.
3. Guidance from the U.S. Fish and Wildlife Service has been fully considered regarding wildlife impacts, particularly in regard to threatened or endangered species.
4. The proposed actions are designed to avoid adverse effects to historic, archaeological, cultural and traditional properties, sites and practices. Compliance with the procedures of the National Historic Preservation Act is complete.
5. Environmental justice was fully considered.
6. Cumulative effects to the environment are either mitigated or minimal.
7. No regulatory requirements have been waived or require compensatory mitigation measures.
8. The proposed projects will improve the socio-economic condition of the affected Indian community.



Regional Director



Date

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1. Purpose and Need for the Proposed Action

PETRO HUNT, LLC is proposing to drill one horizontal oil/gas well from one location on the Fort Berthold Indian Reservation to evaluate and potentially develop the commercial potential of natural resources. The development has been proposed on lands held in trust by the United States in Dunn County, North Dakota. The U.S. Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The BIA also holds title to the subsurface mineral rights. One well would be drilled from the surface location shown in Figure 1. Fort Berthold 148-94-9D-04-1H would be drilled from a single well pad in the SE¼SE¼ of Section 9, T148N, R94W.

The economic development of available resources and associated BIA actions are consistent with BIA's general mission. Leasing and development of mineral resources offers substantial economic benefits to both the Three Affiliated Tribes of the Mandan, Hidatsa and Arikara Nation and to individual tribal members. Oil and gas exploration and development activities are conducted under authority of the Indian Mineral Leasing Act of 1938 (25 USC 396a, *et seq.*), the Indian Mineral Development Act of 1982 (25 USC 2101, *et seq.*), the Federal Onshore Oil and Gas Royalty Management Act of 1982 (30 USC 1701, *et seq.*), and the Energy Policy Act of 2005 (42 USC 15801, *et seq.*). BIA actions in connection with the proposed project are largely administrative and include approval of leases, easements and rights-of-way, a determination regarding the effect on cultural resources and recommendations to the Bureau of Land Management (BLM) regarding approval of the Application for Permit to Drill (APD).

These proposed federal actions require compliance with the *National Environmental Policy Act* of 1969 (NEPA) and regulations of the Council on Environmental Quality (CEQ, 40 CFR 1500-1508). Analysis of the proposed project's potential to impact the human environment will be documented and will guide federal decision making. An APD submitted by Petro-Hunt, LLC, describes developmental, operational and reclamation procedures and practices that contribute to the technical basis of this Environmental Assessment (EA). The procedures and practices described in the application are critical elements in both the project proposal and the BIA's decision regarding environmental impacts. This EA will result in either a Finding of No Significant Impact (FONSI) or a decision to prepare an Environmental Impact Statement (EIS).

There are several components to the proposed action. Both new and improved roads are needed to access the proposed well site. A well pad would be constructed to accommodate drilling operations. Pits for drill cuttings would be constructed, used and reclaimed. Drilling and completion information could result in long-term commercial production at the site, in which case supporting facilities would be installed. The working portions of the well pad and the access road would remain in place during commercial production. All project components would eventually be abandoned and reclaimed, as specified in this document and the APD and according to any other federal conditions, unless formally transferred with federal approval to either the BIA or the landowner. The proposed well is exploratory, in that results could also support developmental decisions on other leases in the surrounding area, but this EA addresses only the installation and possible long-term operation of this well and directly associated infrastructure and facilities. Additional NEPA analysis, decisions and federal actions will be required prior to any other development.

Any authorized project will comply with all applicable federal, state and tribal laws, rules, policies, regulations and agreements. No construction, drilling or other ground-disturbing operations will begin until all necessary leases, easements, surveys, clearances, consultations, permissions, determinations and permits are in place.

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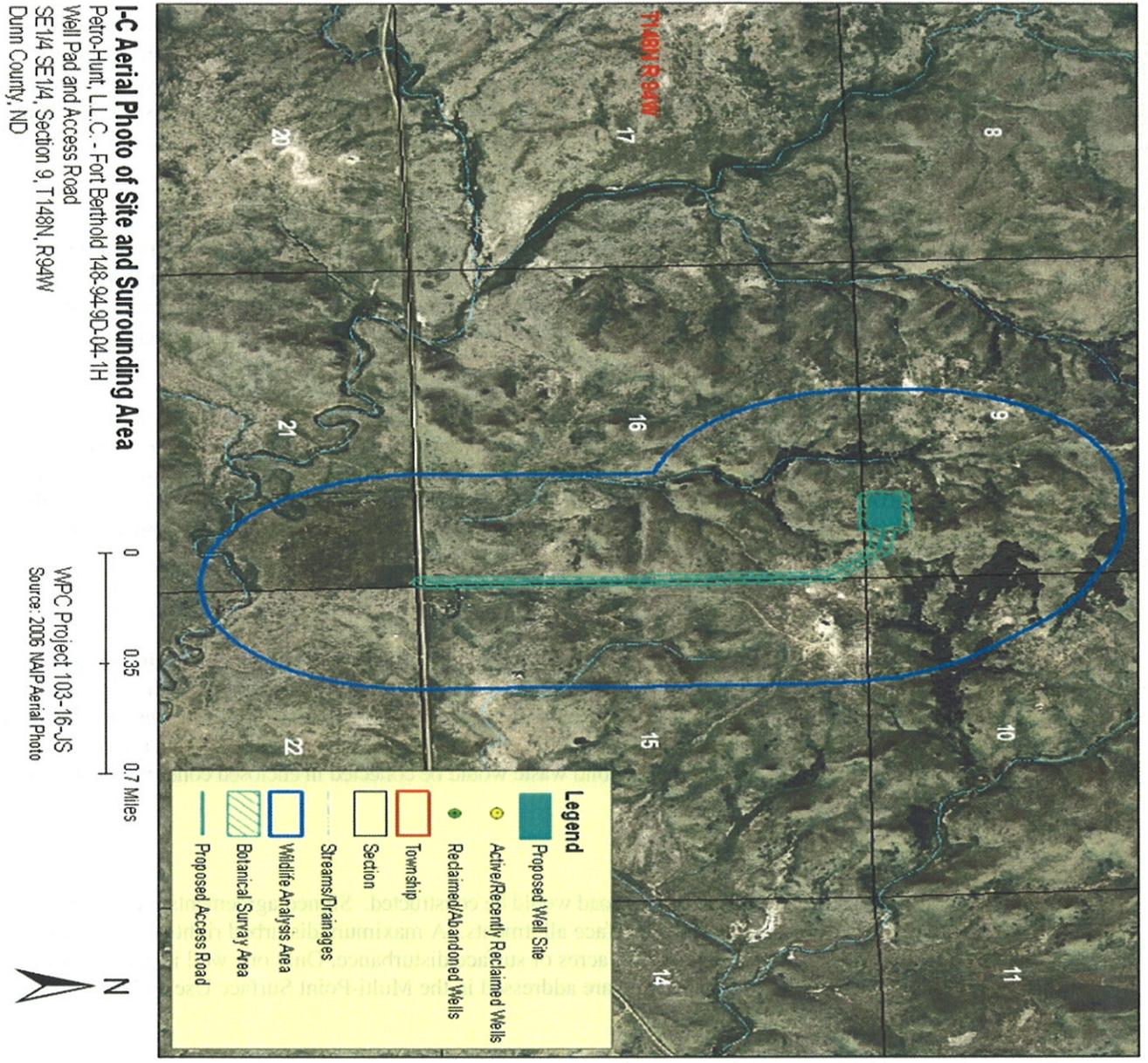


Figure 1: Project location.

2. Proposed Action and Alternatives

The **No Action Alternative** must be considered within an Environmental Assessment. If this alternative is selected, BIA would not approve leases, rights-of-way or other administrative proposals for the proposed project. The Application for Permit to Drill (APD) for this well location would not be approved. Current land use practices would continue at a No Action site. Development under other oil and gas leases would remain a possibility, but No Action is the only available or reasonable alternative to the specific proposal considered in this document.

This document analyzes the potential impacts of a specific proposed action – an exploratory oil/gas well on allotted surface and mineral estate within the boundaries of the Fort Berthold Indian Reservation in Dunn County, North Dakota. The proposed well would test the commercial potential of the Middle Bakken Dolomite Member of the Bakken Formation. Site-specific actions would or might include several components, including an access road, construction of a well pad, drilling operations, installation of production facilities, tanker traffic and reclamation.

All construction activities would follow lease stipulations, practices and procedures outlined in this document, the APD, guidelines and standards in *Surface Operating Standards for Oil and Gas Exploration and Development* (BLM/US Forest Service, Fourth Edition, also known as the Gold Book), and any conditions added by either BIA or BLM. All lease operations would be conducted in full compliance with applicable laws and regulations, including 43 CFR 3100, *Onshore Oil and Gas Orders 1, 2, 6 and 7*, approved plans of operation and any applicable Notices to Lessees.

2.1 Field Camps

Self-contained trailers may house a few key personnel during drilling operations, but any such arrangements would be very short-term. No long-term residential camps are proposed. Construction and drilling personnel would commute to the project site, most likely from within or around the Reservation. Human waste would be collected in standard portable chemical toilets or service trailers located on-site, then transported off-site to a state-approved wastewater treatment facility. Other solid waste would be collected in enclosed containers and disposed of at a state-approved facility.

2.2 Access Roads

A total of about 5,982 feet (1.13 miles) of new road would be constructed. Signed agreements are in place allowing road construction across affected surface allotments. A maximum disturbed right-of-way (ROW) width of 60 feet would result in a total of 8.24 acres of surface disturbance. Only one well is planned for the surface location. Details of road construction are addressed in the Multi-Point Surface Use and Operations Plan in the APD.

Construction would follow road design standards outlined in the Gold Book. A minimum of six (6) inches of topsoil would be stripped from the access road corridors, with the stockpiled topsoil redistributed on the back slope areas of the borrow ditches following road construction. These borrow ditch areas would be reseeded as soon as practical with a seed mixture determined by the BIA. If commercial production is established from the proposed location, the access road would be graveled with a minimum of four (4) inches of gravel and the roadway would remain in place for the life of the well. Details of road construction are addressed in the Multi-Point Surface Use and Operations Plan in the APD.

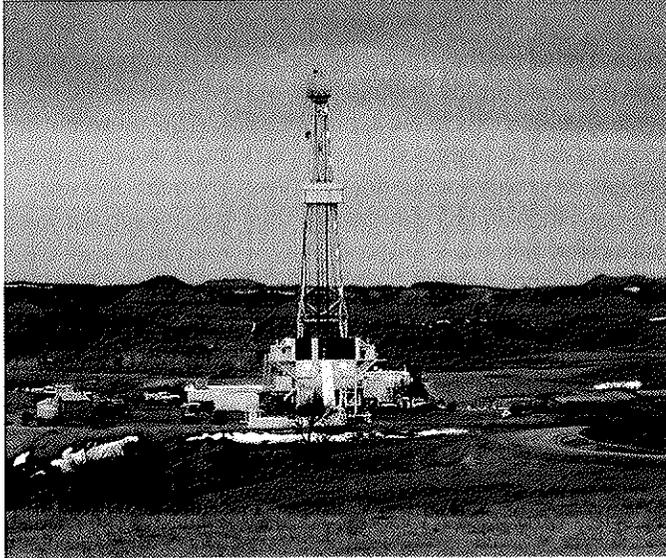


Figure 2.4: Typical drilling rig

Cuttings generated from drilling would be deposited in the reserve pit(s) on the well pad. Reserve pits would be lined with an impervious (plastic/vinyl) liner to prevent drilling fluid seepage and contamination of the underlying soil. Liners would be installed over sufficient bedding (either straw or dirt) to cover any rocks, would overlap the pit walls, extend under the mud tanks, and would be covered with dirt and/or rocks to hold it in place. Prior to use, the entire location would be fenced completely with a cattle guard at the access road into location, in order to protect both wildlife and livestock. Fencing would be installed in accordance with Gold Book guidelines and maintained until the reserve pits are backfilled.

2.5 Casing and Cementing

Surface casing would be set to about 2,100 feet and cemented back to the surface during drilling, isolating all near-surface freshwater aquifers in the project area. The Dakota Formation is a potential hydrocarbon zone expected to be encountered at a depth of about 5,500 feet, so production casing would be set and cemented to about 11,400 feet. Casing and cementing operations would be conducted in full compliance with *Onshore Oil and Gas Order 2*.

2.6 Completion and Evaluation

After the well has been drilled and cased, a completion (work-over) unit would be moved onto the site. For wells of the depth proposed, about thirty (30) days are usually needed to clean out the well bore, pressure test the casing, perforate and fracture the horizontal portion of the hole, and run production tubing for commercial production. If the target formation is to be fractured to stimulate production, the typical procedure is to pump a mixture of sand and a carrier (e.g., water and/or nitrogen) under extreme pressure downhole. The resulting fractures are propped open by the sand, increasing the capture zone of the well and maximizing efficient drainage of the field. After fracturing, the well is typically flowed back to the surface to recover fracture fluids and remove excess sand. Fluids utilized in the completion procedure would be captured either in the reserve pit or in tanks for disposal in strict accordance with NDIC rules and regulations.

2.7 Commercial Production

If drilling, testing and production support commercial production from the proposed location, additional equipment would be installed, including a pumping unit at the well head, a vertical heater/treater, tanks (usually four 400 barrel steel tanks), and a flare/production pit. An impervious dike sized to hold 100% of the capacity of the largest tank plus one full day's production would surround production tanks and the heater/treater. Load out lines would be located inside the diked area, with a heavy screen-covered drip barrel installed under the outlet. A metal access staircase would protect the dike and support flexible hoses used by tanker trucks. The BIA would choose an inconspicuous paint color for all permanent aboveground production facilities from colors recommended either by the BLM or the Rocky Mountain Five-State Interagency Committee. A typical producing rig is shown in Figure 2.7 and more detail is included in the APD.

Oil would be collected in tanks installed on location and periodically trucked to an existing oil terminal for sales. Any produced water would be captured in tanks and periodically trucked to an approved disposal site. The frequency of trucking activities for both product and water would depend upon volumes and rates of

production. The duration of production operations cannot be reliably predicted, but some oil wells have pumped for more than one hundred years.



Large volumes of gas are not expected from this location. Small volumes would be flared in accordance with Notice to Lessees (NTL) 4A and NDIC regulations, which prohibit unrestricted flaring for more than the initial year of operation (NDCC 38-08-06.4). Results could also encourage additional exploration on the Reservation. Should future oil/gas exploration activities be proposed by Petro Hunt on the Fort Berthold reservation, those proposals and associated federal actions would require additional NEPA analysis and BIA consideration prior to implementation.

Figure 2.7: Typical commercial operation

2.8 Reclamation

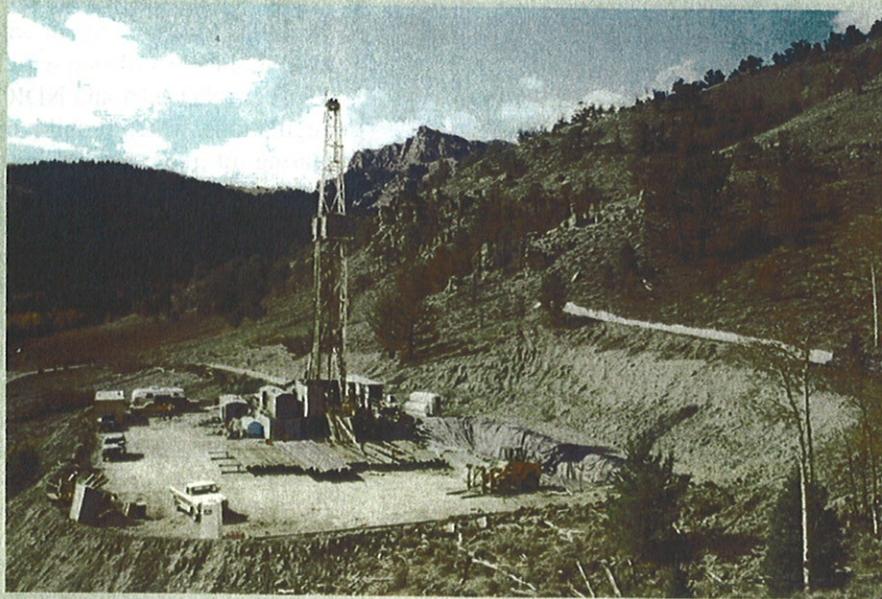
The reserve pit and drill cuttings would be treated, solidified, backfilled and buried as soon as possible after well completion. Any oily residue is dispersed and captured, preventing coalescence and release to the environment at significant rates in the future. Controlled mixing of cuttings with a non-toxic reagent causes an irreversible reaction that quickly results in an inert, solid material. The alkaline nature of the stabilized material also chemically stabilizes various metals that may be present, primarily by transforming them into less soluble compounds. Treated material would then be buried in the reserve pit, overlain by at least four feet of overburden as required by NDIC regulations.

