



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

MAY 16 2012

MEMORANDUM

TO: Superintendent, Fort Berthold Agency

FROM: ^{ACTING} Regional Director, Great Plains Region

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, an Environmental Assessment (EA) has been completed and a Finding of No Significant Impact (FONSI) has been issued. The EA authorizes land use for the Dancing Bull 16-21HC, 16-21HZ, 16-21HD & Olson 12-1HX, 12-1HC, 12-1HY, 12-1HD / FBIR 13-24HC, 13-24HZ & 13-24HD Wells, access roads and utility corridors on the Fort Berthold Indian Reservation.

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 (40 C.F.R. Section 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: Tex Hall, Chairman, Three Affiliated Tribes (with attachment)
Elgin Crows Breast, Tribal Historic Preservation Officer (with attachment)
Derek Enderud, BLM, Bureau of Land Management (with attachment)
Ryan Krapp (with attachment)
Eric Wortman, EPA, (with attachment)
Jonathon Shelman, Corps of Engineers
Jeff Hunt, Fort Berthold Agency

Finding of No Significant Impact

WPX Energy Williston, LLC

*Dancing Bull 16-21HC, 16-21HZ, 16-21HD &
Olson 12-1HX, 12-1HC, 12-1HY, 12-1HD / FBIR 13-24HC, 13-24HZ & 13-24HD
Wells, Pads, Access Roads and Utility Corridors*

*Fort Berthold Indian Reservation
Mountrail County, North Dakota*

The U.S. Bureau of Indian Affairs (BIA) has received a proposal to drill Dancing Bull 16-21HC, 16-21HZ, 16-21HD & Olson 12-1HX, 12-1HC, 12-1HY, 12-1HD / FBIR 13-24HC, 13-24HZ & 13-24HD Wells, Pads, Access Roads and Utility Corridors on the Fort Berthold Indian Reservation (FBIR). Associated federal actions by BIA include determinations of impacts and effects regarding environmental resources for developments on tribal lands.

The potential of the proposed actions to impact the human environment is analyzed in the attached addendum to an existing EA, as required by the National Environmental Policy Act. Based on the recently completed addendum to the 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 solicited for the preceding NEPA document was sufficient to ascertain potential environmental concerns associated with the currently proposed project.
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 actions 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. This guidance includes the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", and the Endangered Species Act (16 U.S.C. 1531 et seq.).
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

5-16-12
Date

ACTING

Environmental Assessment
Dancing Bull 16-21H and Olson 12-1H/FBIR 13-24H
Well Pads, Access Roads, Pipelines and Utilities
WPX Energy Williston, LLC

TABLE OF CONTENTS

1.0	Purpose and Need for the Proposed Action	1
2.0	Proposed Action and Alternatives.....	6
2.1	Proposed Action	6
2.1.1	Field Camps	6
2.1.2	Access Road Construction Procedures.....	6
2.1.3	Pipeline and Utility Construction Procedures	7
2.1.4	Well Pad Construction Procedures	9
2.1.5	Drilling	9
2.1.6	Casing and Cementing	10
2.1.7	Completion and Evaluation.....	10
2.1.8	Commercial Production	10
2.1.9	Pipeline Spill Response Plan.....	12
2.1.10	Pipeline Marking Procedures.....	12
2.1.11	Pipeline Quality Control/Quality Assurance Measures	12
2.1.12	Site Description(s)	12
2.1.13	Interim Reclamation.....	16
2.1.14	Final Reclamation.....	16
2.2	The No Action Alternative	18
3.0	The Affected Environment and Potential Impacts	19
3.1	Air Quality.....	20
3.2	Public Health and Safety	21
3.3	Water Resources.....	22
3.3.1	Surface Water.....	22
3.3.2	Groundwater.....	24
3.3.3	Water Wells and Water Use Permits.....	25
3.4	Wildlife and Habitat.....	26
3.4.1	Species of Concern	26
3.4.2	Species Assessments.....	26
3.4.3	Wildlife (General).....	29
3.5	Soils	30
3.6	Vegetation and Noxious Weeds.....	31
3.6.1	Noxious Weeds	34
3.7	Cultural Resources	34
3.8	Socio-economics	35
3.9	Environmental Justice.....	37
3.10	Irreversible and Irrecoverable Commitment of Resources	38
3.11	Short-Term Use versus Long-Term Productivity	39
3.12	Cumulative Impacts	39
3.13	Mitigation and Commitments by WPX.....	41
3.13.1	Site Specific Spill Prevention and BMP's	43
3.13.2	Wildlife Protections	43

ENVIRONMENTAL ASSESSMENT

United States Bureau of Indian Affairs

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



**WPX Energy Williston, LLC
Dancing Bull 16-21H and Olson 12-1H/FBIR 13-24H
Well Pads, Access Roads, Pipelines and Utilities**

Fort Berthold Indian Reservation

May 2012

For information contact:
Bureau of Indian Affairs, Great Plains Regional Office
Division of Environment, Safety and Cultural Resources
115 4th Avenue SE
Aberdeen, South Dakota 57401
605-226-7656

3.13.3	Utilities.....	43
3.13.4	Dust Control	43
3.13.5	Fire Control.....	43
3.13.6	Traffic and Roads	43
3.13.7	Cultural Resources	44
4.0	Consultation and Coordination	45
5.0	List of Preparers	47
6.0	References.....	48

LIST OF FIGURES

Figure 1.	Proposed Well Locations	2
Figure 2.	Proposed Dancing Bull 16-21H Drill Plan.....	3
Figure 3.	Proposed Olson 12-1H/FBIR 13-24H Drill Plan.....	4
Figure 4.	Typical roadway cross section (Gold Book).....	8
Figure 5.	Typical drill rig (Carlson McCain)	10
Figure 6.	Typical producing unit (Carlson McCain).....	11
Figure 7.	Dancing Bull 16-21H Well Site and ROW.....	13
Figure 8.	Typical well pad during operation.....	17
Figure 9.	Well pad after reclamation.	17
Figure 10.	General Hydrology.....	23
Figure 11.	Dancing Bull 16-21H General Appearance.....	31
Figure 12.	Access Road, Pipeline and Utility ROW.....	32
Figure 13.	Olson 12-1H/FBIR 13-24H General Appearance.....	33
Figure 14.	Access Road, Pipeline and Utility ROW.....	33
Figure 15.	Oil and Gas Development.....	42

LIST OF TABLES

Table 1.	Well Summary.....	1
Table 2.	Summary of Federal Air Quality Standards and Available Air Quality Data	20
Table 3.	Distance and Location of Residences	21
Table 4.	Distance from Dancing Bull 16-21H to receiving water.....	22
Table 5.	Distance from Olson 12-1H/FBIR 13-24H to receiving water.....	24
Table 6.	Water Wells Within 5 miles.....	25
Table 7.	Mountrail County Threatened, Endangered, and Candidate species and Designated Critical Habitat	26
Table 8.	Wildlife (General)	29
Table 9.	Dancing Bull 16-21H Soils.....	30
Table 10.	Olson 12-1H/FBIR 13-24H Soils.....	30
Table 11.	Noxious weeds known to occur in Mountrail County.....	34
Table 12.	Income and Unemployment.	36
Table 13.	Housing.....	37
Table 14.	Oil and Gas Well Status in Area.....	40
Table 15.	Scoping Record	45

APPENDICES

- Appendix A** Dancing Bull 16-21H Plat Package
- Appendix B** Olson 12-1H/FBIR 13-24H Plat Package
- Appendix C** Scoping and Concurrence Request Letters
- Appendix D** Scoping Responses and Concurrence Letter

Acronyms

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

1.0 Purpose and Need for the Proposed Action

WPX Energy Williston, LLC (WPX), formerly Dakota-3 E&P, LLC (D-3), is proposing to construct two well pads to drill ten horizontal oil/gas wells on the Fort Berthold Indian Reservation (FBIR), in order to evaluate and/or develop the commercial potential of the natural resources. This includes associated access roads and gathering/supply utilities.

The U.S. Bureau of Indian Affairs (BIA) is the surface management agency for potentially affected tribal lands and individual allotments. The developments are proposed on lands held in trust by the United States in Mountrail County, North Dakota (Figure 1). The BIA may also hold title to subsurface mineral rights.

Additional NEPA analysis, decisions, and federal actions will be required prior to any other developments. 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.

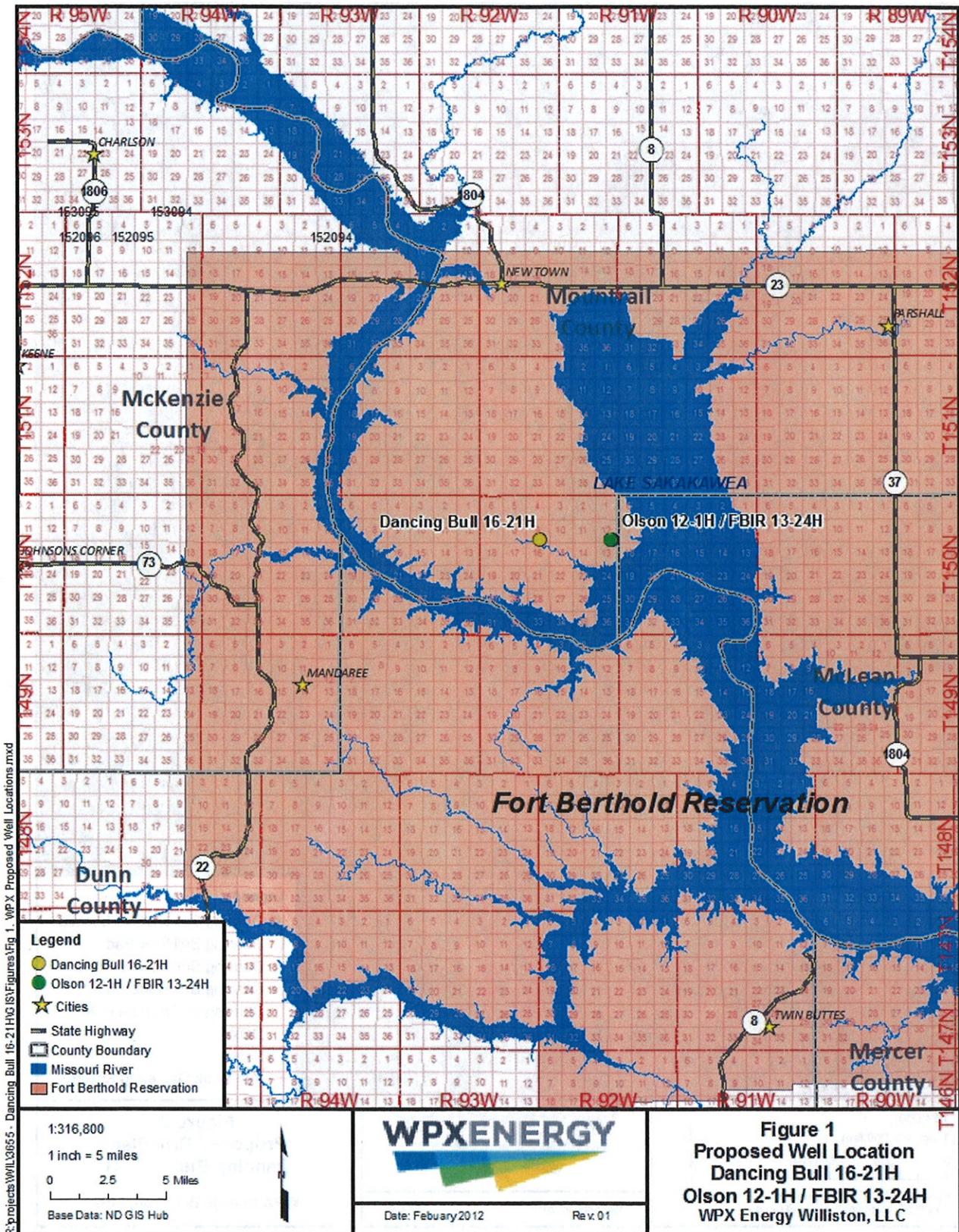
The economic development of available resources and associated BIA actions are consistent with the BIA's general mission. Leasing and development of mineral resources offers economic benefits to both the Three Affiliated Tribes of the Mandan, Hidatsa, and Arikara Nations and to individual tribal members. 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 include the approval of leases, easements and rights-of-way, determinations regarding cultural resource effects and recommendations to the Bureau of Land Management (BLM) regarding approval of Applications for Permit to Drill (APDs).

The proposed wells (ten total) will be drilled from two well pads. The well pads will be named the Dancing Bull 16-21H and the Olson12-1H/FBIR 13-24H. The Olson 12-1H/FBIR 13-24H is a "combined" well pad, from which two separate drilling/spacing units will be accessed. Both the Bakken and Three Forks shale formations will be drilled from these well pads. The individual well information is summarized in Table 1 below. The drilling plans for these wells are depicted in Figure 2 and Figure 3. Plat packages and construction schematics for the wells are included as Appendices A and B, respectively.

Table 1. Well Summary

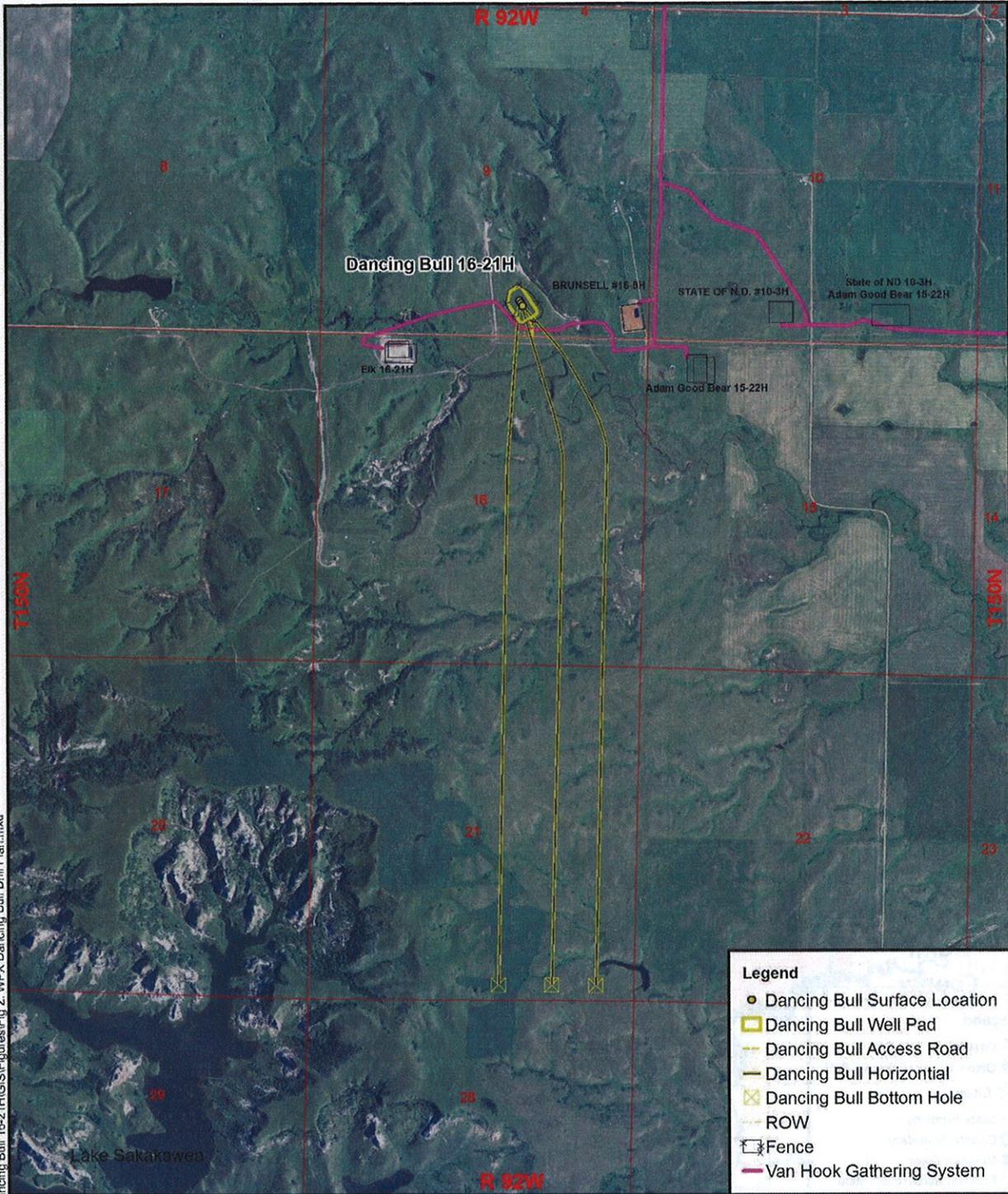
Well Designation	Target Formation	Surface Hole Location (Lat/Long)	Bottom Hole Location (Lat/Long)
Dancing Bull 16-21HC	Bakken	47.820284, -102.458422	47.790357, -102.458822
Dancing Bull 16-21HD	Bakken	47.820059, -102.458190	47.790429, -102.452517
Dancing Bull 16-21HZ	Three Forks	47.820171, -102.458306	47.790396, -102.455364
Olson 12-1HC	Bakken	47.819733, -102.390666	47.847077, -102.394780
Olson 12-1HD	Bakken	47.819642, -102.390612	47.847083, -102.388102
Olson 12-1HX	Three Forks	47.819779, -102.391187	47.847073, -102.398190
Olson 12-1HY	Three Forks	47.819779, -102.390804	47.847080, -102.391314
FBIR 13-24HC	Bakken	47.820008, -102.392146	47.790427, -102.393902
FBIR 13-24HD	Bakken	47.819917, -102.391763	47.790440, -102.390851
FBIR 13-24HZ	Three Forks	47.819962, -102.391955	47.790434, -102.390851

Figure 1. Proposed Well Locations



R:\Projects\WILL31655 - Dancing Bull 16-21H\IG\Figures\Fig 1. WPX Proposed Well Locations.mxd

Figure 2. Proposed Dancing Bull 16-21H Drill Plan



R:\projects\WIL\3655 - Dancing Bull 16-21H\GIS\Figures\Fig 2. WPX Dancing Bull Drill Plan.mxd

1:24,000
1 inch = 2,000 feet
0 1,000 2,000 Feet

Basemap: USGS 24K Quadrangle
Sanish SE; NAIP 2010 Mountrail County



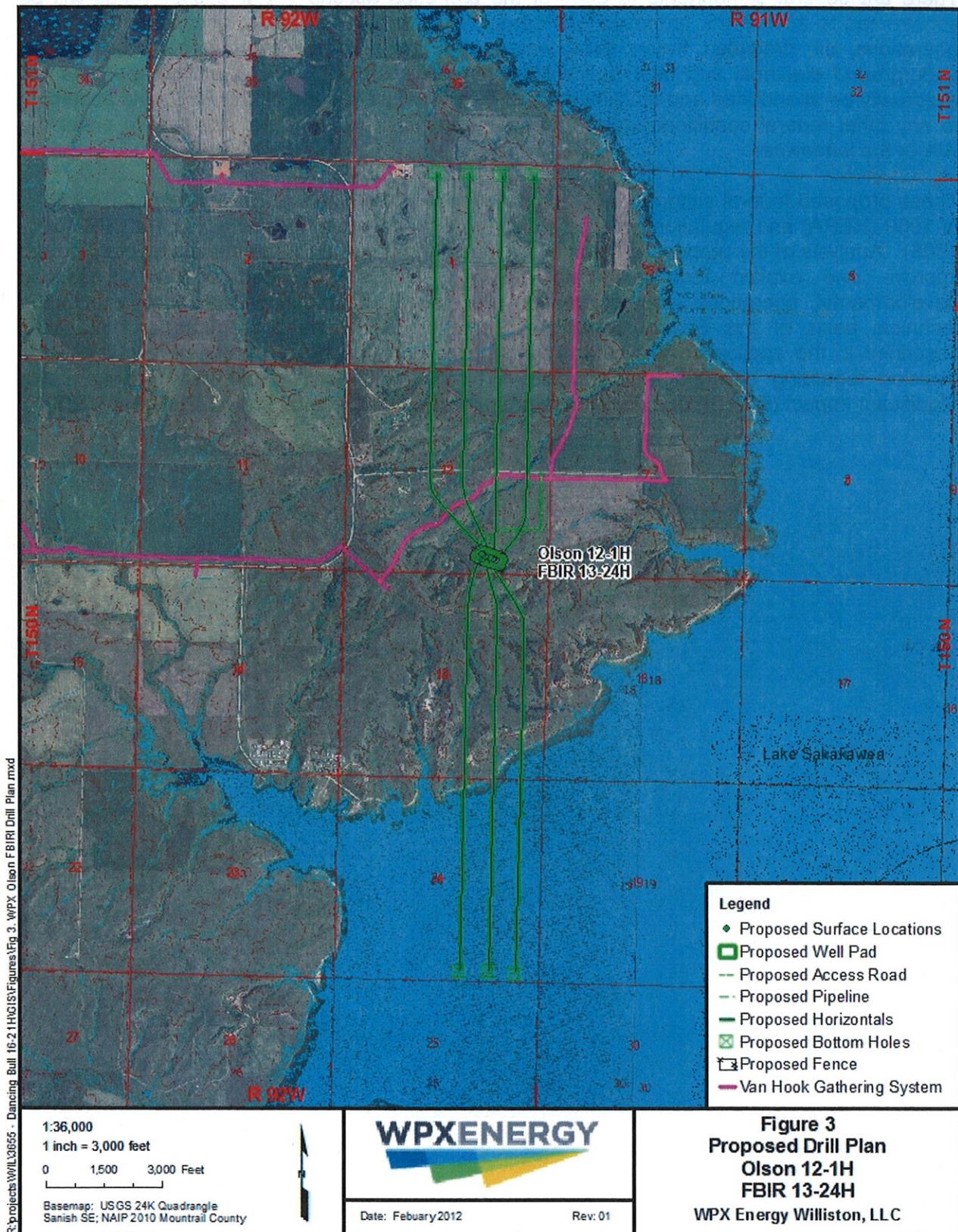
Date: February 2012 Rev: 01

- Legend**
- Dancing Bull Surface Location
 - Dancing Bull Well Pad
 - Dancing Bull Access Road
 - Dancing Bull Horizontal
 - ⊗ Dancing Bull Bottom Hole
 - ROW
 - ⊠ Fence
 - Van Hook Gathering System

Figure 2
Proposed Drill Plan
Dancing Bull 16-21H

WPX Energy Williston, LLC

Figure 3. Proposed Olson 12-1H/FBIR 13-24H Drill Plan



There are several components to each of the proposed actions. New access roads will be constructed to access the proposed well sites; well pads will be built to accommodate drilling operations; oil, produced water, fresh water, and gas pipelines may be constructed; and underground electrical and fiber optics lines may be installed. All project components will eventually be abandoned and reclaimed, as specified in this document, the APD, and according to any other federal conditions, unless formally transferred with federal approval to either the BIA or the landowner.

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 proposal's potential to affect the human environment is expected to both improve and explain federal decision-making. APDs submitted by WPX describe developmental, operations, 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).

2.0 Proposed Action and Alternatives

The Proposed Action, outlined within this document, analyzes the potential impacts of the specific proposed projects, ten exploratory oil/gas wells on tribal allotted surface ownership and mineral estate held in trust by the BIA in Mountrail County, North Dakota. The proposed wells will test the commercial potential of the Bakken and Three Forks Formations. Site-specific actions will include several components, including construction and installation of:

- Access roads,
- Well pads,
- Oil, natural gas, and produced water gathering pipelines,
- Fresh water supply pipeline,
- Underground electrical and fiber optic utilities.

2.1 Proposed Action

Construction activities will follow lease stipulations, practices, and procedures outlined in this document, the APD, guidelines and standards in *Surface Operating Standards for Oil and Gas Explorations and Development* (BLM/US Forest Service, Fourth Edition, also known as the Gold Book), and any conditions added by either BIA or the BLM. All lease operations will be conducted in compliance with applicable laws and regulations, including 43 CFR 3100, *Onshore Oil and Gas Orders 1, 2, 3, 6, and 7*, approved plans of operations and any applicable Notices to Lessees.

2.1.1 Field Camps

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

2.1.2 Access Road Construction Procedures

Approximately 3,560 feet of new access road, within a 130-foot right-of-way (ROW), will be constructed from BIA 6 and BIA 602 roadways to the Dancing Bull 16-21H and Olson 12-1H/FBIR 13-24H well pads, respectively.

The maximum disturbed ROW width of 130 feet of the access roads, pipeline and utility corridor will result in a potential 10.5 acres of disturbance. Signed agreements will be in place allowing road construction across affected surface allotments and private land surfaces. Any applicable approach permits and/or easements will be obtained prior to any construction activity.

Construction will follow road design standards outlined in the Gold Book. A minimum of eight inches of topsoil will be stripped from the Dancing Bull 16-21H and Olson 12-1H/FBIR 13-24H access roads and utility corridor. The stockpiled topsoil will be redistributed on the outslope areas of the borrow ditches following road construction. Ditches will be reseeded as soon as practical with a seed mixture approved by the BIA. Care will be taken during road construction to avoid disturbing any existing buried utilities. The access roads will be surfaced with a

minimum of four-inches of gravel and the roadway will remain in place for the life of the well. Typical cross-sections are shown in Figure 4.

2.1.3 Pipeline and Utility Construction Procedures

An associated pipeline and utility corridor will parallel the road alignment within the ROW of each access route. The pipeline and utility corridor will include oil, natural gas, and produced water gathering pipelines; and fresh water supply pipelines. Underground electrical and fiber optic utilities may also be constructed.

The natural gas pipeline will be constructed of three-inch diameter polyethylene pipe. The oil pipeline will be constructed of six- to eight-inch welded steel pipe. Produced water pipelines will consist of four-inch diameter polyethylene pipe. Fresh water supply pipelines will be four- to six-inch diameter polyethylene pipe.

All pipelines will be underground. Natural gas and oil pipelines will be installed in one trench with produced water and fresh water pipelines installed in a second trench. Trenches will be approximately 2.5 feet wide and will be placed 10 to 15 feet apart. All pipelines will be installed at a minimum depth of six feet except as needed at road and stream crossings, or as needed for safety considerations. Underground electrical and fiber optic utilities will be installed at the same time or later utilizing the spider-plow method.

Trenches will be backfilled immediately after pipeline and utility installation and testing, waiting only if soils are overly wet or frozen. Appropriate temporary and long-term erosion control measures will be applied to all disturbed areas to minimize and control erosion. Field practices will conform with prescribed BMP's which may include:

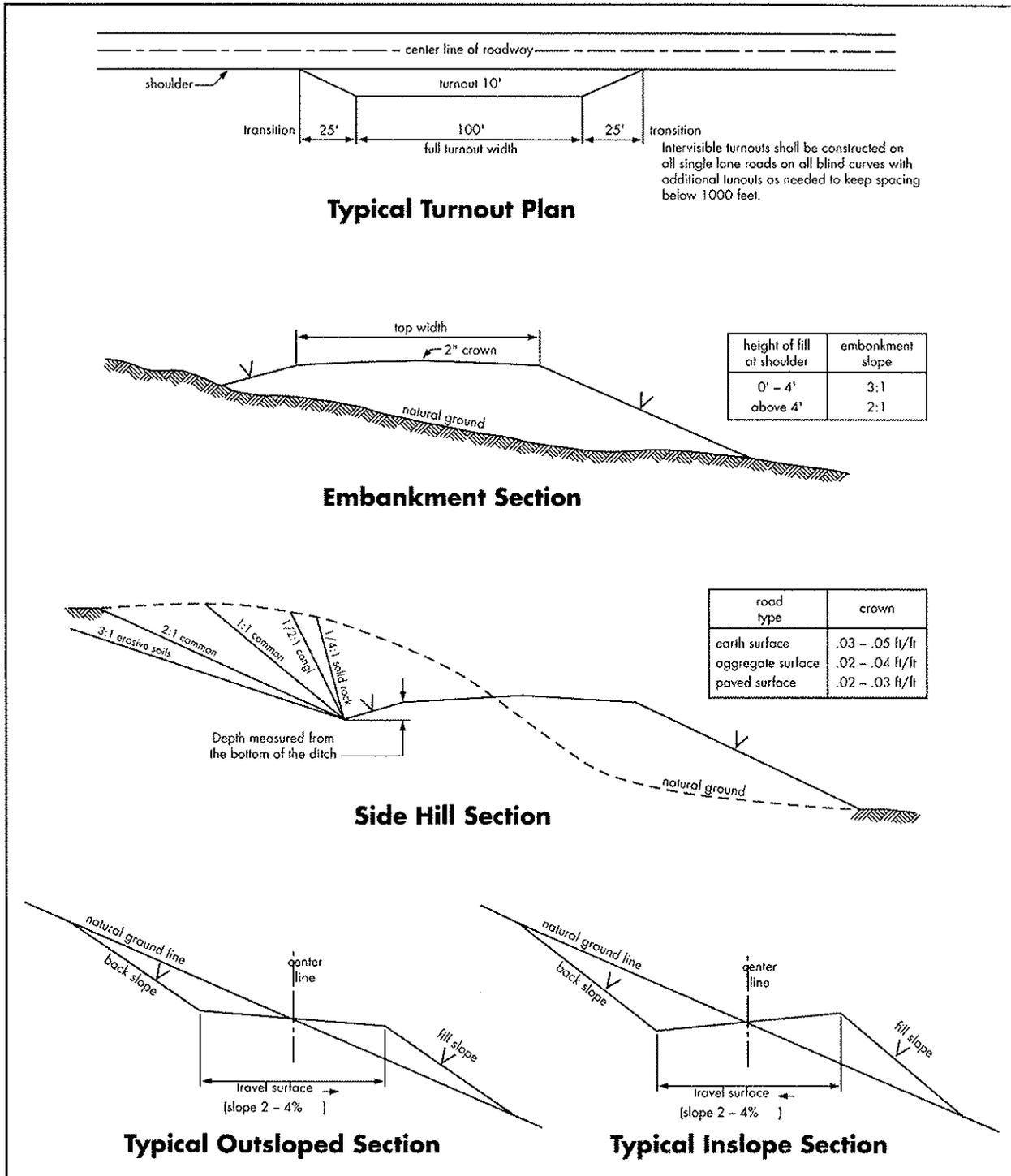
- Installing erosion fabric, mats or logs;
- Construction of diversion ditches and/or water bars;
- Seeding, planting, mulching and creation of buffer strips; and
- Other measures identified at on-site meetings by BIA and during construction to minimize erosion and soil loss.

When ditching is implemented with a trenching machine, the topsoil will first be stripped and stored on the far side of the spoil side of the ROW. Subsoil will be stored closest to the open ditch. Pipeline installation and subsoil backfilling will be performed as soon as possible dependent on weather conditions. If construction occurs during winter months, topsoil will likely contain chunks of frozen soil. If the topsoil is excessively frozen the topsoil will not be replaced but kept in windrows. Appropriate BMP's will be placed along the entirety of the ROW to reduce the potential for excessive erosion as a result of spring snow melt. In areas where the spring thaw will likely bring considerable amounts of running water, surface breakers, along with temporary surface matting may be installed to further minimize erosion potential.

After subsoil is scarified to alleviate compaction, the stockpiled topsoil will be redistributed over the ROW. Topsoil redistribution and final grading will be done in the spring following complete frost thaw and required drying of the right-of-way. Monitoring and maintenance of erosion along the ROW will be ongoing and the responsibility of WPX.

Figure 4. Typical roadway cross section (Gold Book)

- Construction Steps**
1. Salvage topsoil
 2. Construct road
 3. Redistribute topsoil
 4. Revegetate slopes



2.1.4 Well Pad Construction Procedures

The proposed well pads will consist mainly of an area leveled for the drilling rig and related equipment. The well pad areas will be cleared of vegetation, stripped of topsoil, and graded to the specifications in the approved APD. Topsoil will be stockpiled and stabilized until disturbed areas are reclaimed and re-vegetated. Excavated subsoil will be used in well pad construction, with the finished well pads graded to ensure positive water drainage away from the drill site. Erosion control devices will be maintained throughout well pad construction, drilling, and interim reclamation, as needed. Weed control will be performed for the duration of the projects.

The Dancing Bull 16-21H well pad working surface will be constructed initially to approximately 3.8 acres in size. Construction activities and soil stockpiles will increase the overall surface disturbance. The total surface use, within the fenced area of the site, will be approximately 5.6 acres.