If commercial production equipment is installed, the well pad would be reduced in size to about 300' x 200', with the rest of the original pad reclaimed. The working area of each well pad and the running surface of access roads would be surfaced with scoria or crushed rock obtained from a previously approved location. Other interim reclamation measures to be accomplished within the first year include reduction of the cut and fill slopes, redistribution of stockpiled topsoil, installation of erosion control measures, and reseeded. The outslope portions of roads would be covered with stockpiled topsoil and re-seeded with a seed mixture determined by the BIA, reducing the residual access-related disturbance to about 28' wide.

Final reclamation would occur either in the very short term if the proposed well is commercially unproductive, or later upon final abandonment of commercial operations. All disturbed areas would be reclaimed, reflecting the BIA view of oil and gas exploration and production as temporary intrusions on the landscape. All facilities would be removed, well bores would be plugged with cement and dry hole markers would be set. Access roads and work areas would be leveled or backfilled as necessary, scarified, re-contoured and re-seeded. Exceptions to these reclamation measures might occur if the BIA approves assignment of an access road either to the BIA roads inventory or to concurring surface allottees. The Surface Use Plan within the APD contains additional details regarding both interim and final reclamation measures. Figure 2.8 shows an example of reclamation from the Gold Book.

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Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development



The well pad and access road are constructed to the minimum size necessary to safely conduct drilling and completion operations.



The well pad and access road have been recontoured back to the original contour, the topsoil respread, and the site revegetated.

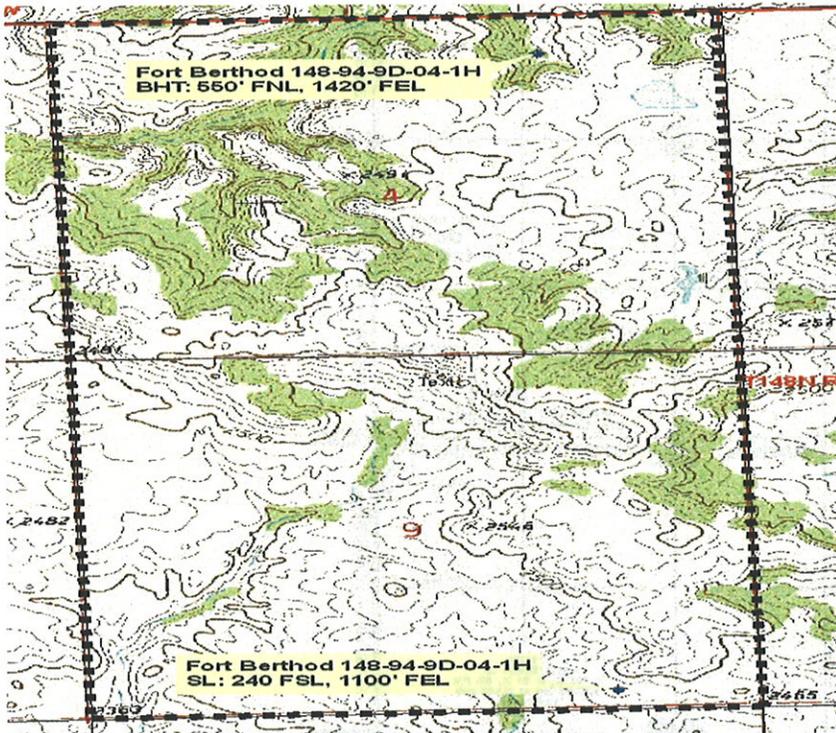
Figure 2.8: Example of reclamation from the Gold Book

2.9 Construction Details at Individual Sites

One lateral wellbore will be drilled at the surface location.

Fort Berthold 148-94-9D-04-1H

As shown in Figures 2.9a and 2.9d, the well pad would be in the SE¼ of Section 9, T148N, R94W, to reach 640 acre (+/-) spacing units consisting of the east half of Section 4 and the east half of Section 9. Access from Tribal

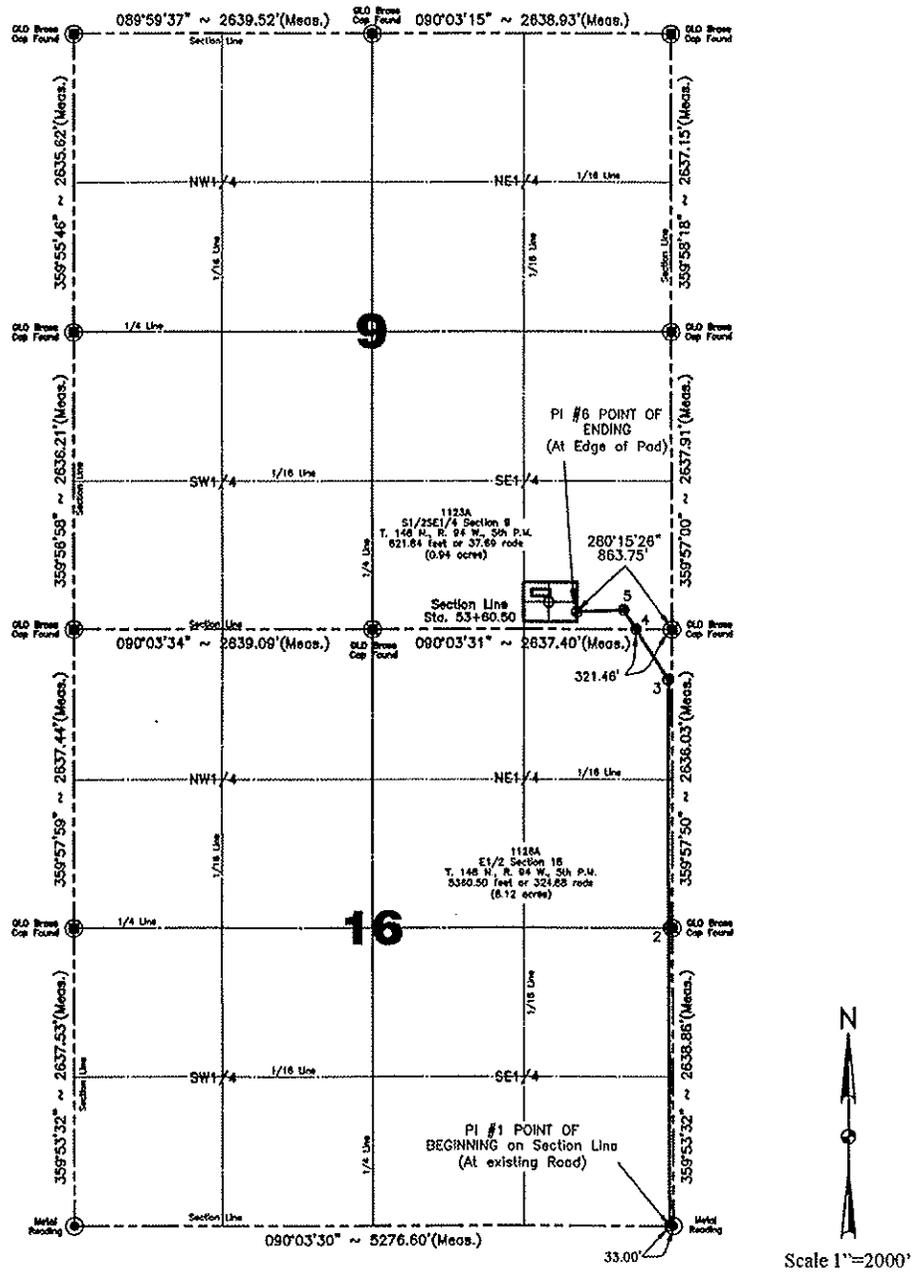


Highway 14 requires approximately 6,000 feet of new road. Total disturbance would be almost 8.5 acres. Photographs of the proposed well location and access road are shown in Figures 2.9b and 2.9c. Directional drilling would achieve and maintain the minimum 500' setback from the section boundaries of spacing units. Directional would become roughly horizontal at a true vertical depth (TVD) of about 10,200 feet. The well will total about 20,280 feet, including a lateral reach of about 9,200 feet in the Middle Bakken Member. The well surface location is about 240 feet FSL and 1,100 feet FEL of Section 9. Drilling targets are about 550 feet FNL and 1,420 feet FEL of Section 4.

Figure 2.9a: Fort Berthold 148-94-9D-04-1H, Spacing Units



Figure 2.9b: Fort Berthold 148-94-9D-04-1H Well Pad Figure 2.9c: Fort Berthold 148-94-9D-04-1H Access Road



I-A Proposed Access Road and Well Site Orientation
Petro Hunt, LLC—Fort Berthold
148-94-9D-04-1H
SE1/4SE1/4 of Section 9 and NE1/4NE1/4 of Section 16, T.148 R.94W
Dunn County, North Dakota

Figure 2.9d: Project Overview

2.10 Preferred Alternative

The preferred alternative is to complete all administrative actions and approvals necessary to authorize or facilitate oil and gas developments at this proposed well location.

3. The Affected Environment and Potential Impacts

The Fort Berthold Indian Reservation is the home of the Three Affiliated Tribes of the MHA Nation. Located in west-central North Dakota, the Reservation encompasses more than one million acres, of which almost half are held in trust by the United States for either the MHA Nation or individual allottees. The remainder of the land is owned in fee simple title, sometimes by the MHA Nation or tribal members, but usually by non-Indians. The Reservation occupies portions of six counties, including Dunn, McKenzie, McLean, Mercer, Mountrail and Ward. In 1945, the Garrison Dam was completed, inundating much of the Reservation. The remaining land was divided into three sections by Lake Sakakawea, an impoundment of the Missouri River upstream of the Garrison Dam.

The proposed well and access road is situated geologically within the Williston Basin, where the shallow structure consists of sandstones, silts and shales dating to the Tertiary Period (65 to 2 million years ago), including the Sentinel Butte and Golden Valley Formations. The underlying Bakken Formation is a well-known source of hydrocarbons; its middle member is targeted by the proposed project. Although earlier oil/gas exploration activity within the Reservation was limited and commercially unproductive, recent economic changes and technological advances now make accessing oil in the Bakken Formation feasible.

The Reservation is within the northern Great Plains ecoregion, which consists of four physiographic units: 1) the Missouri Coteau Slope north of Lake Sakakawea; 2) the Missouri River trench; 3) the Little Missouri River badlands; and 4) the Missouri Plateau south and west of Lake Sakakawea (Williams and Bluemle 1978). Much of the Reservation is on the Missouri Coteau Slope. Elevations of the formerly glaciated, gently rolling landscape ranges from a normal pool elevation of 1,838 feet at Lake Sakakawea to over 2,600 feet on Phaelan's Butte near Mandaree. Annual precipitation on the plateau averages between 15 and 17 inches. Mean temperatures fluctuate between -3° and 21° F in January and between 55° and 83° F in July, with 95 to 130 frost-free days each year (Bryce et al. 1998; High Plains Regional Climate Center 2008).

The proposed well site and spacing units are in a rural area consisting primarily of mixed grass prairie that is currently either idle or used to graze livestock. This grassland is intermixed with scattered woody cover and/or dense shrubby areas on north facing slopes and scattered seasonal drainages. The landscape has been previously disturbed by dirt trails and graveled and paved roadways. The broad definition of the human and natural environment under NEPA leads to the consideration of the following elements: air quality, public health and safety, water resources, wetland/riparian habitat, threatened and endangered species, soils, vegetation and invasive species, cultural resources, socioeconomic conditions, and environmental justice. Potential impacts to these elements are analyzed for both the No Action Alternative and the Preferred Alternative. Impacts may be beneficial or detrimental, direct or indirect, and short-term or long-term. This EA also analyzes the potential for cumulative impacts and ultimately makes a determination as to the significance of any impacts. In the absence of significant negative consequences, it should be noted that a significant benefit from the project does *not* in itself require preparation of an EIS.

3.1 The No Action Alternative

Under the No Action Alternative, the proposed project would not be constructed, drilled, installed, or operated. Existing conditions would not be impacted for the following critical elements: air quality, public health and safety, water resources, wetland/riparian habitat, threatened and endangered species, soils, vegetation and invasive species, cultural resources, and environmental justice. There would be no project-related ground disturbance, use of hazardous materials, or trucking of product to collection areas. Surface disturbance, deposition of potentially harmful biological material, trucking, and other traffic would not change from present levels. Under the No Action Alternative, the MHA Nation, Tribal members, and allottees would not have the opportunity to realize potential financial gains resulting from the discovery of resources at this well location.

3.2 Air Quality

The North Dakota Department of Health (NDDH) network of Ambient Air Quality Monitoring (AAQM) stations includes Watford City in McKenzie County, Dunn Center in Dunn County, and Beulah in Mercer County. These stations are located west, south and southeast of the proposed well site. Criteria pollutants tracked under National Ambient Air Quality Standards (NAAQS) of the Clean Air Act include sulfur dioxide (SO₂), particulate matter (PM₁₀), nitrogen dioxide (NO₂) and ozone (O₃). Two other criteria pollutants – lead (Pb) and carbon monoxide (CO) – are not monitored by any of three stations. Table 3.2 summarizes federal air quality standards and available air quality data from the three- county study area.

Table 3.2 Air quality standards and data for Dunn, McKenzie, and Mercer Counties, North Dakota

Pollutant	Averaging Period	NAAQS ($\mu\text{g}/\text{m}^3$)	NAAQS (ppm)	County		
				Dunn	McKenzie	Mercer
SO ₂	24-Hour	365	0.14	0.004 ppm	0.004 ppm	0.011 ppm
	Annual Mean	80	0.030	0.001 ppm	0.001 ppm	0.002 ppm
PM ₁₀	24-Hour	150	--	50 ($\mu\text{g}/\text{m}^3$)	35 ($\mu\text{g}/\text{m}^3$)	35 ($\mu\text{g}/\text{m}^3$)
	Annual Mean	50	--	--	--	--
PM _{2.5}	24-Hour	35	--	--	--	--
	Weighted Annual Mean	15	--	--	--	--
NO ₂	Annual Mean	100	0.053	0.002 ppm	0.001 ppm	0.003 ppm
CO	1-Hour	40,000	35	--	--	--
	8-Hour	10,000	9	--	--	--
Pb	3-Month	1.5	--	--	--	--
O ₃	1-Hour	240	0.12	0.071 ppm	0.072 ppm	0.076 ppm
	8-Hour	--	0.08	0.061 ppm	0.066 ppm	0.067 ppm

Source: U.S. Environmental Protection Agency (EPA) 2006. $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter. ppm = parts per million.

North Dakota was one of only nine states in 2006 that met standards for all criteria pollutants. The state also met standards for fine particulates and the eight-hour ozone standards established by the U.S. Environmental Protection Agency (EPA) (NDDH 2007). The three counties addressed in Table 3.2 are also in full attainment and usually far below established limits (American Lung Association 2006). The Clean Air Act mandates

prevention of significant deterioration in designated attainment areas. Class I areas are of national significance and include national parks greater than 6,000 acres in size, national monuments, national seashores, and federal wilderness areas larger than 5,000 acres and designated prior to 1977. There is a Class I airshed at nearby Theodore Roosevelt National Park, which covers about 110 square miles in three units within the Little Missouri National Grassland between Medora and Watford City, 30-40 miles west of the proposed well site. The Reservation can be considered a Class II attainment airshed, which affords it a lower level of protection from significant deterioration.

The proposed project is similar to other projects installed nearby with the approval of state offices. Construction, drilling and tanker traffic would generate temporary, intermittent and nearly undetectable gaseous emissions of particulates, SO₂, NO₂, CO, and volatile organic compounds. Road dust would be controlled as necessary and other best management practices implemented as necessary to limit emissions to the immediate project area (BLM 2005). No detectable or long-term impacts to air quality or visibility are expected within the airsheds of the Reservation, state, or Theodore Roosevelt National Park. No laws, regulations or other requirements have been waived; no monitoring or compensatory measures are required.

3.3 Public Health and Safety

Health and safety concerns include naturally-occurring toxic gases, hazardous materials used or generated during installation or production, and hazards posed by heavy truck traffic associated with drilling, completion and production activities.

Hydrogen sulfide gas (H₂S) is extremely toxic in concentrations above 500 parts per million, but it has not been found in measurable quantities in the Bakken Formation. Before reaching the Bakken, however, drilling would penetrate the Mission Canyon Formation, which is known to contain varying concentrations of H₂S. Release of H₂S at dangerous concentrations is very unlikely. Contingency plans submitted to BLM comply fully with relevant portions of *Onshore Oil and Gas Order 6* to minimize potential for gas leaks during drilling. Emergency response plans protect both the drilling crew and the general public within one mile of a well; precautions include automated sampling and alarm systems operating continuously at multiple locations on the well pad. No direct impacts from H₂S are anticipated.

Negative impacts from construction would be largely temporary. Noise, fugitive dust, and traffic hazards would be present for about sixty days during construction, drilling and well completion, and then diminish sharply during commercial operations. For this proposed well site it is anticipated that about 50 trips over the course of several days would be required to transport the drilling rig and associated equipment to the site, with the same traffic later needed to remove the rig and other temporary facilities.