The Olson 12-1H/FBIR 13-24H well pad working surface will be constructed initially to approximately 6.3 acres in size. Construction activities and soil stockpiles will increase the overall surface disturbance. The total surface use, within the fenced area of the site, will be approximately 10.1 acres.

2.1.5 Drilling

WPX will submit APDs to the BLM for the proposed wells. The BLM North Dakota Field Office will forward the APDs to the BIA's Fort Berthold Agency in New Town, North Dakota, for review and concurrence. The BLM will not approve an APD until BIA completes its NEPA process and recommends APD approval. No construction or drilling will begin until an approved permit has been obtained from the BLM.

Rig transport and on-site assembly will take approximately seven days per well. A rotary drill rig will require approximately 30 days to reach target depths. A typical drilling rig is shown in Figure 5. For approximately the upper 2,500 feet of each drilled hole, a fresh-water based mud system with non-hazardous additives such as bentonite clay will be used to minimize contaminant concerns. Fresh water will be obtained from a commercial source for drilling, using nearly 8.4 gallons of water per foot of hole drilled.

Following the setting and cementing of the near-surface casing, an oil-based mud system will be used to drill to the production casing point for the proposed wells. The oil-based mud system consists of a diesel fuel (80-85%) and water (15-20%) mixture. The oil-based drilling fluids reduce the potential for hole sloughing while drilling through shale formations. Approximately 4,725 gallons of water and 18,900 gallons of diesel fuel per well will be used during the vertical drilling for each well. The lateral reach of each well hole will be drilled using on average approximately 33,600 gallons of fresh water.

A closed-loop drilling system will be used to drill the wells. The cuttings and fluids generated from drilling will be circulated and deposited within reserve tanks on the well pads. Tanks will be emptied as needed at approved off-site disposal facilities in accordance with North Dakota Industrial Commission (NDIC) rules and regulations.

Prior to use, the entire location will be fenced with a cattle guard at the access road entrance to each pad, in order to protect both wildlife and livestock. Fencing will be installed in accordance with Gold Book guidelines and maintained through the life of the wells.



Figure 5. Typical drill rig (Carlson McCain)

2.1.6 Casing and Cementing

Surface casing will be set to approximately 2,500 feet and cemented back to the surface during drilling, isolating all near-surface aquifers. The Fox Hills Formation will be encountered at approximately 1,700 feet and the Pierre Formation at approximately 1,800 feet. A production casing cemented from approximately 11,256 feet up to 4,000 feet will isolate potential hydrocarbon zones in the Dakota Formation that occur below 4,500 feet. The production horizontal section will be uncased with all associated operations conducted in compliance with *Onshore Oil and Gas Order 2* (Title 43 CFR 3160).

2.1.7 Completion and Evaluation

A work-over unit will be moved onto the well sites following the completion of the drilling operations. Approximately 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. A mixture of sand and a carrier (water and/or nitrogen) may be pumped into the well bore under extreme pressure to fracture the target formation. The sand particles will stabilize the fractures, increase the capture zone and maximize the field drainage. The fracture fluids will be recovered by flowing the well back to the surface, with all recovered fluids disposed of in accordance with NDIC rules and regulations.

2.1.8 Commercial Production

If drilling, testing, and production support commercial production from the proposed locations, additional equipment will be installed including a pumping unit at the wellhead, a vertical heater/treater, storage tanks, and a flare/production pit. An impervious dike (that can contain that can contain 110% capacity of the largest holding tank plus one full days production) will be placed around the production tanks and heater/treater. Load-out lines will be located inside the diked area and a screened drip barrel will be installed under the outlet. A metal access staircase will provide access to the diked area, protect the dike, and may provide support to tanker truck hoses. The BIA will choose an inconspicuous paint color for permanent aboveground production facilities

from colors recommended either by the BLM or by the Rocky Mountain Five-State Interagency committee. A typical producing unit is shown in Figure 6.

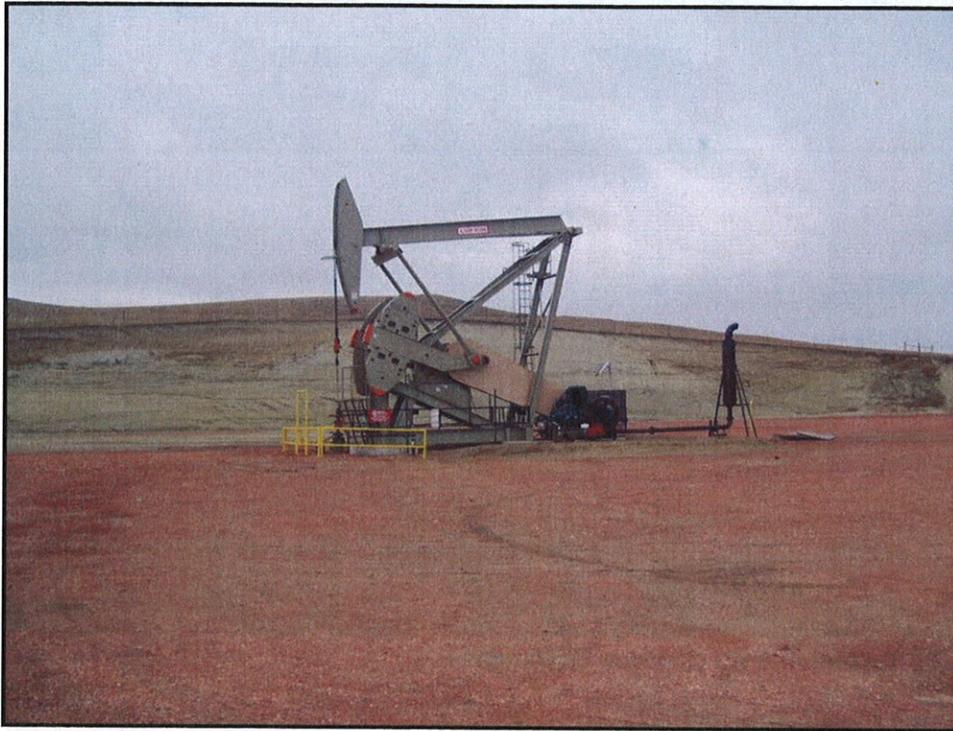


Figure 6. Typical producing unit (Carlson McCain)

Oil and produced water will be collected in tanks and trucked to an existing oil terminal or approved disposal sites until connection to pipelines. Production volumes of oil and water along with pipeline operational date will dictate trucking frequency and duration.

The duration of production operations cannot be reliably predicted, but some oil wells have pumped for more than 100 years. Initial daily production is estimated at 500 barrels of oil and 100 barrels of water, decreasing after three months to approximately 200 barrels of oil and 50 barrels of water per day.

Large volumes of natural gas are not expected from these locations. Small volumes will be flared in accordance with Notice to Lessees (NTL) 4A and adopted NDIC regulations, which prohibit unrestricted flaring for more than the initial year of operation (NDCC 28-08-06.4).

Gathering pipelines for oil, natural gas, and produced water; and a fresh water supply pipeline will be constructed as part of this project. The gathering network will allow for gas, oil, and produced water to be transported to a central location for shipping to market. The water supply pipeline will reduce the amount of truck traffic needed to supply water during fracing operations.

Should future oil/gas exploration and development activities be proposed wholly or partly on trust land, those proposals and associated federal actions would require additional site-specific NEPA analysis and BIA consideration prior to implementation.

2.1.9 Pipeline Spill Response Plan

WPX has developed an Emergency Spill Contingency Plan (Plan) for the VHGS (WPX, 2011). The spill preventative measures and monitoring protocols, notification procedures, spill detection and on-scene spill mitigation procedures, response activities, contacts, training and drill procedures, and response plan review and update procedures, as referenced in the Plan, apply to the proposed pipelines, so long as WPX remains the operator. A copy of the Plan has been filed with the BIA and WPX has committed to adhering to the procedures and requirements as defined by federal law (Title 49 Code of Federal Regulations [CFR] 194).

2.1.10 Pipeline Marking Procedures

WPX will adhere to the requirements of 49 CFR 192.707 with regard to the marking of buried pipelines. Specifically, WPX will place pipeline markers within 1,000 feet of one another, at public road crossings, railroad crossings, creek crossings, fence crossings, and at points of major direction change.

2.1.11 Pipeline Quality Control/Quality Assurance Measures

WPX will purchase steel pipe that is rated as API 5L X-42/52 and will inspect the pipe to ensure quality and integrity. WPX will ensure that the external epoxy coating is applied to a minimum thickness of 14 millimeters. During construction, welds will be visually inspected for quality and completeness by qualified professionals. Once welds have passed visual inspection, 20% of the welds will be subjected to Non-Destructive Testing. After passing these tests, the weld areas are covered for corrosion protection. After the weld areas have been covered, the external coating of the pipe is inspected using a jeepmeter to detect holes and cracks. Upon passing the inspection process, the pipe is lowered into the trench and buried. Prior to being put into service, the steel pipe is pressurized with air and integrity tested to approximately 115% of the maximum design pressure of 720 pounds per square inch gauge (psig). A cathodic protection system will be installed to protect against corrosion with annual surveys conducted to assure system integrity.

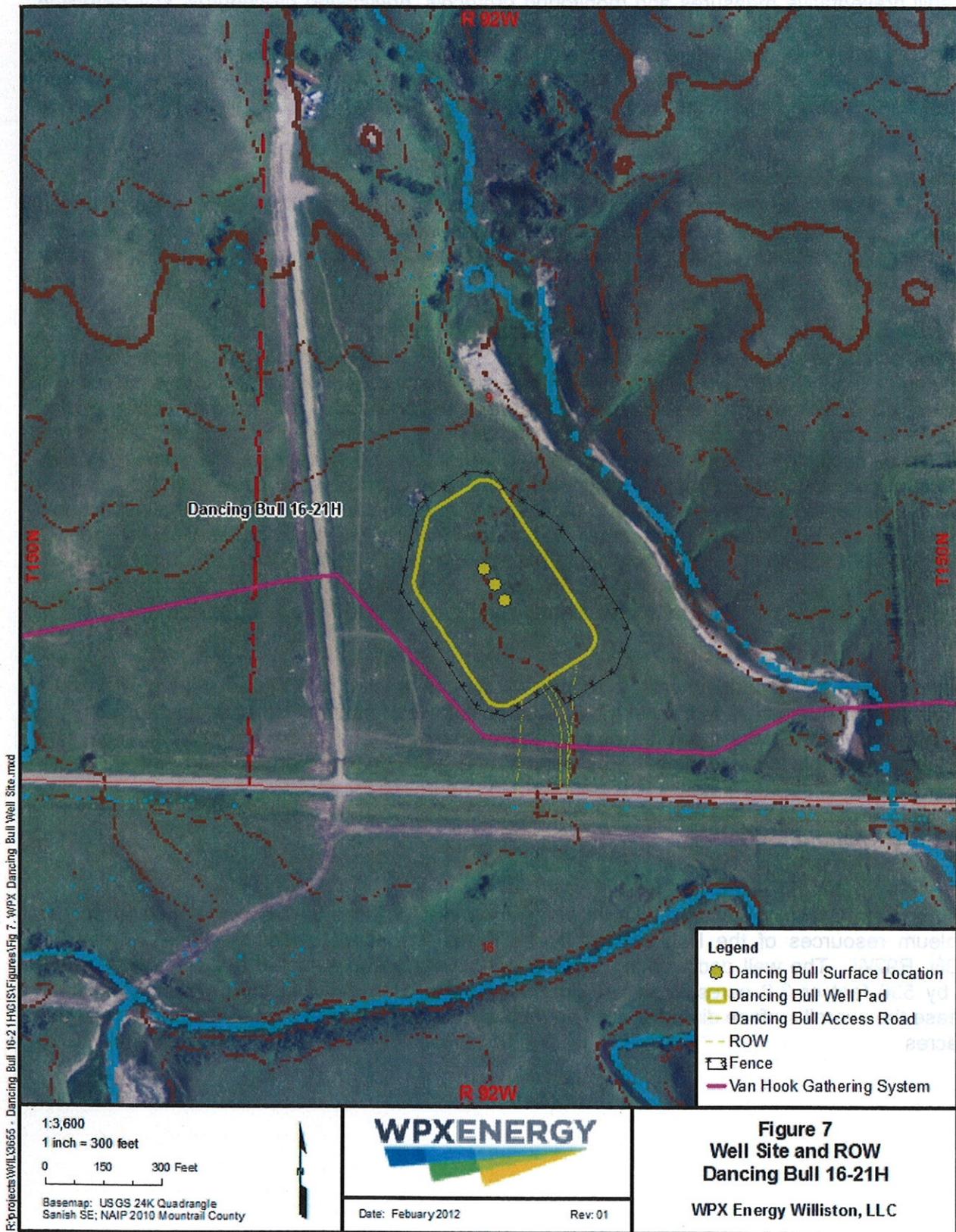
The natural gas and produced water pipelines will be constructed with high density polyethylene (HDPE) pipe manufactured with resin 4710. The polyethylene material is not subject to corrosion from reaction with the natural gas or water so no external or internal coating or cathodic protection is required. The pipes are designed to sustain a maximum pressure of 255 psig and will be air pressure tested to approximately 115% prior to being approved for service.

2.1.12 Site Description(s)

2.1.12.1 Dancing Bull 16-21H

The proposed Dancing Bull 16-21H well site will consist of three well bores, drilled to access petroleum resources of the Bakken and Three Forks formations under Sections 16 and 21, T150N, R92W. The well pad working surface will initially be constructed to approximately 330 feet by 530 feet or 3.8 acres in size (Figure 7). Construction activities and soil stockpiles will increase the overall surface disturbance. The total surface use (fenced area) will be approximately 5.6 acres

Figure 7. Dancing Bull 16-21H Well Site and ROW



An 18-inch containment berm will be constructed on top of the pad site to contain surface runoff during drilling and for the life of the well. Topsoil from the site will be stripped at a depth of six inches and stockpiled on the northeast and southeast sides of the pad. Soil stockpiles will act as a secondary containment berm during drilling. Topsoil will be replaced across the disturbed surface during interim and final reclamation. Site specific Best Management Practices (BMP's) include a shallow diversion ditch to divert water around the site, a containment berm surrounding the pad, and appropriate erosion control measures.

The access road will begin at BIA 6 and proceed northeast to the pad site, approximately 259 feet. An associated pipeline and utility corridor will follow the road alignment and will include oil, natural gas, produced water, and fresh water pipelines along with underground electrical and fiber optic utilities as described in previous sections. Shut off valves will be installed at the pad site for all pipelines. The Dancing Bull 16-21H lateral pipelines will connect to the VHGS.

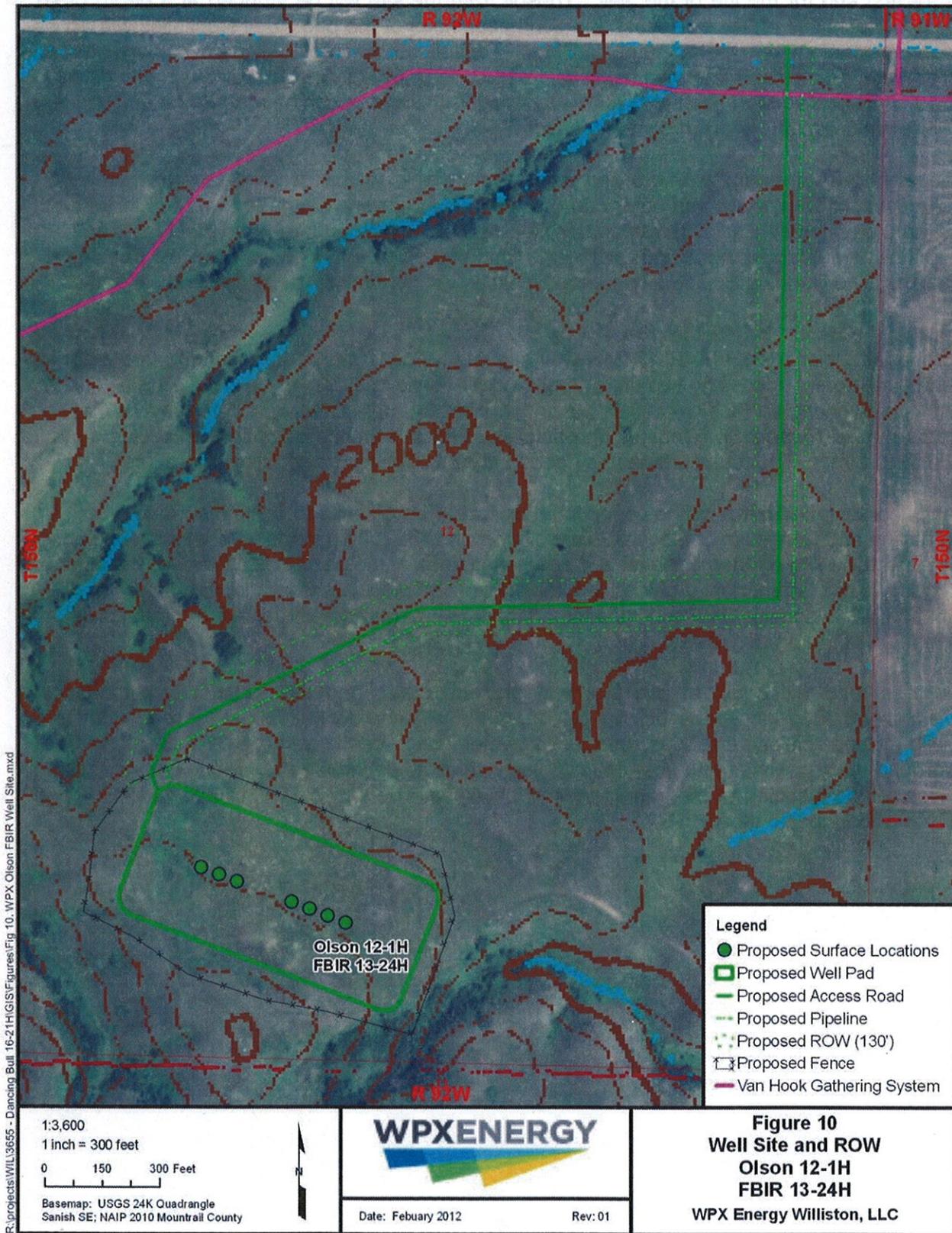
2.1.12.2 Olson 12-1H/FBIR 13-24H

The proposed Olson 12-1H/FBIR 13-24H well site will be constructed to accommodate facilities for seven well bores, accessing two drilling units under sections 1, 12, 13, and 24, T150N, R92W. The well pad working surface will initially be constructed to approximately 355 feet by 780 feet or 6.3 acres in size (Figure 8). Construction activities and soil stockpiles will increase the overall surface disturbance. The total surface use (fenced area) will be approximately 10.1 acres.

A 48-inch containment berm will be constructed on top of the pad site to contain surface runoff during drilling and for the life of the well. Topsoil from the site will be stripped to a depth of eight-inches and stockpiled on the northeast and southeast sides of the pad. Soil stockpiles will act as a secondary containment during drilling with topsoil redistributed during interim and final reclamation. Site specific BMP's include the containment berm and erosion control measures identified during the on-site review.

The access road will begin at BIA 602 and proceed south and then west to the pad site, approximately 3,260 feet. An associated pipeline and utility corridor will follow the road alignment and will include oil, natural gas, produced water, and fresh water pipelines along with underground electrical lines and fiber optic cables utilities as described in previous sections. Shut off valves will be installed at the pad site for all pipelines. The Olson 12-1H/FBIR 13-24H lateral pipelines will connect to the VHGS.

Figure 8. Olson 12-1H/FBIR 13-24H Well Site and ROW



R:\projects\WIL\13655 - Dancing Bull 16-21H\GIS\Figures\Fig 10. WPX Olson FBIR Well Site.mxd

2.1.13 Interim Reclamation

If commercial production equipment is installed, best faith efforts will be made to reduce the size of the well pad to approximately half of the original size. Re-contouring and interim reclamation of disturbed areas will be accomplished within six-months after construction is completed, and no later than by the next appropriate planting season (fall or spring). Interim site reclamation plans after well drilling completions will reduce the pad surface sizes to less than half of the size needed for development. No reclamation of cuttings pits will be necessary due to the use of a closed-loop drilling system.

The working area of each well pad and the running surface of the access road will remain surfaced with scoria or crushed rock. Other interim reclamation measures include reduction of the cut and fill slopes, redistribution of stockpiled topsoil, installation of erosion control measures, and reseeding of native species as recommended by the BIA.

2.1.14 Final Reclamation

Final reclamation will occur within six months if the proposed well is commercially unproductive, or later upon final abandonment of commercial operations. All disturbed areas will be reclaimed, reflecting the BIA view of oil and gas exploration and production as temporary intrusions on the landscape. All above ground facilities will be removed, well bores will be plugged with cement and dry hole markers will be set. Access roads and work areas will be leveled or backfilled as necessary, scarified, re-contoured and re-seeded.

Decommissioning of the pipelines and utilities will also result in mandatory final reclamation of the ROW. Due to economic costs and additional environmental disturbance associated with excavation and removal, pipelines will be purged with water to remove hydrocarbons, and then abandoned in place.

Weather conditions will determine final reclamation timing. The disturbed area(s) in grassland locales will be re-seeded with certified, weed-free seed mixtures established by the BIA. Native species will be used to the extent possible and seeding and planting will comply with BIA and BLM regulations to ensure successful reclamation. Disturbed areas in cultivated fields will not require re-seeding, reverting back to agricultural use.

Long term monitoring will be required to ensure successful reclamation and implementation of any necessary remedial efforts. 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. Figure 9 and Figure 10 (from the Gold Book) show a typical site that was constructed and reclaimed.

Disturbed areas will be monitored to identify areas of excessive erosion, subsidence, or invasion of noxious weeds. Periodic monitoring will be performed and repeated reclamation efforts will be undertaken in problem areas until the BIA has certified the reclamation is successful. Successful reclamation is defined by the BIA to include the following observable factors: 1) reproduction of seeded and re-established species; 2) natural invasion of plants from undisturbed adjacent communities; and 3) control or exclusion of noxious weeds.

The BIA has developed a weed management plan to facilitate the treatment of known and likely noxious/invasive weed species. If seeding is not successful within two growing seasons, the BIA may require extra efforts to stabilize the site, such as matting the entire affected area, or using a mix of rapidly growing forbs and annual grasses, followed by reseeding with grasses, forbs, and shrubs with rapidly expanding, deep root systems.

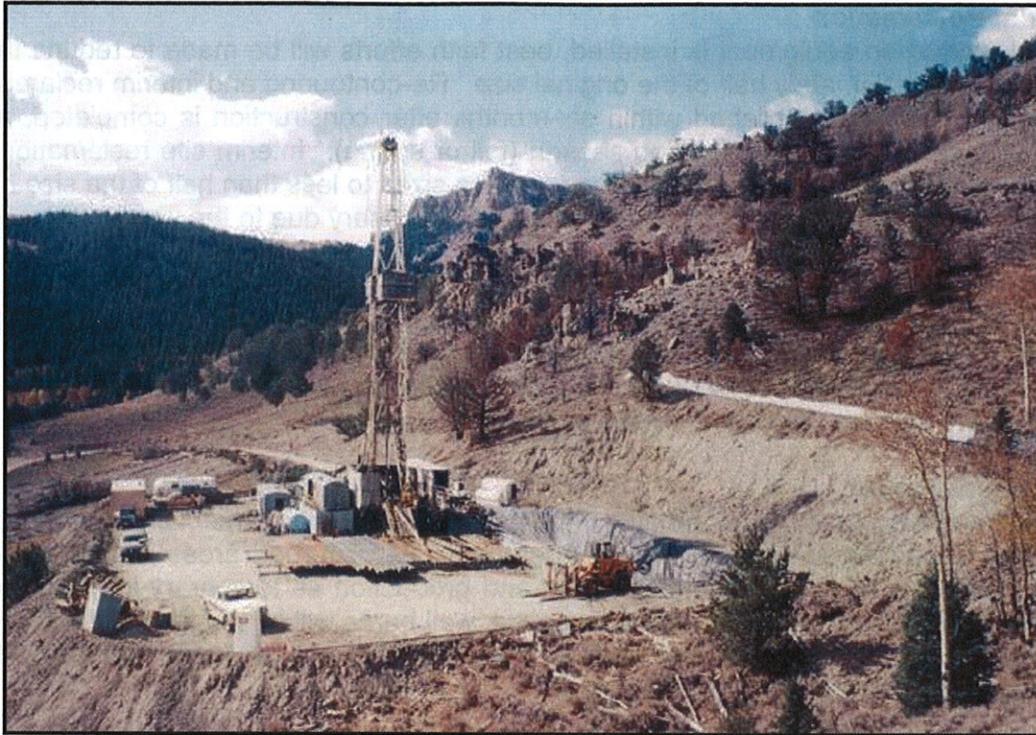


Figure 9. Typical well pad during operation.

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

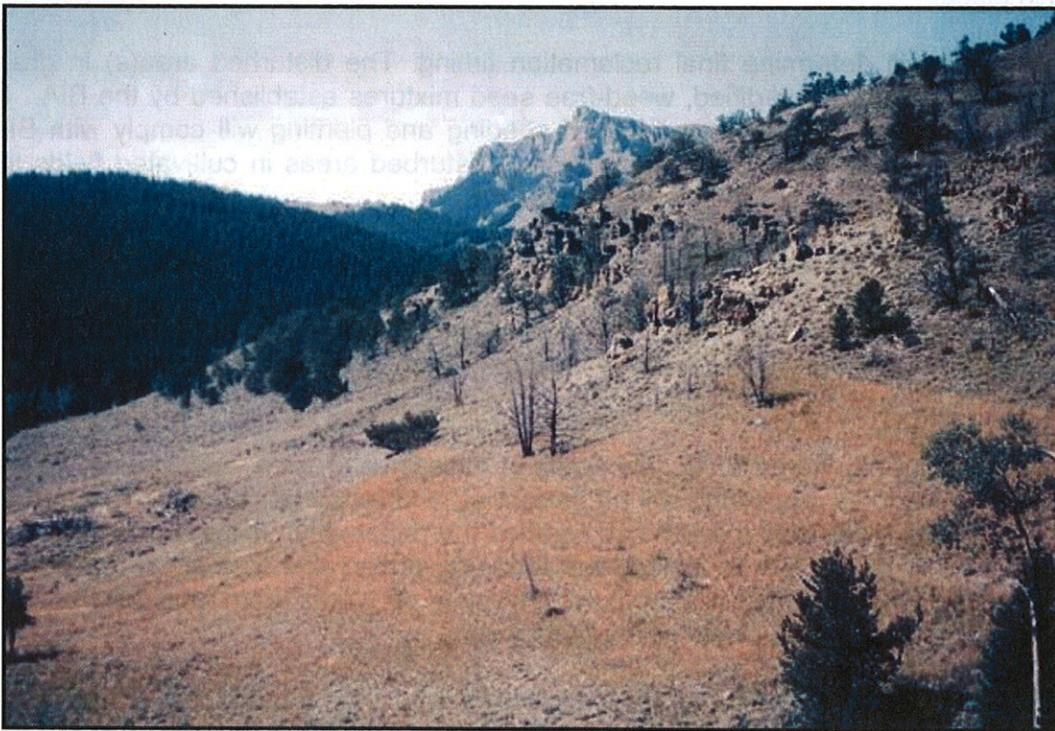


Figure 10. Well pad after reclamation.

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

2.2 The No Action Alternative

The No Action Alternative must be considered within an EA. If this alternative were selected, the BIA will not approve leases, rights-of-way, or other administrative proposals for the proposed project. The project, as proposed, will not be constructed and neither the benefits nor the impacts outlined in this EA will be realized.

3.0 The Affected Environment and Potential Impacts

The FBIR is the home of the Three Affiliated Tribes of the MHA Nation. Located in west-central North Dakota, the FBIR 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-members. 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 wells and access roads are 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 and Three Forks Formations are a well-known source of hydrocarbons targeted by the proposed project. Although earlier oil/gas exploration activities within the Reservation were limited and commercially unproductive, recent economic and technological advancement have created feasible access to these formations.

The Reservation is within the northern Great Plains ecoregion, which consists of four physiographic units:

- Missouri Coteau Slope north of Lake Sakakawea;
- Missouri River Trench (not flooded);
- Little Missouri River Badlands; and
- Missouri Plateau south and west of Lake Sakakawea

Much of the Reservation is located on the Missouri Coteau Slope and is comprised of a glaciated gently rolling landscape. Elevations of the Reservation range from 1,838 feet at Lake Sakakawea to over 2,600 feet on Phaelan's Butte near Mandaree. Annual precipitation averages between 15 to 17 inches. Mean temperatures fluctuate between -3° and 21°F in January and between 55° to 83° in July, with 95 to 130 frost-free days each year (Bryce et al. 1998; High Plains Regional Climate Center 2008).

The proposed well sites and spacing units are in a rural area consisting primarily of grassland, shrubland, and cropland that is currently farmed, idle or used to graze livestock. The landscape has been previously disturbed by dirt trails and gravel and paved roadways.

The specific well pad locations were determined at on-site inspections by the proponent, the BIA Environmental Specialist, land surveyors, archeologists, the Tribal Historic Preservation Office (THPO) monitor and the environmental consultant. Resource surveys were conducted at the time of on-site inspections to determine potential affects to cultural, biological, and physical resources such as topography, natural drainage and erosion control, location of topsoil and subsoil stockpiles, flora, fauna, and wildlife habitat. The Dancing Bull 16-21H location was evaluated on October 26, 2011. The Olson 12-1H/FBIR 12-24H location was evaluated on October 10, 2011.

The broad definition of 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 Proposed Action. Impacts may be beneficial or detrimental, direct or indirect, and short-term or long-term. The 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. After consideration of the no-action alternative, existing conditions and potential impacts from proposed projects are described below.

3.1 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 proposed well sites. 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 these three stations. Table 2 summarizes federal air quality standards and available air quality data from the three-county study area.

Table 2. Summary of Federal Air Quality Standards and Available Air Quality Data

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	0.3	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

North Dakota was one of 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 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 air shed at nearby Theodore Roosevelt National Park (TRNP). TRNP covers three units of approximately 110 square miles within the Little Missouri National Grassland between Medora and Watford City. The nearest unit, (TRNP North Unit) and is located 30-40 miles west of the proposed projects. The reservation can be considered a Class II attainment air shed, which affords it a lower level of protection from significant deterioration.

The proposed projects are similar to other nearby previously approved and installed projects. Construction, drilling, and tanker traffic will generate temporary, intermittent, and nearly undetectable gaseous emissions of particulates, SO₂, NO₂, CO₂, and volatile organic compounds. Road dust will be controlled as necessary and other BMPs will be 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 air sheds of the Reservation, state, or TRNP. No laws, regulations or other requirements have been waived; no monitoring or compensatory measures are required.

3.2 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 (ppm), but it has not been found in measurable quantities in the Bakken and Three Forks Formations. Before reaching the Bakken, however, drilling will 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 implemented include automated sampling and alarm systems operating continuously at multiple locations on the well pad.

Satellite imagery was used to identify occupied homes within one and five-miles of the proposed well sites (Table 3). There are 10 permanent occupied homes located within one-mile of the proposed well sites and 27 permanent occupied homes located within five-miles. Pouch Point Recreation Area contains housing units but are seasonal and not within line of sight of the proposed projects.

Table 3. Distance and Location of Residences

Well Name	Nearest residence	Occupied Residences within 1 mile	Occupied Residences within 5 miles*
Dancing Bull 16-21H	2,260' Southeast	4	27
Olson 12-1H/FBIR 13-24H	2,330' Northwest	6	19

* does not include 77 seasonal residences

Impacts from construction will be largely temporary. Noise, fugitive dust, and traffic hazards will be present during the construction, drilling, and well completion (approximately 60 days) and then diminish quickly during commercial operation. Approximately 50 trips during several days will be needed to transport the drilling rig and associated equipment to each site. The same amount of traffic will be required to dismantle and transport the drilling rig following the completion of the drilling operations.

Natural gas will initially be flared during production and the produced oil and water will be trucked away from the well site. Tanker truck activity depends directly on production of the well and timing of connection to the VHGS. Initially a successful Bakken well usually produces high rates of both oil and water. Upwards of 500 barrels of oil and 100 barrels of water per day might be expected during the initial months of production with production typically decreasing by 50% or more after the initial months. An oil tanker usually hauls 140 barrels and a water tanker holds 110 barrels per load. Four oil tankers and one water tanker may visit each well site per day during the initial months of production. This number will decline as production declines. Established load restrictions for state and BIA roadways will be followed and appropriate haul permits will be acquired. All traffic must be confined to approved routes and conform to load and speed limits.

The EPA specifies chemical reporting 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, and traffic. All operations, including flaring, will conform to instructions from BIA fire management staff. Impacts from the proposed projects are considered minimal, unlikely or insignificant. No laws regulations, or requirements have been waived; no compensatory mitigation measures are required.

3.3 Water Resources

3.3.1 Surface Water

The proposed sites are located on a glaciated upland in the Missouri River Regional Water Basin (Figure 11). Surface water runoff generally starts as sheet-flow until collected by ephemeral drainages leading to Lake Sakakawea. The ephemeral drainages, in turn, combine to form intermittent and/or perennial streams that flow into Lake Sakakawea. Lake Sakakawea is part of the Missouri River sub-regional watershed and is the receiving water for runoff from the land area surrounding the well sites.

3.3.1.1 Dancing Bull 16-21H

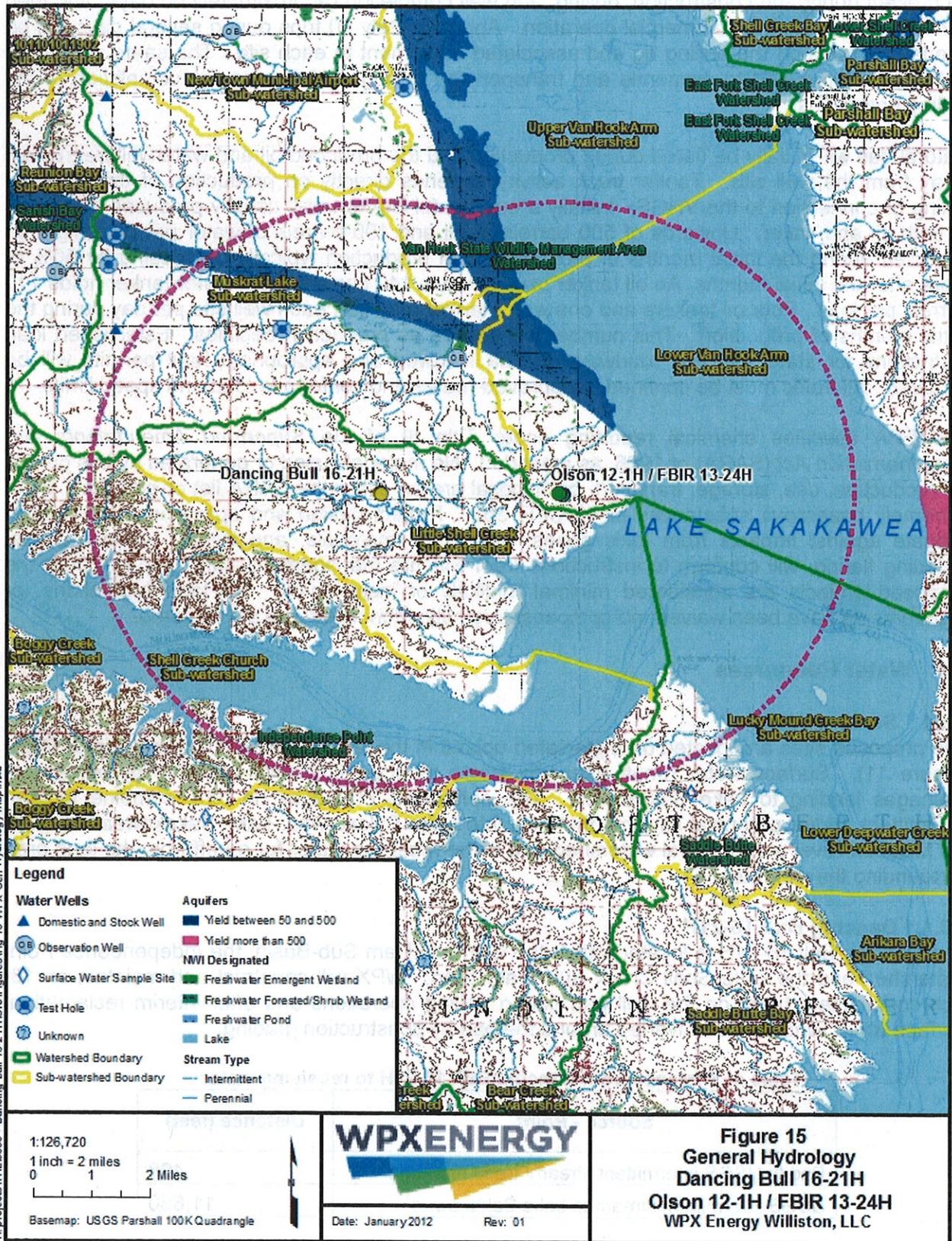
The Dancing Bull 16-21H is located within the Garrison Dam Sub-Basin, the Independence Point Watershed and the Little Shell Creek Sub-Watershed. WPX will construct and maintain an 18-inch containment berm on the well pad during drilling operations and after interim reclamation. Surface water runoff will be diverted around the pad by construction grading.

Table 4. Distance from Dancing Bull 16-21H to receiving water

Source - Point	Distance (feet)
Pad to USGS intermittent stream/ treed drainage	498
USGS intermittent stream to Lake Sakakawea ¹	11,680

¹Lake level based on Mountrail County Aerial Photograph (NAIP 2010) and high water mark

Figure 11. General Hydrology



R:\projects\Will3655 - Dancing Bull 16-21H\GIS\Figures\Fig_15_WPX_Gen_Hydrology_Map.mxd

National Wetland Inventory (NWI) maps prepared and maintained by the USFWS have identified intermittent connected wetlands east of the Dancing Bull 16-21H well site. Wetland positions were evaluated at the on-site visit and it was determined that the wetlands will not be impacted by well development at the proposed site. BMP's will be utilized to prevent potential disturbance of wetlands.

3.3.1.2 Olson 12-1H/FBIR 13-24H

The Olson 12-1H/FBIR 13-24H is located within the Garrison Dam Sub-Basin, the Van Hook State Wildlife Management Area Watershed and the Lower Van Hook Arm Sub-Watershed. WPX will construct and maintain a 48-inch containment berm on the well pad during drilling operations and after interim reclamation. Surface water runoff will be diverted around the pad by construction grading.

Table 5. Distance from Olson 12-1H/FBIR 13-24H to receiving water

Source - Point	Distance (feet)
Pad to USGS intermittent stream/ treed drainage	519
USGS intermittent stream to Lake Sakakawea ¹	4,400

¹Lake level based on Mountrail County Aerial Photograph (NAIP 2010) and high water mark

NWI maps indicate that no wetlands are present at the site. The on-site visits confirmed that no wetlands are present at this site.

3.3.2 Groundwater

The principal uses of ground water in Mountrail County are for domestic and livestock supplies, public supplies, industrial supplies, and irrigation. Most farm units in the area have at least one well for their domestic and livestock uses, but no records are available to accurately determine the quantity of water used. Practically all of the water used for industrial purposes in Mountrail County either is used in connection with the production of petroleum or is obtained from public supplies and no records are kept. The largest use of ground water in the county is for pressure maintenance during well drilling.

Ground water in Mountrail County is obtained from aquifers in the glacial drift of Quaternary age, the Sentinel Butte and Tongue River Formations in the Fort Union Group of Tertiary age, and the Fox Hills Formation, Hell Creek Formation, and the Dakota Group of Cretaceous age. The Dakota Group, Fox Hills Formation, Hell Creek Formation, Fort Union Group, and the glacial drift contain the only aquifers that are presently of economic importance.

The upper part of the Fox Hills Formation and the lower part of the Hell Creek Formation contain about 100 feet of sandstone in an inter-bedded sandstone, siltstone, and shale zone. The sandstone beds in the zone apparently are hydrologically connected and herein are referred to as the Fox Hills-Hell Creek aquifer.

The top of the Fox Hills-Hell Creek aquifer generally ranges from 1,550 to 2,100 feet below land surface (altitude about 300 feet above msl) in the south-central and southwestern parts of Mountrail County. The top of the aquifer is approximately 1,450 to 2,100 feet below land surface (altitude about 550 feet above msl) in the southeastern part of the county.

The Fort Union Group generally underlies the glacial drift at depths of less than 100 feet throughout much of the Coteau Slope and the Drift Prairie, except in the larger ancient buried

valleys. Depths to the Fort Union are commonly more than 100 feet in the Coteau du Missouri area, but many exceptions do exist. The group is subdivided into four formations in some Tongue River and Sentinel Butte Formations

The Tongue River and Sentinel Butte Formations either crop out or immediately underlie the glacial drift in the report area. These units are distinguishable only on the surface in Mountrail County. Individual sand beds in the Tongue River-Sentinel Butte Formations vary greatly in thickness. Most sand beds are less than 10 feet thick, but thicknesses exceeding 100 feet, does occur.

3.3.3 Water Wells and Water Use Permits

There are no domestic or stock water supply wells within five miles of the proposed well sites (Figure 11); however, there are three observation wells and two test wells located within 5 miles of the Dancing Bull 16-21H (Table 6). There is one observation well and one test well located within 5 miles of the Olson 12-1H/FIBR 13-24H.

Table 6. Water Wells Within 5 miles

LOCATION	Distance To Nearest Proposed Well (miles)	Permit Type	Aquifer	Well Depth (feet)	Date
Dancing Bull 16-21H					
NE SE 34 T151N R92W	2.7	Observation Well	White Shield	200	8/6/1966
NE NE 31 T151N R92W	3.3	Test Well	Unknown	60	7/18/1967
SE NE 30 T151N R92W	3.9	Observation Well	Unknown	240	6/4/1992
SE SE 27 T151N R93W	4.2	Test Well	Unknown	220	7/18/1967
SW SE 24 T151N R93W	5.0	Observation Well	Unknown	260	6/3/1992
Olson 12-1H/FBIR 13-24H					
NE SE 34 T151N R92W	2.9	Observation Well	White Shield	200	8/6/1966
SE SE 27 T151N R93W	4.3	Test Well	Unknown	220	7/18/1967

Source: ND State Water Commission 2009

Water quality will be protected by drilling with fresh water to a point below the base of the Fox Hills Formation, implementing proper hazardous materials management, and using appropriate casing and cementing. Drilling will proceed in compliance with *Onshore Oil and Gas Order 2, Drilling Operations* (43 CFR 3160). If cement circulation is lost, a cement bound log will be required by BLM to ascertain if remedial cementing is required to provide an adequate seal between casing and strata. Surface casing will be cemented in place to a depth of approximately 2,500 feet, isolating aquifers in the Fox Hills Formation and extending a minimum of 50 feet into the underlying Pierre shale. Intermediate casing will extend from the surface and cemented as needed to isolate potentially productive water and hydrocarbon-bearing zones.

Seepage and infiltration of hazardous materials from the sites are considered unlikely due to the use of closed-loop drilling system (pit-less). There will be no other pits or lagoons. Impacts to shallow aquifers from surface activities and spills will also be minimized or managed by implementation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan. Produced water will be stored in tanks on site and periodically trucked to an approved disposal site until connection to the VHGS.

Evidence of groundwater contamination related to the project will result in a stop work order until appropriate measures are identified and implemented. These and other construction and reclamation techniques included in the APD will minimize the potential for impacts to both surface water and groundwater. No significant impacts to surface water or groundwater are expected because of the proposed action. No applicable laws or regulations will be waived; no compensatory mitigation measures are required to protect surface water or groundwater. The BIA and the BLM will monitor operations and review site records at their discretion.

3.4 Wildlife and Habitat

3.4.1 Species of Concern

Assessments for Federally listed threatened and endangered species and candidate species were conducted by evaluating historic and present occurrences by determining if potential habitat exists within the project area. Scoping letters were sent to the US Fish and Wildlife Service (USFWS), North Dakota Game and Fish Department (NDGFD), the BLM and the North Dakota Parks and Recreation Department - Natural Heritage Inventory (NDPRD) concerning wildlife and habitat impact concerns (Appendix A). Consultation and comments received are presented in Appendix B. All concerns have been considered and mitigation measures have been incorporated throughout this EA.

Currently, seven species and one Designated Critical Habitat is listed as potential in Mountrail County, North Dakota (Table 7).

Table 7. Mountrail County Threatened, Endangered, and Candidate species and Designated Critical Habitat

Species	Status
Interior Least Tern	Endangered
Whooping Crane	Endangered
Pallid Sturgeon	Endangered
Gray Wolf	Endangered
Piping Plover	Threatened
Sprague's Pipit	Candidate
Dakota Skipper	Candidate
Designated Critical Habitat - Piping Plover	

¹ USFWS (March, 2012)

3.4.2 Species Assessments

Assessments for Federally listed threatened, endangered species were conducted by evaluating historic and present occurrences and by determining if potential habitat exists within the project area. A determination was made concerning direct and cumulative effects of the proposed activities on each species and habitat. Determinations made for federally listed species are:

- No effect
- May affect, but is not likely to adversely affect
- May affect, and is likely to adversely affect
- Is likely to jeopardize a proposed species or adversely modify critical habitat
- Is not likely to jeopardize a proposed species or adversely modify critical habitat

Determinations concerning direct and cumulative effects of the proposed activities on each species and their habitat are presented below. The USFWS issued a determination of concurrence with the determinations of affects below and is included in Appendix D.

3.4.2.1 Gray Wolf

Gray wolves, an Endangered Species in North Dakota, were historically found throughout much of North America including the Upper Great Plains. Human activities have restricted their present range to the northern forests of Minnesota, Wisconsin, and Michigan and the Northern Rocky Mountains of Idaho, Montana, and Wyoming. They now only occur as occasional visitors in North Dakota. The most suitable habitat for the gray wolf is found around the Turtle Mountains region where documented and unconfirmed reports of gray wolves in North Dakota have occurred (Grondahl and Martin, no date). Due to the transient nature and there are no recent recorded sightings in the area the proposed project **may affect, is not likely to adversely affect** this species.

3.4.2.2 Interior Least Tern

The interior least tern nests on midstream sandbars along the Yellowstone and Missouri River systems. Interior least terns construct bowl-shaped depression nests on sparsely vegetated sandbars and sandy beaches. Their nesting period occurs between mid-May through mid-August. During the nesting season the least tern has been documented to travel 7.5-miles or more from the lake to forage in wetlands. The Dancing Bull 16-21H well site is located approximately 2.6 miles from and not within line-of-sight of the Missouri River system shoreline. The pad site will not impact any wetlands and BMP's will be employed to protect adjacent drainages and the lake. The Olson 12-1H/FBIR 13-24H well site is located approximately one mile from and is within direct line-of-sight of the Missouri River system shoreline. No individual terns were observed in the area during the on-site visit at either site. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** this species.

3.4.2.3 Pallid Sturgeon

Pallid sturgeon are found in the Mississippi, Missouri, and Yellowstone River systems and are adapted for living close to the bottom of large, shallow rivers with sand and gravel bars. Pallid sturgeon populations in North Dakota have decreased since the 1960's (Grondahl and Martin no date). The proposed Dancing Bull 16-21H well site is approximately 2.6 miles from the Missouri River system (Lake Sakakawea). The proposed Olson 12-1H/FBIR 13-24H well site is one mile from the Missouri River system. . A closed-loop (pit-less) drilling system will be used at this site and BMP's will be employed, including a containment berm surrounding the proposed well pad site, Following these guidelines, it is reasonable to expect that the proposed projects will have **no effect** on this species.

3.4.2.4 Whooping Crane

The primary nesting area for the whooping crane is in Canada's Wood Buffalo National Park. Aransas National Wildlife Refuge in Texas is the primary wintering area for whooping cranes. In the spring and fall, the cranes migrate primarily along the Central Flyway. During the migration, cranes make numerous stops, roosting in large shallow marshes, and feeding and loafing in harvested grain fields. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss (Texas Parks and Wildlife 2008).

The proposed well site is located within the Central Flyway. Approximately 75% of the whooping crane sightings in North Dakota occur within a 90-mile corridor that includes the proposed well location. Because collisions with power lines are the primary cause for fledgling mortality, it is BIA directive that any utility lines be constructed underground. Land use in the area is native grasslands and agricultural fields. The pads and access roads are placed in locations that may

have some potential of impacting whooping crane feeding habitat. No individual whooping cranes were observed in the area during the on-site visits.

Construction activities may cause migratory cranes to divert from the area but are not likely to result in fatalities. If a crane is sighted within one-mile of the project area, construction activities in the immediate area will cease and will be immediately reported to the USFWS, the NDGFD, and the BIA. In coordination with the USFWS and the BIA construction will resume once the bird(s) have left the area. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** whooping cranes.

3.4.2.5 Piping Plover and Critical Habitat

Piping plovers are found along the Missouri and Yellowstone River systems on gravel shorelines and sandbars and also on large alkaline wetlands. Nesting sites have been documented on the shorelines of Lake Sakakawea. In addition, critical habitat has been designated along Lake Sakakawea. NDPRD records indicate historic piping plover critical habitat within two miles of the project site but still greater than one-mile.

No individuals were observed in the area during the on-site visit to the sites. The proposed Olson 12-1H/FBIR 13-24H well site is located in pasture lands and approximately one mile from and within direct line-of-sight of the Missouri River system shoreline. The Dancing Bull 16-21H well site is located approximately 2.6 miles from and not within line-of-sight of the Missouri River system shoreline. Applying the aforementioned BMP's, it is reasonable to expect that the proposed projects **may affect, is not likely to adversely affect** this species.

3.4.2.6 Sprague's Pipit

The Sprague's pipit is a ground nesting bird that breeds and winters on open grasslands. It feeds mostly on insects and spiders and some seeds. The Sprague's pipit is closely tied with native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota and South Dakota as well as south-central Canada. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358.3 ac). The species prefers to breed in well-drained, open grasslands and avoids grasslands with excessive shrubs. Preferred grass height is estimated to be between 10 and 30 cm. They may avoid roads, trails, and habitat edges.

The proposed Dancing Bull 16-21H pad site will be developed within a native prairie pasture dissected by drainages; near a private driveway and BIA 6. The pasture was not grazed at the time of the on-site evaluation and vegetation height was moderate to high (>30cm). The proposed Olson 12-1H/FBIR 13-24H pad site will be developed within a mixed grass prairie pasture dissected by treed drainages. The pasture was not grazed at the time of the on-site evaluation and vegetation height was moderate to high (>30cm). Shrub species (hawthorn and chokecherry) and green ash occupy the immediate landscape. Based upon these landscape conditions the proposed activities **may affect, is not likely to adversely affect** this species.

3.4.2.7 Dakota Skipper

Dakota skippers are found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; and 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needle grass, pale purple coneflower and upright coneflowers and blanket flower. Dakota skipper populations have declined historically due to widespread conversion of native prairie.

The proposed Dancing Bull 16-21H pad site will be developed within a native prairie pasture in which needle grasses and coneflowers are present. The proposed Olson 12-1H/FBIR 13-24H pad

site and ROW is proposed to be developed within a mixed grass prairie pasture. This pasture does contain needle grasses, bluestem grasses and coneflower species as well. The overall surface disturbance by these projects will be small in context to the amount of native prairie that is in the immediate area. Based upon these landscape conditions the proposed activities **may affect, is not likely to adversely affect** this species.

3.4.3 Wildlife (General)

Proposed oil and gas development in the area may affect raptor and migratory bird species through direct mortality, habitat degradation, and/or displacement of individual birds. These impacts are regulated in part through the *Migratory Bird Treaty Act* (916 USC 703-711) and the Bald and Golden Eagle Protection Act (BGEPA).

A ground survey for cliff, tree, and ground raptor nests has been conducted within ½-mile of the proposed projects during the on-site reviews. The project areas were also surveyed for migratory bird species. No nests or birds were observed using the area during the on-site review. The timing of the surveys was not within the typical nesting window; therefore, may not be an accurate account of nesting species in the project area. Surveys for migratory birds nests (including raptor) will again be conducted within five-days of construction if portions of the projects are to be constructed during the spring nesting season (February 1 - July 15). If a migratory bird nest is located, the location will be recorded, monitored and documentation will be maintained. The USFWS and BIA will be consulted to determine mitigation measures to avoid disturbance of the nest. Measures may include applying an appropriate avoidance buffer to the nest or delaying construction in that area until the nest is fledged.

Mowing and/or grubbing of suitable nesting habitat in the project area may be done in the fall prior to construction. This discourages migratory birds from establishing territories and nests in the spring following the disturbance.

Table 8 identifies other wildlife that was observed and/or may generally be expected around the proposed site(s). These were confirmed by direct observation or by various signs of wildlife activity. Direct wildlife observations are affected by time of day, time of year, etc.

Table 8. Wildlife (General)

Location	Observed	Suitable Habitat
Dancing Bull 16-21H	None	Mule deer and white-tailed deer, pronghorn antelope, small mammals, sharp-tailed grouse, and a variety of grassland and song birds
Olson 12-1H/FBIR 13-24H	Pocket gopher mounds	Mule deer and white-tailed deer, pronghorn antelope, small mammals, sharp-tailed grouse, and a variety of grassland and song birds

Potential impacts to wildlife include disturbance of habitat by construction of the well pad, construction of a new road, and potential future commercial operations. Minimal to no impacts on listed species are expected due to the low likelihood of their occurrence within the project area. Ground clearing may affect habitat for unlisted species, including small birds, ground dwelling mammals, and other wildlife species. Proposed projects may affect raptor and migratory bird species through direct mortality, habitat degradation, and/or displacement of individual birds. Fragmentation of native prairie habitat is a specific concern for grouse species. High value wildlife habitat will not be compromised by pad construction but there will be an overall loss of grassland cover.

Precautions benefitting all wildlife include:

- Locations overlying or near existing disturbances;
- No open pits or ponds;
- Installation of covers on drip buckets under valves or spigots; and
- Prompt initial reclamation.

Final reclamation will proceed within six months (or the following spring if during winter months) if the well is unproductive, or promptly after a commercial well is decommissioned.

3.5 Soils

The Natural Resource Conservation Services (NRCS) soils data was reviewed prior to the on-site assessment and verified during the field visit. Generally, the wells are located on fine-grained soils with low to moderate erosion potential. The sites are suitable for construction. Sites will be monitored for erosion and BMP's will be placed to control erosion as necessary.

The Dancing Bull 16-21H site (fenced surface use area) and ROW is located on a 0-6% slope comprised of the Williams loams and Williams-Zahl loams according to the NRCS Soils Mapping Units (MUs) of Mountrail County (Table 9). The surface is mixed prairie grassland and the topsoil is approximately six inches deep across the site.

Table 9. Dancing Bull 16-21H Soils

Soil Name	Surface Use Acres	ROW Acres	Total Acres
Williams loams, 0 to 3 percent slopes	2.4	0.2	2.6
Williams-Zahl loams, 3 to 6 percent slopes	2.4	0.7	3.1
Williams-Zahl loams, 6 to 9 percent slopes	0.7	0	0.7

The Olson 12-1H/FBIR13-24H site (fenced surface use area) and ROW is located on a 9-25% slope comprised mostly of the Zahl-Williams loams according to the NRCS MUs (Table 9). Smaller amounts of Williams-Zahl loams and Zahl-Max complex are found along the ROW and at the edge of the expected disturbance area, respectively. The surface is mixed prairie grassland and the topsoil is approximately eight-inches deep across the site.

Table 10. Olson 12-1H/FBIR13-24H Soils

Soil Name	Surface Use Acres	ROW Acres	Total Acres
Zahl-Williams loams, 9 to 25 percent slopes	9.5	4.8	14.3
Williams-Zahl loams, 6 to 9 percent slopes	0	3.0	3.0
Williams-Zahl loams, 3 to 6 percent slopes	0	1.8	1.8
Zahl-Max loams, 25 to 60 percent slopes	0.6	0	0.6

3.6 Vegetation and Noxious Weeds

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 Mountrail County describe vegetation within proposed project areas 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, little bluestem, blue grama, side-oats grama, green needlegrass, and western wheatgrass. Typical wetland plants are smartweed, sedge species, bulrush, bluejoint and cattail. Woody draws, coulees, and drainages may host communities of chokecherry, buffalo berry, western snowberry and gooseberry.

The proposed Dancing Bull 16-21H pad site is located on a gentle southeast slope within a native prairie community (Figure 12 and Figure 13). Western wheatgrass (*Agropyron smithii*), blue grama (*Bouteloua gracilis*), and prairie junegrass (*Koeleria pyramidata*) are the dominant grasses. Forbs and shrubs mixed across the landscape included yellow sweet clover (*Melilotu sofficinalis*), buckbrush (*Symphoricarp osoccidentalis*), fringed sagebrush (*Artemisia frigid*), purple coneflower (*Echinacea angustifolia*), Silver leaf scurfpea (*Psoralea argophylla*). The invasive Kentucky bluegrass (*Poa pratensis*) and crested wheatgrass (*Agropyron cristatum*) are prevalent in the northwest corner near a previously disturbed area (farmstead).



Figure 12. Dancing Bull 16-21H General Appearance

The proposed well site is located on a southeast sloping plateau of native prairie pasture. Photograph taken facing west across the site.



Figure 13. Access Road, Pipeline and Utility ROW

Photograph taken from BIA 6 toward the proposed Dancing Bull 16-21H well site.

The proposed Olson 12-1H/FBIR 13-24H pad site is located within a rolling mixed grass prairie community (Figure 14Figure 15). A mostly native mix of needle-and-thread (*Stipa comata*), thread-leaf sedge (*Carex filifolia*), porcupine grass (*Stipa spartea*), western wheatgrass (*Agropyron smithii*), and Big bluestem (*Andropogon gerardii*) is found on the hillside near the west edge of the pad. Purple coneflower (*Echinacea angustifolia*) and white sage (*Artemisia ludoviciana*) are the prominent forbs found in the area. Near the eastern edge of pad and along the proposed ROW, Kentucky bluegrass is mixed with smooth brome (*Bromus inermis*), and western wheatgrass. Forbs and shrubs mixed across the landscape included buckbrush, yellow sweet clover, Missouri goldenrod (*Solidago missouriensis*) and purple coneflower. Drainages with Green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus Americana*) and hawthorne (*Crateagus spp.*) flank the proposed pad site but will not be disturbed.



Figure 14. Olson 12-1H/FBIR 13-24H General Appearance

The proposed well site is located on a northeastern sloping plateau of mixed prairie pasture. Photograph taken facing north across the site from the south edge of the pad.



Figure 15. Access Road, Pipeline and Utility ROW

Photograph taken from BIA 602 facing along the proposed ROW. The ROW route crosses previously cultivated mixed grass prairie to the pad.

3.6.1 Noxious Weeds

The North Dakota Agriculture Commission (ND Department of Agriculture, 2010) identifies twelve noxious weed plant species in the state (Table 11). Seven of the twelve noxious weed species have been reported in Mountrail County. Absinth wormwood, Canada thistle, field bindweed, leafy spurge, musk thistle, salt cedar, spotted knapweed, Russian knapweed and yellow star thistle are known to occur (ND Department of Agriculture 2010). No noxious weeds were observed at the on-site assessment.

Table 11. Noxious weeds known to occur in Mountrail County

Common Name	Scientific Name	2010 Reported Acres of Noxious Weeds
Absinth wormwood	<i>Artemisia absinthium</i>	545
Canada thistle	<i>Cirsium arvense</i>	1,675
Dalmatian toadflax	<i>Linaria genistifolia</i>	NR
Diffuse knapweed	<i>Centaurea diffusa</i>	NR
Leafy spurge	<i>Euphorbia esula</i>	7,550
Musk thistle	<i>Carduus nutans</i>	NR
Purple loosestrife	<i>Lythrum salicaria</i>	NR
Russian knapweed	<i>Acroptilon repens</i>	NR
Saltcedar	<i>Tamarix spp.</i>	NR
Spotted knapweed	<i>Centaurea maculosa</i>	140
Yellow toadflax	<i>Linaria vulgaris</i>	175

North Dakota Department of Agriculture 2010

Potential disturbance of up to 26.2 acres presents opportunities for invasive species and threatens to reduce the quality or quantity of forage or crop production. The APD and this EA require the operator to control noxious weeds throughout project areas. 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 the approved ROW or the fenced area of the well pad. Areas stripped of topsoil must be re-seeded and reclaimed at the earliest opportunity and within six months. Certified weed-free straw and seed must be used for 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.

3.7 Cultural Resources

Historic properties, or 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. Cultural resources is a broad term encompassing sites, objects, or practices of archaeological, historical, cultural and religious significance. 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). Thus, BIA consults and corresponds with the THPO regarding cultural resources on all projects proposed within the exterior boundaries of the Fort Berthold Reservation.

Cultural resource inventories of these well pads and access roads were conducted by personnel of SWCA Environmental Consultants, using an intensive pedestrian methodology. For the Dancing Bull 16-21HC/Dancing Bull 16-21HZ/Dancing Bull 16-21HD project approximately 20.84 acres were inventoried between October 21 and 25, 2011 (Leroy 2012) and for the Olson 12-1HX/Olson 12-1HC/Olson 12-1HY/Olson 12-1HD & FBIR 13-24HC/FBIR 13-24HZ/FBIR 13-24HD project approximately 54.98 acres were inventoried between October 10, 2011 and February 3, 2012 (Reinhart and Herson 2012). Two archaeological sites were located, one of which may possess the quality of integrity and meet at least one of the criteria (36 CFR 60.6) for inclusion on the National Register. 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 these undertakings, as the archaeological sites will be avoided. This determination was communicated to the THPO on March 9, 2012; however, the THPO did not respond within the allotted 30 day comment period.

If cultural resources are discovered during construction or operation, the operator shall immediately stop work, secure the affected site and notify BIA and THPO. Unexpected or inadvertent discoveries of cultural resources or human remains trigger mandatory federal procedures that include work stoppage and BIA consultation with all appropriate parties. Following any such discovery, operations will not resume without written authorization from the BIA. **Project personnel are prohibited from collecting any artifacts or disturbing cultural resources in the area under any circumstances. Individuals outside the right-of-way are trespassing.** No laws, regulations, or other requirements have been waived; no compensatory mitigation measures are required.

3.8 Socio-economics

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 the majority 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 12. 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.

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).

Table 12. 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.

As shown in Table 13, 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-member 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 of tribal members is 22% compared to 11.1% for the reservation as a whole and 4.6% statewide.

Availability and affordability of housing can affect oil and gas development and operations. Housing information from the year 2000 is summarized in Table 14. The tribal Housing Authority manages a majority of the housing units within the reservation. Housing typically consists of 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 13. 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	--	--	22%	33%	Unknown
Fort Berthold Reservation	\$10,291	\$26,274	11.1%	--	Unknown
Mountrail	\$29,071	\$34,541	5.8%	--	15.4%

County					
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.

The proposed projects are not expected to have measurable impacts on population trends, local unemployment rates or housing starts. Relatively high-paying construction jobs will 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 actions will require temporary employees during the well construction cycle and one to two full-time employees from the long-term production cycle. Short-term construction employment will provide some economic benefit. Long-term commercial operations will provide significant royalty income and indirect economic benefits.

Table 14. Housing

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

Source: U.S. Census Bureau 2007 and 2008

3.9 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 environment 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.

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 the 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-benefitting allottees. The absence of lease and royalty income does not, moreover, preclude other benefits. Exploration and development will 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 case, surface owners do not receive oil and gas lease or royalty income and their only income will be compensatory for productive acreage lost due to road and well pad construction. Tribal members without either surface or mineral rights will not receive any direct benefits whatsoever. Indirect benefits of employment and general tribal gains will 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 effect to historic properties. Research and survey has found nothing to be impacted at either well pad that qualifies as a traditional cultural property (TCP) 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, vegetation, or soils – within the human environment. 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 mitigations measures are required.

3.10 Irreversible and Irretrievable Commitment of Resources

Removal and consumption of oil and/or gas from the Bakken and/or Three Forks Formation will 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.

3.11 Short-Term Use versus Long-Term Productivity

Short-term activities will not detract significantly from long-term productivity of the project areas. The small areas dedicated to the access roads and well pads will be unavailable for livestock grazing, wildlife habitat, and other uses. Allottees with surface rights will be compensated for loss of productive acreage. Project footprints will shrink considerably once the wells are drilled, the pipelines and utilities installed and the area is reclaimed and reseeded. Successful and ongoing reclamation of the landscape will 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 and Three forks Formations.