If the well proves productive, one small truck would travel to the pad each day to check the pump. Gas would be flared initially, while oil and produced water would be hauled out by tankers, with tanker traffic depending directly on productivity. A successful Bakken well usually produces both oil and water at a high rate initially. In the vicinity of the proposed project, 500-1,000 barrels of oil per day might be expected at first, along with about 200 barrels of water. Over the next several months, daily production might drop to 200-400 barrels of oil and 30-70 barrels of water. An oil tanker can usually haul 140 barrels of oil per load, while water tankers usually hold 110 barrels. Production service might then start at 3-7 oil tankers and two water haulers in and out daily, before declining to 2-3 oil tankers and a single water load. Established load restrictions for state and BIA roadways would be followed and haul permits would be acquired as appropriate. All traffic must be confined to approved routes and conform to speed limits.

The U.S. EPA specifies chemical reporting requirements under Title III of the *Superfund Amendments and Reauthorization Act* (SARA) of 1986, as amended. No materials used or generated by this project for production, use, storage, transport, or disposal are on either the SARA list or on EPA's list of extremely hazardous substances in 40 CFR 355. Project design and operational precautions mitigate against impacts from toxic gases, hazardous materials or traffic. All operations, including flaring, would conform to instructions from BIA fire

management staff. Impacts from the proposed project are considered minimal, unlikely and insignificant. No laws, regulations or other requirements have been waived; no compensatory mitigation measures are required

3.4 Water Resources

Surface Water

The project would be located within the Lake Sakakawea basin and Lower Little Missouri Sub-Region as seen in Figure 3.4a. Fort Berthold 148-94-9D-04-1H would be in the Waterchief Bay watershed and the Upper Moccasin Creek sub-watershed (NDWC 2008a).

Runoff is generally sheet-flow until collected by ephemeral and perennial drainages leading to Moccasin Creek and eventually the Missouri River (Lake Sakakawea). Surface runoff from around Fort Berthold 148-94-9D-04-1H would flow to the south to Moccasin Creek and then to Missouri River (Lake Sakakawea) via Moccasin Creek Bay.

The proposed project has been sited to avoid direct impacts to surface water and minimize disruption of drainages. Roadway engineering and erosion control measures would mitigate the potential migration of sediments downhill or downstream. No measureable increase in runoff or impacts to surface water is expected as a result of project approval.



Local Watersheds and Aquifers
Petro-Hunt, L.L.C. - Fort Berthold 148-94-9D-04-1H
Well Pad and Access Road
SE1/4 SE1/4, Section 9, T148N, R94W
Dunn County, ND

0 1.5 3 Miles
WPC Project 103-16-JS
Source: 2006 NAIP Aerial Photo



Figure 3.4a Watershed map

Groundwater

From deepest to shallowest, Dunn County aquifers include the Cretaceous Fox Hills and Hell Creek formations and the Tertiary Tongue River and Sentinel Butte formations, as shown in Table 3.4a. The Sentinel Butte formation crops out in Dunn County and is most commonly used for domestic supply; its water is potable and meets standards of the North Dakota Department of Health. Detailed analyses are available from the North Dakota Geological Survey, Bulletin 68, Part II, 1976.

Table 3.4a: Dunn County aquifers

Formation Name	Depth Range (ft)	Thickness (ft)	Lithology
Sentinel Butte	0 – 300	Up to 500	Siltstone and sandstone
Tongue River	0 – 500	Up to 500	Siltstone and sandstone
Hell Creek	900 – 1900	300	Sandstone and shale
Fox Hills	1200 – 2200	200	Sandstone and shale

The North Dakota State Water Commission has not issued permits for any water wells or surface water impoundments near the proposed project. The closest permit is 2,366 feet east of the access road and 4,882 feet southeast of the proposed well pad. The permit is a surface water monitoring site that is located in section 15 (Permit Number 148-094-15 CAD [Appendix A]). Information on water permits in other sections of the township is summarized in Tables 3.4b and 3.4c (NDWC 2008). Nonetheless, Petro-Hunt would protect the water quality of these aquifers by cementing casing across these zones to prevent contamination. The well bore will be drilled with fresh water to a point below the base of the Fox Hills Formation prior to setting casing to prevent contamination of the formation.

Table 3.4b: Existing Water Permits in T148-R94W, Dunn County, North Dakota

Permit Number	Legal Location		Permit Type	Permit Information		
	Subdivision	Section		Aquifer	Depth	Date
148-094-06 DBD	NW1/4SE1/4SE1/4	6	Unknown	Sentinel Butte-Tongue River	Unk	Unk
148-094-13 BBD	SE1/4NW1/4NW1/4	13	Unknown	Sentinel Butte-Tongue River	Unk	Unk
148-094-15 CAD	SE1/4NE1/4SW1/4	15	Surface Water Monitoring Site	Surface Water	0	Unk
148-094-23 CBD	SE1/4NW1/4SW1/4	23	Surface Water Monitoring Site	Surface Water	0	Unk
148-094-14 AAB	NW1/4NE1/4NE1/4	14	Observation Well	Tongue River	315	6/23/1992
148-094-01 DDD	SE1/4SE1/4SE1/4	1	Test Hole	No Obs Well Installed	80	10/12/1971

Table 3.4c: Existing Water Permits in T148-R95W, Dunn County, North Dakota

Permit Number	Legal Location		Permit Type	Permit Information		
	Subdivision	Section		Aquifer	Depth	Date
148-095-22- CCA	NE1/4NE1/4SW1/4	22	Unknown	Fox Hills	1455	Unk
148-095-31- CCA	NE1/4NE1/4SW1/4	31	Unknown	Fox Hills	Unk	Unk
148-095-32- DBD	NW1/4SE1/4SE1/4	32	Unknown	Fox Hills	Unk	Unk
148-095-33- BDB	NW1/4SE1/4NW1/4	33	Unknown	Tongue River	Unk	Unk
148-095-35- BDD	SE1/4SE1/4NW1/4	35	Unknown	Tongue River	Unk	Unk
148-095-12- DCC	SW1/4SW1/4SE1/4	12	Observation Well	Sentinel Butte-Tongue River	52	6/23/1992

Source: North Dakota State Water Commission website: <http://www.swc.state.nd.us> (NDWC 2008)

Surface casing would be cemented in place to a depth of about 2,380 feet, isolating aquifers in the Fox Hills Formation and extending a minimum of fifty feet into the underlying Pierre shale. Intermediate casing would extend from the surface casing and be cemented between about 4,000 and 10,000 feet in depth to isolate potential productive water and hydrocarbon-bearing zones. Any produced water would be captured in tanks on site and periodically trucked to an approved disposal site. The frequency of trucking of either oil or water would depend on production rates. BIA and BLM would monitor all operations and record-keeping at their discretion. Evidence of ground water contamination related to the project would result in a stop work order until all appropriate measures were identified and implemented.

These and other construction and reclamation techniques included in the APD would minimize potential for impacts to both groundwater and surface water. No significant impacts to surface water or groundwater are expected as a result of the proposed action. No applicable laws or regulations would be waived: no compensatory mitigation measures are required to protect surface water or groundwater.

3.5 Wetland/Riparian Habitat and Threatened or Endangered Species

Wildlife occurrence and habitat within a one-mile radius of the *Site* were inventoried on July 6 and July 16, 2009, via a walking survey and visual inspection (Figure 3.5a & Figure 3.5b). Historical data for raptor species of concern in the area surrounding the *Site* was reviewed in conjunction with the on-*Site* survey (USFWS 2008).

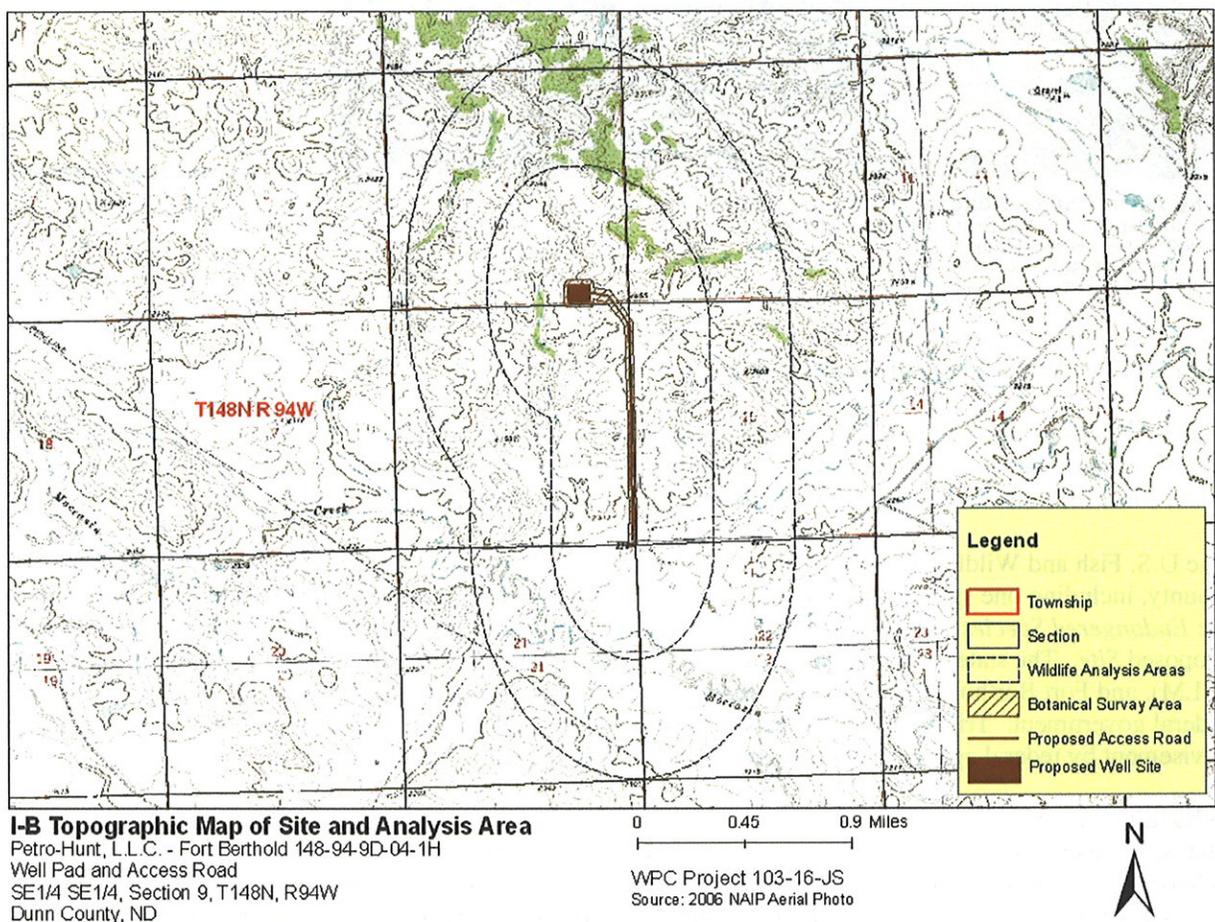
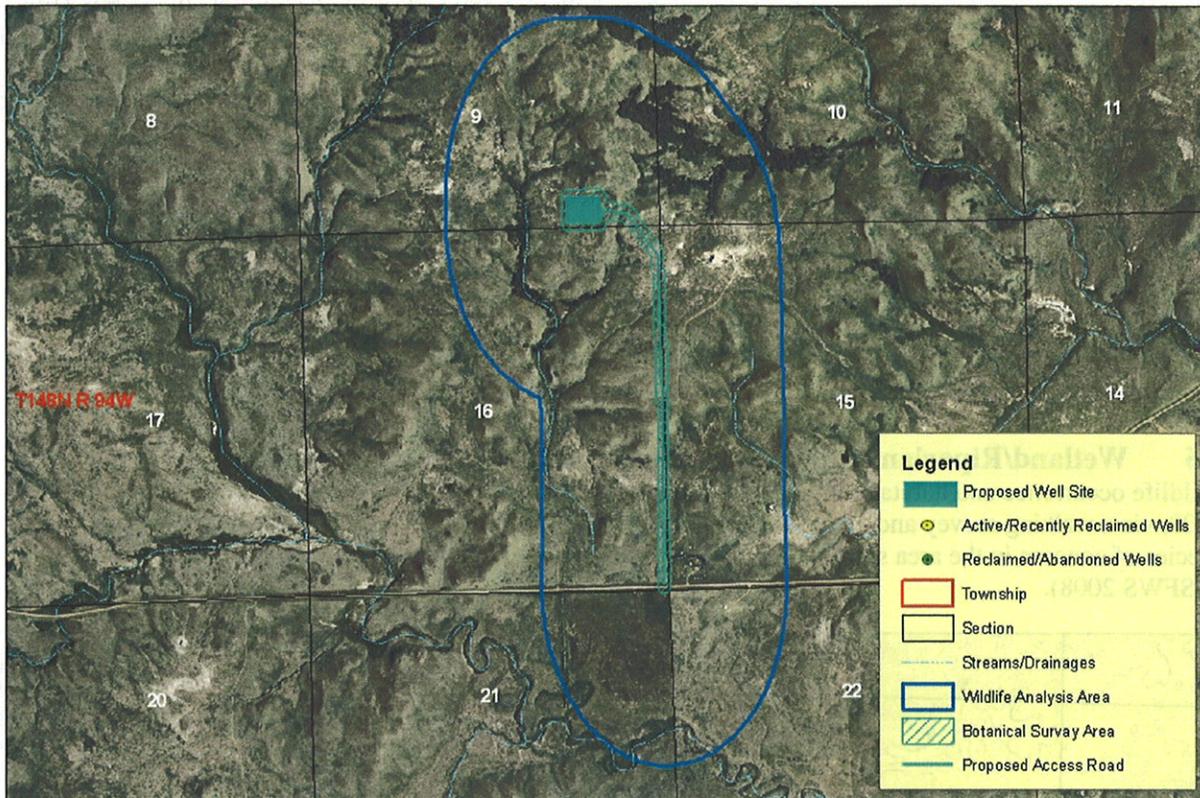


Figure 3.5a: Topographic Map of Analysis Area



I-C Aerial Photo of Site and Surrounding Area
 Petro-Hunt, L.L.C. - Fort Berthold 148-94-9D-04-1H
 Well Pad and Access Road
 SE1/4 SE1/4, Section 9, T148N, R94W
 Dunn County, ND

0 0.35 0.7 Miles
 WPC Project 103-16-JS
 Source: 2006 NAIP Aerial Photo



Figure 3.5b: Aerial Photo of Analysis Area

National Wetland Inventory (NWI) maps maintained by the U.S. Fish and Wildlife Services (USFWS) do not directly identify any jurisdictional wetlands within the project area. Physical inventories on July 6 and July 16, 2009, confirmed that no riparian or wetland habitats would be impacted by the proposed road or well.

The U.S. Fish and Wildlife Service (USFWS) identifies seven federally listed species occurring in Dunn County, including one species that is a candidate for listing (USFWS 2008) as threatened or endangered under the *Endangered Species Act* (ESA). None of these species were observed during field reconnaissance of the proposed *Site*. The state of North Dakota, Bureau of Indian Affairs (BIA), Bureau of Land Management (BLM), and Fort Berthold Reservation do not have a list of threatened or endangered species different from the federal government. Tribes and states may recognize additional species of concern; such lists are taken under advisement by federal agencies, but are not legally binding in the manner of the ESA.

Whooping crane (*Grus Americana*).

Status: Endangered

Likelihood of occurrence: **unlikely**

Whooping cranes historically nested in North Dakota, but the whooping crane is currently only a migrant through North Dakota in the spring and fall. During spring and fall whooping crane migration, large shallow marshes with a minimal to nonexistent emergent zones are preferred for roost sites, and upland cropland and pastures adjacent to and usually within one kilometer (0.62 mile) are used for foraging (Howe 1989).

Suitable habitat for whooping cranes is not present on-*Site*. The lack of a cropland/wetland matrix habitat makes migratory stopovers by whooping cranes unlikely. The proposed project will not affect this species.

Interior least tern (*Sterna antillarum*)

Status: Endangered

Likelihood of occurrence: **unlikely**

Natural habitat for interior least terns in North Dakota includes islands, beaches and sandbars of the Missouri and Yellowstone Rivers and along the shorelines of Lake Sakakawea and Oahe (USFWS 2006). Interior least terns are generally restricted to larger meandering rivers with a broad floodplain, slow currents and greater sedimentation rates, which allow for the formation of suitable habitat. Interior least terns experience the greatest nesting success on sand or gravel bar islands because predation by terrestrial predators is reduced (USFWS 2006).

Interior least terns' seasonal habitat requisites are associated with rivers, streams and reservoirs. There is no existing suitable habitat within or near the *Site* that would be appropriate for this species. The proposed project will not affect this species.

Pallid sturgeon (*Scaphirhynchus albus*)

Status: Endangered

Likelihood of occurrence: **would not occur**

The pallid sturgeon is known to occur in North Dakota primarily at the confluence of the Missouri and Yellowstone Rivers (USFWS 2006).

There is no existing or potential aquatic habitat within or near the *Site* that would be suitable for this species. The proposed project would not affect this species.