3.12 Cumulative Impacts

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that is the focus of the cumulative impact analysis. While impacts can be differentiated as direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time. Thus, the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource no matter what entity (federal, non-federal, or private) is taking the actions. 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. There are other impacts, however, that cumulatively may be greater than the sum of the individual projects.

The landscape and vegetation of the Great Plains have undergone continual transformations due to the influences of nature and human actions. Cumulative effects have occurred as a loss and alteration of habitats caused by cultivation, range management practices, fire suppression, exotic species introductions, resource development, and other practices. Past and current disturbances near the proposed project include farming, grazing, roads, and other oil/gas development. Virtually all-available acreage is already organized into agricultural leases or range units to utilize surface resources for economic benefit.

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 and Three Forks Formation and has accelerated within the reservation boundary the last three years. The proposed projects are one of various proposed developments in the area. As such, it will contribute only a portion of the cumulative impacts. In some instances, the cumulative impact on the environment of the proposed project and oil/gas development activities will be the sum of the individual impacts from each project in the region.

Perimeters of 1, 5, 10, and 20 miles around the proposed well sites were evaluated to determine the level of oil and gas activity in the surrounding area, as shown in Table 15 and in Figure 16. There are now 39 active wells within five miles of the sites considered in this document with at least 34 confidential sites in the area as reported by the NDIC. The immediate area is currently being developed by WPX and other producers. Within ten miles, there are currently 183 active wells with another 72 proposed. Within 20 miles, there are approximately 1,168 total oil and gas

wells in various stages of development or production, with ever-increasing development within the FBIR boundaries.

Table 15. Oil and Gas Well Status in Area

Distance from Well Sites	Active Wells	Proposed Wells (Confidential)	Permitted to Drill	Currently Drilling	Totals
Dancing Bull 16-21H and Olson 12-1H/FBIR 13-24H					
0-1 miles	6	7	0	0	13
1-5 miles	39	34	0	1	73
5-10 miles	183	72	5	11	272
10-20 miles	520	215	33	42	810
Cumulative Total (20-mile radius)	748	328	38	54	1168
Fort Berthold Reservation	471	291	17	34	813

Source: NDIC O/G Well Status – May 7, 2012

Commercial success at any new well might result in additional oil/gas exploration proposals, but such developments are speculative at this time. WPX has numerous wells in various stages of development, in the planning process or in the application process. Such developments will rely wherever possible on shared roads, expanding pads to accommodate multiple wells, centralized and downsized facilities, and other opportunities to reduce surface disturbance and impacts to the human environment. WPX is developing a gas, oil, and produced water gathering system and a fresh water delivery system to connect wells planned for development in the area. The development of this VHGS will reduce the amount of oil field truck traffic on the Sanish Peninsula over the life of the oil field.

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.

There will be ground-disturbing activities to lands that have not been previously cultivated or otherwise physically manipulated. The proposed well sites will disturb a portion of native prairie rangelands. Current land uses are expected to continue with little change other than the acreage required for road and pad construction. Increased truck traffic on adjacent roadways can be expected and has a documented negative, but manageable, impact on road conditions.

The proposed actions have been planned to avoid impacts to wetlands, floodplains, surface water, cultural resources, and threatened and endangered species. Unavoidable affects to these or other resources will be minimized and/or mitigated as described in this document. The operator of any facility will be required to reclaim disturbed areas following construction and completion. Implementation of other precautionary and protective measures detailed in this EA and applicable regulations are expected to minimize impacts to critical elements of the human environment. Foreseeable impacts from the proposed projects are expected generally to be temporary, manageable, and/or insignificant. Cumulative impacts over the entire Bakken basin have not been assessed. No cumulative impacts are reasonably foreseen from the proposed activities, relative to the existing scale of development.

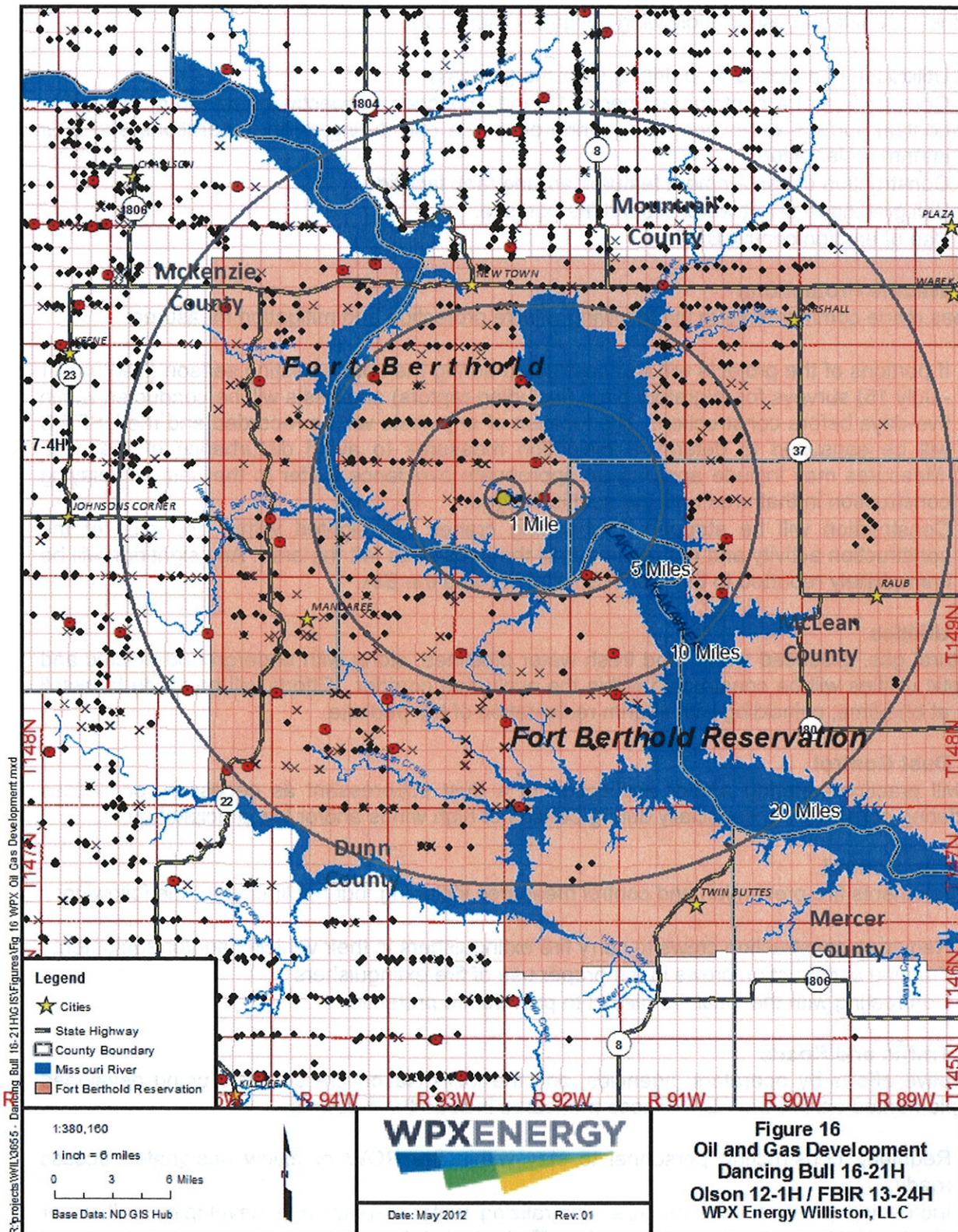
3.13 Mitigation and Commitments by WPX

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.

Resource surveys were conducted at the time of on-site inspections to determine potential affects to cultural and natural (i.e., biological and physical) resources. The locations were inspected in consideration of topography, location of topsoil/subsoil stockpiles, natural drainage and erosion control, flora, fauna, habitat, historical and cultural resources, and other surface issues. The final locations were determined in consideration of these issues.

Avoidance measures and other protective measures were incorporated into the final project design to minimize impacts to evaluated resources, as appropriate. Those measures are presented here and will be incorporated in the Permit to Construct.

Figure 16. Oil and Gas Development



3.13.1 Site Specific Spill Prevention and BMP's

WPX has committed to use the following mitigation measures:

- Utilization of a closed-loop drilling systems (pit-less)
- Construction of a containment berm (18 and 48 inches, respectively) on top of the pad to contain surface water from transferring off of the pad during drilling operations and after interim reclamation.
- Construction of containment features around tank facilities.
- Soil grading to divert water around the pad site.
- Use of erosion control BMPs.

3.13.2 Wildlife Protections

WPX has made commitments to the following wildlife protection and mitigation measures:

- If portions of the projects will be constructed during the spring nesting season (February 1 - July 15) surveys for migratory birds (including raptors) and nests will be conducted within five-days before construction. The location of any nests will be recorded and the USFWS will be consulted to determine mitigation measures to avoid disturbance of the nest. Measures may include applying an appropriate avoidance buffer to the nest or delaying construction in that area until the nest is fledged.
- Construction will be stopped if whooping cranes are sighted within one mile of the construction activity and not resume until the birds have left the area. Any sightings will be immediately reported to the USFWS, NDGFD, and the BIA.

3.13.3 Utilities

Oil, natural gas, produced water, and fresh water pipelines, along with underground electric and fiber optic utilities will be constructed within the evaluated corridor. Efforts will be made to install utilities at one time; coinciding with interim reclamation of the pad site.

3.13.4 Dust Control

WPX will practice watering and/or application of a dust suppressant as necessary on access roads during construction, especially during periods of high winds and/or low precipitation.

3.13.5 Fire Control

WPX implements fire prevention and control measures including, but not limited to, the following:

- Requiring construction crews to carry fire extinguishers in their vehicles and/or equipment.
- Training construction crews in the proper use of fire extinguishers.
- Contracting with the local fire district to provide fire protection.

3.13.6 Traffic and Roads

Cooperative efforts by operators, agencies, and the MHA Nation are currently being developed and implemented across the FBIR. These measures include the following:

- Requiring construction personnel to stay within the ROW or follow designated access roads.
- Increasing pipeline infrastructure, centralizing water depots, and developing salt water disposal wells to reduce overall truck traffic and road degradation.
- Utilizing Tribal TERO fees for oil and gas activities, TAT Tribal funds, and IRR funds to increase the pace of maintenance and repair of roads impacted by increased truck traffic and adverse weather conditions.

3.13.7 Cultural Resources

If cultural resources are discovered during construction or operation, the operator shall immediately stop work, secure the affected site and notify the BIA and THPO. Unexpected or inadvertent discoveries of cultural resources or human remains trigger mandatory federal procedures that include work stoppage and BIA consultation with all appropriate parties. Following any such discovery, operations will not resume without written authorization from the BIA. Project personnel are prohibited from collecting any artifacts or disturbing cultural resources in the area under any circumstances. Individuals outside the right-of-way are trespassing.

4.0 Consultation and Coordination

Project scoping letters and maps were mailed on January 17, 2012. Direct mail recipients and a record of comments received are listed in Table 16. An example scoping letter and responses are found in Appendices C and D. A letter stating concurrence of species effect determinations was received from USFWS on February 22, 2012 and is found in Appendix D.

Table 16. Scoping Record

Recipients	Comments
Bureau Of Land Management	No Response
Bureau of Reclamation	Contact FBRWS
Dunn County	No Response
EPA	No Response
FAA Bismarck	No Response
FAA Minneapolis	No Response
FEMA	Consult local MHA Nation DES Director and SWC.
Fort Berthold Rural Water Supply	No Response
McKenzie Ranger District	No Response
McLean County Board of Commissioners	No Response
MHA Nation	No Response
MHA Nation District Rep	No Response
MHA Nation Chairman	No Response
MHA Nation Game & Fish	No Response
MHA Nation Natural Resources Dept.	No Response
MHA Nation THPO	No Response
Montana Dakota Utilities	No Response
Mountrail Board of Commissioners	No Response
National Park Service	No Response
ND DOT	No Response
ND Game and Fish	Avoid loss and fragmentation of native prairie, wooded draws, riparian corridors and wetlands.
ND NRCS	Consult if wetlands are impacted.
NDIAC	No Response
New Town Municipal Airport	No Response
NoDak Electric Cooperative, Inc.	No Response
North Dakota Department of Health	Minimize dust, minimize degradation to waterways, insure proper storm water management.
North Dakota Parks and Recreation Dept.	No species of concern or significant ecological communities within one mile.
Parshall-Hankins Field Airport	No Response
Reservation Telephone Co-op	No Response
Southwest Water Authority	No Response
Spirit Lake Tribe	No Response
Standing Rock Sioux Tribe	No Response
State Historical Society	Request for cultural resource survey results.

Turtle Mountain Band of Chippewa	No Response
USACOE - Bismarck	Nationwide Permit 12 information provided.
USACOE - Riverdale	Recommend down slope trenching to contain hazardous wastes; use closed-loop drilling, weed free fill material; remove undesirable vegetation, NSO within ½ mile of T&E species; construct Aug 15-April 1 to reduce disruption during breeding season, and assess cumulative impacts.
USFWS	Concurrence with mitigation efforts and T&E species determinations
Ward County Board of Commissioners	No Response

5.0 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 Carlson McCain, Inc, under the direction of the BIA. Federal officials, oil and gas representatives, and consultants included the following:

Bureau of Indian Affairs

Marilyn Bercier
Mark Herman

WPX Energy Williston, LLC

Nelson Klitzka, Regulatory Specialist
Jennifer Head, Regulatory Manager

Carlson McCain, Inc.

Todd Hartleben, Senior Engineer
Ryan Krapp, Wildlife Biologist/GIS Specialist
Miranda Meehan, Natural Resource Specialist

6.0 References

- Armstrong, C.A.1971. Ground Water Resources of Burke and Mountrail Counties. Geological Survey, United States Department of the Interior.
- Bryce, S., J.M. Omemik, D.E. Pater, M. Ulmer, J.Schaar, J. Freeouf, R. Johnson, P. Kuck, and S.H. Azevedo. 1998. Ecoregions of North Dakota and South Dakota. Jamestown, North Dakota: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/habitat/ndsdeco/index.htm>. Accessed June 2008.
- Canadian Wildlife Service Environment Canada.2004. Assessment and Status Report on the Dakota Skipper (*Hesperia dacotae*) in Canada. Committee on the Status of Endangered Wildlife in Canada. Environment Canada, Ottawa, ON.
- Grondahl, C. and K. Martin. No Date. North Dakota's endangered and threatened species. North Dakota State Game and Fish Department's Non-game Program, Bismarck, ND. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/wildlife/endanger/index.htm> (Version 16JUL97).
- Lechert, Stephanie and Reinhart, Damien. 2012. *A Class I and Class III Cultural Resource Inventory of the Olson #1-12H and FBIR #13-24H Well Pad and Utility Corridor, Fort Berthold Indian Reservation, Mountrail County, North Dakota*. Prepared for WPX Energy Williston, LLC by SWCA Environmental Consultants, Bismarck, North Dakota. Submitted by SWCA Environmental Consultants to the BIA Great Plains Regional Office March 8, 2012.
- LeRoy, Adam. 2012. *A Class I and Class III Cultural Resource Inventory of the Dancing Bull #16-21H Well Pad and Utility Corridor, Fort Berthold Indian Reservation, Mountrail County, North Dakota*. Prepared for WPX Energy Williston, LLC by SWCA Environmental Consultants, Bismarck, North Dakota. Submitted by SWCA Environmental Consultants to the BIA Great Plains Regional Office March 8, 2012.
- North Dakota State Industrial Commission. 2010. Oil and Gas Well Data. North Dakota State Industrial Commission. Bismarck, ND. <https://www.dmr.nd.gov/oilgas/>
- North Dakota State Water Commission. 2009. Surface and Ground Water Data. North Dakota State Water Commission. Bismarck, ND. <http://mapservice.swc.state.nd.us/>
- North Dakota Department of Agriculture. 2008. County and City Listed Noxious Weeds. North Dakota Department of Agriculture, Bismarck. <http://www.agdepartment.com/PDFFiles/CountyCityListedNoxWeeds.pdf>
- North Dakota Department of Agriculture. 2010. NDAC 7-06-01-02. Noxious weeds listed. North Dakota Administrative Code 7-06-01-02. North Dakota Department of Agriculture, Bismarck. <http://www.nd.gov/ndda/files/resource/2010NoxiousWeedsListSurveyAcresReported.pdf>
- Rathge, R., M. Clemson, and R. Danielson. 2002. North Dakota Population Projections 2005-2020. North Dakota State Data Center at North Dakota State University. Fargo, North Dakota. September.

Reinhart, Damien, and Chandler S. Herson

(2012) A Class I and Class III Cultural Resource Inventory of the Olson #12-1H and FBIR #13-24H Well Pad and Utility Corridor, Fort Berthold Indian Reservation, Mountrail County, North Dakota. SWCA Environmental Consultants for WPX Energy Williston, LLC, Tulsa, OK.

Texas Parks and Wildlife Department. 2008. Whooping Crane (*Grus americana*). Texas Parks and Wildlife Department, Austin, TX.
<http://www.tpwd.state.tx.us/huntwild/wild/species/whooper>

Three Affiliated Tribes. 2008. Mandan, Hidatsa, Arikara Website. Available online at http://www.mhanation.com/main/history/histOIY_economic_social.html. Accessed April 2008.

U.S. Bureau of Indian Affairs (BIA). 2003. American Indian Population and Labor Force Report. U.S. Department of the Interior, Bureau of Indian Affairs, Office of Tribal Affairs. Washington, D.C. 34pp.

United States Census Bureau. 2008. Selected Demographic Data for both North Dakota and the Fort Berthold Indian Reservation from Census 2000. U.S. Census Bureau, Census 2000. Information downloaded 5/12/2008 and available online at <http://factfinder.census.gov>.

United States Department of Agriculture. 2009. North Dakota Noxious Weeds. North Dakota Department of Agriculture. <http://www.agdepartment.com/noxiousweeds>

United States Department of Agriculture, Natural Resources Conservation Service. 2009. Mountrail County, North Dakota Digitized Soil Survey. North Dakota Department of Agriculture. http://soils.usda.gov/survey/online_surveys/north_dakota

United States Department of Agriculture, Natural Resource Conservation Service. 2009. Watershed Boundary Dataset (WBD). <http://www.ncgc.nrcs.usda.gov/products/datasets/watershed/>

United States Department of the Interior and United States Department of Agriculture. 2007. Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development. BLM/WO/ST-06/021+3071/REV 07. Bureau of Land Management. Denver, Colorado. 84 pp.

United States Environmental Protection Agency (EPA). 1998. Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses. Office of Federal Activities, U.S. Environmental Protection Agency. Washington, D.C. 70 pp + appendices.

United States Farm Service Agency. 2005 and 2009. National Agriculture Imagery Program, Mountrail County aerial photograph.

United States Fish and Wildlife Service. 2010. County occurrence of endangered, threatened and candidate species and designated critical habitat in North Dakota. Department of the Interior, US Fish and Wildlife Service Washington, D.C. 20240

United States Fish and Wildlife Service. 2009. National Wetlands Inventory. <http://wetlandsfws.er.usgs.gov/NWI/>

United States Geologic Service. 2009. New Town SW, 24K Topographic Quadrangle. 7.5 Minute Series. US Geological Survey, Denver, CO and North Dakota State Water Commission, Bismarck, North Dakota. <http://gis1.state.nd.us/24k/>

United States Geologic Service. 2009. Parshall 100K Topographic Quadrangle. 7.5 Minute Series. US Geological Survey, Denver, CO and North Dakota State Water Commission, Bismarck, North Dakota. <http://gis1.state.nd.us/100k/>

United States Geologic Service. 2009. Water Resources of the United States. States Geological Service, Bismarck, ND. <http://water.usgs.gov/GIS/huc.html>

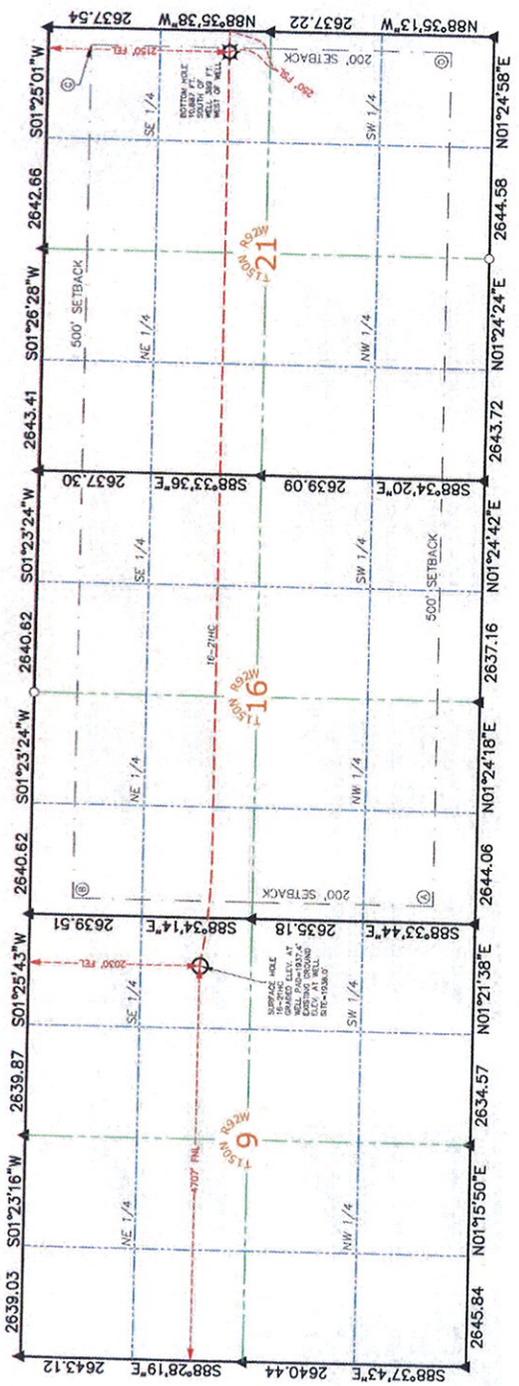
United States Geological Survey. 2006. Federally Listed Endangered, Threatened, and Candidate Species – 1995 (updated August 3, 2006). U.S. Department of the Interior. <http://www.npwrc.usgs.gov/resource/wildlife/nddanger/species/grusamer.htm>

Williams, B. B., and M. E. Bluemle. 1978. Status of Mineral Resource Information for the Fort Berthold Indian Reservation, North Dakota. Administrative report B1A-40. 35 pp.

WPX, 2011. Van Hook Gathering System - Emergency Spill Contingency Plan. Prepared by Dakota-3 E&P Company, LLC (a subsidiary of Williams). 1801 Burdick Expressway West, Minot, ND 58701. November, 2011.

Appendix A

Dancing Bull 16-21H Plat Package



WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HC
(SURFACE HOLE LOCATION)

1) **MAD_83**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

2) **MAD_27_116-21HC**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

3) **MAD_27_116-21HC**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HC
(BOTTOM HOLE LOCATION)

1) **MAD_83**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

2) **MAD_27_116-21HC**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

3) **MAD_27_116-21HC**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

DRILL AREA SETBACK COORDINATES

A) **MAD_83**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

B) **MAD_83**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

C) **MAD_27**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

D) **MAD_27**
 UTM_ZONE: 13N
 N: 7385736.342
 E: 2261622.483

LEGEND

- Found Monument
- Corner Searched and Not Found
- Calculated Corner
- Bottom Hole Location
- Surface Hole Location

I, Kurt M. Kitch, Professional Land Surveyor, North Dakota, R.S.# 4597 hereby certify that I and/or personnel under my direct supervision made a survey on the 16th day of January, 2015, for the purpose of locating the well locations of the DANCING BULL 16-21HC, well spacing Bull 16-21HC being located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92, West and the Bottom Hole location of the DANCING BULL 16-21HC, well spacing Bull 16-21HC, located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92, West and the Bottom Hole location of the DANCING BULL 16-21HC, well spacing Bull 16-21HC, located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92, West, both being in the 5th P.M., Williston County, North Dakota.

NOTES:

- All bearings shown hereon are based on the north line of the 5th P.M., Williston County, North Dakota, bearing a bearing of South 89°28'19" East using GPS observations and occupying a CNI control point.
- Vertical datum used is of NAD 83.
- Distances shown hereon are ground distances using a combined scale factor of 1.0001652272.



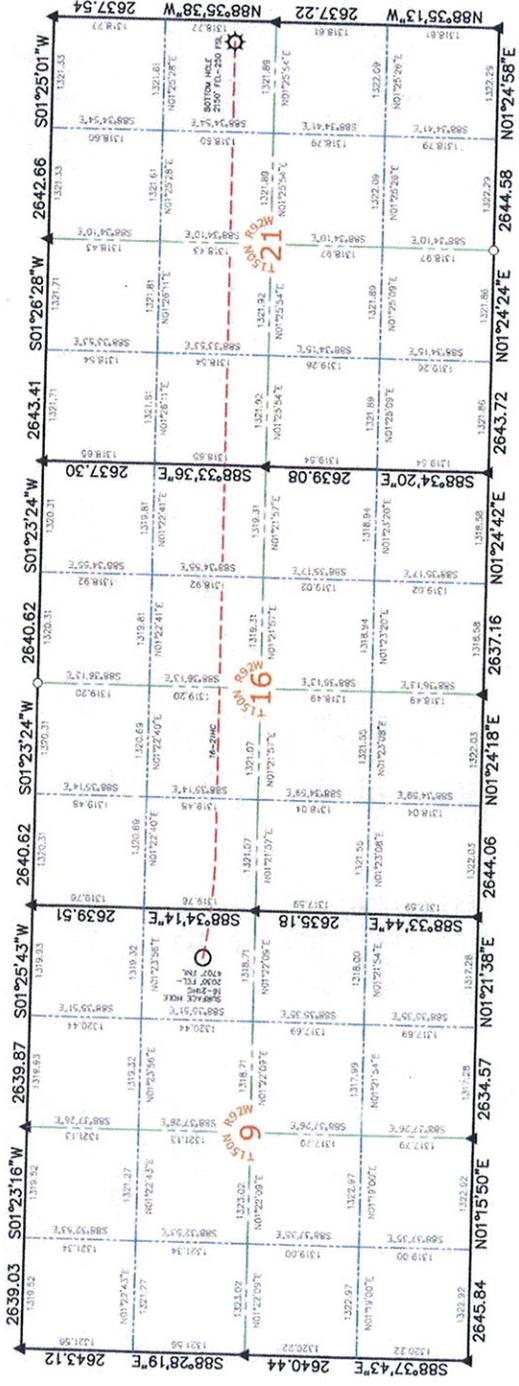
Kurt M. Kitch
 Registered Land Surveyor
 License No. 4597
 State of North Dakota

WELL LOCATION PLAT
DANCING BULL 16-21HC
 ~ WPX ENERGY WILLISTON, LLC ~

PAD LOCATION
 THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150 NORTH, RANGE 92 WEST, WILLISTON COUNTY, NORTH DAKOTA



Scale: 1" = 1000'
 (Paper Size: 11" x 17")



WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HC
(SURFACE HOLE LOCATION)

1) MAD. 83 (16-21HC)
 Long: 102°27'30.32"
 Lat: 47°39'02.84"
 UTM Zone 13N
 N: 1738590.535
 E: 2261850.443

2) MAD. 27 (16-21HC)
 Long: 102°27'30.29"
 Lat: 47°39'02.84"
 UTM Zone 13N
 N: 1738590.520
 E: 2261850.358

3) MAD. 27 (16-21HC)
 Long: 102°27'30.29"
 Lat: 47°39'02.84"
 UTM Zone 13N
 N: 1738590.520
 E: 2261850.358

DEBRIL AREA SETBACK COORDINATES

- | | |
|--|--|
| A) MAD. 83
UTM ZONE 13N
N: 1738590.542
E: 2261850.443 | A) MAD. 27
UTM ZONE 13N
N: 1738590.520
E: 2261850.358 |
| B) MAD. 83
UTM ZONE 13N
N: 1738590.535
E: 2261850.440 | B) MAD. 27
UTM ZONE 13N
N: 1738590.520
E: 2261850.358 |
| C) MAD. 83
UTM ZONE 13N
N: 1738590.535
E: 2261850.443 | C) MAD. 27
UTM ZONE 13N
N: 1738590.520
E: 2261850.358 |
| D) MAD. 83
UTM ZONE 13N
N: 1738590.535
E: 2261850.440 | D) MAD. 27
UTM ZONE 13N
N: 1738590.520
E: 2261850.358 |

LEGEND

- ▲ Found Mainwell
- Corner Searched and Not Found
- Calculated Corner
- ⊙ Bottom Hole Location
- Surface Hole Location



Kurt M. Kisch, Professional Land Surveyor, North Dakota
 No. 53,529
 I have personally supervised and checked the field observations and direct supervision made a survey on the 18th day of January, 2012 for the Surface Hole Location and Elevation of WPX Energy Williston, LLC. The location of the surface hole is located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92 West and the Bottom Hole Location being located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92 West, both being of the 5th P.M., Mountrail County, North Dakota.

- Notes:
- All bearings shown hereon are based on the north line of the NE 1/4 of Section 9, Township 150 North, Range 92 West, having a bearing of South 88°29'19" East using GPS observations and occupying a CM control point.
 - Vertical Datum used is of NAD 83.
 - Distances shown hereon are ground distances using a combined scale factor of 1.0001659272.

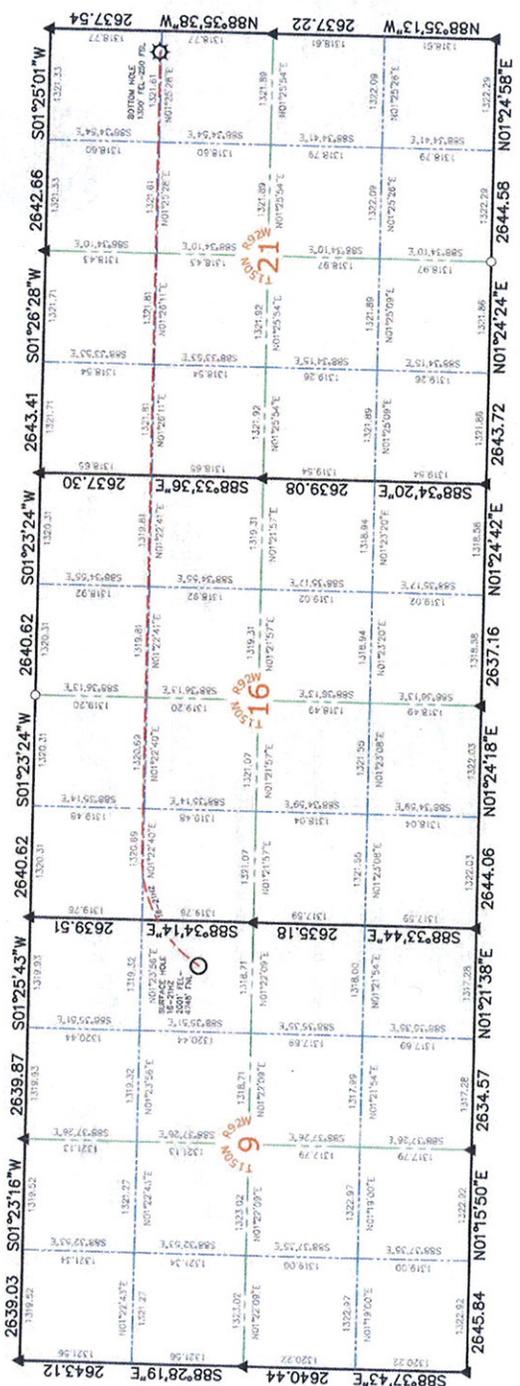


Kurt M. Kisch Registered Land Surveyor
 Registration No. 53,529
 State of North Dakota

HORIZONTAL SECTION PLAT
 DANCING BULL 16-21HC
 ~ WPX ENERGY WILLISTON, LLC ~

PAD LOCATION
 THE SE 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150 NORTH, RANGE 92 WEST, MOUNTRAIL COUNTY, NORTH DAKOTA





WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HZ
(SURFACE HOLE LOCATION)

1) **NAD 83 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

2) **NAD 27 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

3) **NAD 27 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HZ
(BOTTOM HOLE LOCATION)

1) **NAD 83 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

2) **NAD 27 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

3) **NAD 27 (16-21HZ)**
 Lot: 47,927.13"
 Long: 102,458.50"
 Lot: 47,927.13"
 Long: 102,458.50"

DELL AREA SETBACK COORDINATES

- A) **NAD 83**
 UTM ZONE 18N
 N: 17385900.630
 E: 2266122.480
- B) **NAD 27**
 UTM ZONE 18N
 N: 17385900.630
 E: 2266122.480
- C) **NAD 83**
 UTM ZONE 18N
 N: 17385900.630
 E: 2266122.480
- D) **NAD 27**
 UTM ZONE 18N
 N: 17385900.630
 E: 2266122.480

I, Kurt M. Kisch, Professional Land Surveyor, North Dakota License # 4937 hereby certify that I and/or personal under my supervision have surveyed and prepared this plat for the Surface Hole Location and Elevation of WPX ENERGY WILLISTON, LLC, Well Dancing Bull 16-21HZ being located within the SE 1/4 of the SW 1/4 of the Section 21, Township 150 North, Range 92 West, both being of the 5th P.M., Mountrail County, North Dakota.

- Notes:**
- All bearings shown herein are based on the north line of the NE 1/4 of Section 9, Township 150 North, Range 92 West, having a bearing of South 85°28'19" East using GPS observations and occupying a CM control point.
 - Vertical Datum used is of NAVD 88.
 - Distances shown herein are measured distances using a combined scale factor of 1.0001650272.



Kurt M. Kisch, Registered Land Surveyor
 Registration No. 4937
 State of North Dakota

**HORIZONTAL SECTION PLAT
 DANCING BULL 16-21HZ
 ~ WPX ENERGY WILLISTON, LLC ~**

Carlson McCain
 ENVIRONMENTAL, ENGINEERING & SURVEYING
 2777 Bismarck Blvd., Suite 200
 Bismarck, ND 58503-1111
 www.carlsonmccain.com

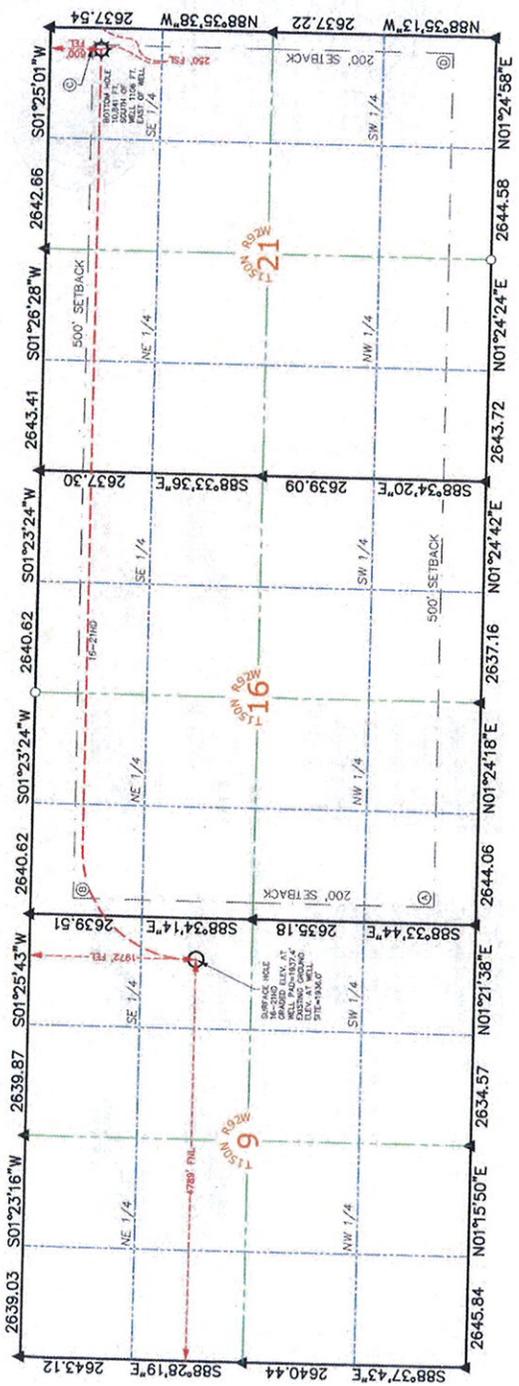
PAD LOCATION
 THE SE 1/4 OF THE SW 1/4 OF SECTION 21, TOWNSHIP 150 NORTH, RANGE 92 WEST, MOUNTRAIL COUNTY, NORTH DAKOTA

DATE: 08/01/2013
 DRAWN BY: K. KISCH
 REVISIONS: 02/13/2013 (Kurt M. Kisch)

LEGEND

- Found Monument
- Not Found
- Calculated Corner
- Bottom Hole Location
- Surface Hole Location

0 250 500 1000
 Feet
 (1" = 1000')
 (Paper Size 35" x 24")



WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HD
(SURFACE HOLE LOCATION)

1) **MAD 83 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

2) **MAD 27 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

3) **MAD 27 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HD
(BOTTOM HOLE LOCATION)

1) **MAD 83 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

2) **MAD 27 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

3) **MAD 27 (16-21HD)**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

DEBRILL AREA SETBACK COORDINATES

A) **MAD 83**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

B) **MAD 83**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

C) **MAD 27**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

D) **MAD 27**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

DEBRILL AREA SETBACK COORDINATES

A) **MAD 83**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

B) **MAD 83**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

C) **MAD 27**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

D) **MAD 27**
 UTM ZONE 13N
 N: 2297275.42
 E: 2297822.460

I, Kurt M. Kisch, Professional Land Surveyor, North Dakota License #4937, hereby certify that I and/or personnel under my direct supervision made a survey on the 16th day of January, 2011, for the purpose of locating the well locations and drilling areas for the DANCING BULL 16-21HD well located within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92 West and the Bottom Hole location within the SW 1/4 of the SE 1/4 of Section 9, Township 150 North, Range 92 West, both being of the 5th P.M., Meantrel County, North Dakota.

- NOTES:**
- All bearings shown hereon are based on the north line of the NE 1/4 of Section 9, Township 150 North, Range 92 West, and the North line of Section 9, Township 150 North, Range 92 West, observations and occupying a C.M. control point.
 - Vertical Datum used is of NAD 83.
 - Distances shown hereon are ground distances using a combined scale factor of 1.0001659272.



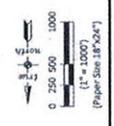
Kurt M. Kisch
 Registered Land Surveyor
 License #4937
 State of North Dakota

WELL LOCATION PLAT
DANCING BULL 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

PAD LOCATION
 THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150 NORTH, RANGE 92 WEST, MEANTREL COUNTY, NORTH DAKOTA



- LEGEND:**
- Found Monument
 - Corner Searched and Not Found
 - Calculated Corner
 - Bottom Hole Location
 - Surface Hole Location



LOCATION COORDINATE SUMMARY
DANCING BULL 16-21HC, 16-21 HZ, & 16-21HD
 ~WPX ENERGY WILLISTON, LLC~

Section	Township	Range	Geographic NAD 83						Geographic NAD 27						UTM Zone 13N NAD 27		
			Deg. Min. Decimal Seconds		Decimal Degrees		Deg. Min. Decimal Seconds		Decimal Degrees		Deg. Min. Decimal Seconds		Decimal Degrees		Northing	Easting	Footage
			Latitude	Longitude	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude					
16-21HC PAD (SHL)	150N	92W	47°49'13.02"	102°27'30.32"	47.820283°	102.458422°	47°49'12.98"	102°27'28.66"	47.820272°	102.457962°	17385905.845	2264700.896	2030' FEL	4707' FNL			
16-21HC PAD (BHL)	150N	92W	47°47'25.53"	102°27'31.95"	47.790424°	102.458876°	47°47'25.49"	102°27'30.29"	47.790414°	102.458415°	17375015.748	2264947.66	2150' FEL	250' FSL			
16-21HZ PAD (SHL)	150N	92W	47°49'12.62"	102°27'29.90"	47.820171°	102.458306°	47°49'12.57"	102°27'28.24"	47.820160°	102.457845°	17385865.796	2264730.823	2001' FEL	4748' FNL			
16-21HZ PAD (BHL)	150N	92W	47°47'25.54"	102°27'19.51"	47.790427°	102.455419°	47°47'25.50"	102°27'17.85"	47.790416°	102.454957°	17375044.448	2265797.101	1300' FEL	250' FSL			
16-21HD PAD (SHL)	150N	92W	47°49'12.21"	102°27'29.48"	47.820059°	102.458190°	47°49'12.17"	102°27'27.82"	47.820047°	102.457729°	17385825.711	2264760.703	1972' FEL	4789' FNL			
16-21HC PAD (BHL)	150N	92W	47°47'25.54"	102°27'09.26"	47.790428°	102.452571°	47°47'25.50"	102°27'05.60"	47.790417°	102.452110°	17375068.084	2266496.641	600' FEL	250' FSL			

	UTM Zone 13N NAD 83		UTM Zone 13N NAD 27	
	Drill Area Setback Coordinates			
A	17385758.342	2261850.443	17385040.253	2261983.308
B	17385900.635	2266122.480	17385182.611	2266255.267
C	17375739.386	2266465.074	17375021.620	2266598.063
D	17375595.384	2262193.087	17374877.542	2262326.162

LOCATION COORDINATE SUMMARY

DANCING BULL 16-21HC

~WPX ENERGY WILLISTON, LLC~

	Section	Township	Range
16-21HC PAD (SHL)	9	150 N	92 W
16-21HC PAD (BHL)	21	150 N	92 W

Geographic NAD 83				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HC PAD (SHL)	47°49'13.02"	102°27'30.32"	47.820283	102.458422
16-21HC PAD (BHL)	47°47'25.53"	102°27'31.95"	47.790424	102.458876

Geographic NAD 27				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HC PAD (SHL)	47°49'12.98"	102°27'28.66"	47.820272	102.457962
16-21HC PAD (BHL)	47°47'25.49"	102°27'30.29"	47.790414	102.458415

UTM Zone 13N NAD 27				
	Northing	Easting	Footage	
16-21HC PAD (SHL)	17385905.845	2264700.896	2030 FEL	4707 FNL
16-21HC PAD (BHL)	17375015.748	2264947.66	2150 FEL	250 FSL

	UTM Zone 13N NAD 83		UTM Zone 13N NAD 27	
	Drill Area Setback Coordinates		Drill Area Setback Coordinates	
	Northing	Easting	Northing	Easting
A	17385758.342	2261850.443	17385040.253	2261983.308
B	17385900.635	2266122.480	17385182.611	2266255.267
C	17375739.396	2266465.074	17375021.620	2266598.063
D	17375595.384	2262193.087	17374877.542	2262326.162

LOCATION COORDINATE SUMMARY

DANCING BULL 16-21HZ

~WPX ENERGY WILLISTON, LLC~

	Section	Township	Range
16-21HZ PAD (SHL)	9	150 N	92 W
16-21HZ PAD (BHL)	9	150 N	92 W

Geographic NAD 83				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HZ PAD (SHL)	47°49'12.62"	102°27'29.90"	47.820171	102.458306
16-21HZ PAD (BHL)	47°47'25.54"	102°27'19.51"	47.790427	102.455419

Geographic NAD 27				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HZ PAD (SHL)	47°49'12.57"	102°27'28.24"	47.820160	102.457845
16-21HZ PAD (BHL)	47°47'25.50"	102°27'17.85"	47.790416	102.454957

UTM Zone 13 NAD 27				
	Northing	Easting	Footage	
16-21HZ PAD (SHL)	17385865.796	2264730.823	2001 FEL	4748 FNL
16-21HZ PAD (BHL)	17375044.448	2265797.101	1300 FEL	250 FSL

	UTM Zone 13N NAD 83		UTM Zone 13N NAD 27	
	Drill Area Setback Coordinates		Drill Area Setback Coordinates	
	Northing	Easting	Northing	Easting
A	17385758.342	2261850.443	17385040.253	2261983.308
B	17385900.635	2266122.480	17385182.611	2266255.267
C	17375739.396	2266465.074	17375021.620	2266598.063
D	17375595.384	2262193.087	17374877.542	2262326.162

LOCATION COORDINATE SUMMARY

DANCING BULL 16-21HD

~WPX ENERGY WILLISTON, LLC~

	Section	Township	Range
16-21HD PAD (SHL)	9	150 N	92 W
16-21HD PAD (BHL)	9	150 N	92 W

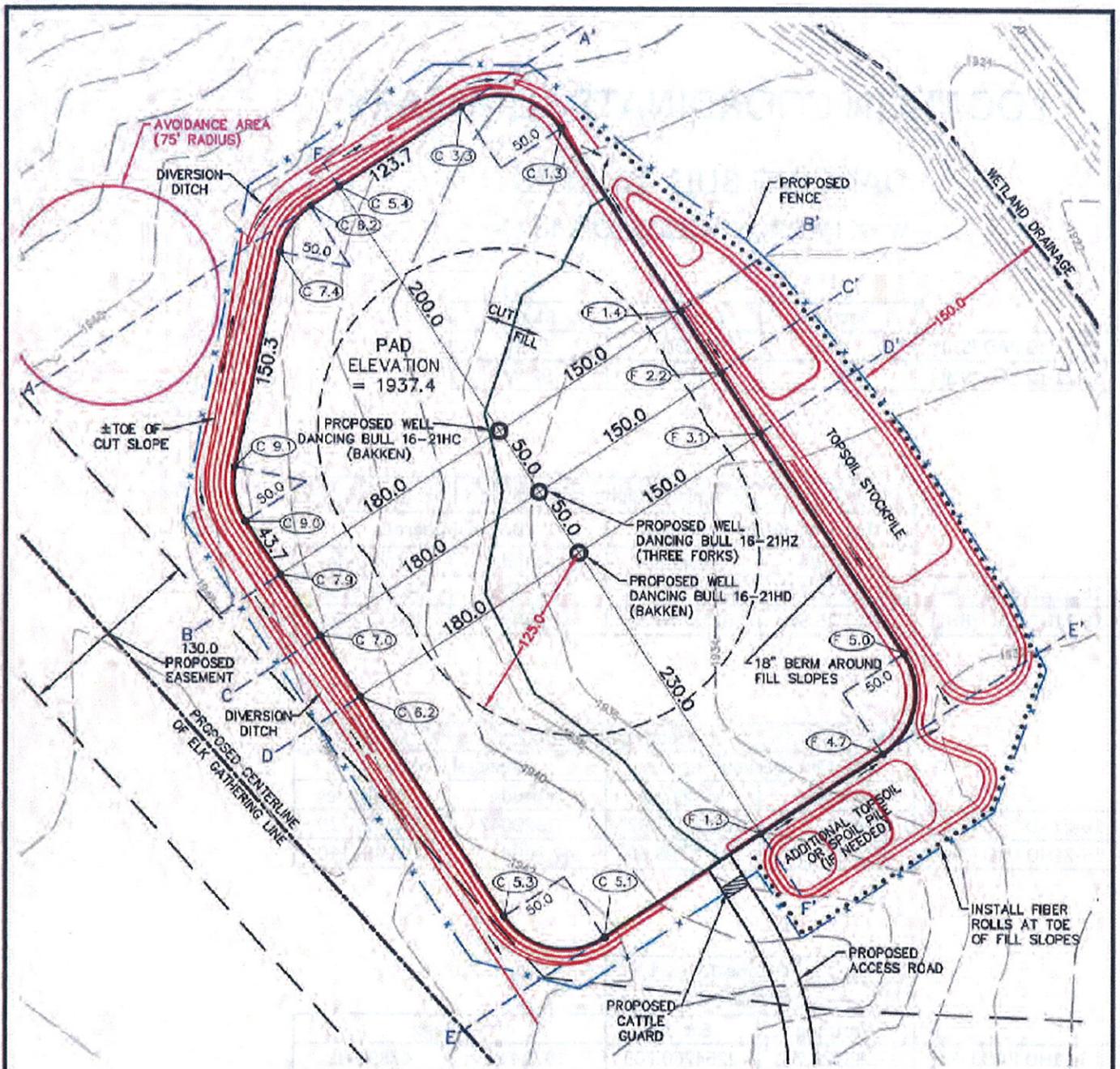
Geographic NAD 83				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HD PAD (SHL)	47°49'12.21"	102°27'29.48"	47.820059	102.458190
16-21HD PAD (BHL)	47°47'25.54"	102°27'09.26"	47.790428	102.452571

Geographic NAD 27				
	Deg. Min. Decimal Seconds		Decimal Degrees	
	Latitude	Longitude	Latitude	Longitude
16-21HD PAD (SHL)	47°49'12.17"	102°27'27.82"	47.820047	102.457729
16-21HD PAD (BHL)	47°47'25.50"	102°27'05.60"	47.790417	102.452110

UTM Zone 13 NAD 27				
	Northing	Easting	Footage	
	16-21HD PAD (SHL)	17385825.711	2264760.703	1972 FEL
16-21HD PAD (BHL)	17375068.084	2266496.641	600 FEL	250 FSL

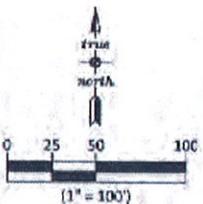
	UTM Zone 13N NAD 83		UTM Zone 13N NAD 27	
	Drill Area Setback Coordinates		Drill Area Setback Coordinates	
	Northing	Easting	Northing	Easting
A	17385758.342	2261850.443	17385040.253	2261983.308
B	17385900.635	2266122.480	17385182.611	2266255.267
C	17375739.396	2266465.074	17375021.620	2266598.063
D	17375595.384	2262193.087	17374877.542	2262326.162

P:\Jobs\3560 - Van Hook Gathering System\Survey\Paids\Dancing Bull Pad\3560 - Dancing Bull Layout.dwg 5/9/2012 3:16:01 PM CDT



LEGEND

- 1/2 Section Line
- 1/4 Section Line
- - - Existing 2' Contour
- - - Existing 10' Contour
- Proposed Pad
- Proposed Fence
- Proposed 2' Contour
- Proposed 10' Contour
- Proposed Cut/Fill Break
- Proposed Fiber Rolls
- Proposed Cut/Fill (in feet)
- Proposed Well



SITE DATA	
DANCING BULL 16-21HC (BAKKEN)	
FEL: 2030'	FNL: 4707'
DANCING BULL 16-21HZ (THREE FORKS)	
FEL: 2001'	FNL: 4748'
DANCING BULL 16-21HD (BAKKEN)	
FEL: 1972'	FNL: 4789'

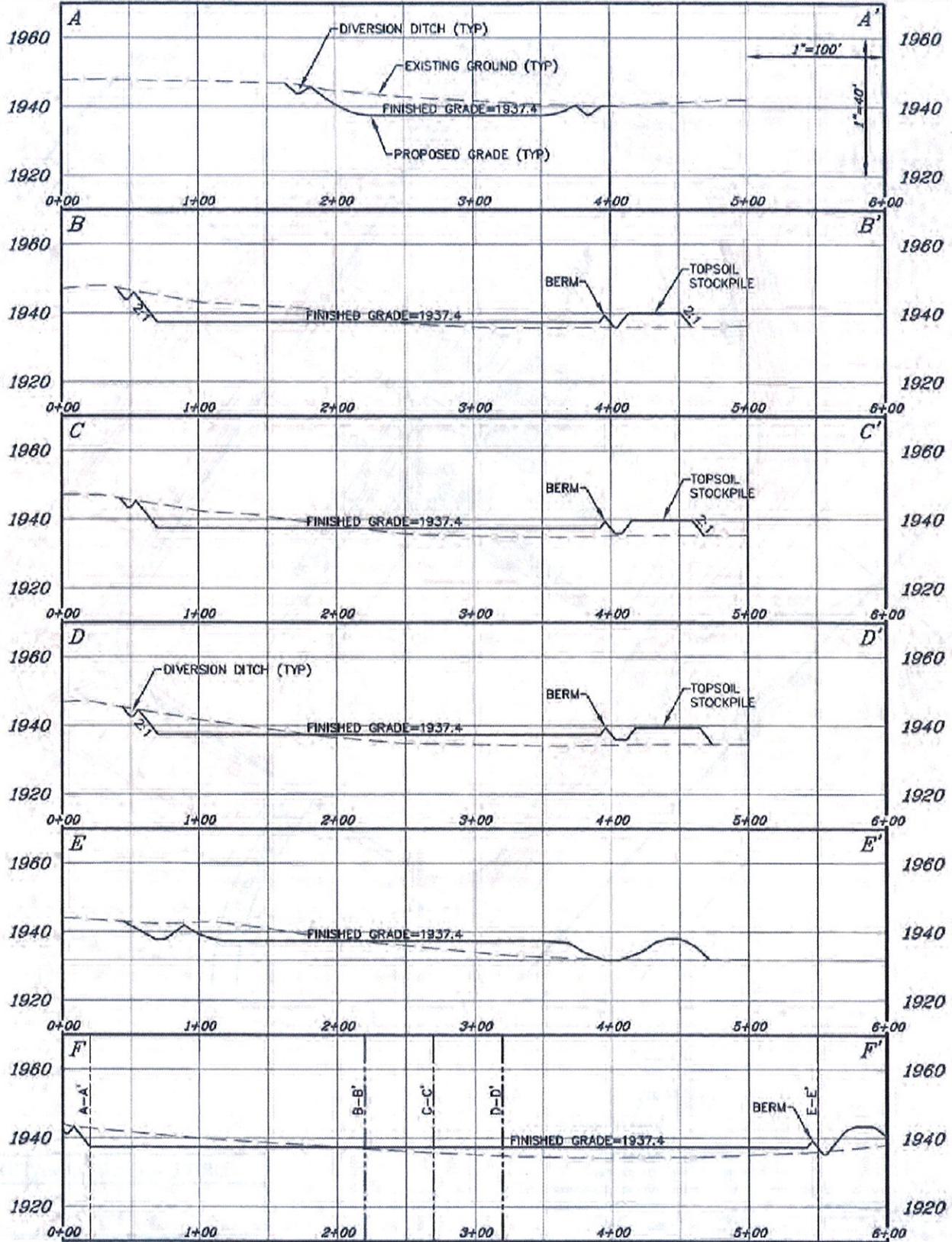
EARTHWORK QUANTITIES	
CUT SLOPE:	2:1
FILL SLOPE:	2:1
TOTAL CUT:	12,600 C.Y.
TOTAL FILL + 25% SHRINK:	9,100 C.Y.
TOPSOIL STRIPPING AT 6":	3,500 C.Y.
SPOIL:	0 C.Y.
DISTURBED AREA:	5.30 AC.
FENCED AREA:	5.60 AC.

Carlson McCain
 ENVIRONMENTAL - ENGINEERING - SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58503
 Phone: 701-255-1475
 www.carlsonmccain.com

PAD LOCATION	
THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, NOUNTRAIL COUNTY, NORTH DAKOTA	
JOB NO: 3560	DATE: 01/16/12
REVISIONS: 5/2/12	

PAD LAYOUT
DANCING BULL 16-21HC, 16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

F:\005\13541 - 3560\3560 - Van Hook Gathering System\Survey\Pods\Dancing Bull\Layout.dwg 5/9/2012 1:16:01 PM CDT



**Carlson
McCain**
ENVIRONMENTAL · ENGINEERING · SURVEYING
2718 Gateway Avenue, #101
Bismarck, ND 58503
Phone: 701-255-1475
www.carlsonmccain.com

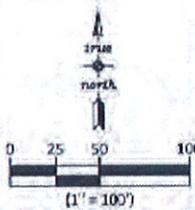
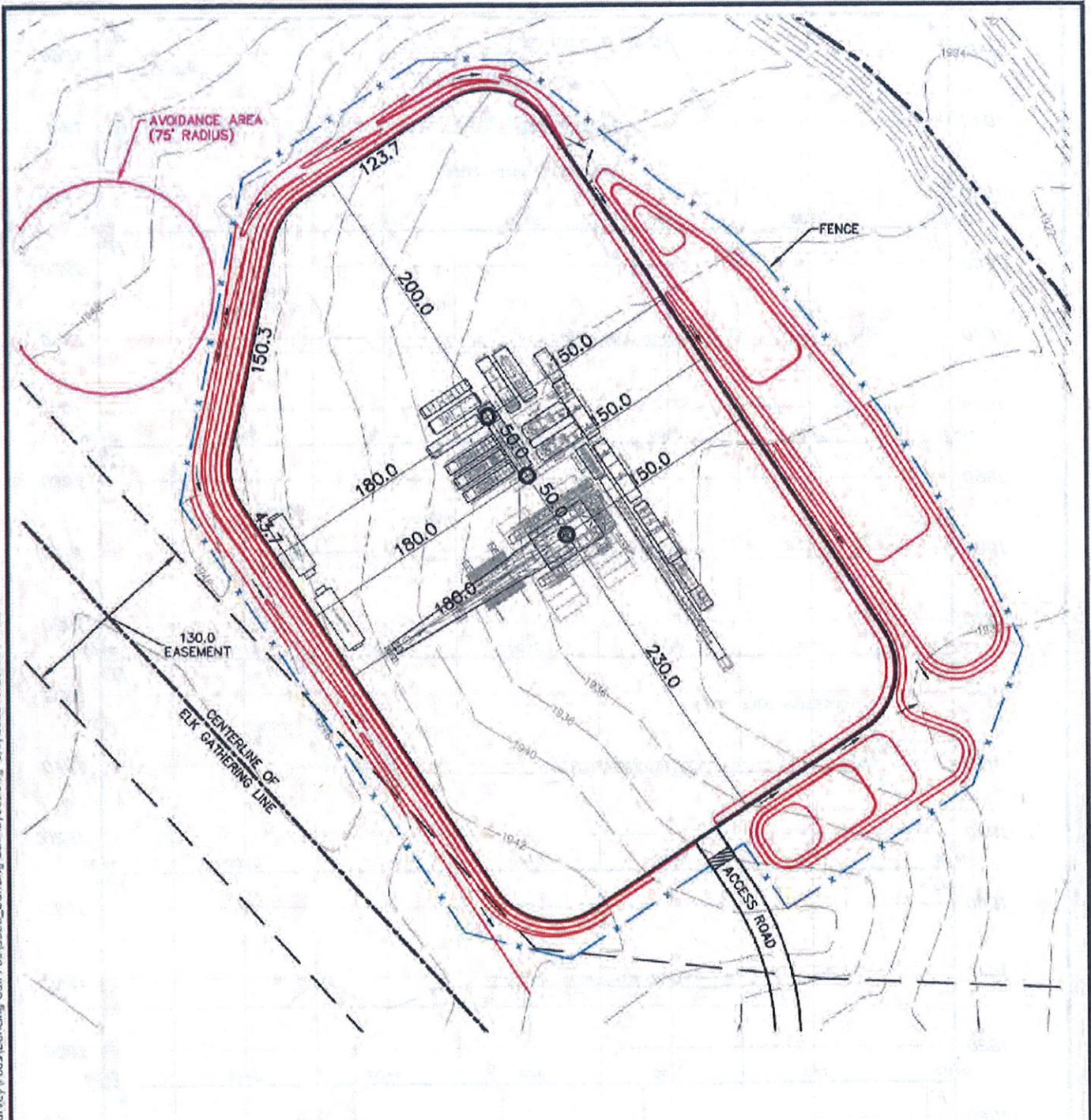
PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF
SECTION 9, TOWNSHIP 150N, RANGE 92W,
MCNUTRIL COUNTY, NORTH DAKOTA

JOB NO: 3560 DATE: 01/16/12
REVISIONS: 5/2/12

CROSS-SECTIONS
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
~ WPX ENERGY WILLISTON, LLC ~

F:\Jobs\3561 - 3560\3560 - Van Hook Gathering System\Survey\Pods\Dancing Bull Pod\3560_Dancing Bull-layout.dwg 5/9/2012 1:16:01 PM CDT



LEGEND

- Existing 2' Contour
- Existing 10' Contour
- Proposed Pad
- Proposed Fence
- Proposed 2' Contour
- Proposed 10' Contour
- Proposed Well

DRILL RIG INFORMATION
PATTERSON-UTI RIG 336 WITH 3 MUD TANK



**Carlson
McCain**
ENVIRONMENTAL · ENGINEERING · SURVEYING
2718 Gateway Avenue, #101
Bismarck, ND 58503
Phone: 701-255-1475
www.carlsonmccain.com

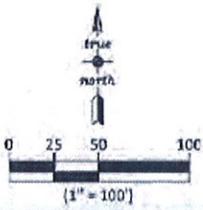
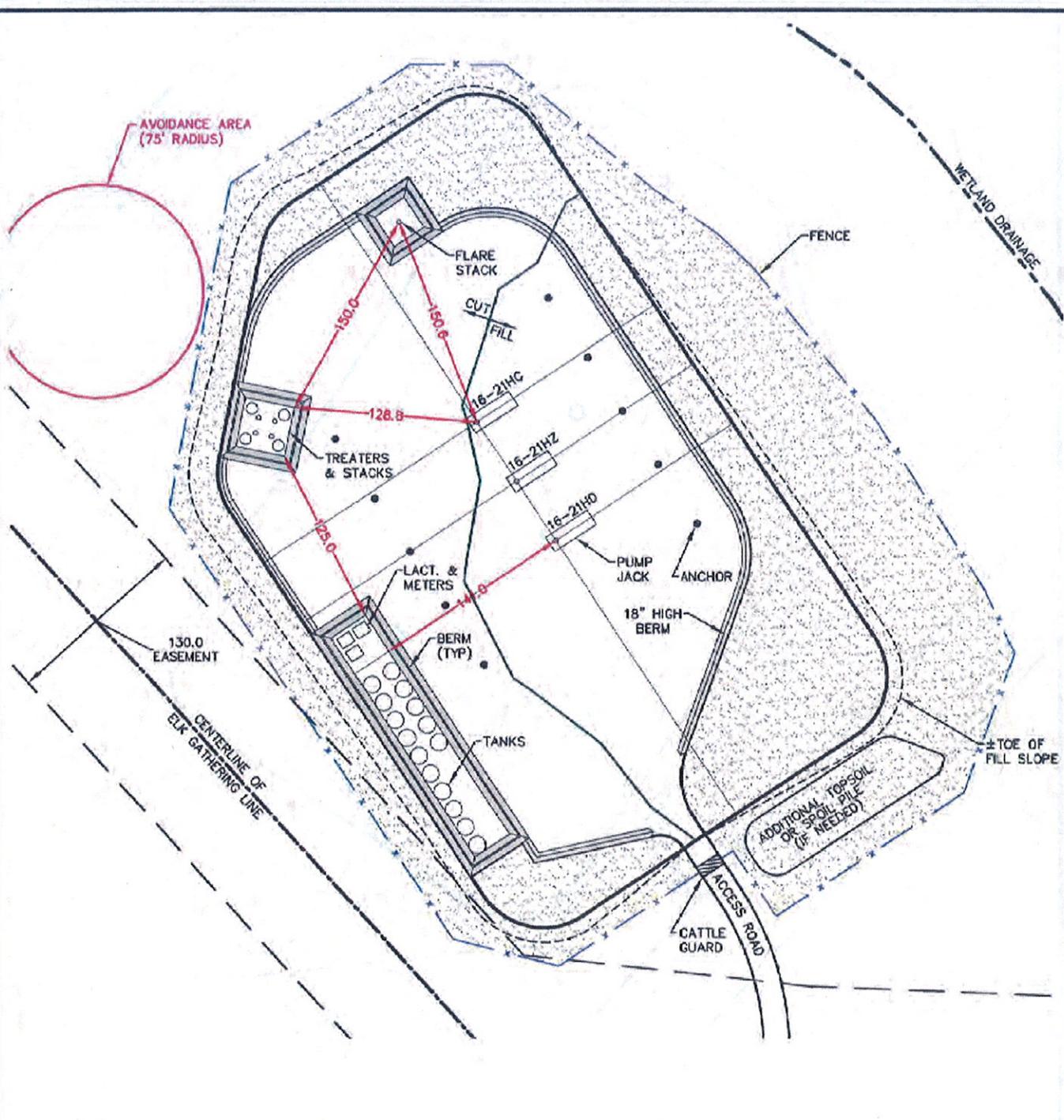
PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF
SECTION 9, TOWNSHIP 150N, RANGE 92W,
MOUNTAIN COUNTY, NORTH DAKOTA

JOB NO: 3560 DATE: 01/16/12
REVISIONS: 5/2/12

DRILL RIG LAYOUT
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
~ WPX ENERGY WILLISTON, LLC ~

E:\Jobs\3560 - Van Hook Gathering System\Survey\Drawings\Bull Pad\3560_Dancing Bull-layout.dwg 5/9/2012 1:16:01 PM CDT



- LEGEND**
- 1/2 Section Line
 - 1/4 Section Line
 - Proposed Pad
 - x - x - Proposed Fence
 - - - Proposed Cut/Fill Break
 - o Proposed Well

INTERIM RECLAMATION DATA	
FENCED AREA:	5.60 AC.
RECLAIMED AREA:	2.81 AC.
PAD AREA:	2.79 AC.