Black-footed ferret (*Mustela nigripes*)

Status: Endangered

Likelihood of occurrence: **would not occur**

Black-footed ferrets historically occurred in this region of North Dakota, but mostly in the extreme southwest part of the state (USFWS 2006). Suitable habitat includes large black-tailed prairie dog (*Cynomys spp.*) colonies or complexes of colonies. The ferret's primary food source is the black-tailed prairie dog and ferrets also inhabit black-tailed prairie dog burrows.

The proposed *Site* does not contain active black-tailed prairie dog colonies. The black-footed ferret is not expected to be present given the paucity of food and habitat in the project area. The proposed project would not affect this species.

Gray wolf (*Canis lupus*)

Status: Endangered

Likelihood of occurrence: **would not occur**

The most suitable habitat for the gray wolf in North Dakota is in the dense and contiguous forested areas in the north central and northeast parts of the state. There have been documented occurrences of gray wolves in south-central North Dakota (1985, 1990, and 1991) and confirmed reports of gray wolves in the Turtle Mountains of North Dakota (Grondahl, NDGFD, personal communication, 2006).

The *Site* does not contain dense, contiguous forested areas required by the gray wolf and there have been no historical wolf sightings within or near the project area (USFWS 2006). The proposed project would not affect this species.

Piping plover (*Charadrius melodus*)

Status: Threatened

Likelihood of occurrence: **unlikely**

The *Site* is, at the north end, four miles south of Lake Sakakawea which is designated critical habitat for piping plover (USFWS 2008). Critical habitat for the piping plover includes sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies (USFWS 2006).

Suitable habitat for piping plovers is not present within the *Site*. There are no suitable nesting/foraging habitats in the vicinity, as the *Site* and surrounding area are primarily grassland habitats. Birds occasionally may fly though the *Site* when migrating or moving between nesting and foraging areas. The proposed project would not affect this species.

Dakota skipper (*Hesperia dacotae*)

Status: Candidate

Likelihood of occurrence: **may occur**

North Dakota has a large and stable population of Dakota skippers. In the western part of the state, its habitat includes ungrazed native prairie with little bluestem (*Schizachyrium scoparium*), needle and thread (*Stipa viridula*), purple coneflower (*Echinacea spp.*) and a high forb and grass diversity (USFWS 2006). The Dakota skipper has been documented within both McKenzie and Dunn Counties (USFWS 2008). Confirmed observations were located at two sites approximately six miles northwest of the *Site* in the NE¼SW¼ & NW¼SE¼ of Section 28, T149N, R94W and the NE¼NW¼ of Section 33, T149N, R94W, McKenzie County (USFWS 2008).

The *Site* does not contain suitable habitat for the Dakota skipper. No individuals were observed during the survey. The proposed project will not affect this species.

Other Wildlife Species

Numerous resident and migratory birds, mammals, amphibians and insects occupy the *Site* both continually and intermittently throughout the year. Due to the migratory and transient behavior of wildlife species, the information presented includes a discussion of wildlife resources known within the *Site* and at a regional level, obtained from queries of state and federal natural resource related databases, and interviews with state (Kreft, B., NDGFD, 2008) and federal management personnel (Ellsworth, T., USFWS, 2008). Focus was also given to land cover and potential habitat availability of the *Site* based on the field reconnaissance, which includes mixed grass prairie and shrub cover.

Table 3.5a: Resident Bird species in Dunn and McKenzie Counties

Common Name	Scientific Name
American Crow	<i>Corvus brachyrhynchos</i>
Black-billed Magpie	<i>Pica hudsonia</i>
Black-capped Chickadee	<i>Poecile atricapilla</i>
Blue Jay	<i>Cyanocitta cristata</i>
Short-eared Owl	<i>Asio flammeus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Eastern Screech Owl	<i>Atus asio</i>
European Starling	<i>Sturnus vulgaris</i>
Gray Partridge	<i>Perdix perdix</i>
Great Horned Owl	<i>Bubo virginianus</i>
Hairy Woodpecker	<i>Picoides villosus</i>
House Finch	<i>Carpodacus mexicanus</i>
House Sparrow	<i>Passer domesticus</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
Wild Turkey	<i>Meleagris gallopavo</i>
Horned Lark	<i>Eremophila alpestris</i>
Source: Sibley, D.A. 2006 The Sibley Field Guide to Bird of Eastern North American North Dakota Game and Fish Department.	

Eighteen resident birds are known from McKenzie and Dunn Counties (Table 3.5a). At least seventy-one migratory birds could potentially occur in the vicinity of the *Site*. These lists should not be considered comprehensive, but rather representative of the majority of species regularly present in the vicinity of the project area. Based on a lack of suitable waterfowl nesting habitat present within the region of the *Site* relative to eastern portions of the state, only limited use of the area (except staging on Lake Sakakawea, 10 miles from the project area) by migrating waterfowl species would be expected.

During the field survey, six resident bird species were observed. These were American crow (*Corvus*

brachyrhynchos), house sparrow (*Passer domesticus*), ring-necked pheasant (*Phasianus colchicus*), sharp-tailed grouse (*Tympanuchus phasianellus*), prairie horned lark (*Eremophila alpestris*), and red-tailed hawk (*Buteo jamaicensis*). The majority of available trend information on birds focuses on game species. A review of the ND Game and Fish Department annual game bird reports for central and western North Dakota indicates that populations are healthy and stable-to-increasing in this region.

Table 3.5b Mammal Species in Dunn and McKenzie Counties

Common Name	Scientific Name
Pronghorn Antelope	<i>Antilocapra Americana</i>
Badger	<i>Taxidea Taxus</i>
Beaver	<i>Castor Canadensis</i>
Big Brown Bat	<i>Eptesicus fescus</i>
Coyote	<i>Canis latrans</i>
Eastern Chipmunk	<i>Tamias striatus</i>
Fox Squirrel	<i>Sciurus niger</i>
Franklin's Ground Squirrel	<i>Spermophilus franklinii</i>
Little Brown Bat	<i>Myotis Lucifugus</i>
Long-tailed Weasel	<i>Mustela frenata</i>
Meadow Vole	<i>Microtus pennsylvanicus</i>
Mink	<i>Mustela vison</i>
Muskrat	<i>Ondatra zibethicus</i>
Raccoon	<i>Procyon lotor</i>
Red Fox	<i>Vulpes vulpes</i>
Red Squirrel	<i>Tamiasciurus hudsonicus</i>
Silver-haired Bat	<i>Lasionycteris noctivagans</i>
Thirteen-lined Ground Squirrel	<i>Spermophilus tridecemlineatus</i>
Mule Deer	<i>Odocoileus hemionus</i>
White-tailed Jackrabbit	<i>Lepus townsendii</i>
Source: Knue, J. 1991. Big Game in North Dakota; A Short History, North Dakota Game and Fish Department	

At least twenty-one large and small mammals are present within McKenzie and Dunn Counties throughout the year (Table 3.5b). The rolling mixed grass prairie, cropland and intermittent woody cover of the *Site* and vicinity likely provide food sources for many of these species. A review of ND Game and Fish Department winter aerial survey data indicates that white-tailed deer density within McKenzie and Dunn Counties is excellent and suggests a healthy and stable-to increasing deer population. Several other big game and furbearer species potentially inhabit the vicinity of the *Site*.

Potential Impacts to Wildlife

Construction and operation of the *Site* is not likely to affect the six federally listed threatened or endangered species that have ranges that include the project area. No effects are expected for the pallid sturgeon, black-footed ferret, gray wolf and whooping crane because these species do not occupy the *Site* vicinity, other than as

occasional transients. Potential habitat of the Interior least tern and piping plover is not within the *Site*, but is in the vicinity. Habitat for the candidate species Dakota skipper is found in the *Site* vicinity but there is not adequate habitat on-*Site* for this species. Only indirect effects would be likely, such as temporary displacement caused by noise or presence of humans. These potential effects are not likely to affect these species or habitat.

Regarding other wildlife species within the *Site*, construction activities that remove vegetation and disturb soil may cause direct mortality, displacement, or increased exposure to predators for the less mobile species (i.e. small mammals, amphibians, reptiles, ground-nesting birds). More mobile species (i.e. medium to large mammals and birds) would be expected to disperse from the *Site* during construction and re-enter the area following completion of construction activities. Long-term habitat loss would be minimal and restricted to the localized area of permanently altered vegetation. Disturbance to wildlife due to noise, increased traffic, and human presence may temporarily displace individuals during the construction period. However, these effects are not likely to cause long term declines in populations.

3.6 Soils

A published soil survey for Dunn County from 1982 with updated information is available online from the Natural Resources Conservation Service (NRCS 2009). Information on the soils on the route of the access road and at the well pad is presented in this section. Mapping unit symbols are listed in numerical order for this project area. Table 3.6a identifies the soils within the well pad and access road. Internet links to tables on water erosion attributes, descriptions and chemical soil properties are provided in this section.

Table 3.6a Soil Mapping Unit Names and Map Symbols

Soil	Map Unit	Project Occurrence			Erosion Factors			
		Pad	Road	Slope	Kf	T	Hydrologic Soil Group	Wind Erodibility Group
Cabba loam	9E	No	Yes	15-45	.32	2	D	4L
Belfield-Grail silty clay loams	18	Yes	No	0-2	.37	5	C	6
Cohagen-Vebar fine sandy loams	30E	Yes	No	9-25	.49	2	B	3
Lefor fine sandy loam	42C	Yes	No	6-9	.20	3	C	3
Rhoades silt loam	62B	Yes	No	0-6	.32	2	D	6
Dogtooth-Cabba complex	62D	Yes	Yes	9-15	.32	2	D	5
Vebar fine sandy loams	81D	Yes	No	9-15	.20	3	B	3

Internet Links to Soil Tables

Soil Attributes for the soil profiles that are going to be disturbed by the project can be found at the NRCS website <http://soildatamart.nrcs.usda>.

Description of Water Erosion Attributes

The following attributes from soildatamart pertain to the erosion susceptibility of the soils found along the proposed access road and well pad. These attributes should be taken into consideration during construction disturbance:

- Erosion Factors indicate susceptibility of a soil to sheet and rill erosion by water. Kf indicates the erodability of material less than two millimeters in size. Values of K range from 0.02 to 0.69. Higher values indicate greater susceptibility.
- T Factors estimates maximum average annual rates of erosion by wind and water that will not affect crop productivity. Tons/acre/year range from 1 for shallow soils to 5 for very deep soils. Higher T soils can tolerate higher rates of erosion without loss of productivity.
- Hydrologic Soil Groups are based on estimates of runoff potential, based on infiltration rates for thoroughly wetted soils unprotected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The rate of infiltration decreases from Group A (high infiltration, low runoff) to D (low infiltration, high runoff).
- A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible.

Brief Description of Soil Mapping Units

- **Map Unit 9E:** Cabba loam, 15 to 45 percent slopes, is a shallow soil that is moderately steep to very steep. Cabba loam is primarily found on uplands. Permeability is moderate, surface runoff is very rapid, well drained, and available water capacity is very low. A restrictive layer is found at a depth of about 18 inches.

- **Map Unit 18:** Belfield-Grail silty clay loams, 1 to 3 percent slopes, are primarily located on convex slopes and swales on upland. These soils are deep, nearly level and are well drained. Permeability and surface runoff are slow and available water capacity is high in both soils.
- **Map Unit 30E:** Cohagen-Vebar fine sandy loams, 9 to 25 percent slopes, are primarily located on uplands. These soils are shallow to moderately deep, strongly sloping to moderately steep, somewhat excessively drained to well drained. Permeability is moderately rapid, and surface runoff is medium in both the Cohagen and Vebar soils. The water capability is very low in the Cohagen soil and low in the Vebar soil. Vebar soils are on side slopes and foot slopes, while Cohagen soils are found on hills and ridges. A restrictive layer is found at a depth of about 17 inches. This unit is made up of 45 percent Cohagen and 40 percent of Vebar soils. The remaining 15 percent is made up of Arnegard, Parshall and Rhoades soils.
- **Map Unit 42C:** Lefor fine sandy loam, 6 to 9 percent slopes, is located on side slopes and foot slopes of uplands. It is moderately deep, moderately sloping soil that is well drained. Permeability is moderate, surface runoff is medium, and available water capacity is low. Root penetration is somewhat restricted by soft bedrock at a depth of about 28 inches.
- **Map Unit 62B:** Rhoades silt loam, 0 to 6 percent slopes, is a deep, nearly level to gently sloping soil that is moderately well drained. Surface runoff is slow, available water capacity is moderate, and permeability is very slow. A restrictive layer is found at a depth of about 3 inches.
- **Map Unit 62D:** Dogtooth-Cabba loams, 9 to 15 percent slopes, are found in uplands and are strongly sloping. These soils are shallow to deep, and are moderately well drained to well drained. Permeability is very slow in the Dogtooth soil and moderate in the Cabba soil. Surface runoff is rapid in both soils. Available water capacity is moderate in the Dogtooth soil and very low in the Cabba soil. A restrictive layer is found at a depth of about 3 inches in the Rhoades soils and about 18 inches in the Cabba soil. They are made up of 50 percent Dogtooth soils and 25 percent Cabba soils. The remaining 25 percent is made up of Badland, Amor, Arnegard, Harriet, and Morton soils.
- **Map Unit 81D:** Vebar fine sandy loams, 9 to 15 percent, are found on side slopes of uplands and are often dissected by shallow drainage ways. It is moderately deep, well drained soil and is strongly sloping. Permeability is moderately rapid and available water capacity is low, while surface runoff is medium. Root penetration is restricted by soft bedrock at a depth of about 38 inches.

Table 3.6b provides an estimate of the surface disturbance associated with road and well pad construction for all affected soil units. Implementation of proven management practices for stabilization and reclamation is expected to reduce erosion to negligible levels.

Table 3.6b Acres of Disturbance

Soil	Map Unit	Access Road		Well Pad Size	Total Acres	Percent of Total
		Length (ft)	Acres			
Cabba loam	9E	0	0.00	0.05	0.05	0.47%
Belfield-Grail silty clay loams	18	844	0.94	0	0.94	8.88%
Cohagen-Vebar fine sandy loams	30E	810	0.88	0	0.88	8.31%
Lefor fine sandy loam	42C	503	0.54	0	0.54	5.10%
Rhoades silt loam	62B	2,174	2.53	0	2.53	23.89%
Dogtooth-Cabba complex	62D	645	0.70	3.80	4.50	42.49%
Vebar fine sandy loams	81D	1,021	1.15	0	1.15	10.86%
Totals		5,997	6.74	3.85	10.59	100.00%

Summary

About 42 percent of the on-Site construction would occur in soil mapping unit 62D (Rhoades silt loam 9-15 percent slopes). This soil has low runoff potential, with a moderate hazard of sheet and rill erosion, and a low hazard of wind erosion. The remaining area consists of a soil that is very high in water erosion potential and a slightly higher hazard of wind erosion. Erosion potential would increase in the interval between construction and reclamation. Stabilizing vegetation would be removed and topsoil stripped during construction. Implementation of proven BMPs for stabilization and reclamation would be expected to reduce erosion to negligible levels.

All soil areas with exposed steep slopes have the potential of having high erosion factors. Minimizing disturbance on steep slopes would help reduce erosion. Since the erosion hazard is very severe on the steeper sloping parts of the access road, it may be advantageous to minimize disturbance in these areas where steep slopes present problems that are very difficult to overcome. Erosion would be the primary concern relating to soils during implementation of this project. Erosion potential would increase during the interval between construction and reclamation, as stabilizing vegetation is removed and topsoil stripped, with vulnerability increasing with slope. Erosion capabilities of the soils should be taken into consideration during construction activities. Further, various practices have been shown to feasibly and significantly reduce erosion of a wide variety of soils, including those within the project area (BLM Instruction Memorandum 2004-124, BLM/USFS Gold Book 2007). Considering the soils in the project area and in the surrounding landscape, good erosion management and revegetation procedures in constructing this route should result in minimal impacts to the soil and water resources.

3.7 Vegetation and Invasive Species

The Missouri Plateau Ecoregion (Missouri Slope) is a western mixed-grass and short-grass prairie (Bryce et al. 1998). The U.S. Department of Agriculture soil surveys for Dunn County describe vegetation within the proposed project area as mostly cultivated farmlands, native grasses, and wetland plants. Common grain and seed crops include wheat, oats, flax, canola, and barley. Native grasses include big bluestem (*Andropogon gerardii*), little bluestem (*Schizachyrium scoparium*), blue grama (*Bouteloua gracilis*), side-oats grama (*Bouteloua curtipendula*), green needlegrass (*Nassella viridula*), and western wheatgrass (*Pascopyrum smithii*). Typical wetland plants are smartweed (*Polygonum amphibium*), sedge species (*Carex sp.*), bulrush (*Scirpus sp.*), bluejoint (*Calamagrostis canadensis*), and cattail (*Typha sp.*). Woody draws, coulees, and drainages may host communities of chokecherry (*Prunus virginiana*), buffaloberry (*Shepherdia argentea*), western snowberry (*Symphoricarpos occidentalis*), and gooseberry (*Ribes sp.*).