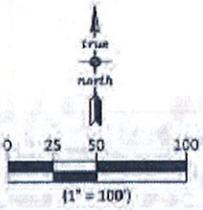
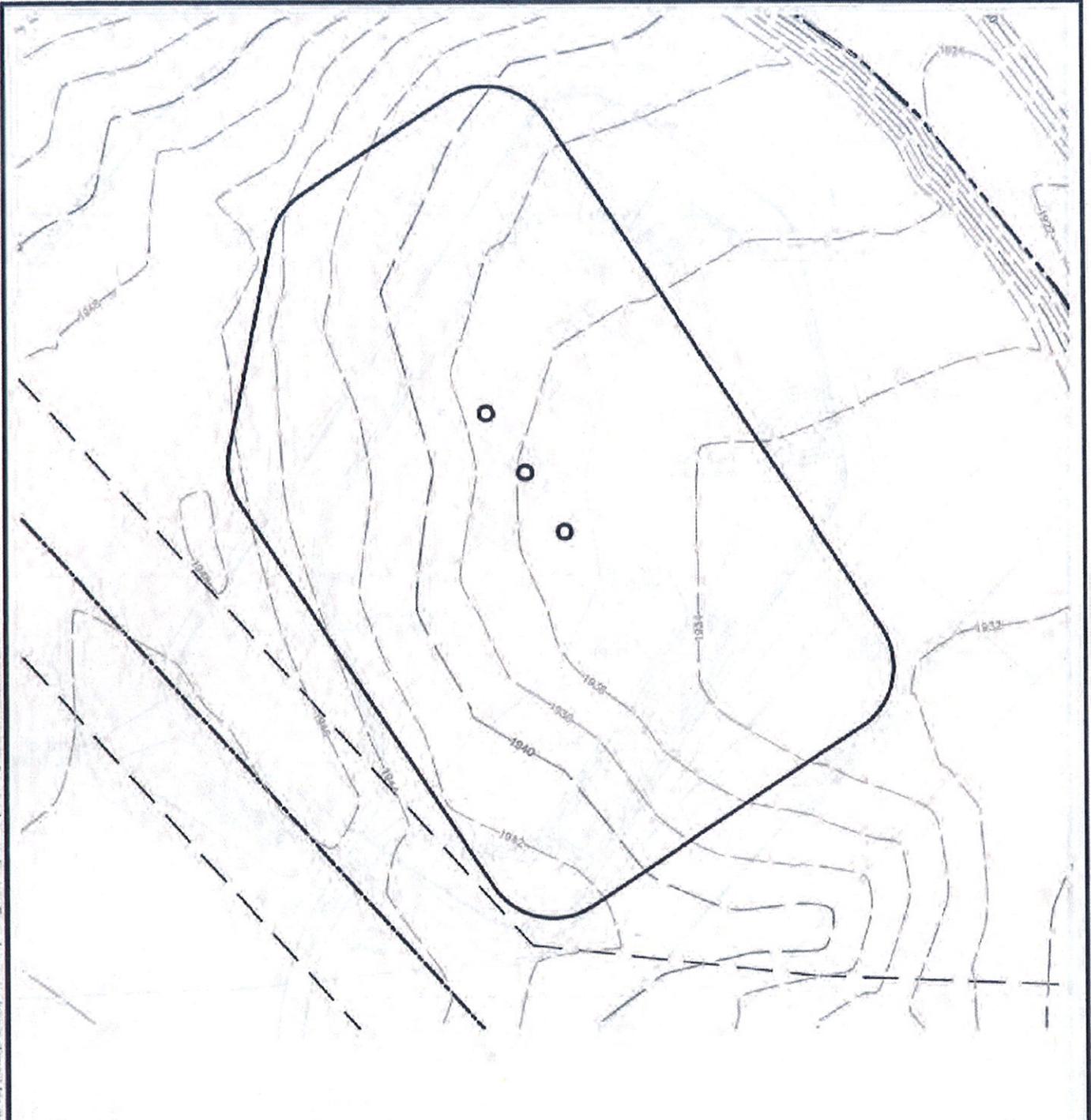
**Carlson
McCain**
ENVIRONMENTAL • ENGINEERING • SURVEYING
2718 Gateway Avenue, #101
Bismarck, ND 58503
Phone: 701-255-1475
www.carlsonmccain.com

PAD LOCATION	
THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, MOUNTRAIL COUNTY, NORTH DAKOTA	
JOB NO:	3560 DATE: 01/16/12
REVISIONS:	5/2/12

**PRODUCTION FACILITY LAYOUT
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
~ WPX ENERGY WILLISTON, LLC ~**

SHEET 13 of 21

F:\Jobs\3561 - 35601.3560 - Van Hook Gathering System\Survey\pads\Dancing Bull Pad\3560_Dancing Bull Layout.dwg 5/9/2012 1:16:01 PM EDT



LEGEND

- 1/2 Section Line
- 1/4 Section Line
- - - 2' Contour
- - - 10' Contour
- Pad
- Well



**Carlson
McCain**
ENVIRONMENTAL · ENGINEERING · SURVEYING
2718 Gateway Avenue, #101
Bismarck, ND 58503
Phone: 701-255-1475
www.carlsonmccain.com

PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF
SECTION 9, TOWNSHIP 150N, RANGE 92W,
MCUNTRAIL COUNTY, NORTH DAKOTA

JOB NO: 3560 | DATE: 01/16/12
REVISIONS: 5/2/12

FINAL RECLAMATION PLAN
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
~ WPX ENERGY WILLISTON, LLC ~

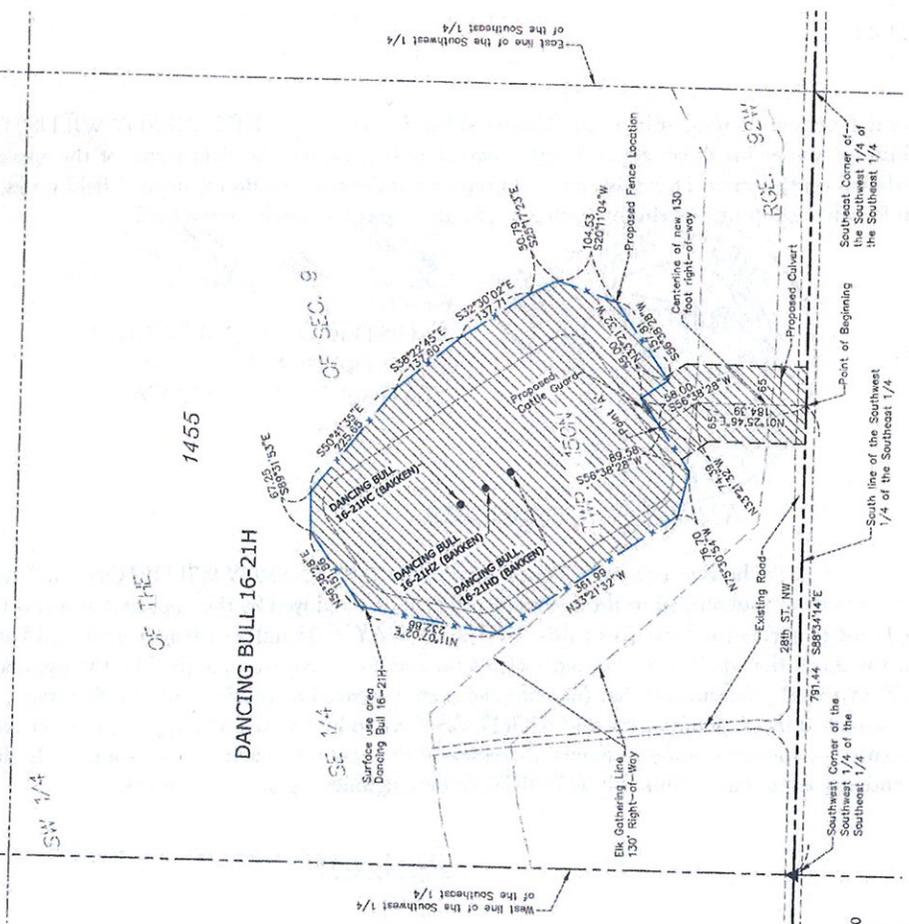
PARCEL DESCRIPTION

PID No: Tract 1455
 Sec. 9-150-92
 The Southwest Quarter of the
 Southeast Quarter of Section 9,
 Township 150N, Range 92W
 Mountrail County, North Dakota.

SW 1/4

1455

DANCING BULL 16-21H



- ▲ = FOUND MONUMENT
- = CORNER SEARCHED AND NOT FOUND
- = CALCULATED CORNER

PROJECT NO. 3560
 FIELD CREW: GUNDERSON/CARLSON
 DATE: 01/16/12
 REVISIONS: Review hatch per sheet 1-31-12
 TRACT: Dancing Bull 16-21H

- Notes:**
- All bearings shown herein are based on the west line of the Northwest Quarter of Section 7, Township 150N, Range 91W having a bearing of N01°25'54"E using GPS observations occupying a CMI control point and having the location and elevation derived from an OPUS Solution.
 - Vertical Datum used is of NAVD 88.
 - The OPUS Solution control point used is located 2741.55 feet on a bearing of S21°22'37"E from the North Quarter Corner of Section 7, Township 150N, Range 91W.
 - Distances shown herein are ground distances using a combined scale factor of 1.000143341.

Pad, Road, Pipeline, Electric, Utility, Fiber, Optic, and above ground Appurtenances.

RIGHT-OF-WAY DESCRIPTION

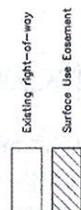
A 130.00 foot wide right-of-way for Pad, Road, Pipeline, Electric, Utility, Fiber Optic, and above ground Appurtenance purposes lying over, under and across the Southwest Quarter of the Southeast Quarter, Section 9, Township 150N, Range 92W, the centerline of said right-of-way to be described as follows: Commencing at the Southwest Corner of said Southwest Quarter of the Southeast Quarter; thence on an assumed bearing of South 88 degrees 34 minutes 14 seconds East, along the south line of said quarter section, 70.00 feet; thence North 89 degrees 59 minutes 59 seconds East, 184.39 feet; thence North 33 degrees 21 minutes 32 seconds West, 74.39 feet to a point hereinafter referred to as Point 'A', which is also the east line of the proposed surface use area and said centerline there terminating.

Sidelines of said right-of-way shall be prolonged or shortened to meet the grantor's property lines or proposed surface use area.

Together with:

A surface use easement lying over, under and across all that part of the Southwest Quarter of the Southeast Quarter of Section 9, Township 150N, Range 92W, said easement to be described as follows: Beginning at the aforementioned Point 'A'; thence South 56 degrees 38 minutes 28 seconds West, 89.58 feet; thence North 75 degrees 54 seconds West, 76.70 feet; thence North 33 degrees 21 minutes 32 seconds West, 361.99 feet; thence North 11 degrees 07 minutes 02 seconds East, 232.86 feet; thence North 56 degrees 38 minutes 28 seconds East, 151.96 feet; thence South 89 degrees 59 minutes 59 seconds East, 67.25 feet; thence South 50 degrees 57 minutes 33 seconds East, 32.00 feet; thence North 33 degrees 21 minutes 32 seconds East, 137.71 feet; thence South 25 degrees 17 minutes 23 seconds East, 50.79 feet; thence South 20 degrees 04 seconds West, 104.53 feet; thence South 56 degrees 38 minutes 28 seconds West, 157.81 feet; thence North 33 degrees 21 minutes 32 seconds West, 55.00 feet; thence South 56 degrees 38 minutes 28 seconds West, 56.00 feet to the point of beginning.

Additional Right of Way Acreage = 0.76 acres
 Surface Use Area (Fenced Area) = 5.60 acres
 Total Disturbance Area = 6.36 acres



CERTIFICATE

I hereby certify that this plot correctly represents work performed by me or under my direct supervision and is true and correct to the best of my knowledge and belief.
 Dated: 01/16/12



Kurt M. Kisch
 Kurt M. Kisch Registered Land Surveyor
 Registration No. 4597
 State of North Dakota

Carlson McCain
 ENVIRONMENTAL-ENGINEERING-SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58103-2547
 www.carlsonmccain.com

PAD LOCATION
 THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, MOUNTRAIL COUNTY, NORTH DAKOTA.
 JOB NO: 3560 (DATE: 01/16/12)
 REVISIONS: 5/7/12, 8/20/12

RIGHT-OF-WAY PLAT
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

WPX ENERGY WILLISTON, LLC
DANCING BULL 16-21HC, 16-21HD, & 16-21HZ

Pad, Road, Pipeline, Electric, Utility, Fiber Optic and above ground Appurtenances
RIGHT-OF-WAY

Tract #: 1455

Sections: SW 1/4 SE 1/4, Sec 9, Twp. 150N, Rge 92W

TOTAL RIGHT-OF-WAY ON TRIBAL LANDS

Total length of RIGHT-OF-WAY is 258.78 feet or 0.05 miles. Width of RIGHT-OF-WAY is 130.00 feet (65.00 feet perpendicular on each side of centerline unless otherwise shown). Contains 0.76 acres more or less. Total Surface Use Area contains 5.60 acres more or less. Total combined Pad, Road, Pipeline, Electric, Utility, Fiber Optic, and above ground Appurtenances Right-of-Way contains 6.36 acres more or less.

SURVEYOR'S AFFIDAVIT

STATE OF MINNESOTA)
) SS
COUNTY OF ANOKA)

Kurt M. Kisch, Being first duly sworn deposes and states that he is the Registered Land Surveyor for WPX ENERGY WILLISTON, LLC. That these surveys were made by him (or under his direct supervision). That he has examined the field notes of the surveys of the RIGHT-OF-WAY as described and shown on this map. That this map was prepared under his direction from said field notes; and that said RIGHT-OF-WAY, 0.05 miles in length, beginning and ending as shown on this map is accurately represented.



[Handwritten Signature]
Kurt M. Kisch
REGISTERED LAND SURVEYOR
REGISTRATION NO. L.S. 4597
STATE OF NORTH DAKOTA

APPLICANT'S CERTIFICATE

I, _____, Do hereby certify that I am the agent for WPX ENERGY WILLISTON, LLC, hereinafter designated the applicant; that Kurt M. Kisch who subscribed to the foregoing affidavit, is employed by the applicant as a Land Surveyor and that he was directed by the applicant to survey the location of this RIGHT-OF-WAY, 0.05 miles in length, that said RIGHT-OF-WAY are accurately represented on this map; that such survey as represented on this map has been adopted by the applicant as the definite location of the RIGHT-OF-WAY thereby shown; and that the map has been prepared to be filed with the Secretary of Interior or his duly appointed representative as part of the application for said RIGHT-OF-WAY to be granted the applicant, its successors and assigns, with the right to construct, maintain, and repair improvements thereon and thereover, for such purposes, and with the further right in the applicant, its successors and assigns to transfer this RIGHT-OF-WAY by assignment, grant, or otherwise.

APPLICANT

TITLE

F:\Jobs\13541 - 3560\3560 - Van Hook Gathering System\Survey\Pods\Dancing Bull Pad\Emergency Route Area Map.dwg 5/9/2012 11:12:02 AM CDT



LEGEND

- Existing Road
- Turn Location



ENVIRONMENTAL • ENGINEERING • SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58503
 Phone: 701-255-1475
 www.carlsonmccain.com

PAD LOCATION

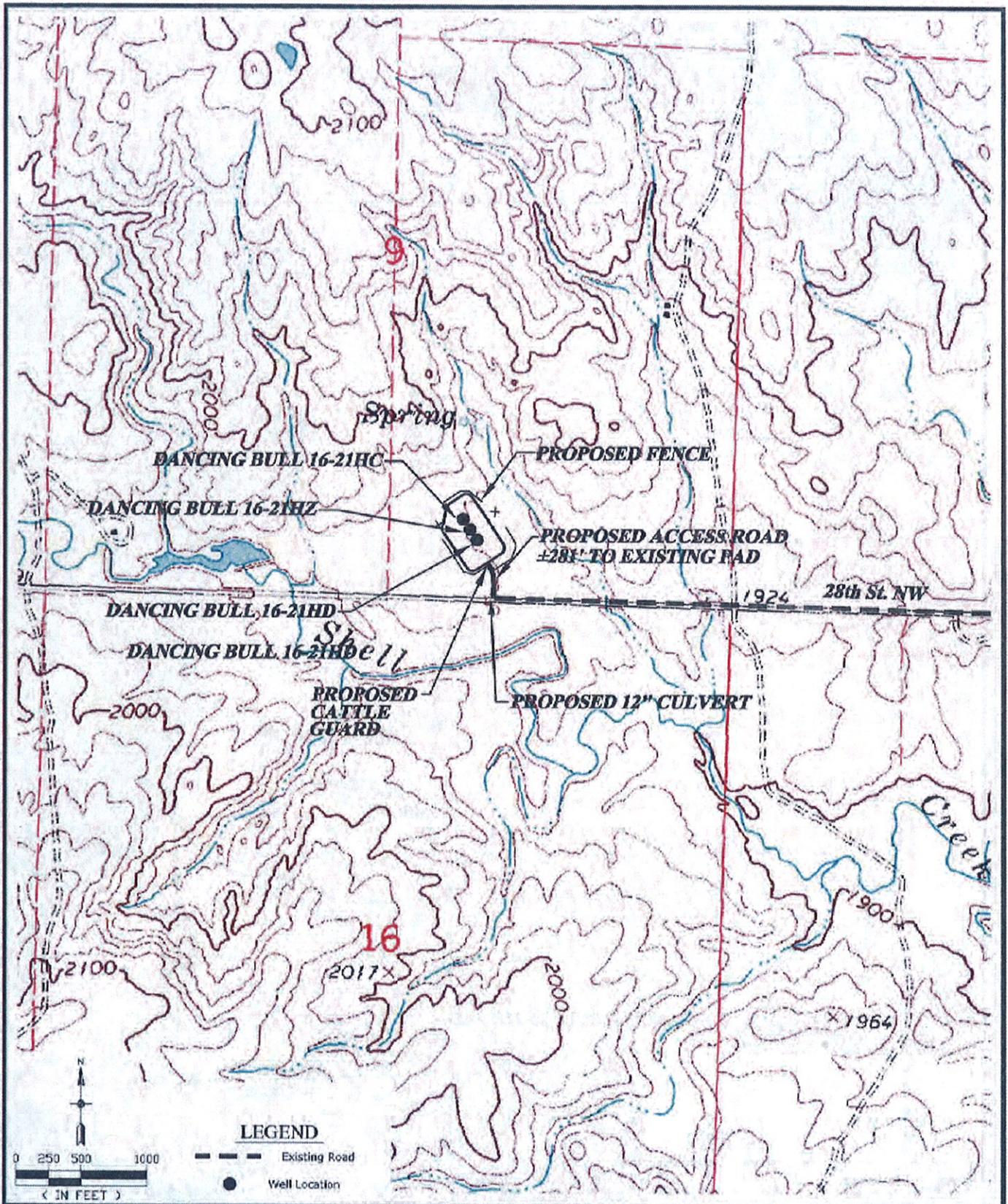
THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, MOUNTRAIL COUNTY, NORTH DAKOTA

JOB NO: 3560 DATE: 1/16/12
 REVISIONS:

EMERGENCY ROUTE AREA MAP
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

MAP A

F:\Jobs\3541 - 3560\3560 - Van Hook Gathering System\Survey\Pods\Dancing Bull Pad\Access Road Map.dwg 5/9/2012 11:08:17 AM CDT



Carlson McCain
 ENVIRONMENTAL · ENGINEERING · SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58503
 Phone: 701-255-1475
 www.carlsonmccain.com

PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF
 SECTION 9, TOWNSHIP 150N, RANGE 92W,
 MOUNTRAIL COUNTY, NORTH DAKOTA

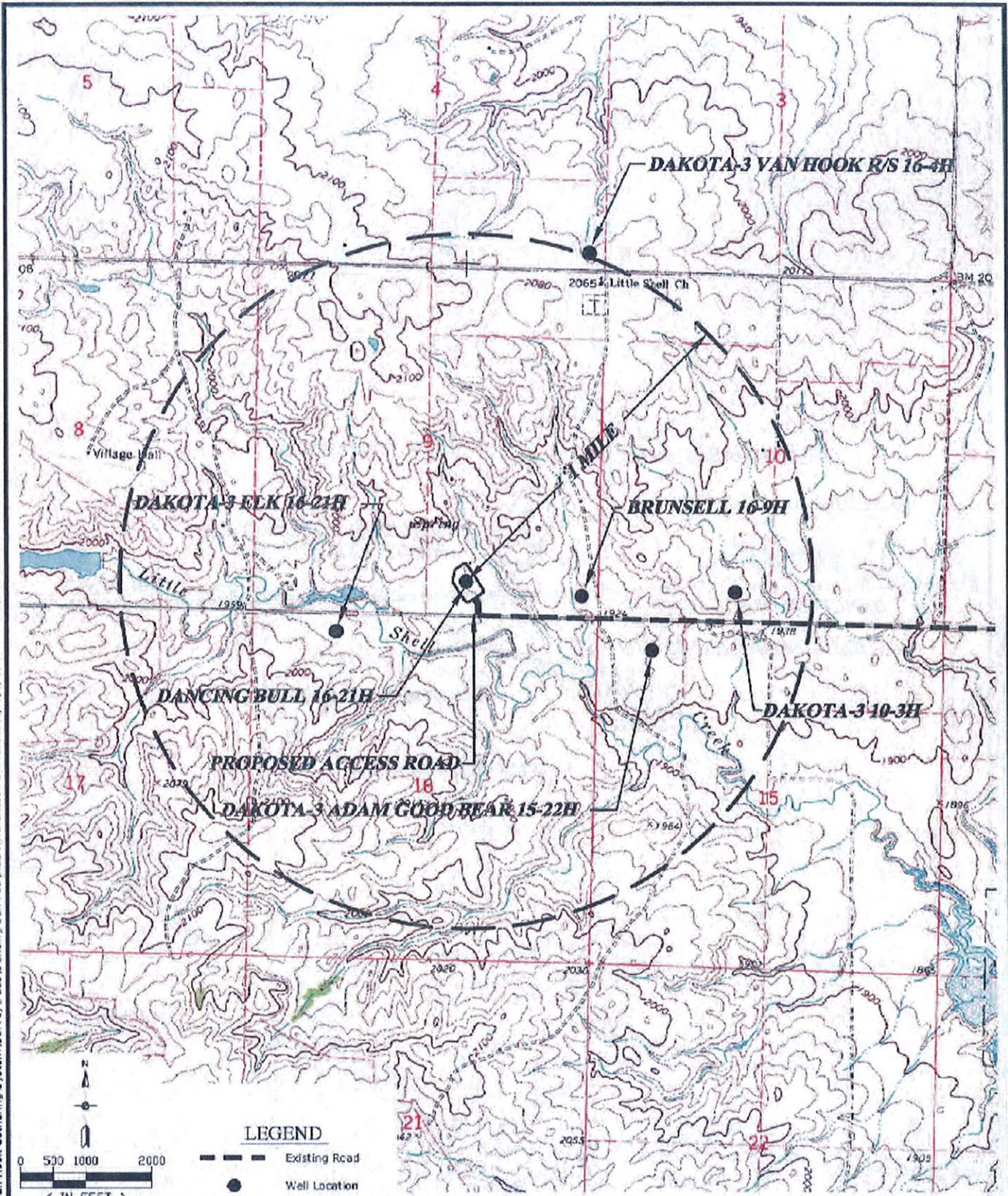
JOB NO: 3560 DATE: 01/16/12
 REVISIONS:

ACCESS ROAD MAP
DANCING BULL 16-21HC,
16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

MAP B

SHEET 18 of 21

F:\Jobs\3541 - 3560\3560 - Van Hook Gathering System\Survey\pads\Dancing Bull Pad\H2S Awareness Perimeter.dwg 5/9/2012 11:17:23 AM CDT



ENVIRONMENTAL · ENGINEERING · SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58503
 Phone: 701-255-1475
 www.carlsonmccain.com

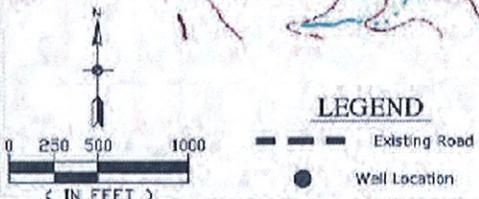
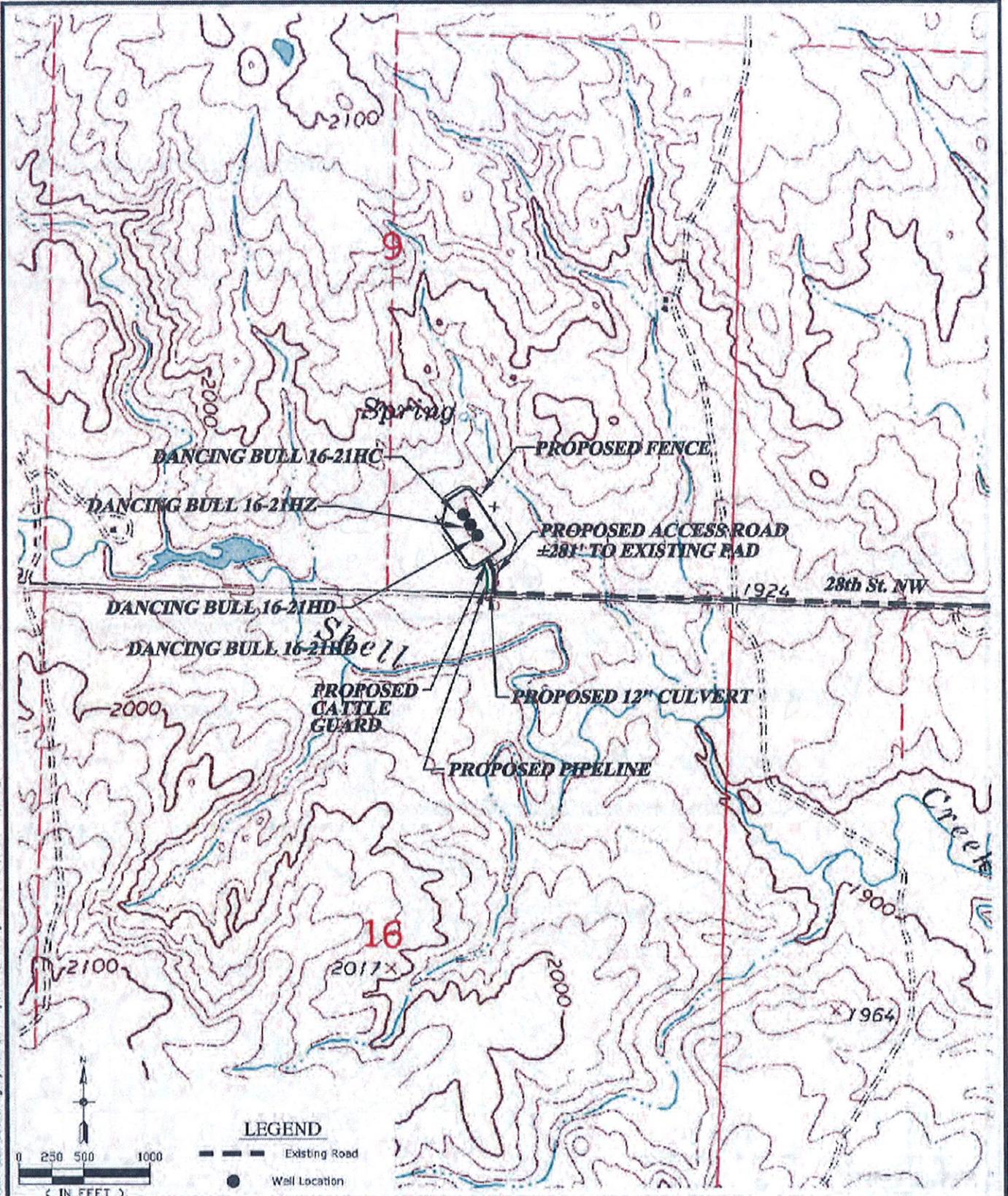
PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, MOUNTRAIL COUNTY, NORTH DAKOTA

JOB NO: 3560 DATE: 01/16/12
 REVISIONS:

**1 MILE RADIUS
 H2S AWARENESS PERIMETER
 DANCING BULL 16-21HC,
 16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~
 MAP C**

F:\Jobs\3541 - 3560\3560 - Van Hook Gathering System\Survey\Paids\Dancing Bull Pad\Pipeline Map.dwg 5/9/2012 11:14:35 AM CDT



Carlson McCain
 ENVIRONMENTAL - ENGINEERING - SURVEYING
 2718 Gateway Avenue, #101
 Bismarck, ND 58503
 Phone: 701-255-1475
 www.carlsonmccain.com

PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF SECTION 9, TOWNSHIP 150N, RANGE 92W, MOUNTRAIL COUNTY, NORTH DAKOTA

JOB NO: 3560 DATE: 01/15/12
 REV:SIONS:

PIPELINE MAP
DANCING BULL 16-21HC, 16-21HZ & 16-21HD
 ~ WPX ENERGY WILLISTON, LLC ~

MAP D SHEET 20 of 21

DRIVING DIRECTIONS

Proceed southerly from New Town, North Dakota along College Drive. College Drive becomes 88th Avenue Northwest. Follow this route for approximately 7.2 miles to the intersection of 32nd Street Northwest. Turn left onto 32nd Street Northwest and continue easterly for approximately 2.0 miles to the intersection of 86th Avenue Northwest. Turn right onto 86th Avenue Northwest and continue southerly for approximately 1.0 miles to the intersection of 31st Street Northwest. Turn left onto 31st Street Northwest and continue easterly for approximately 1.0 miles to the intersection of 85th Avenue Northwest. Turn right onto 85th Avenue Northwest and continue southerly for approximately 3.0 miles. As the road bends to the west it becomes 28th Street Northwest. Continue on 28th Street Northwest for approximately 2.4 miles to the access road to the DANCING BULL 16-21H PAD site. Turn right onto access road and continue northerly approximately 0.05 miles to the existing well location.

Total distance from New Town, North Dakota to the DANCING BULL 16-21H PAD site is approximately 16.45 miles.