Invasive species is a general term referring to plants that are not native to an area, spread aggressively, and have negative economic and environmental impacts. Otherwise known as noxious weeds, these species can spread easily to the detriment of public health, indigenous plant communities, crops, livestock, recreational uses, and the management of natural or agricultural systems. Of the twelve species declared noxious under the North Dakota Century Code (Chapter 63-01.1), five are known to occur in Dunn County, including absinth

wormwood, Canada thistle, dalmation toadflax, field bindweed, and leafy spurge (NDAA 2007). Table 3.7 shows Dunn County acreages for these species. No additional species have been designated by the county within its jurisdiction. Additional information is available from the NRCS Plants Database for North Dakota at <http://plants.usda.gov>.

Table 3.7: Invasive species

Common Name	Scientific Name	Dunn County Acres
Absinth wormwood	<i>Artemisia abinthium</i> L.	24,500
Canada thistle	<i>Cirsium arvense</i> (L.) Scop	22,705
Dalmation toadflax	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>	2
Diffuse knapweed	<i>Centaurea diffusa</i> Lam	--
Field bindweed	<i>Convolvulus arvensis</i> L.	19,800
Leafy spurge	<i>Euphorbia esula</i> L.	8,302
Musk thistle	<i>Carduus nutans</i> L.	--
Purple loosestrife	<i>Lythrum salicaria</i>	--
Russian knapweed	<i>Acroptilon repens</i> (L.) DC.	--
Saltcedar (tamarisk)	<i>Tamarix ramosissima</i>	0
Spotted knapweed	<i>Centaurea maculosa</i> Lam.	--
Yellow starthistle	<i>Centaurea solstitialis</i> L.	--

Source: NRCS Plants Database for North Dakota at <http://plants.usda.gov>.

An evaluation of the existing vegetation during the on-site assessments conducted on July 6 and 16, 2009 did not indicate the presence of any listed noxious weed species within the proposed project area. Potential disturbance of almost 13 acres and removal of existing vegetation present opportunities for invasive species and threaten to reduce the quality or quantity of forage or crop production. The APD and this EA require the operator to control noxious weeds throughout the project area. Vehicles that have been driven in areas with invasive species must be cleaned with high-pressure sprayers before entering the project area. **Surface disturbance and vehicular traffic must not take place outside approved rights-of-way or the well pad.** Areas stripped of topsoil must be re-seeded and reclaimed at the earliest opportunity. Certified weed-free straw and seed must be used for all construction, seeding, and reclamation efforts. Prompt and appropriate construction, operation, and reclamation are expected to reduce vegetative impacts to minimal levels, effectively negating the potential to establish or spread invasive species.

3.8 Cultural Resources

Cultural resources is a broad term encompassing sites, objects, or practices of archaeological, historical, cultural and religious significance. Cultural resources on federal or tribal lands are protected by many laws, regulations and agreements. The *National Historic Preservation Act of 1966* (16 USC 470 *et seq.*) at Section 106 requires, for any federal, federally assisted or federally licensed undertaking, that the federal agency take into account the effect of that undertaking on any district, site, building, structure or object that is included in the National Register of Historic Places (National Register) before the expenditure of any federal funds or the issuance of any federal license. Eligibility criteria (36 CFR 60.6) include association with important events or people in our history, distinctive construction or artistic characteristics, and either a record of yielding or a potential to yield information important in prehistory or history. In practice, properties are generally not eligible for listing on the National Register if they lack diagnostic artifacts, subsurface remains or structural features, but those considered eligible are treated as though they were listed on the National Register, even when no formal nomination has been filed. This process of taking into account an undertaking's effect on historic properties is known as "Section 106 review," or more commonly as a cultural resource inventory.

The area of potential effect (APE) of any federal undertaking must also be evaluated for significance to Native Americans from a cultural and religious standpoint. Sites and practices may be eligible for protection under the *American Indian Religious Freedom Act of 1978* (42 USC 1996). Sacred sites may be identified by a tribe or an authoritative individual (Executive Order 13007). Special protections are afforded to human remains, funerary objects, and objects of cultural patrimony under the *Native American Graves Protection and Repatriation Act* (NAGPRA, 25 USC 3001 *et seq.*).

Whatever the nature of the cultural resource addressed by a particular statute or tradition, implementing procedures invariably include consultation requirements at various stages of a federal undertaking. The MHA Nation has designated a Tribal Historic Preservation Officer (THPO) by Tribal Council resolution, whose office and functions are certified by the National Park Service. The THPO operates with the same authority exercised in most of the rest of North Dakota by the State Historic Preservation Officer (SHPO). As a result, BIA consults and corresponds with the THPO on all projects proposed within the exterior boundaries of the Fort Berthold Reservation. The SHPO may have useful information, but has no official role regarding proposed federal actions on trust land. The MHA Nation has also designated responsible parties for consultations and actions under NAGPRA and cultural resources generally.

A cultural resource inventory of this well pad and access road was conducted by personnel of Beaver Creek Archaeology, Inc., using a pedestrian methodology. Approximately 23.5 acres were intensively inventoried on July 15, 2009 (Pollman 2009). No historic properties were located that appear to possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. No properties were located that appear to be eligible for protection under the *American Indian Religious Freedom Act of 1978* (42 USC 1996). As the lead federal agency, and as provided for in 36 CFR 800.5, on the basis of the information provided, BIA reached a determination of **no historic properties affected** for this undertaking. This determination was communicated to the THPO on September 1, 2009, and the THPO concurred on September 11, 2009.

3.9 Socioeconomics

Socioeconomic conditions include population, demographics, income, employment, and housing. These conditions can be analyzed and compared at various scales. This analysis focuses on the reservation, the four counties that overlap most of the Reservation and the state of North Dakota. The state population showed little change between the last two censuses (1990–2000), but there were notable changes locally, as shown in Table 3.9a. Populations in Dunn, McKenzie, McLean, and Mountrail counties declined 5 to 11%, while population on the Fort Berthold Reservation increased by almost 10%. These trends are expected to continue (Rathge *et al.* 2002). While American Indians are the predominant group on the reservation, they are a minority everywhere else in the state. More than two-thirds (3,986) of the Reservation population are tribal members.

Table 3.9a: Population and Demographics

County or Reservation	Population in 2000	% of State Population	% Change 1990-2000	Predominant Group	Predominant Minority
Dunn County	3,600	0.56%	- 10.1%	White	American Indian (12%)
McKenzie County	5,737	0.89%	- 10.1%	White	American Indian (21%)
McLean County	9,311	1.45%	- 11.0%	White	American Indian (6%)
Mountrail County	6,631	1.03%	- 5.6%	White	American Indian (30%)
Fort Berthold Reservation	5,915	0.92%	+ 9.8%	American Indian	White (27%)
Statewide	642,200	100%	+ 0.005%	White	American Indian (5%)

Source: U.S. Census Bureau 2007.

In addition to the ranching and farming that are employment mainstays in western North Dakota, employment on the reservation largely consists of ranching, farming, tribal government, tribal enterprises, schools, and

federal agencies. The MHA Nation’s Four Bears Casino and Lodge, near New Town, employs over 320 people, 90% of which are tribal members (Three Affiliated Tribes 2008).

As shown in Table 3.9b, counties overlapping the Reservation tend to have per capita incomes, median household incomes, and employment rates that are lower than North Dakota statewide averages. Reservation residents have lower average incomes and higher unemployment rates compared to the encompassing counties. MHA Nation members are in turn disadvantaged relative to overall Reservation incomes and unemployment rates that average in non-Indian data. The most recent census found that per capita income for residents of the Reservation is \$10,291 (less than 1/3 the state average). Overcrowded housing skews the median reservation household income upward to \$26,274 (about 1/3 the state average). A BIA report in 2003 found that 33% of employed MHA Nation members were living below federal poverty levels. The unemployment rate for tribal members is 22 %, compared to 11.1% for the reservation as a whole and 4.6% statewide.

Table 3.9b: Income and Unemployment

Unit of Analysis	Per Capita Income	Median Household Income	Unemployment Rate (2007)	Employed but Below Poverty Level	Percent of All People in Poverty
MHA Nation members	--	--	22 %	33 %	Unknown
Fort Berthold Reservation	\$ 10,291	\$ 26,274	11.1 %	--	Unknown
Mountrail County	\$ 29,071	\$ 34,541	5.8 %	--	15.4%
Dunn County	\$ 27,528	\$ 35,107	3.4 %	--	13%
McKenzie County	\$ 27,477	\$ 35,348	3.1 %	--	15.8 %
McLean County	\$ 32,387	\$ 37,652	4.7 %	--	12.8%
North Dakota	\$ 31,871	\$ 40,818	3.2 %	--	11.2 %

Source: U.S. Department of Agriculture Economic Research Data 2008 and BIA 2003.

Availability and affordability of housing could impact oil and gas development and operations. Housing information is summarized in Table 3.9c. The tribal Housing Authority manages a majority of the housing units within the reservation. Housing typically consists of mutual help homes built through various government programs, low-rent housing units, and scattered-site homes. Private purchase and rental housing are available in New Town. New housing construction has recently increased within much of the analysis area, but availability remains low.

Table 3.9c: Housing Units – 2000 (U.S. Census Bureau 2007 and 2008).

Housing Development	Fort Berthold Reservation	Dunn County	McKenzie County	McLean County	Mountrail County
Existing Housing					
Owner-Occupied Units	1,122	1,570	2,009	4,332	2,495
Renter-Occupied Units	786	395	710	932	941
Total	1,908	1,965	2,719	5,264	3,436
New Private Housing Building Permits 2000-2005	--	18	4	135	113
Housing Development Statistics					
State rank in housing starts	--	51 of 53	15 of 53	21 of 53	17 of 53
National rank in housing starts	--	3112 / 3141	2498 / 3141	2691 / 3141	2559 / 3141

The proposed project is not expected to have measurable impacts on population trends, local unemployment rates or housing starts. Relatively high-paying construction jobs would result from exploration and development of oil and gas reserves on the reservation, but most of these opportunities are expected to be short-term. The proposed action would require temporary employees during the well construction cycle and one to two full-time employees for the long-term production cycle. Short-term construction employment

would provide some economic benefit. Long-term commercial operations would provide significant royalty income and indirect economic benefits.

3.10 Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, was signed by President Clinton in 1994. The Order requires agencies to advance environmental justice (EJ) by pursuing fair treatment and meaningful involvement of minority and low-income populations. Fair treatment means such groups should not bear a disproportionately high share of negative environmental consequences from federal programs, policies, decisions or operations. Meaningful involvement means federal officials actively promote opportunities for public participation and federal decisions can be materially affected by participating groups and individuals.

The U.S. Environmental Protection Agency (EPA) headed the interagency workgroup established by the 1994 Order and is responsible for related legal action. Working criteria for designation of targeted populations are provided in *Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses* (EPA 1998). This guidance uses a statistical approach to consider various geographic areas and scales of analysis to define a particular population's status under the Order.

Environmental Justice is an evolving concept with potential for disagreement over the scope of analysis and the implications for federal responsiveness. It is nevertheless clear that tribal members on the Great Plains qualify for EJ consideration as both a minority and low-income population. The population of the Dakotas is predominantly Caucasian. While some 70% of Reservation residents are tribal members, Indians comprise only 5% of North Dakota residents and 12% of the population of Dunn County. Even in a state with relatively low per capita and household income, Indian individuals and households are distinctly disadvantaged.

There are, however, some unusual EJ considerations when proposed federal actions are meant to benefit tribal members. Determination of fair treatment necessarily considers the distribution of both benefits and negative impacts, due to variation in the interests of various tribal groups and individuals. There is also potential for major differences in impacts to resident tribal members and those enrolled or living elsewhere. A general benefit to MHA Nation government and infrastructure has already resulted from tribal leasing, fees and taxes. Oil and gas leasing has also already brought much-needed income to MHA Nation members who hold mineral interests, some of whom might eventually benefit further from royalties on commercial production. Profitable production rates at proposed locations might lead to exploration and development on additional tracts owned by currently non-benefiting allottees. The absence of lease and royalty income does not, moreover, preclude other benefits. Exploration and development would provide many relatively high-paying jobs, with oversight from the Tribal Employment Rights Office.

The owners of allotted surface within the project areas may not hold mineral rights. In such cases, surface owners do not receive oil and gas lease or royalty income and their only related income would be compensatory for productive acreage lost to road and well pad construction. Tribal members without either surface or mineral rights would not receive any direct benefits whatsoever. Indirect benefits of employment and general tribal gains would be the only potential offsets to negative impacts.

Potential impacts to tribes and tribal members include disturbance of cultural resources. There is potential for disproportionate impacts, especially if the impacted tribes and members do not reside within the Reservation and therefore do not share in direct or indirect benefits. This potential is significantly reduced following the surveys of proposed well locations and access road routes and determination by the BIA that there will be no historic properties affected. Nothing is known to be present, furthermore, that qualifies for protection under the *American Indian Religious Freedom Act*. Potential for disproportionate impacts is further mitigated by requirements for immediate work stoppage following an unexpected discovery of cultural resources of any type. Mandatory consultations will take place during any such work stoppage, affording an opportunity for all affected parties to assert their interests and contribute to an appropriate resolution, regardless of their home location or tribal affiliation.

The proposed project has not been found to pose significant impacts to any other critical element—air, public health and safety, water, wetlands, wildlife, soils or vegetation—within the human environment. Avoiding or minimizing such impacts also makes unlikely disproportionate impacts to low-income or minority populations. The proposed action offers many positive consequences for tribal members, while recognizing Environmental Justice concerns. Procedures summarized in this document and in the APD are binding and sufficient. No laws, regulations or other requirements have been waived; no compensatory mitigation measures are required.

3.11 Mitigation and Monitoring

Many protective measures and procedures are described in this document and in the APD. No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required. Monitoring of cultural resource impacts by qualified personnel is recommended during all ground-disturbing activities.

3.12 Irreversible and Irrecoverable Commitment of Resources

Removal and consumption of oil and/or gas from the Bakken Formation would be an irreversible and irretrievable commitment of resources. Other potential resource commitments include acreage devoted to disposal of cuttings, soil lost through wind and water erosion, cultural resources inadvertently destroyed, wildlife killed during earthmoving or in collisions with vehicles, and energy expended during construction and operation.

3.13 Short-Term Use Versus Long-Term Productivity

Short-term activities would not detract significantly from the long-term productivity of the project area. The small areas dedicated to the access road and well pad would be unavailable for livestock grazing, wildlife habitat and other uses. Allottees with surface rights would be compensated for loss of productive acreage and the project footprint would shrink considerably once the well were drilled and non-working areas were reclaimed and reseeded. Successful and ongoing reclamation of the landscape would quickly support wildlife and livestock grazing, stabilize the soil, and reduce the potential for erosion and sedimentation. The major long-term resource loss corresponds with the project purpose: extraction of hydrocarbons from the Bakken Formation.

3.14 Cumulative Impacts

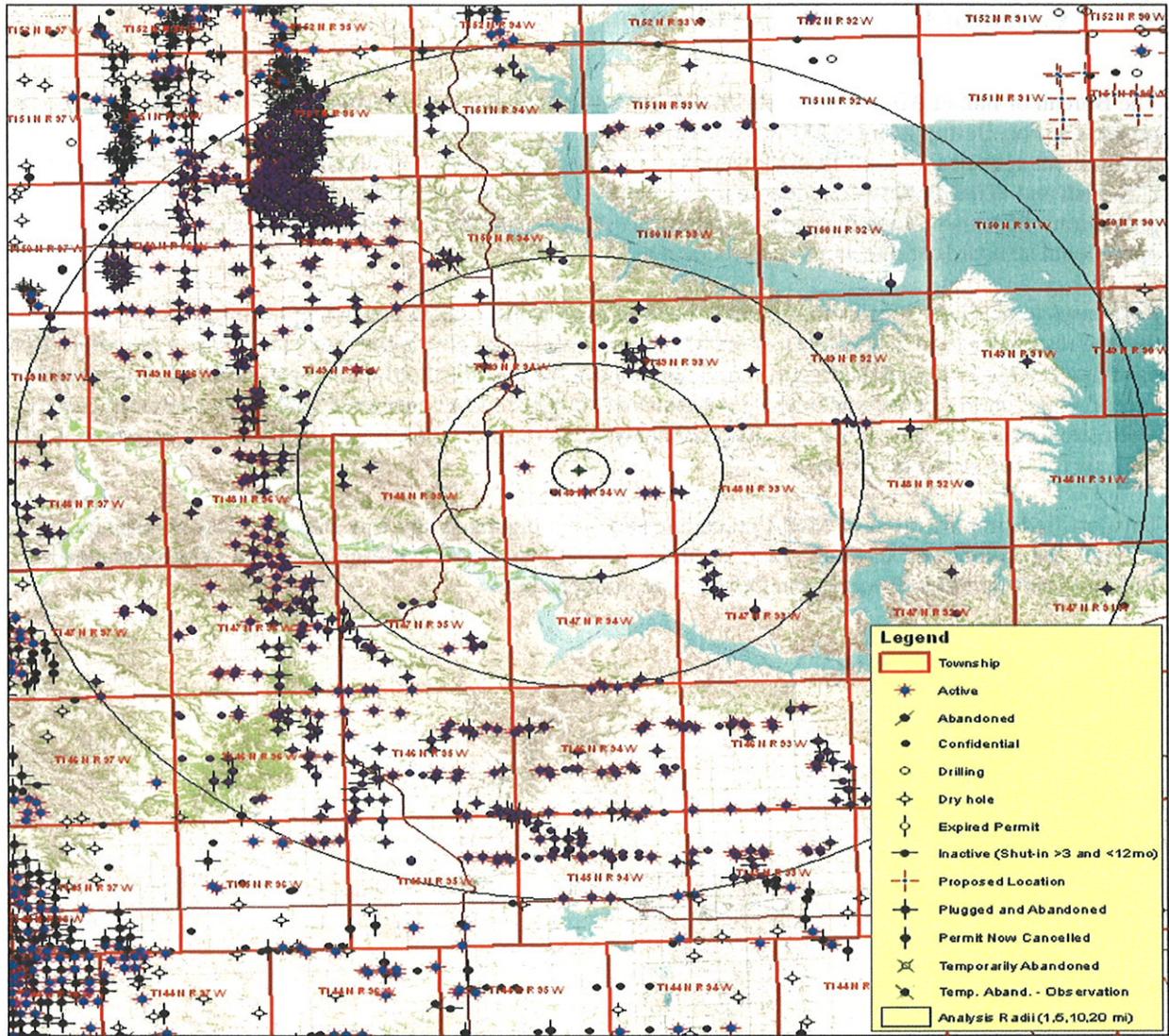
Environmental impacts may accumulate either over time or in combination with similar activities in the area. Unrelated activities may also have negative impacts on critical elements, thereby contributing to cumulative degradation of the environment. Past and current disturbances in the vicinity of the proposed project include farming, grazing, roads, and other oil/gas wells. Current land uses are expected to continue with little change, since undivided interests in the land surface are often held by tribal members other than those holding mineral rights. Virtually all available acreage is already organized into agricultural leases or range units to utilize surface resources for economic benefit; oil and gas development is not expected to have more than a minor effect on surface use patterns.

The major activity with potential to impact critical elements of the human environment is oil field development. Over the past several years, exploration has accelerated over the Bakken Formation. Most of this exploration has taken place outside the reservation boundary on fee land, but for purposes of cumulative impact analyses, land ownership and the reservation boundary are immaterial. Perimeters of 1, 5, 10, and 20 miles around the proposed well sites were therefore evaluated to determine the level of oil and gas activity in the surrounding area (Figure 3.14). Within five miles of the proposed *Site*, there are nine active wells within ten miles of the *Site*, there are 148 active wells and within 20 miles of the site there are 896 active wells. One hundred seventeen of these are located outside the Fort Berthold Reservation (**Appendix A**).

Within the reservation and near the proposed site, installations remain few and dispersed. Commercial success at any new well might result in additional oil/gas exploration proposals, but such developments are speculative

at this time and until APDs are submitted to BLM or BIA. Approved oil/gas leases may lead to additional exploration and development, but additional analysis and BIA approval are required before the surface is disturbed at any other location. Potential impacts from possible future development cannot be meaningfully analyzed at this time. Not only is the level of development highly sensitive to volatile commodities prices, but additional development may increase interest in pipelines, thereby *reducing* impacts to certain critical elements of the human environment, such as public safety and air quality.

The proposed action has been planned to avoid impacts to wetlands, floodplains, surface water, cultural resources, and threatened and endangered species. Unavoidable impacts to these or other resources would be minimized and/or mitigated as described in this document. The operator of any facility would be required to complete interim reclamation of the road and well pad immediately following construction and completion. Implementation of other precautionary and protective measures detailed in this EA, the APD, and applicable regulations are expected to minimize impacts to all critical elements of the human environment. Impacts from the proposed project are expected to generally be minor, temporary, manageable, and/or insignificant. No cumulative impacts are reasonably foreseen from existing and proposed activities, other than increasingly positive impacts to the reservation economy.



Cumulative Impacts Analysis
 Petro-Hunt, L.L.C. - Fort Berthold 148-94-9D-04-1H
 SE 1/4 SE 1/4, Section 9, T148N, R94W
 Dunn County, ND

0 2 4 Miles
 WPC Project 103-16-JS
 Source: USGS Topo Map, NDOGC Data



Figure 3.14: Approved or proposed oil and gas projects

4. Consultation and Coordination

The Bureau of Indian Affairs has completed many Environmental Assessments (EAs) for the oil and gas projects at Fort Berthold since 2007. For the first 18 of these projects, prior notice was sent to about 60 tribes, government agencies, non-profit organizations and individuals. BIA consulted directly and repeatedly with the U.S. Fish and Wildlife Service to identify issues and incorporate best management practices for wildlife protection. BIA also routinely cooperated on every project with the Bureau of Land Management regarding operational standards and reclamation procedures.

Responses to previous notifications quickly became repetitious, usually consisting of form letters advising BIA that the respondent had no concerns or that the same general concerns applied to every project proposal. BIA has therefore discontinued mailing of individual notices for Fort Berthold oil and gas environmental review, except where proposals include unusual components not previously considered with other interested parties. There are no such components to the proposal analyzed in this EA. BIA is satisfied that the proper scope of analysis for such projects is known.

This justified simplification of NEPA procedures does not impact in any way BIA practices regarding cultural resource regulations and standard practices under the National Historic Preservation Act. Correspondence with the Tribal Historic Preservation Officer is reproduced below.



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

SEP 01 2009

Perry 'No Tears' Brady, THPO
Mandan, Hidatsa and Arikara Nation
PO Box 429
Parshall, North Dakota 58770

Dear Mr. Brady:

We have considered the potential effects on cultural resources of an oil well pad and access road in Dunn County, North Dakota. Approximately 23.5 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the area depicted in the enclosed report. One archaeological site was located that may possess the quality of integrity and meet at least one of the criteria (36 CFR 60.4) for inclusion on the National Register of Historic Places. No properties were located that appear to qualify for protection under the American Indian Religious Freedom Act (16 USC 1996).

As the surface management agency, and as provided for in 36 CFR 800.5, we have therefore reached a determination of **no historic properties affected** for this undertaking, as the archaeological site will be avoided. Catalogued as **BIA Case Number AAO-1598/FB/09**, the proposed undertaking, location, and project dimensions are described in the following report:

Pollman, Jennifer
(2009) Fort Berthold 148-94-9D-04-1H Well Pad and Access Road: A Class III Cultural Resource Inventory, Dunn County, North Dakota. Beaver Creek Archaeology for Petro-Hunt, LLC, Bismarck

If your office concurs with this determination, consultation will be completed under the National Historic Preservation Act and its implementing regulations. The Standard Conditions of Compliance will be adhered to.

If you have any questions, please contact Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

Regional Director

Enclosures

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency
Chief, Division of Energy and Environment



TRIBAL HISTORIC PRESERVATION

Mandan Hidatsa Arikara
Perry 'No Tears' Brady, Director.
404 Frontage Road,
New Town, North Dakota 58763
Ph/701-862-2474 fax/701-862-2490
pbrady@mhanation.com

September 11, 2009

Carson Murdy
Regional Archeologist
Bureau of Indian Affairs
Great Plains Regional Office
115 Fourth Avenue SE
Aberdeen, SD, 57401

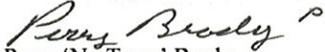
RE: Project # AAO-1598/FB/09
Petro-Hunt Ft. Berthold 148-94-9D-04-1H well pad and access road

Dr. Murdy:

After review of the documentation provided, the Mandan Hidatsa Arikara Nations Tribal Historic Preservation Office concurs with the determination of 'No Historic Properties Affected' to any pre and post-historic relics, artifacts or sacred and cultural resources in the Project areas.

We respectfully request to be notified should any NAGPRA issue or others arise as the Project progresses.

Sincerely,


Perry 'No Tears' Brady,
Tribal Historic Preservation Officer,
Mandan Hidatsa Arikara Nations.

THPO Concurrence letters

5. List of Preparers

An interdisciplinary team contributed to this document, following guidance in Part 1502.6 of CEQ regulations. Portions of the documents were drafted by Western Plains Consulting, Inc. under contract to Petro-Hunt, LLC under the direction of BIA. Preparers, reviewers, consultants and federal officials include the following:

- John Schulz Certified Wildlife Biologist / Senior Biologist, WPC Consultants
- Justin Askim Wildlife Biologist, WPC Consultants
- Carolyn Godfread Senior Botanist, WPC Consultants
- Don Nordquist Petro Hunt, LLC, Applicant and Document Review
- Division of Environment Safety and Cultural Resources, BIA

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Acronyms

AAQM	Ambient Air Quality Monitoring (site)	NDNH	North Dakota Natural Heritage
AIRFA	American Indian Religious Freedom Act	ND SWC	North Dakota State Water Commission
APD	Application for Permit to Drill	NEPA	National Environmental Policy Act
APE	Area of Potential Affect	NHPA	National Historic Preservation Act
BIA	Bureau of Indian Affairs	NPAL	Northern Plains Agroecosystems Laboratory
BLM	Bureau of Land Management	NRCS	Natural Resources Conservation Service
CFR	Code of Federal Regulations	NRHP	National Register of Historic Places
EA	Environmental Assessment	NTL	Notice to Lessees
EIS	Environmental Impact Statement	SHPO	State Historic Preservation Officer
EPA	Environmental Protection Agency	TCP	Traditional Cultural Property
FONSI	Finding of No Significant Impact	TERO	Tribal Employment Rights Office
GPRO	Great Plains Regional Office	THPO	Tribal Historic Preservation Officer
MHA Nation	Three Affiliated Tribes of the Mandan, Hidatsa and Arikira Nation	TVD	Total Vertical Depth
NAGPRA	Native American Graves Protection and Repatriation Act	USC	United States Code
NDCC	North Dakota Century Code	USFS	U.S. Forest Service
NDDH	North Dakota Department of Health	USFWS	U.S. Fish and Wildlife Service
NDIC	North Dakota Industrial Commission	USGS	U.S. Geological Survey

8.0 Appendix: (A)

Wells within 1, 5, 10, and 20 miles of Proposed Fort Berthold 148-94-9D-04-1H, Petro-Hunt L.L.C., Dunn County, ND

Source: ND Oil & Gas Industrial Commission. Data updated 05-11-2009

Wells within 1 mi radius (9)

FILE_NO	API_NO	OPERATOR	WELL_NAME	TD	SPUD_DATE	FIELD_NAME	Q/Q	SEC	TWFR	NG	FEET	M	INS	FEET	E	WELL	LONGITUDE	WELL	TYF	STATUS	SYMBOL
Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name
11839	33-025-00492-00-00	PENNYCOIL EXPLORATION & PRODUCTION CO.	MOCCASIN 3-24 BIA	9830	11/17/1985 0.00	WILDCAT	SESSV	3	147	84	658	S	1889	W	47.57689	-102.84563	OG	DRY	DRY	DRY	
8861	33-025-00717-00-00	SAVATHE ENERGY CO.	NORBLAND 1	13864	10/27/1990 0.00	WILDCAT	NEWV	19	148	84	300	N	1840	W	47.63091	-102.96031	OG	DRY	DRY	DRY	
18155	33-025-00941-00-00	PEAK NORTH DAKOTA, L.L.C.	PORT BERTHOLD 148-94-19B-16-14	13864	10/27/1990 0.00	WILDCAT	NEWV	19	148	84	275	N	1185	W	47.63091	-102.96031	OG	DRY	DRY	DRY	
17003	33-025-00714-00-00	PEAK NORTH DAKOTA, L.L.C.	YOLG 2-11H	15539	01/20/2008 0.00	WILDCAT	NEWV	24	148	84	270	N	2309	W	47.63102	-102.86859	OG	DRY	DRY	DRY	
14807	33-025-00811-00-00	SWIRAY GP, L.L.C.	J.W. HALL 1-19H	15539	01/20/2008 0.00	WILDCAT	NEWV	24	148	84	270	N	2309	W	47.63102	-102.86859	OG	DRY	DRY	DRY	
17804	33-025-00784-00-00	PEAK NORTH DAKOTA, L.L.C.	BURR 16-44H	15449	11/17/2008 0.00	WILDCAT	SESSV	16	148	84	300	S	310	E	47.63234	-102.85054	OG	DRY	DRY	DRY	
18094	33-025-00930-00-00	PEAK NORTH DAKOTA, L.L.C.	PORT BERTHOLD 148-94-17D-08-1H	15449	11/17/2008 0.00	WILDCAT	SESSV	16	148	84	275	S	745	E	47.63234	-102.85054	OG	DRY	DRY	DRY	
18129	33-025-00938-00-00	ZENERGY OPERATING COMPANY, LLC	OKATOJA 2 ETHAN HALL 2-14H	14359	02/24/1982 0.00	WILDCAT	NEWV	14	148	84	300	N	2384	E	47.63436	-102.61525	OG	DRY	DRY	DRY	
9710	33-025-00948-00-00	SLAWSON EXPLORATION COMPANY, INC.	BIA HALE 1-7	11578	09/15/1979 0.00	WILDCAT	NEWV	7	148	84	1820	S	320	E	47.65106	-102.95783	OG	DRY	DRY	DRY	
17975	33-025-00881-00-00	ZENERGY OPERATING COMPANY, LLC	OKATOJA 2 ETHAN HALL 2-14H	14359	02/24/1982 0.00	WILDCAT	NEWV	14	148	84	300	N	2384	E	47.65106	-102.95783	OG	DRY	DRY	DRY	
9408	33-025-01390-00-00	FATRICK PRODUCTION CO.	YOLG 2-11H	14603	04/14/1988 0.00	WILDCAT	NEWV	27	148	84	880	S	352	E	47.70238	-102.70709	OG	DRY	DRY	DRY	
13404	33-025-00444-00-00	GEOLINEAR CO.	GEOLINEAR DENNIS 2-20	9365	01/11/1982 0.00	MANDARIE	SWANV	20	148	83	1500	N	1200	W	47.71331	-102.81982	OG	DRY	DRY	DRY	

Wells within 10 mi radius (67)

FILE_NO	API_NO	OPERATOR	WELL_NAME	TD	SPUD_DATE	FIELD_NAME	Q/Q	SEC	TWFR	NG	FEET	M	INS	FEET	E	WELL	LONGITUDE	WELL	TYF	STATUS	SYMBOL
Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name	Name
1719	33-025-00716-00-00	SLAWSON EXPLORATION COMPANY, INC.	OKATOJA 2 ETHAN HALL 2-14H	14359	02/24/1982 0.00	WILDCAT	NEWV	14	148	84	300	N	2384	E	47.59623	-102.81982	OG	DRY	DRY	DRY	
13176	33-025-00437-00-00	MERTIN OIL, INC.	OKATOJA 2 ETHAN HALL 2-14H	11963	09/17/1979 0.00	WILDCAT	NEWV	35	147	84	254	S	1916	E	47.59623	-102.81982	OG	DRY	DRY	DRY	
17118	33-025-00437-00-00	MERTIN OIL, INC.	ALDUBROOK 41-27H	20650	03/20/2008 0.00	CORRAL CREEK	NEWV	27	147	85	400	N	940	E	47.53025	-102.76115	OG	DRY	DRY	DRY	
17118	33-025-00437-00-00	MERTIN OIL, INC.	ALDUBROOK 41-27H	20650	03/20/2008 0.00	CORRAL CREEK	NEWV	27	147	85	400	N	940	E	47.53025	-102.76115	OG	DRY	DRY	DRY	
18285	33-025-00884-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	BURNER 41-26H	20428	1/5/2008 0.00	BAILEY	NEWV	25	147	85	228	N	250	W	47.53044	-102.72509	OG	DRY	DRY	DRY	
18285	33-025-00884-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	BURNER 41-26H	20428	1/5/2008 0.00	BAILEY	NEWV	25	147	85	228	N	250	W	47.53044	-102.72509	OG	DRY	DRY	DRY	
18120	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH COAST 11-28H	18120	01/20/2008 0.00	BAILEY	NEWV	24	147	85	200	S	320	W	47.51607	-102.72497	OG	DRY	DRY	DRY	
17781	33-025-00938-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY, LP	NORTH CO																		