F:\Jobs\3541 - 3560\3560 - Van Hook Gathering System\Survey\pads\Dancing Bull Pad\Emergency Route Area Map.dwg 5/9/2012 11:12:02 AM CDT



ENVIRONMENTAL - ENGINEERING - SURVEYING

2718 Gateway Avenue, #101
Bismarck, ND 58503
Phone: 701-255-1475
www.carlsonmccain.com

PAD LOCATION

THE SW 1/4 OF THE SE 1/4 OF
SECTION 9, TOWNSHIP 150N, RANGE 92W,
MOUNTRAIL COUNTY, NORTH DAKOTA

JOB NO: 3560 | DATE: 1/16/12
REVISIONS:

DRIVING DIRECTIONS DANCING BULL 16-21HC, 16-21HZ & 16-21HD

~ WPX ENERGY WILLISTON, LLC ~

Appendix B

Olson 12-1H/FBIR 13-24H Plat Package



CONFIDENTIALITY NOTES:

The Information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



**WILLIAM H. SMITH
& ASSOCIATES P.C.**

SURVEYING CONSULTANTS
550 EAST SECOND NORTH PHONE: 307-875-3638
GREEN RIVER, WY 307-875-3639
www.wsmithpc.com

DRAWN BY: RAW

CHECKED BY: WHD

PROJECT NO: N/A

JOB NO: 2011500

REVISIONS:

LEGEND

PROPOSED ACCESS ---
EXISTING ROAD ———

LOCATION:
OLSON 12-1H
FBIR 13-24H

S1/2 SE1/4,
SEC. 12,
T150N, R92W,
MOUNT RAIL COUNTY,
NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC
A SUBSIDIARY OF WILLIAMS

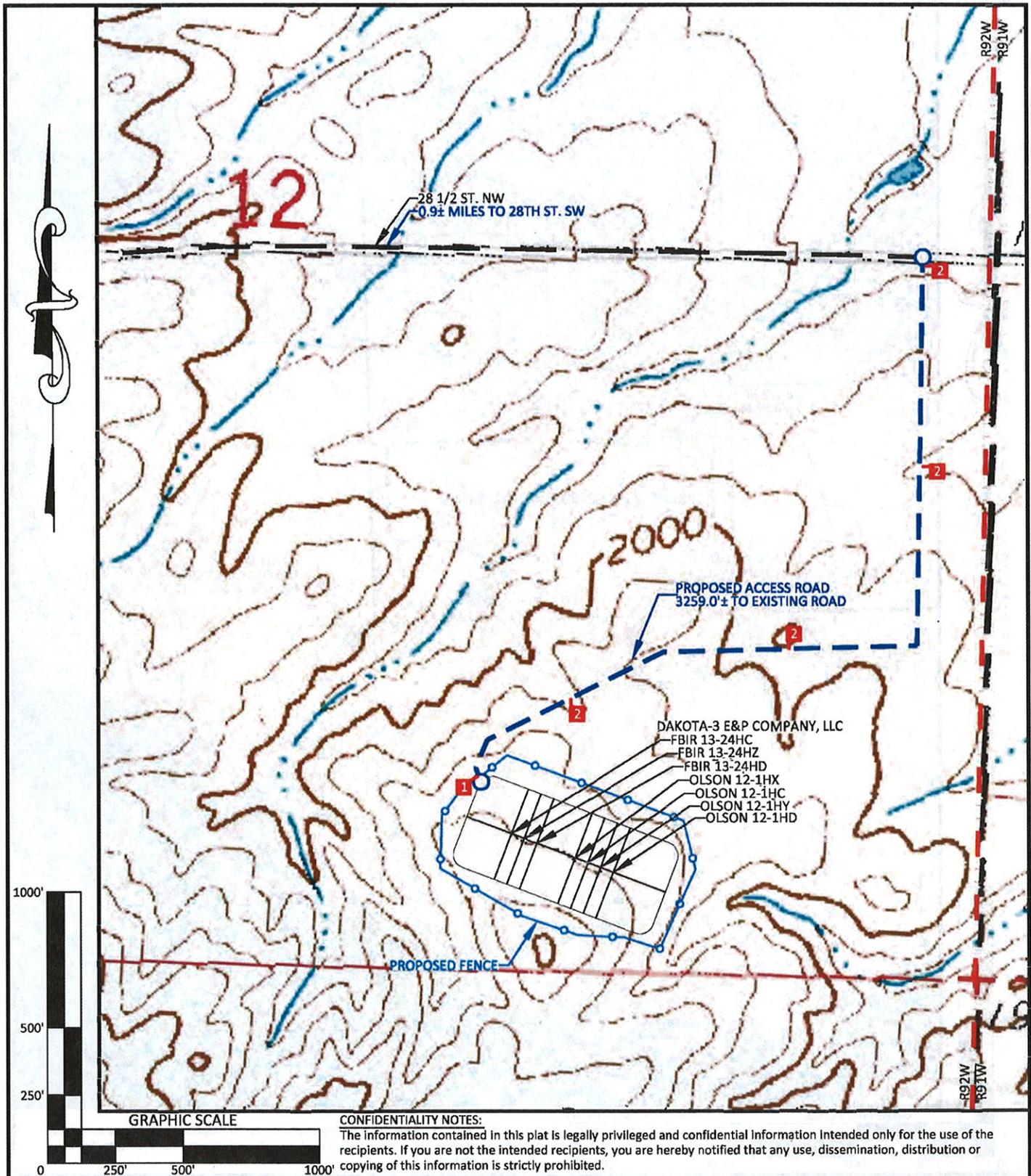
AREA MAP

SCALE: 1"= 2 MILE

EXHIBIT "J"

DATE: 11/14/2011

SHEET 1 OF 4



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmithpc.com

DRAWN BY: RAW CHECKED BY: WHD
 PROJECT NO: N/A JOB NO: 2011500
 REVISIONS:

LEGEND
 PROPOSED ACCESS ———
 EXISTING ROAD ———
 PROPOSED FENCE ———

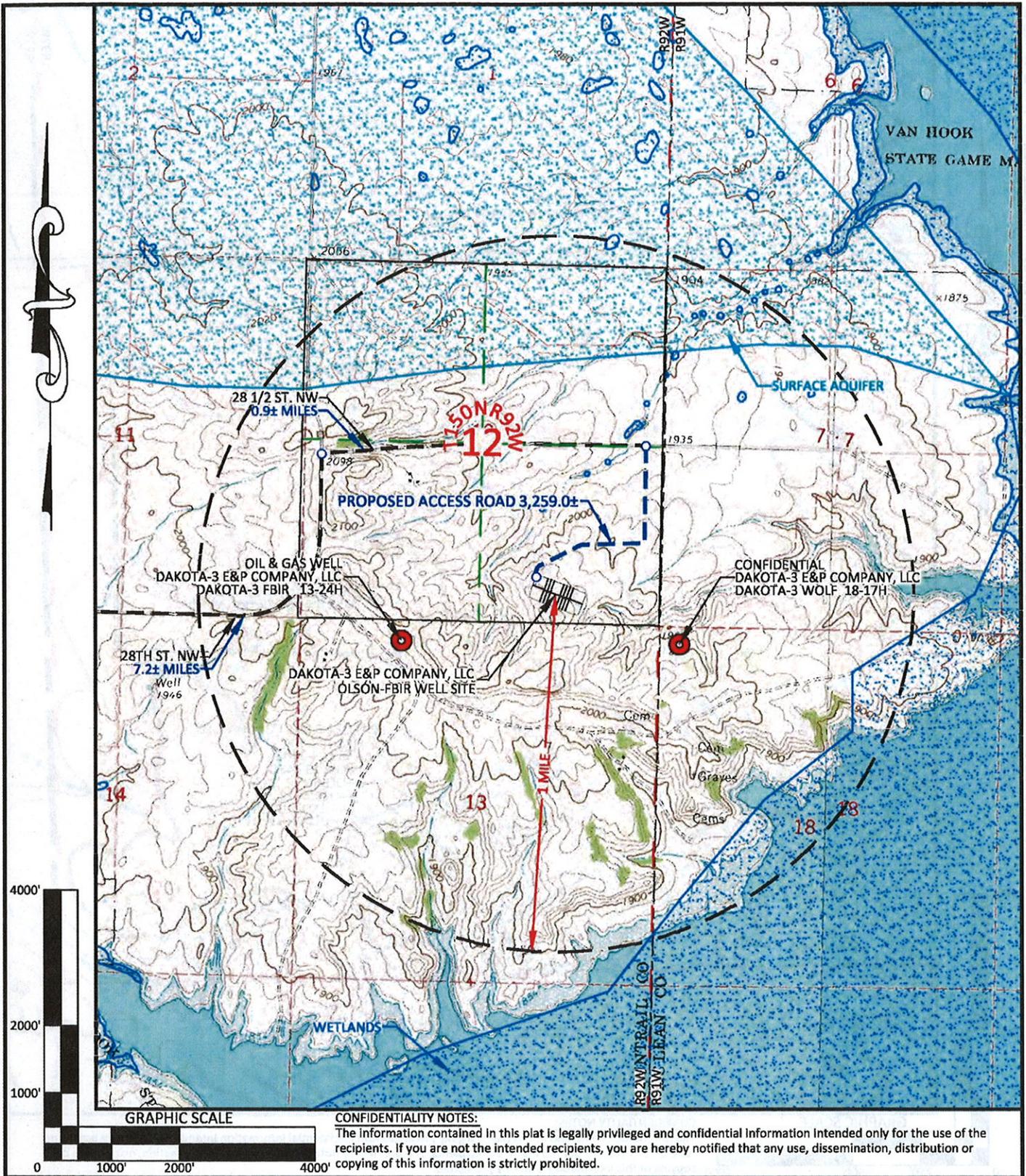
- 1 INSTALL CATTLE GAURD
- 2 INSTALL CMP

LOCATION:
OLSON 12-1H
FBIR 13-24H
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC
 A SUBSIDIARY OF WILLIAMS

ACCESS ROAD MAP

SCALE: 1"=500' EXHIBIT "J"
 DATE: 11/14/2011 SHEET 2 OF 4



CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



WILLIAM H. SMITH & ASSOCIATES P.C.

SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmithpc.com

DRAWN BY: RAW
 PROJECT NO: N/A
 REVISIONS:

CHECKED BY: WHD
 JOB NO: 2011500

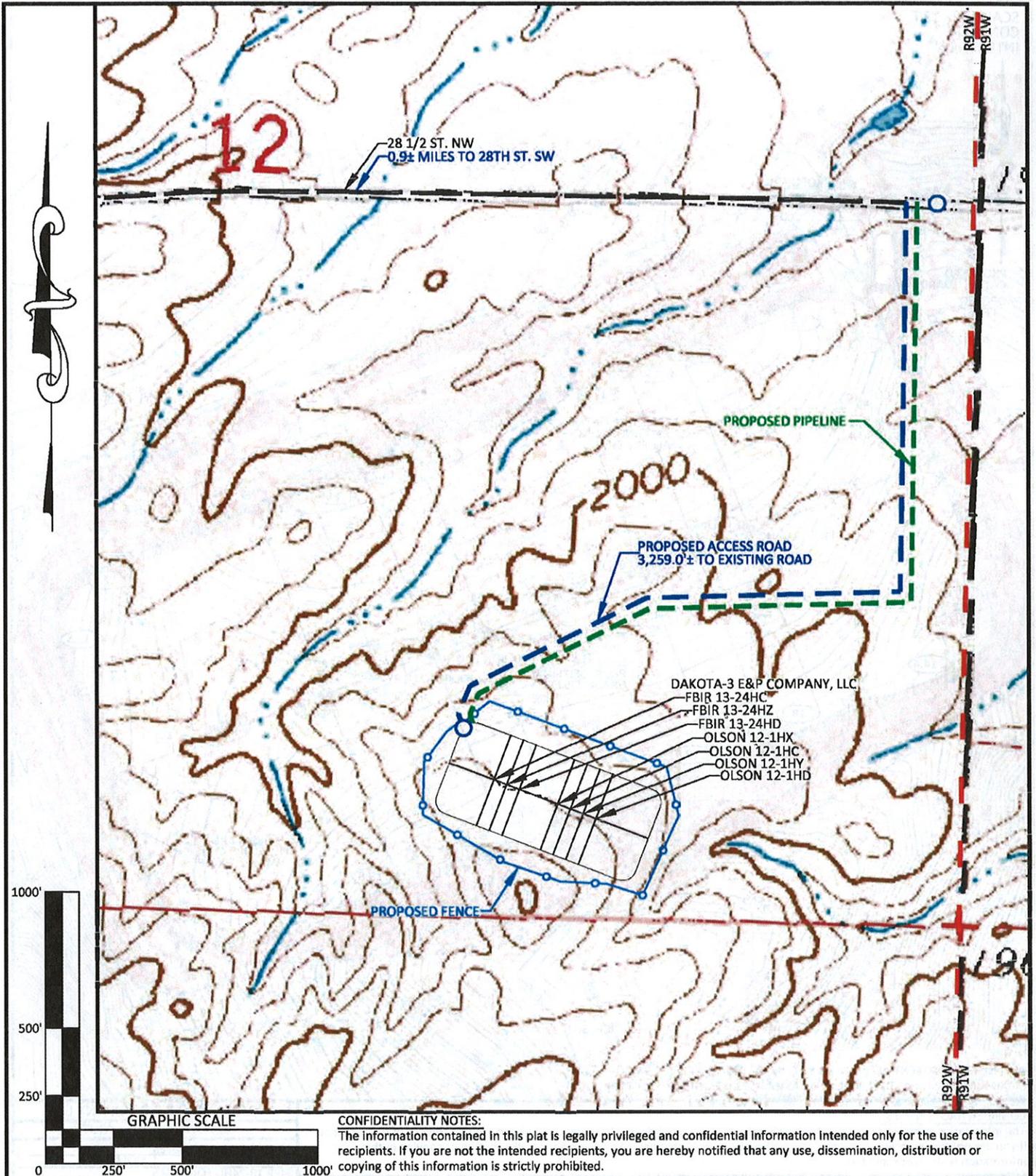
LEGEND	
PROPOSED ACCESS	
EXISTING ROAD	
SECTION LINE	
1/4 LINE	
WETLANDS	
SURFACE AQUIFER	

LOCATION:
OLSON 12-1H
FBIR 13-24H
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNT TRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC
A SUBSIDIARY OF WILLIAMS

WELL LOCATION MAP

SCALE: 1"=2000'	EXHIBIT "J"
DATE: 11/14/2011	SHEET 3 OF 4



**WILLIAM H. SMITH
& ASSOCIATES P.C.**
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmithpc.com

DRAWN BY: RAW	CHECKED BY: WHD
PROJECT NO: N/A	JOB NO: 2011500
REVISIONS:	

LEGEND

PROPOSED ACCESS ————

EXISTING ROAD ————

PROPOSED PIPELINE ————

PROPOSED FENCE ————

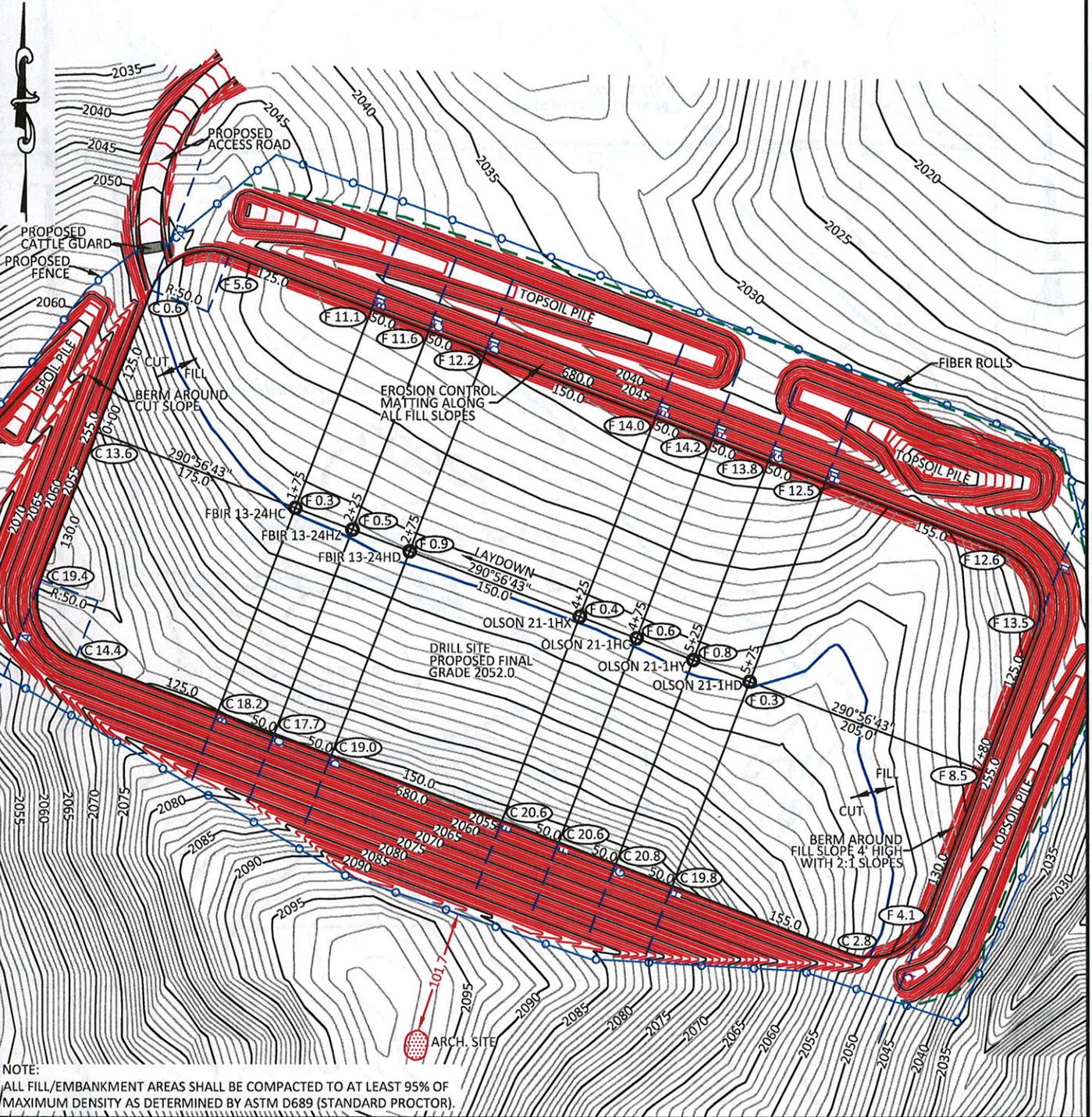
LOCATION:
OLSON 12-1H
FBIR 13-24H
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNT RAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC
A SUBSIDIARY OF WILLIAMS

PIPELINE DRAWING

SCALE: 1"=500'	EXHIBIT "J"
DATE: 11/14/2011	SHEET 4 OF 4

SCALE: 1"= 120'
 CONTOUR
 INTERVAL 1'



NOTE:
 ALL FILL/EMBANKMENT AREAS SHALL BE COMPACTED TO AT LEAST 95% OF
 MAXIMUM DENSITY AS DETERMINED BY ASTM D689 (STANDARD PROCTOR).

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

**DAKOTA-3 E&P COMPANY LLC
 CONSTRUCTION LAYOUT**

FBIR 13-24HC FOOTAGES	
1689' FEL	477' FSL
FBIR 13-24HD FOOTAGES	
1595' FEL	443' FSL
FBIR 13-24HZ FOOTAGES	
1642' FEL	460' FSL
OLSON 12-1HC FOOTAGES	
1406' FEL	376' FSL
OLSON 12-1HD FOOTAGES	
1312' FEL	343' FSL
OLSON 12-1HX FOOTAGES	
1453' FEL	393' FSL
OLSON 12-1HY FOOTAGES	
1359' FEL	359' FSL
SCALE: 1"=120'	EXHIBIT "I"
DATE: 11/13/2011	SHEET 1 OF 5

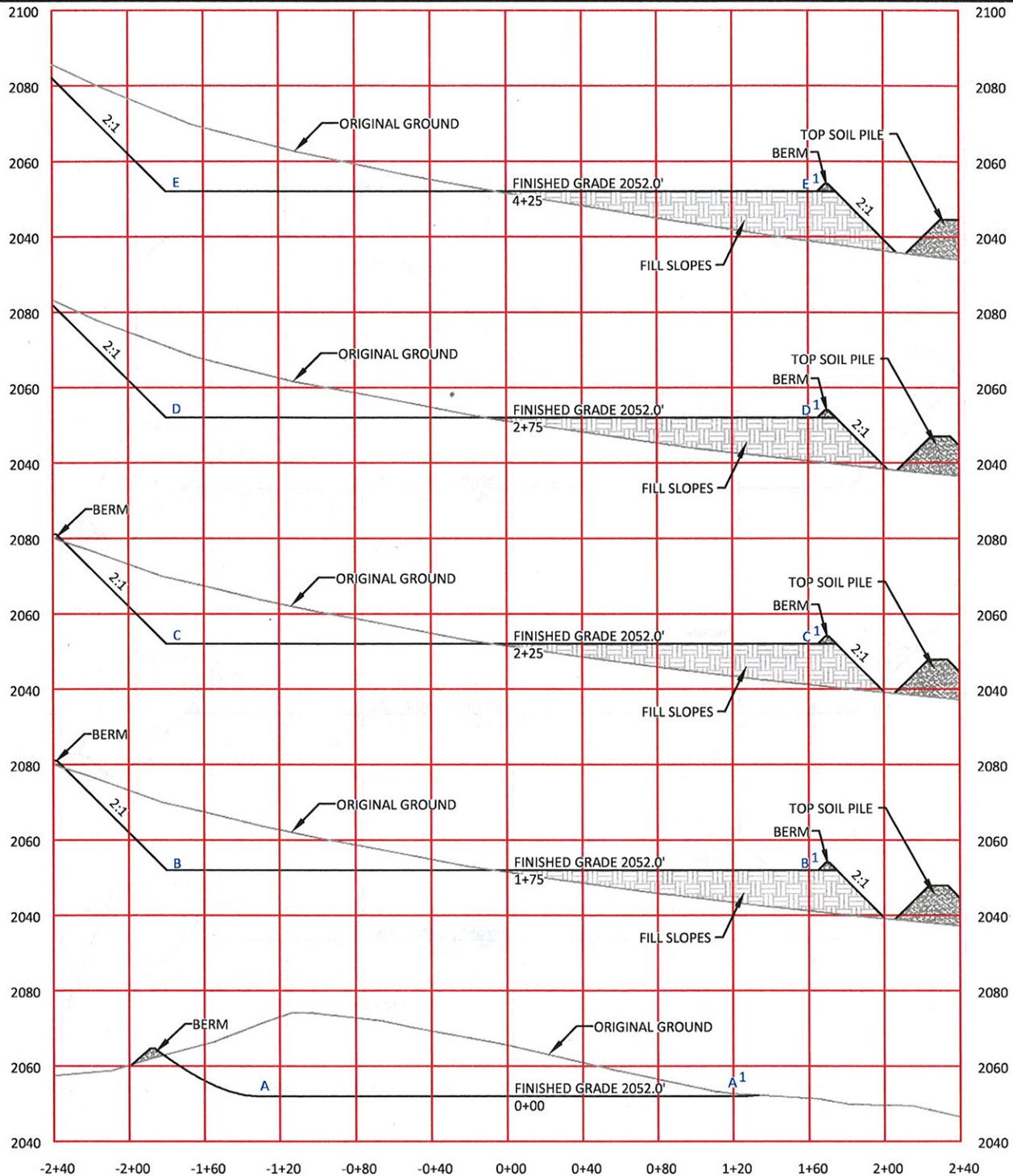
**WILLIAM H. SMITH
 & ASSOCIATES P.C.**
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH GREEN RIVER, WY
 PHONE: 307-875-3638 307-875-3639
 www.wsmithpc.com

CONSTRUCTION DATA

CUT SLOPE:	2:1
FILL SLOPE:	2:1
TOTAL CUT:	63,176 CU. YDS.
TOTAL FILL +30% SHRINK:	53,681 CU. YDS.
TOP SOIL AT 8"	8,901 CU. YDS.
SPOIL:	594 CU. YDS.
DISTURBED AREA	358,694 SQ. FT.
DISTURBED AREA	8.23 ACRES

LOCATION:
**OLSON 12-1H
 FBIR 13-24H**
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DRAWN BY: CED	CHECKED BY: WHD
PROJECT NO: N/A	JOB NO: 2011500
REVISIONS:	



HORIZONTAL SCALE: 1"=80'
 VERTICAL SCALE: 1"=40'

CONFIDENTIALITY NOTES:

The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.wsmithpc.com

DRAWN BY: RAW	CHECKED BY: WHD
PROJECT NO: N/A	JOB NO: 2011500
REVISIONS:	

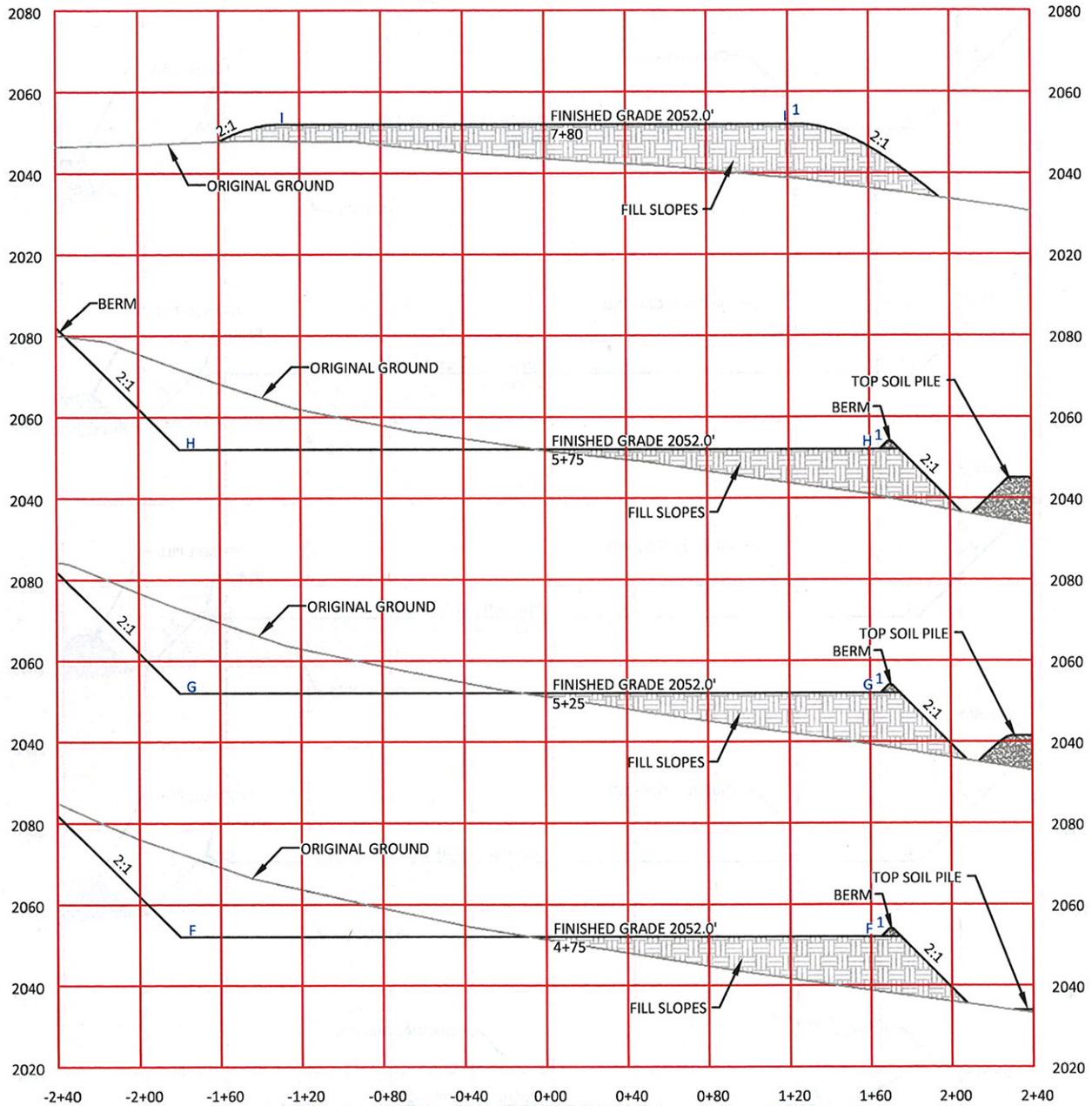
CONSTRUCTION DATA	
CUT SLOPE:	2:1
FILL SLOPE:	2:1
TOTAL CUT:	63,176 CU. YDS.
TOTAL FILL +30% SHRINK:	53,681 CU. YDS.
TOP SOIL AT 8"	8,901 CU. YDS.
SPOIL	594 CU. YDS.
DISTURBED AREA	358,694 SQ. FT.
DISTURBED AREA	8.23 ACRES

LOCATION:
OLSON 12-1H
FBIR 13-24H
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

**CONSTRUCTION LAYOUT
 CROSS SECTIONS**

SCALE: NOTED	EXHIBIT "I"
DATE: 11/13/2011	SHEET 2 OF 5



HORIZONTAL SCALE: 1"=80'
 VERTICAL SCALE: 1"=40'

CONFIDENTIALITY NOTES:

The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.



**WILLIAM H. SMITH
 & ASSOCIATES P.C.**
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmithpc.com

DRAWN BY: RAW CHECKED BY: WHD
 PROJECT NO: N/A JOB NO: 2011500
 REVISIONS:

CONSTRUCTION DATA

CUT SLOPE:	2:1
FILL SLOPE:	2:1
TOTAL CUT:	63,176 CU. YDS.
TOTAL FILL +30% SHRINK:	53,681 CU. YDS.
TOP SOIL AT 8"	8,901 CU. YDS.
SPOIL:	594 CU. YDS.
DISTURBED AREA	358,694 SQ. FT.
DISTURBED AREA	8.23 ACRES

LOCATION:
OLSON 12-1H
FBIR 13-24H

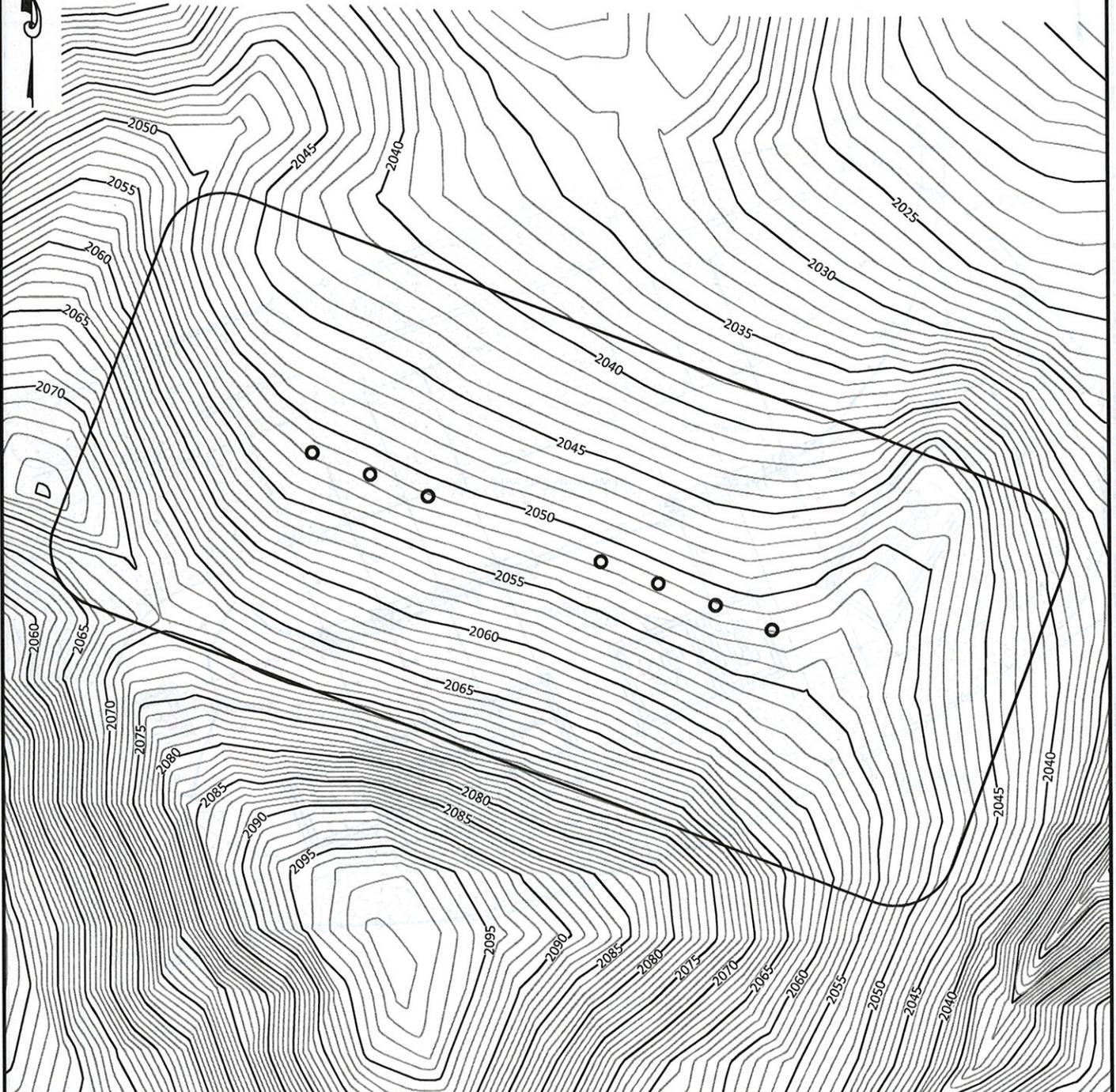
S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

**CONSTRUCTION LAYOUT
 CROSS SECTIONS**

SCALE: NOTED EXHIBIT "I"
 DATE: 11/13/2011 SHEET 3 OF 5

SCALE: 1"= 120'
 CONTOUR
 INTERVAL 1'



**WILLIAM H. SMITH
 & ASSOCIATES P.C.**

SURVEYING CONSULTANTS
 550 EAST SECOND NORTH PHONE: 307-875-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmithpc.com

DRAWN BY: RAW	CHECKED BY: WHD
PROJECT NO: N/A	JOB NO: 2011500
REVISIONS:	

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LOCATION:
**OLSON 12-1H
 FBIR 13-24H**
 S1/2 SE1/4,
 SEC. 12,
 T150N, R92W,
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

FINAL RECLAMATION

SCALE: 1"=120'	EXHIBIT "I"
DATE: 11/13/2011	SHEET 5 OF 5

WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC

OLSON 12-1HC

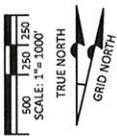
1406 FEET FROM THE EAST LINE AND 376 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)

SECTION 12, T 150 N, R 92 W, 5TH P.M.