16886	33-025-00707-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY LP	COLTIER 44-1H	20333 11267000 0.00	BEAR CREEK	14	147	95	742	S	3300	W	47.547337	-102.958387	OG	A	OG
16887	33-025-00724-00-00	DAVIS OIL CO	TABORA STATE 1	0 11171900 0.00	CORRAL CREEK	18	147 <td>95</td> <td>742</td> <td>S</td> <td>3300</td> <td>W</td> <td>47.547337 <th>-102.958387</th> <th>OG</th> <th>A</th> <th>OG</th> </td>	95	742	S	3300	W	47.547337 <th>-102.958387</th> <th>OG</th> <th>A</th> <th>OG</th>	-102.958387	OG	A	OG
16888	33-025-00735-00-00	MESA PETROLEUM CO.	SUMMERFIELD 1-15	14330 11221380 0.00	CADDALE	15	147 <td>96</td> <td>1100</td> <td>S</td> <td>3350</td> <td>W</td> <td>47.548881 <th>-102.811372</th> <th>OG</th> <th>PNC</th> <th>DRY</th> </td>	96	1100	S	3350	W	47.548881 <th>-102.811372</th> <th>OG</th> <th>PNC</th> <th>DRY</th>	-102.811372	OG	PNC	DRY
16889	33-025-00736-00-00	CONON OIL & GAS	GULL STATE 1-16	19333 11411980 0.00	CORRAL CREEK	16	147 <td>96</td> <td>1760</td> <td>S</td> <td>3600</td> <td>W</td> <td>47.556853 <th>-102.966532</th> <th>OG</th> <th>PNC</th> <th>DRY</th> </td>	96	1760	S	3600	W	47.556853 <th>-102.966532</th> <th>OG</th> <th>PNC</th> <th>DRY</th>	-102.966532	OG	PNC	DRY
16890	33-025-00737-00-00	AMCO PRODUCTION CO.	BRANDVILK 1-16	14375 62421981 0.00	CORRAL CREEK	16	147 <td>96</td> <td>1800</td> <td>S</td> <td>3600</td> <td>E</td> <td>47.556886 <th>-102.8478</th> <th>OG</th> <th>PA</th> <th>DRY</th> </td>	96	1800	S	3600	E	47.556886 <th>-102.8478</th> <th>OG</th> <th>PA</th> <th>DRY</th>	-102.8478	OG	PA	DRY
16891	33-025-00738-00-00	MESA OPERATING LIMITED PARTNERSHIP	MISSOURI BRANDVILK 1-13	14492 61716179 0.00	CORRAL CREEK	13	147 <td>96</td> <td>2047</td> <td>N</td> <td>3531</td> <td>W</td> <td>47.554929 <th>-102.864135</th> <th>OG</th> <th>PA</th> <th>DRY</th> </td>	96	2047	N	3531	W	47.554929 <th>-102.864135</th> <th>OG</th> <th>PA</th> <th>DRY</th>	-102.864135	OG	PA	DRY
16892	33-025-00739-00-00	AMCO PRODUCTION CO.	BRANDVILK 3	0 10718100 0.00	CORRAL CREEK	18	147 <td>95</td> <td>1630</td> <td>N</td> <td>1070</td> <td>W</td> <td>47.555771 <th>-102.836532</th> <th>OG</th> <th>PNC</th> <th>DRY</th> </td>	95	1630	N	1070	W	47.555771 <th>-102.836532</th> <th>OG</th> <th>PNC</th> <th>DRY</th>	-102.836532	OG	PNC	DRY
16893	33-025-00740-00-00	SAMSON RESOURCES COMPANY	A. BENVOLD 1-14	14070 10719194 0.00	CORRAL CREEK	14	147 <td>95</td> <td>1105</td> <td>N</td> <td>1720</td> <td>W</td> <td>47.557179 <th>-102.879528</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	95	1105	N	1720	W	47.557179 <th>-102.879528</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.879528	OG	DRY	DRY
16894	33-025-00741-00-00	HOVIE PETROLEUM CORP.	C. A. DANWIS 1-15	17299 12719181 0.00	WILD CAT	15	147 <td>91</td> <td>550</td> <td>N</td> <td>1820</td> <td>W</td> <td>47.574969 <th>-102.861823</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	91	550	N	1820	W	47.574969 <th>-102.861823</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.861823	OG	DRY	DRY
16895	33-025-00742-00-00	TRACER RESOURCE DEVELOPMENT II, L.L.C.	SQUILLMAN 14-1H	19894 10312000 0.00	BEAR CREEK	14	147 <td>97</td> <td>575</td> <td>N</td> <td>2285</td> <td>W</td> <td>47.579794 <th>-103.000379</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	97	575	N	2285	W	47.579794 <th>-103.000379</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-103.000379	OG	DRY	DRY
16896	33-025-00743-00-00	TRACER RESOURCE DEVELOPMENT II, L.L.C.	ENVOYD 13-1	14163 6171982 0.00	BEAR CREEK	13	147 <td>96</td> <td>820</td> <td>N</td> <td>2050</td> <td>W</td> <td>47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	96	820	N	2050	W	47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.855478	OG	DRY	DRY
16897	33-025-00744-00-00	MESA PETROLEUM CO.	ENVOYD 14-1	14410 6171983 0.00	BEAR CREEK	14	147 <td>96</td> <td>820</td> <td>N</td> <td>2050</td> <td>W</td> <td>47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	96	820	N	2050	W	47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.855478	OG	DRY	DRY
16898	33-025-00745-00-00	MESA PETROLEUM CO.	ENVOYD 15-1	14410 6171983 0.00	BEAR CREEK	14	147 <td>96</td> <td>820</td> <td>N</td> <td>2050</td> <td>W</td> <td>47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	96	820	N	2050	W	47.583826 <th>-102.855478</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.855478	OG	DRY	DRY
16899	33-025-00746-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY LP	FOYACER 21-18H	0	CORRAL CREEK	16	147 <td>95</td> <td>425</td> <td>N</td> <td>1293</td> <td>W</td> <td>47.558939 <th>-102.794574</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	95	425	N	1293	W	47.558939 <th>-102.794574</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.794574	Confidential	Confidential	Confidential
16900	33-025-00747-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY LP	MOCKINGBIRD INDIAN UNIT 1-14-2B	14439 3581983 0.00	WILD CAT	14	147 <td>93</td> <td>1000</td> <td>N</td> <td>1174</td> <td>E</td> <td>47.559235 <th>-102.427263</th> <th>OG</th> <th>DRY</th> <th>DRY</th> </td>	93	1000	N	1174	E	47.559235 <th>-102.427263</th> <th>OG</th> <th>DRY</th> <th>DRY</th>	-102.427263	OG	DRY	DRY
16901	33-025-00748-00-00	GULF OIL CORP.	ERICKSON 11-1H	0	LITTLE KNIFE	11	147 <td>97</td> <td>325</td> <td>S</td> <td>3300</td> <td>W</td> <td>47.560382 <th>-103.004287</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	97	325	S	3300	W	47.560382 <th>-103.004287</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-103.004287	Confidential	Confidential	Confidential
16902	33-025-00749-00-00	CONTINENTAL RESOURCES INC.	BERGAN 1-2H	17498 10242007 0.00	BIG GULCH	12	147 <td>97</td> <td>300</td> <td>S</td> <td>3320</td> <td>W</td> <td>47.560911 <th>-102.952753</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	97	300	S	3320	W	47.560911 <th>-102.952753</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.952753	Confidential	Confidential	Confidential
16903	33-025-00750-00-00	CONTINENTAL RESOURCES INC.	JENNIS 44-1H	0	BEAR CREEK	16	147 <td>95</td> <td>250</td> <td>S</td> <td>250</td> <td>E</td> <td>47.560911 <th>-102.925118</th> <th>OG</th> <th>A</th> <th>OG</th> </td>	95	250	S	250	E	47.560911 <th>-102.925118</th> <th>OG</th> <th>A</th> <th>OG</th>	-102.925118	OG	A	OG
16904	33-025-00751-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16905	33-025-00752-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY LP	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16906	33-025-00753-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16907	33-025-00754-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16908	33-025-00755-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16909	33-025-00756-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16910	33-025-00757-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16911	33-025-00758-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16912	33-025-00759-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16913	33-025-00760-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16914	33-025-00761-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16915	33-025-00762-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16916	33-025-00763-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16917	33-025-00764-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16918	33-025-00765-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16919	33-025-00766-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16920	33-025-00767-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16921	33-025-00768-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16922	33-025-00769-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16923	33-025-00770-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16924	33-025-00771-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16925	33-025-00772-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16926	33-025-00773-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16927	33-025-00774-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16928	33-025-00775-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16929	33-025-00776-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16930	33-025-00777-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16931	33-025-00778-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16932	33-025-00779-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16933	33-025-00780-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16934	33-025-00781-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16935	33-025-00782-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16936	33-025-00783-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16937	33-025-00784-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16938	33-025-00785-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16939	33-025-00786-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16940	33-025-00787-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16941	33-025-00788-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16942	33-025-00789-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th> </td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th> <th>Confidential</th> <th>Confidential</th>	-102.783112	Confidential	Confidential	Confidential
16943	33-025-00790-00-00	AMCO PRODUCTION CO.	BEAR RIVER 34-1	10 10719181 0.00	CORRAL CREEK	34	147 <td>96</td> <td>340</td> <td>S</td> <td>1870</td> <td>W</td> <td>47.561156 <th>-102.783112</th> <th>Confidential</th></td>	96	340	S	1870	W	47.561156 <th>-102.783112</th> <th>Confidential</th>	-102.783112	Confidential		

Well ID	Company	State	County	Section	Block	Tract	Acres	Depth	Completion	Production	Notes																	
8448	33-025-00208-00-00	RANCH OIL COMPANY	DAKOTA 3	ETHAN HALL	2-14H	11301	1711981.000	0	LOST BRIDGE	STATE	1-16	11301	1711981.000	0	NESE	18	148	156	670	N	778	E	47.647414	-102.910859	CG	A	OG	
18129	33-025-00938-00-00	ZENERGY OPERATING COMPANY, LLC	DAKOTA 3	ETHAN HALL	2-14H	11301	1711981.000	0	MCGRORY BUTTE	STATE	1-16	11301	1711981.000	0	WYNE	14	148	154	301	N	2394	E	47.645236	-102.618525	Confidential	Confidential	OG	
17618	33-025-00734-00-00	NEWFIELD PRODUCTION COMPANY	JORGENSEN 1-38H	LOST BRIDGE	STATE	1-16	11301	1711981.000	0	LOST BRIDGE	STATE	1-16	11301	1711981.000	0	WYNE	14	148	154	301	N	2375	E	47.645881	-102.906553	CG	A	OG
11407	33-025-00462-00-00	CENOCANUS	LOST BRIDGE	MESER COL.	1	14375	1119530.000	0	LOST BRIDGE	STATE	1-16	14375	1119530.000	0	SESW	10	148	156	300	S	1500	E	47.627149	-103.901874	CG	PA	OG	
8383	33-025-00125-00-00	ELF-AQUATINE OIL & GAS	DEEP CREEK	MESER COL.	1	14375	1119530.000	0	WILDCAT	STATE	1-16	14375	1119530.000	0	SESW	10	148	156	300	S	1840	E	47.648857	-103.836874	CG	PNC	OG	
2400	33-025-00152-00-00	CONOCO INC.	DEEP CREEK	MESER COL.	1	14375	1119530.000	0	WILDCAT	STATE	1-16	14375	1119530.000	0	SESW	10	148	156	300	S	2074	E	47.648832	-103.836874	CG	PA	OG	
9710	33-025-00348-00-00	SLAWSON EXPLORATION COMPANY, INC.	BIA PALE	1-7	14350	82411892.000	0	EAGLE NEET	STATE	1-16	14350	82411892.000	0	NESE	7	148	184	1820	S	820	E	47.651066	-102.697663	CG	A	OG		
6892	33-025-00060-00-00	THOMAS A. HAUGEN OPERATING CO.	DEEP CREEK	1	14625	12711979.000	0	LOST BRIDGE	STATE	1-16	14625	12711979.000	0	WYNE	3	148	155	1980	S	1190	E	47.652177	-102.981533	CG	A	OG		
10461	33-025-00318-00-00	DEEP CREEK ADVENTURES CO.	SIGNALNESS FEE	3-10	11380	12711983.000	0	LOST BRIDGE	STATE	1-16	11380	12711983.000	0	WYNE	11	148	158	1980	S	1170	E	47.652177	-102.981533	CG	A	OG		
8342	33-025-00355-00-00	DEEP CREEK ADVENTURES CO.	SIGNALNESS FEE	3-10	11380	12711983.000	0	LOST BRIDGE	STATE	1-16	11380	12711983.000	0	WYNE	11	148	158	1980	S	1170	E	47.652177	-102.981533	CG	A	OG		
7814	33-025-00165-00-00	DEEP CREEK ADVENTURES CO.	SIGNALNESS FEE	3-10	11380	12711983.000	0	LOST BRIDGE	STATE	1-16	11380	12711983.000	0	WYNE	11	148	158	1980	S	1170	E	47.652177	-102.981533	CG	A	OG		
11351	33-025-00050-00-00	DIAMOND SHAMROCK EXPLORATION CO.	SIGNALNESS FEE	3-10	11380	12711983.000	0	LOST BRIDGE	STATE	1-16	11380	12711983.000	0	WYNE	11	148	158	1980	S	1170	E	47.652177	-102.981533	CG	A	OG		
16663	33-025-00050-00-00	DIAMOND SHAMROCK EXPLORATION CO.	SIGNALNESS FEE	3-10	11380	12711983.000	0	LOST BRIDGE	STATE	1-16	11380	12711983.000	0	WYNE	11	148	158	1980	S	1170	E	47.652177	-102.981533	CG	A	OG		
17445	33-025-00718-00-00	NEWFIELD PRODUCTION COMPANY	FEDERAL	1-30H	14400	32451985.000	0	WILDCAT	STATE	1-16	14400	32451985.000	0	NESE	3	148	197	78	S	320	E	47.650043	-103.076237	CG	A	OG		
6457	33-025-00118-00-00	THOMAS A. HAUGEN OPERATING CO.	JORGENSEN 1-30H	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	SESW	3	148	198	189	S	966	E	47.651449	-102.910859	CG	A	OG
18919	33-025-00851-00-00	NEWFIELD PRODUCTION COMPANY	JORGENSEN 1-24H	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	SESW	3	148	198	189	S	1160	E	47.652177	-102.910859	CG	A	OG
8338	33-025-00214-00-00	GENERAL AMERICAN OIL COMPANY OF TEXAS	HANNA 1-4	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	SESW	3	148	198	189	S	1305	E	47.652177	-102.910859	CG	A	OG
14639	33-025-00314-00-00	XTO ENERGY CORP.	JORGENSEN 43X-5	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	SESW	3	148	198	189	S	285	E	47.652177	-102.910859	CG	A	OG
9707	33-025-00342-00-00	GEOLINEAR CO.	YOUNG BEAR 3-24E	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	LOST BRIDGE	STATE	1-16	14400	32451985.000	0	SESW	3	148	198	189	S	2045	E	47.653838	-103.059796	CG	A	OG
17667	33-025-00836-00-00	PEAK NORTH DAKOTA, LLC	WOMAN CREEK 4-11H	WILDCAT	STATE	1-16	14400	32451985.000	0	WILDCAT	STATE	1-16	14400	32451985.000	0	WYNE	4	148	192	1810	N	2045	E	47.658843	-102.405442	CG	Confidential	Confidential
11107	33-025-00403-00-00	DIAMOND SHAMROCK EXPLORATION CO.	SENECA 1-11H	WILDCAT	STATE	1-16	14400	32451985.000	0	WILDCAT	STATE	1-16	14400	32451985.000	0	WYNE	4	148	192	1810	N	1701	E	47.672874	-102.500741	Confidential	Confidential	OG
17654	33-025-00832-00-00	PEAK NORTH DAKOTA, LLC	SENECA 1-11H	WILDCAT	STATE	1-16	14400	32451985.000	0	WILDCAT	STATE	1-16	14400	32451985.000	0	WYNE	4	148	192	1810	N	2105	E	47.673169	-102.477944	Confidential	Confidential	OG
17875	33-025-00877-00-00	ZENERGY OPERATING COMPANY, LLC	FREDERICKS 6-31H	BEAR BUTTE	STATE	1-16	14400	32451985.000	0	BEAR BUTTE	STATE	1-16	14400	32451985.000	0	WYNE	6	148	192	315	N	1778	E	47.673177	-102.551015	Confidential	Confidential	OG
11259	33-025-00987-00-00	ZENERGY OPERATING COMPANY, LLC	DAKOTA 3	TAT 71-2A	2-1H	15073	17282208.000	0	WILDCAT	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG	
11071	33-025-00334-00-00	KODIAK OIL & GAS (USA), INC.	TWO SHIELDS BUTTE 14-33-24H	WILDCAT	STATE	1-16	15073	17282208.000	0	WILDCAT	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
81057	33-025-00314-00-00	KODIAK OIL & GAS (USA), INC.	TWO SHIELDS BUTTE 14-33-24H	WILDCAT	STATE	1-16	15073	17282208.000	0	WILDCAT	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
11813	33-025-00146-00-00	ST. MARY LAND & EXPLORATION COMPANY	BEAR DEN UNIT 1	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
8466	33-025-00246-00-00	FLYING J OIL & GAS, INC.	BEAR DEN UNIT 1	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
15929	33-025-00127-00-00	FLYING J EXPLORATION & PRODUCTION, INC.	FEDERAL 1-30	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
5813	33-025-00657-00-00	ADORE RESOURCES CORP.	FEDERAL 1-30	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
5936	33-025-00657-00-00	ADORE RESOURCES CORP.	FEDERAL 1-30	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	1	148	193	288	N	2384	E	47.673177	-102.551015	Confidential	Confidential	OG
8408	33-025-00500-00-00	PATRIK PETROLEUM CO.	BEAR DEN UNIT 2-3H	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	2	148	192	1820	S	2504	E	47.675038	-102.452182	CG	PNC	OG
16319	33-025-00748-00-00	XTO ENERGY INC.	BEAR DEN STATE 2-3H	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	2	148	192	1820	S	2504	E	47.675038	-102.452182	CG	PNC	OG
7758	33-025-01114-00-00	LEAR PETROLEUM EXPLORATION, INC.	NATRINA 1	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	32	149	195	1824	N	1820	E	47.679224	-102.936843	CG	A	OG
14583	33-025-00740-00-00	NEWFIELD PRODUCTION COMPANY	STATE 1-38A	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	32	149	195	1824	N	1820	E	47.683893	-102.862331	CG	A	OG
11435	33-025-00303-00-00	CENOCANUS	MORY CREEK FEDERAL 1-43-26	WILDCAT	STATE	1-16	15073	17282208.000	0	WILDCAT	STATE	1-16	15073	17282208.000	0	WYNE	38	149	198	1085	N	553	E	47.689814	-102.907807	CG	PA	OG
11813	33-025-00146-00-00	ST. MARY LAND & EXPLORATION COMPANY	BEAR DEN FEDERAL 1-30H	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	38	149	198	1085	N	1320	E	47.689814	-102.907807	CG	PA	OG
8466	33-025-00246-00-00	FLYING J OIL & GAS, INC.	BEAR DEN FEDERAL 1-30H	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	38	149	198	1085	N	1320	E	47.689814	-102.907807	CG	PA	OG
15929	33-025-00127-00-00	FLYING J EXPLORATION & PRODUCTION, INC.	FEDERAL 1-30	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	38	149	198	1085	N	1320	E	47.689814	-102.907807	CG	PA	OG
5813	33-025-00657-00-00	ADORE RESOURCES CORP.	FEDERAL 1-30	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	LOST BRIDGE	STATE	1-16	15073	17282208.000	0	WYNE	38	149	198	1085	N</							

3075	33-053-0502-00-00	AMERADA HESS CORPORATION	BLUE BUTTES-MADISON UNIT J-105	9435	3/27/1982 0.00	BLUE BUTTES	11/19/95	1638	N	1650	W	47.845555	-102.855338	OG	DRY		
1737	33-053-0206-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT J-105	9435	3/27/1982 0.00	BLUE BUTTES	11/19/95	1638	N	1650	W	47.845555	-102.855338	OG	DRY		
13412	33-053-0206-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT J-105	9435	3/27/1982 0.00	BLUE BUTTES	11/19/95	1638	N	1650	W	47.845555	-102.855338	OG	DRY		
2861	33-053-0418-00-00	TEXACO EXPLORATION & PRODUCTION INC.	BLUE BUTTES-MADISON UNIT J-104	12552	8/17/1992 0.00	BLUE BUTTES	11/19/95	1650	N	1800	W	47.845554	-102.850751	OG	PA		
10146	33-053-0183-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT J-486HR	9400	1/7/1980 0.00	BLUE BUTTES	11/19/95	1648	N	1800	W	47.845555	-102.852221	OG	PA		
10343	33-053-0178-00-00	TEXACO INC.	BLUE BUTTES-MADISON UNIT J-336	10317	5/18/1984 0.00	BLUE BUTTES	11/19/95	1800	N	1800	E	47.845601	-102.87939	OG	PA		
18847	33-053-0301-00-00	BURLINGTON RESOURCES OIL & GAS COMPANY LP	BLUE BUTTES-MADISON UNIT J-336	12715	10/13/1983 0.00	BLUE BUTTES	11/19/95	1650	N	1800	E	47.845601	-102.87939	OG	PA		
17632	33-053-0329-00-00	HILLIS OIL & GAS COMPANY, L.L.C.	FOREMAN 21-38	0		JOHNSON CORNER	LOT 3	150	N	1420	W	47.846481	-102.856613	Confidential	Confidential		
90077	33-053-0077-00-00	HESS CORPORATION	BBMU J-205D	5475	4/28/1988 0.00	BLUE BUTTES	NEW 2	150	N	1200	W	47.846501	-102.832655	Confidential	Confidential		
67074	33-053-0157-00-00	PETRO-LERMS CORP.	SIGNALNESS 15-96	31	1/17/1980 0.00	BLUE BUTTES	NEW 2	150	N	1200	W	47.846501	-102.832655	Confidential	Confidential		
15403	33-053-0278-00-00	HESS CORPORATION	LARS ROTHE 21-29H	20166	2/10/2007 0.00	BLUE BUTTES	SESS 32	151	S	1225	S	47.847122	-102.845618	OG	PNC		
17211	33-053-0186-00-00	HESS CORPORATION	MARK SANDSTROM 14-28H	16983	8/23/1988 0.00	REUNION BAY	SESS 32	151	S	1400	S	47.847122	-102.845618	OG	OG		
17711	33-053-0186-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-232	16141	3/28/1980 0.00	BLUE BUTTES	SESS 32	151	S	1500	S	47.847122	-102.845618	OG	OG		
2510	33-053-0186-00-00	HESS CORPORATION	C. M. LOMBER 10-4R	16141	3/28/1980 0.00	BLUE BUTTES	SESS 32	151	S	1500	S	47.847122	-102.845618	OG	OG		
1912	33-053-0352-00-00	TEXACO INC.	BLUE BUTTES-MADISON UNIT H-231	9440	1/17/1980 0.00	BLUE BUTTES	SESS 32	151	S	1650	S	47.847122	-102.845618	OG	OG		
7568	33-053-0185-00-00	HESS CORPORATION	T. P. RIGGS 15-31	12834	9/12/1980 0.00	BLUE BUTTES	SESS 31	151	S	1650	S	47.847122	-102.845618	OG	OG		
1572	33-053-0327-00-00	TEXACO EXPLORATION & PRODUCTION INC.	BLUE BUTTES-MADISON UNIT H-431	9858	1/19/1957 0.00	BLUE BUTTES	SESS 31	151	S	1650	S	47.847122	-102.845618	OG	OG		
4095	33-053-0551-00-00	AMERADA HESS CORPORATION	SIGNALNESS-TANK UNIT 1	4607	10/24/1982 0.00	CAMEL BUTTE	SESS 34	151	S	1750	S	47.847122	-102.845618	OG	OG		
8783	33-053-0158-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-431X	92784	1/11/1980 0.00	BLUE BUTTES	SESS 34	151	S	1830	S	47.847122	-102.845618	OG	OG		
10294	33-053-0229-00-00	RANCH OIL COMPANY	STATE 13-38	0		STATE DISPOSAL	SESS 38	151	S	1830	S	47.847122	-102.845618	OG	OG		
10812	33-053-0187-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-311 HR	12760	8/21/1984 0.00	BLUE BUTTES	SESS 38	151	S	1830	S	47.847122	-102.845618	OG	OG		
16053	33-053-0316-00-00	HESS CORPORATION	BB-SIGNALNESS 15-96	36294-11	0	BLUE BUTTES	SESS 36	151	S	1610	S	47.847122	-102.845618	OG	OG		
10104	33-053-0163-00-00	AMPOLEX (TEXAS), INC.	12870	1/14/1984 0.00	BLUE BUTTES	SESS 36	151	S	1610	S	47.847122	-102.845618	OG	OG			
8269	33-053-0126-00-00	HESS CORPORATION	12675	1/16/1981 0.00	BLUE BUTTES	SESS 36	151	S	1610	S	47.847122	-102.845618	OG	OG			
8997	33-053-0126-00-00	HESS CORPORATION	C. M. LOMBER 14	14300	5/11/1982 0.00	BLUE BUTTES	SESS 36	151	S	1610	S	47.847122	-102.845618	OG	OG		
9257	33-053-0126-00-00	HESS CORPORATION	ELESTAD 5-35	14300	5/11/1982 0.00	BLUE BUTTES	SESS 36	151	S	1610	S	47.847122	-102.845618	OG	OG		
1423	33-053-0308-00-00	HESS CORPORATION	RIGGS 10-31	1698	1/14/1984 0.00	BLUE BUTTES	WSE 31	151	S	1570	S	47.847122	-102.845618	OG	OG		
10160	33-053-0163-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT G-431	9450	1/14/1984 0.00	BLUE BUTTES	WSE 31	151	S	1570	S	47.847122	-102.845618	OG	OG		
2449	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT G-432	9450	1/14/1984 0.00	BLUE BUTTES	WSE 32	151	S	1580	S	47.847122	-102.845618	OG	OG		
2607	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT G-432	9450	1/14/1984 0.00	BLUE BUTTES	WSE 32	151	S	1580	S	47.847122	-102.845618	OG	OG		
10734	33-053-0181-00-00	HESS CORPORATION	RIGGS 11-31	12751	9/11/1980 0.00	BLUE BUTTES	WSE 33	151	S	1580	S	47.847122	-102.845618	OG	OG		
10742	33-053-0181-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT G-431	9500	4/25/1984 0.00	BLUE BUTTES	WSE 33	151	S	1580	S	47.847122	-102.845618	OG	OG		
13055	33-053-0181-00-00	AMERADA HESS CORPORATION	BLUE BUTTES-MADISON UNIT G-431	9500	4/25/1984 0.00	BLUE BUTTES	WSE 33	151	S	1580	S	47.847122	-102.845618	OG	OG		
12593	33-053-0278-00-00	MUREX PETROLEUM CORPORATION	TANK 12-35	13130	9/16/1988 0.00	BLUE BUTTES	SW 35	151	S	2058	S	47.847122	-102.845618	OG	OG		
2685	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT F-233	9450	4/21/1982 0.00	BLUE BUTTES	SESS 35	151	S	1830	S	47.847122	-102.845618	OG	OG		
2686	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT F-233	9450	4/21/1982 0.00	BLUE BUTTES	SESS 35	151	S	1830	S	47.847122	-102.845618	OG	OG		
2692	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT F-232	9450	4/21/1982 0.00	BLUE BUTTES	SESS 35	151	S	1830	S	47.847122	-102.845618	OG	OG		
7571	33-053-0165-00-00	HESS CORPORATION	REITZGANG NCT-2 4	14833	7/19/1980 0.00	BLUE BUTTES	SWAN 32	151	S	1980	N	1800	W	47.847122	-102.845618	OG	OG
10743	33-053-0181-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT F-132HR	12463	4/26/1984 0.00	BLUE BUTTES	SWAN 32	151	S	1980	N	1800	W	47.847122	-102.845618	OG	OG
9845	33-053-0163-00-00	RANCH OIL COMPANY	STATE 5-38	12800	1/14/1982 0.00	BLUE BUTTES	SWAN 32	151	S	1980	N	1800	W	47.847122	-102.845618	OG	OG
1823	33-053-0333-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT F-431	9467	5/24/1958 0.00	BLUE BUTTES	SENE 31	151	S	1930	N	1800	W	47.847122	-102.845618	OG	OG
7993	33-053-0189-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT E-432	12955	10/31/1980 0.00	BLUE BUTTES	SENE 32	151	S	1930	N	1800	W	47.847122	-102.845618	OG	OG
12682	33-053-0220-00-00	HESS CORPORATION	R. E. REITZGANG NCT-2 3	14134	4/17/1988 0.00	BLUE BUTTES	WANE 31	151	S	1600	N	1800	W	47.847122	-102.845618	OG	OG
1654	33-053-0252-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT E-433	9336	4/12/1982 0.00	BLUE BUTTES	WANE 31	151	S	1600	N	1800	W	47.847122	-102.845618	OG	OG
2332	33-053-0420-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT E-432	9344	12/41/1958 0.00	BLUE BUTTES	WANE 32	151	S	1600	N	1800	W	47.847122	-102.845618	OG	OG
1647	33-053-0289-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT E-431	9323	12/11/1987 0.00	BLUE BUTTES	WANE 32	151	S	1600	N	1800	W	47.847122	-102.845618	OG	OG
1886	33-053-0420-00-00	AMERADA HESS CORPORATION	BLUE BUTTES-MADISON UNIT E-132	9395	12/20/1958 0.00	BLUE BUTTES	WANE 32	151	S	1600	N	1800	W	47.847122	-102.845618	OG	OG
3814	33-053-0525-00-00	MUREX PETROLEUM CORPORATION	ALFRED BROWN 1	11500	6/29/1984 0.00	CAMEL BUTTE	WANE 34	151	S	1660	N	1800	W	47.847122	-102.845618	OG	OG
10174	33-053-0174-00-00	TEXACO EXPLORATION & PRODUCTION INC.	BLUE BUTTES-MADISON UNIT E-232	9370	9/18/1983 0.00	BLUE BUTTES	WANE 32	151	S	1510	N	1765	W	47.847122	-102.845618	OG	OG
10376	33-053-0192-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-33HR	10950	9/27/1984 0.00	BLUE BUTTES	WANE 32	151	S	1520	N	1765	W	47.847122	-102.845618	OG	OG
5995	33-053-0399-00-00	HESS CORPORATION	BLUES EYE 1	9827	4/21/1982 0.00	BLUE BUTTES	SWAN 29	151	S	1500	S	47.847122	-102.845618	OG	OG		
9317	33-053-0324-00-00	TEXACO EXPLORATION & PRODUCTION INC.	BLUE BUTTES-MADISON UNIT H-238	9424	6/14/1958 0.00	BLUE BUTTES	SESS 29	151	S	1500	S	47.847122	-102.845618	OG	OG		
1653	33-053-0252-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-428	9424	6/14/1958 0.00	BLUE BUTTES	SESS 29	151	S	1500	S	47.847122	-102.845618	OG	OG		
923	33-053-0077-00-00	TEXACO INC.	BLUE BUTTES-MADISON UNIT H-130	3855	8/41/1955 0.00	BLUE BUTTES	SESS 30	151	S	1650	S	47.847122	-102.845618	OG	OG		
1455	33-053-0243-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-430	9460	6/12/1957 0.00	BLUE BUTTES	SESS 30	151	S	1650	S	47.847122	-102.845618	OG	OG		
3848	33-053-0243-00-00	CALVERT DRILLING & PRODUCING CO.	JACK SKARDA 1	11510	8/24/1985 0.00	CAMEL BUTTE	SESS 26	151	S	1660	S	47.847122	-102.845618	OG	OG		
2660	33-053-0398-00-00	RAINBOW RESOURCES, INC.	ALFRED BROWN 1-26	8889	1/19/1974 0.00	CAMEL BUTTE	SESS 26	151	S	1721	S	47.847122	-102.845618	OG	OG		
2260	33-053-0400-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-230	9610	3/26/1959 0.00	BLUE BUTTES	SESS 29	151	S	1810	S	47.847122	-102.845618	OG	OG		
2760	33-053-0400-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-229	9323	3/17/1958 0.00	BLUE BUTTES	SESS 29	151	S	1810	S	47.847122	-102.845618	OG	OG		
9740	33-053-0400-00-00	HESS CORPORATION	BLUE BUTTES-MADISON UNIT H-228	9283	3/19/1951 0.00	BLUE BUTTES	SESS 30	151	S	1734	S	47.847122	-102.845618	OG	OG		
1252	33-053-0217-00-00	AMERADA HESS CORPORATION	EVERETT FELDMAN NCT-1	14869	5/27/1987 0.00	BLUE BUTTES	WANE 29	151	S	1438	S	47.847122	-102.845618	OG	OG		
8095	33-053-0173-00-00	HESS CORPORATION	SWERTSON 29-23 RR	15100	1/18/1981 0.00	BLUE BUTTES	WANE 29	151	S	1438	S	47.847122	-102.845618	OG	OG		
3079	33-053-0503-00-00	AMERADA HESS CORPORATION	GOVT DOROUGH (NCT-2) 1	9529	3/27/1980 0.00	BLUE BUTTES	WANE 28										



NOTICE OF AVAILABILITY

THE BUREAU OF INDIAN AFFAIRS (BIA) AND THE THREE AFFILIATED TRIBES ARE PLANNING ON DRILLING ONE HORIZONTAL OIL/GAS WELLS ON *FORT BERTHOLD 148-94-9D-04-1H*, ON THE FORT BERTHOLD RESERVATION. CONSTRUCTION IS SCHEDULED TO BEGIN IN THE FALL OF 2009.

BASED ON THE ENVIRONMENTAL ASSESSMENT (EA), IT HAS BEEN DETERMINED THAT THE ACTION WILL NOT RESULT IN SIGNIFICANT IMPACTS TO THE QUALITY OF THE HUMAN ENVIRONMENT; THEREFORE, AN ENVIRONMENTAL IMPACT STATEMENT IS NOT REQUIRED.

FOR FURTHER INFORMATION OR TO OBTAIN A COPY OF THE FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND EA, CONTACT HOWARD BEMER, SUPERINTENDENT AT THE FORT BERTHOLD AGENCY AT 701-627-4707.

THE FONSI IS A FINDING ON ENVIRONMENTAL EFFECTS, NOT A DECISION TO PROCEED WITH AN ACTION, THEREFORE CANNOT BE APPEALED.