2240 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)

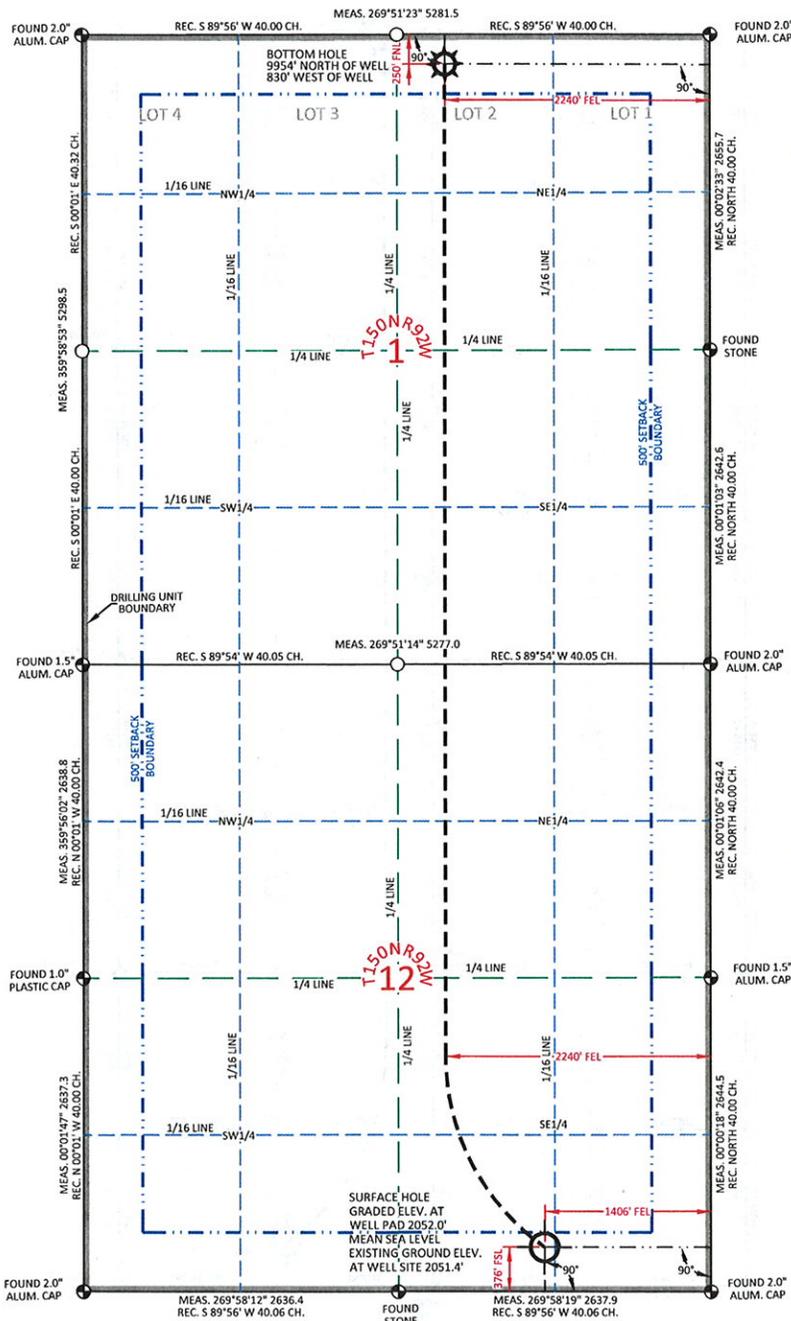
SECTION 1, T 150 N, R 92 W, 5TH P.M.

MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
 Lat. 47°49'11.08"
 Long. 102°23'29.23"
 Lat. 47.819744°
 Long. 102.391453°
 Lat. 47°49'11.04"
 Long. 102°23'27.58"
 Lat. 47.819733°
 Long. 102.390996°
 UTM ZONE 13N
 N:17386257.55
 E:2281152.23
 NAD 27 NAD 83

BOTTOM HOLE LOCATION
 Lat. 47°50'49.31"
 Long. 102°23'41.39"
 Lat. 47.847029°
 Long. 102.394831°
 Lat. 47°50'49.26"
 Long. 102°23'39.75"
 Lat. 47.847018°
 Long. 102.394374°
 UTM ZONE 13N
 N:17396177.60
 E:2279987.10
 NAD 27 NAD 83



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and/or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 2 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorp.
 Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
 Distances shown are Ground Distances using a combined scale factor of 1.000149560
 Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 550 EAST SECOND NORTH
 GREEN RIVER, WY 82501
 PHONE: 307-875-3638
 307-875-3639
 www.whsni.com

DRAWN BY: CED
 PROJECT NO: N/A
 REVISIONS:

CHECKED BY: WHD
 JOB NO: 2011500

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
 SW1/4 SE1/4, SECTION 12,
 T 150 N, R 92 W, 5TH PM.
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

WELL LOCATION PLAT

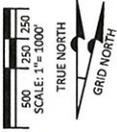
SCALE: 1"=1000'
 DATE: 11/14/2011

EXHIBIT "A"
 SHEET 1 OF 2

HORIZONTAL SECTION PLAT

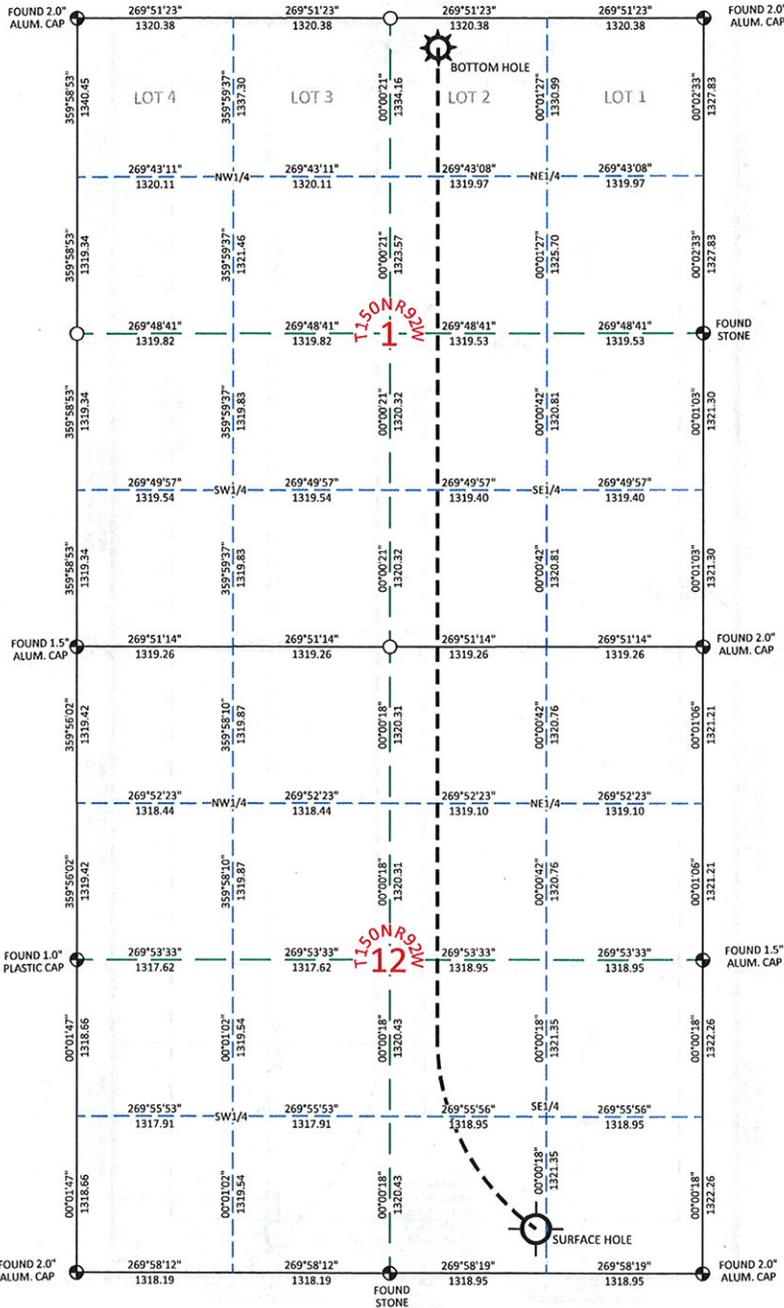
DAKOTA-3 E&P COMPANY LLC
OLSON 12-1HC

1406 FEET FROM THE EAST LINE AND 376 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
2240 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
SECTION 1, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'11.08"
Long. 102°23'29.23"
Lat. 47.819744°
Long. 102.391453°
Lat. 47°49'11.04"
Long. 102°23'27.58"
Lat. 47.819733°
Long. 102.390996°
UTM ZONE 13N
N:17386257.55
E:2281152.23

BOTTOM HOLE LOCATION
Lat. 47°50'49.31"
Long. 102°23'41.39"
Lat. 47.847029°
Long. 102.394831°
Lat. 47°50'49.26"
Long. 102°23'39.75"
Lat. 47.847018°
Long. 102.394374°
UTM ZONE 13N
N:17396177.60
E:2279987.10



I, William H. Dolinar, Professional Land Surveyor, ND. RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 2 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point [5/8" rebar] and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorssn.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
SURVEYING CONSULTANTS
150 EAST SECOND NORTH GREEN RIVER, WY 87501
PHONE: 307.875.3638 307.875.3639
www.williamhsmith.com

DRAWN BY: CED
CHECKED BY: WHD
PROJECT NO: N/A
JOB NO: 2011500

CONFIDENTIALITY NOTES:
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- NOT FOUND CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM, MOUNTRAIL COUNTY, NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

SCALE: 1"=1000'
DATE: 11/14/2011

EXHIBIT "A"
SHEET 2 OF 2

WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC

OLSON 12-1HD

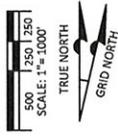
1312 FEET FROM THE EAST LINE AND 343 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)

SECTION 12, T 150 N, R 92 W, 5TH P.M.

600 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)

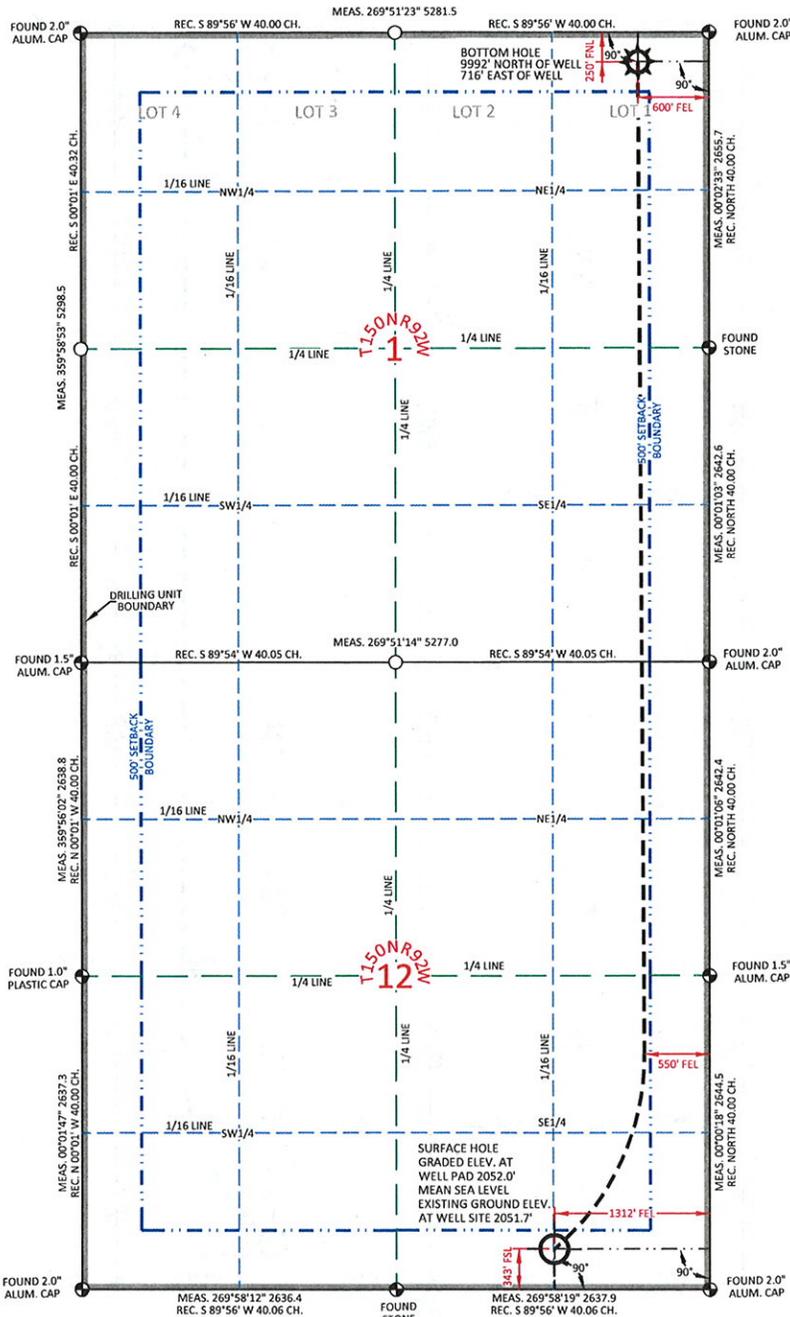
SECTION 1, T 150 N, R 92 W, 5TH P.M.

MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
 Lat. 47°49'10.75"
 Long. 102°23'27.85"
 Lat. 47.819652°
 Long. 102.391069°
 Lat. 47°49'10.71"
 Long. 102°23'26.20"
 Lat. 47.819642°
 Long. 102.390612°
 UTM ZONE 13N
 N:17386227.30
 E:2281247.56

BOTTOM HOLE LOCATION
 Lat. 47°50'49.34"
 Long. 102°23'17.35"
 Lat. 47.847040°
 Long. 102.388153°
 Lat. 47°50'49.30"
 Long. 102°23'15.71"
 Lat. 47.847029°
 Long. 102.387696°
 UTM ZONE 13N
 N:17396236.98
 E:2281625.96

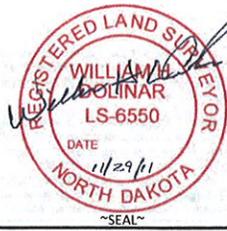


I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SE1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 1 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosn.

Vertical Datum used is of NAVD 88.
 Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.000149560
 Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C. SURVEYING CONSULTANTS
 350 EAST SECOND NORTH
 GREEN RIVER, WY
 PHONE: 307-875-3638
 307-875-3639
 www.whsmithco.com

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
 SE1/4 SE1/4, SECTION 12,
 T 150 N, R 92 W, 5TH PM.
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

WELL LOCATION PLAT

SCALE: 1"=1000'
 DATE: 11/14/2011

EXHIBIT "B"
 SHEET 1 OF 2

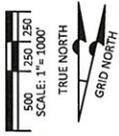
DRAWN BY: CED
 PROJECT NO: N/A
 REVISIONS:

CHECKED BY: WHD
 JOB NO: 2011500

HORIZONTAL SECTION PLAT

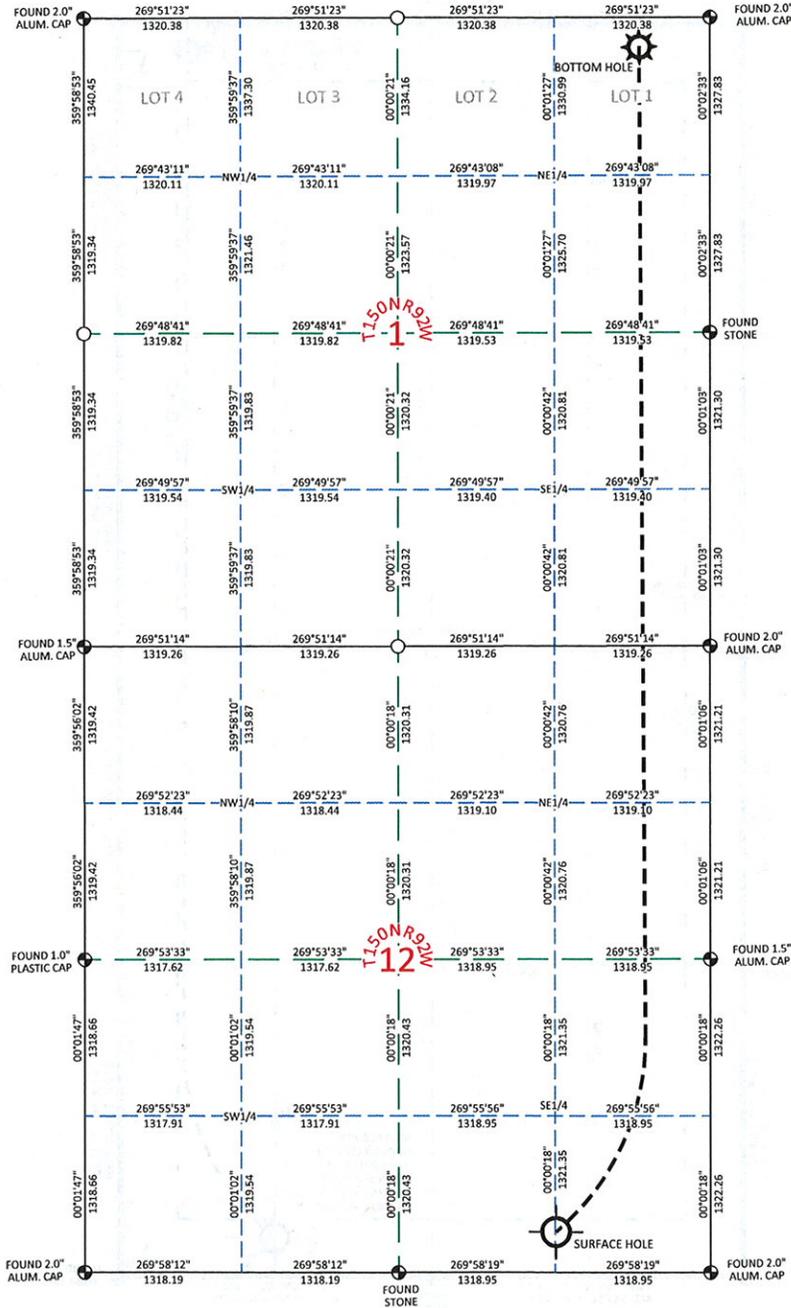
DAKOTA-3 E&P COMPANY LLC
OLSON 12-1HD

1312 FEET FROM THE EAST LINE AND 343 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
600 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
SECTION 1, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'10.75"
Long. 102°23'27.85"
Lat. 47.819652°
Long. 102.391069°
Lat. 47°49'10.71"
Long. 102°23'26.20"
Lat. 47.819642°
Long. 102.390612°
UTM ZONE 13N
N:17386227.30
E:2281247.56

BOTTOM HOLE LOCATION
Lat. 47°50'49.34"
Long. 102°23'17.35"
Lat. 47.847040°
Long. 102.388153°
Lat. 47°50'49.30"
Long. 102°23'15.71"
Lat. 47.847029°
Long. 102.387696°
UTM ZONE 13N
N:17396236.98
E:2281625.96



I, William H. Dolinar, Professional Land Surveyor, ND. RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SE1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 1 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosm.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
SURVEYING CONSULTANTS
850 EAST SECOND NORTH
GREEN RIVER, WY 82901
PHONE: 307-875-3638
307-875-3639
www.whsinc.com

DRAWN BY: CED
PROJECT NO: N/A
REVISIONS:

CHECKED BY: WHD
JOB NO: 2011500

CONFIDENTIALITY NOTES:
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- NOT FOUND CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
SE1/4 SE1/4, SECTION 12,
T 150 N, R 92 W, 5TH PM,
MOUNTRAIL COUNTY,
NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

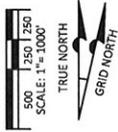
SCALE: 1"=1000'
DATE: 11/14/2011

EXHIBIT "B"
SHEET 2 OF 2

WELL LOCATION PLAT

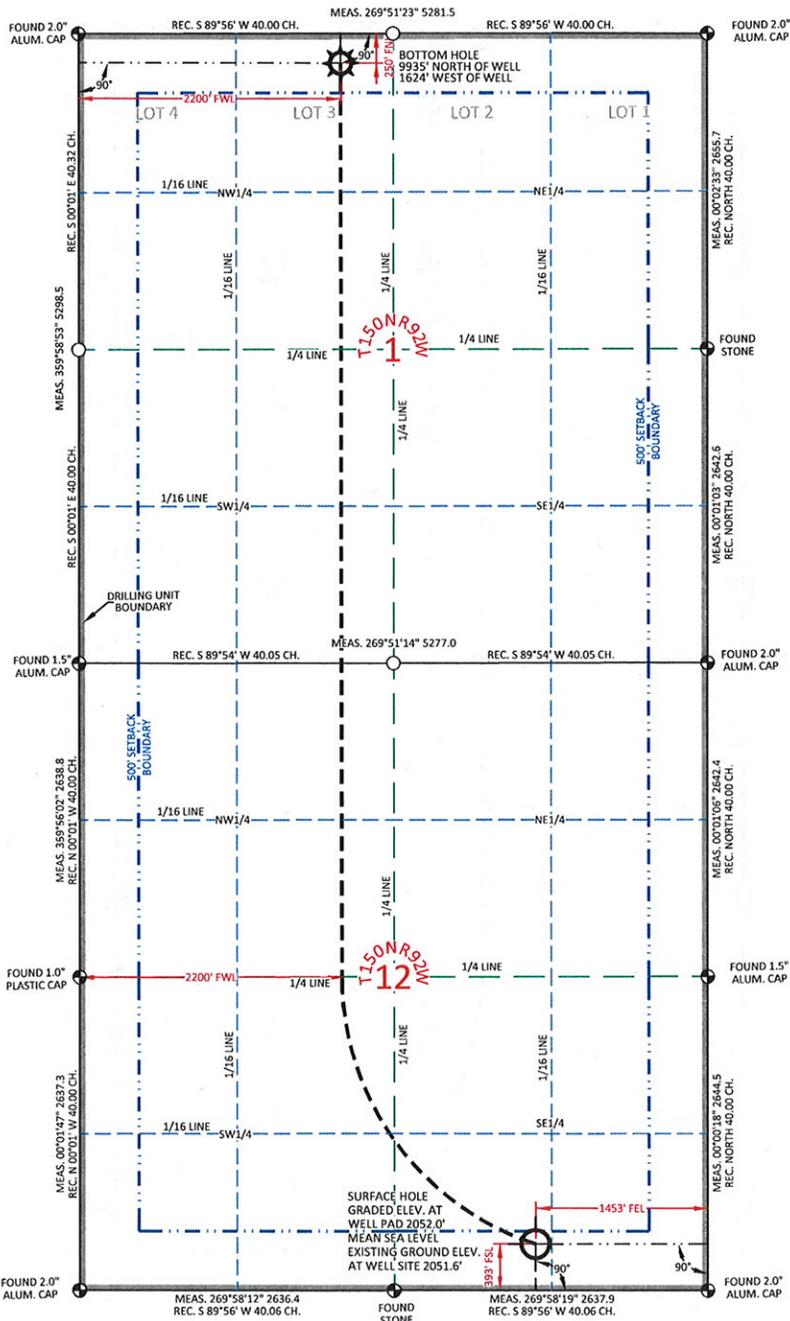
DAKOTA-3 E&P COMPANY LLC

OLSON 12-1HX
 1453 FEET FROM THE EAST LINE AND 393 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
 SECTION 12, T 150 N, R 92 W, 5TH P.M.
 2200 FEET FROM THE WEST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
 SECTION 1, T 150 N, R 92 W, 5TH P.M.
 MOUNTRAIL COUNTY, NORTH DAKOTA



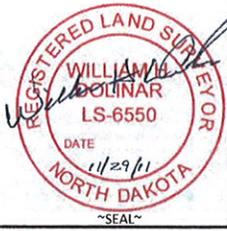
SURFACE HOLE LOCATION
 Lat. 47°49'11.24"
 Long. 102°23'29.92"
 Lat. 47.819790°
 Long. 102.391645°
 Lat. 47°49'11.20"
 Long. 102°23'28.27"
 Lat. 47.819779°
 Long. 102.391188°
 UTM ZONE 13N
 N:17386272.66
 E:2281104.57

BOTTOM HOLE LOCATION
 Lat. 47°50'49.29"
 Long. 102°23'53.72"
 Lat. 47.847024°
 Long. 102.398256°
 Lat. 47°50'49.24"
 Long. 102°23'52.08"
 Lat. 47.847012°
 Long. 102.397799°
 UTM ZONE 13N
 N:17396147.13
 E:2279146.44



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and/or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 3 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorss.
 Vertical Datum used is of NAVD 88.
 Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
 Distances shown are Ground Distances using a combined scale factor of 1.000149560
 Location shown here on is not an "ASBUILT" location.

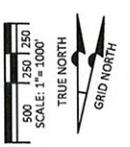


	<p>WILLIAM H. SMITH & ASSOCIATES P.C. SURVEYING CONSULTANTS 550 EAST SECOND NORTH GREEN RIVER, WY PHONE: 307-875-3638 307-875-3639 www.whsllp.com</p>	<p>CONFIDENTIALITY NOTES: The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.</p>	<p>LEGEND</p> <ul style="list-style-type: none"> FOUND MONUMENT MONUMENT SEARCHED FOR NOT FOUND CALCULATED CORNER SURFACE HOLE LOCATION BOTTOM HOLE LOCATION 	<p>LOCATION OF PLATTED WELL SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM. MOUNTRAIL COUNTY, NORTH DAKOTA</p>	<p>DAKOTA-3 E&P COMPANY LLC</p> <p>WELL LOCATION PLAT</p> <p>SCALE: 1"=1000' DATE: 11/14/2011</p> <p>EXHIBIT "C" SHEET 1 OF 2</p>
--	--	---	---	---	---

HORIZONTAL SECTION PLAT

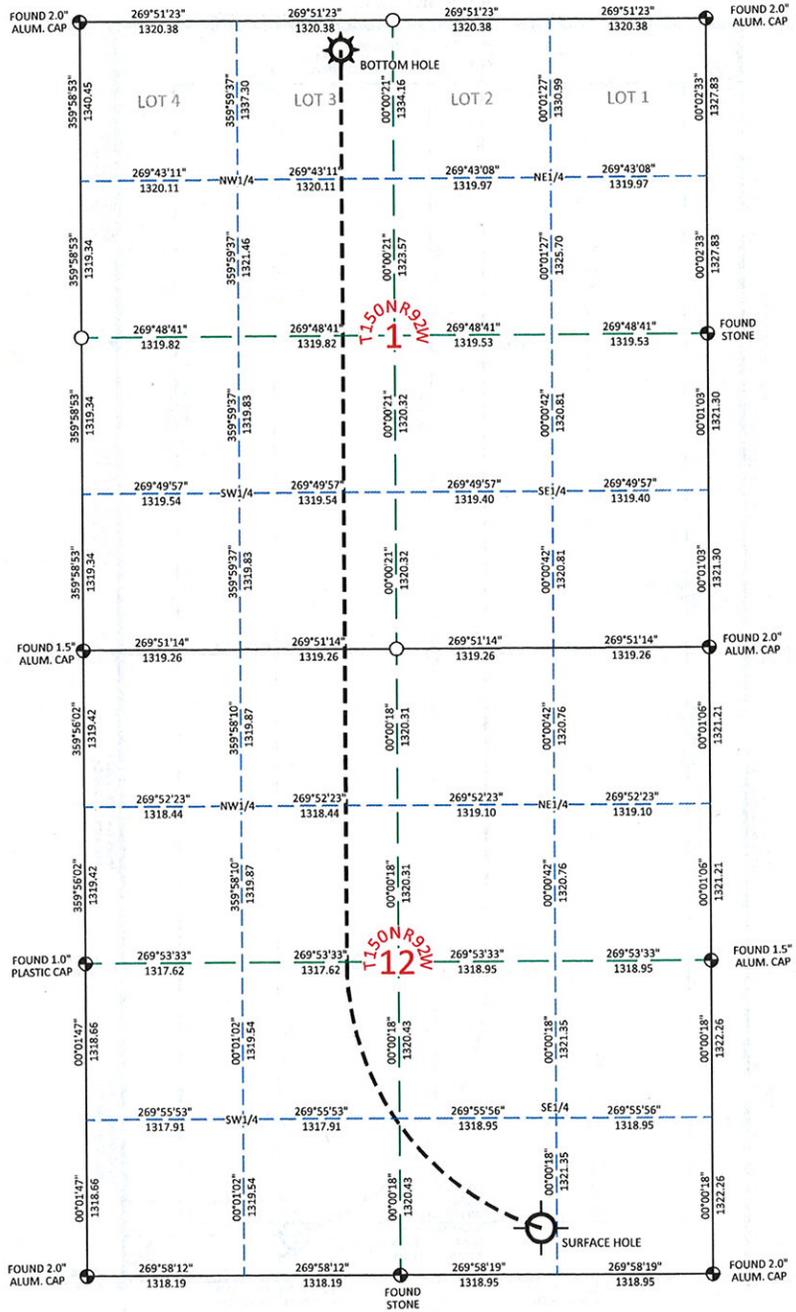
DAKOTA-3 E&P COMPANY LLC
OLSON 12-1HX

1453 FEET FROM THE EAST LINE AND 393 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
2200 FEET FROM THE WEST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
SECTION 1, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'11.24"
Long. 102°23'29.92"
Lat. 47.819790°
Long. 102.391645°
Lat. 47°49'11.20"
Long. 102°23'28.27"
Lat. 47.819779°
Long. 102.391188°
UTM ZONE 13N
N:17386272.66
E:2281104.57

BOTTOM HOLE LOCATION
Lat. 47°50'49.29"
Long. 102°23'53.72"
Lat. 47.847024°
Long. 102.398256°
Lat. 47°50'49.24"
Long. 102°23'52.08"
Lat. 47.847012°
Long. 102.397799°
UTM ZONE 13N
N:17396147.13
E:2279146.44



I, William H. Dolinar, Professional Land Surveyor, ND. RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 3 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorp.

Vertical Datum used is of NAVD 88.
Control Point is located 284°29'50" T, 21.289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



	WILLIAM H. SMITH & ASSOCIATES P.C. SURVEYING CONSULTANTS 550 EAST SECOND NORTH GREEN RIVER, WY. PHONE: 307-875-3638 www.w.h.smith.com	CONFIDENTIALITY NOTES: The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.	LEGEND FOUND MONUMENT MONUMENT SEARCHED FOR NOT FOUND CALCULATED CORNER SURFACE HOLE LOCATION BOTTOM HOLE LOCATION	LOCATION OF PLATTED WELL SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM. MOUNTRAIL COUNTY, NORTH DAKOTA	DAKOTA-3 E&P COMPANY LLC HORIZONTAL SECTION PLAT SCALE: 1"=1000' DATE: 11/14/2011
	DRAWN BY: CED PROJECT NO: N/A REVISIONS:	CHECKED BY: WHD JOB NO: 2011500	EXHIBIT "C" SHEET 2 OF 2		

WELL LOCATION PLAT

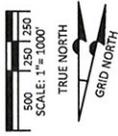
DAKOTA-3 E&P COMPANY LLC

OLSON 12-1HY

1359 FEET FROM THE EAST LINE AND 359 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.

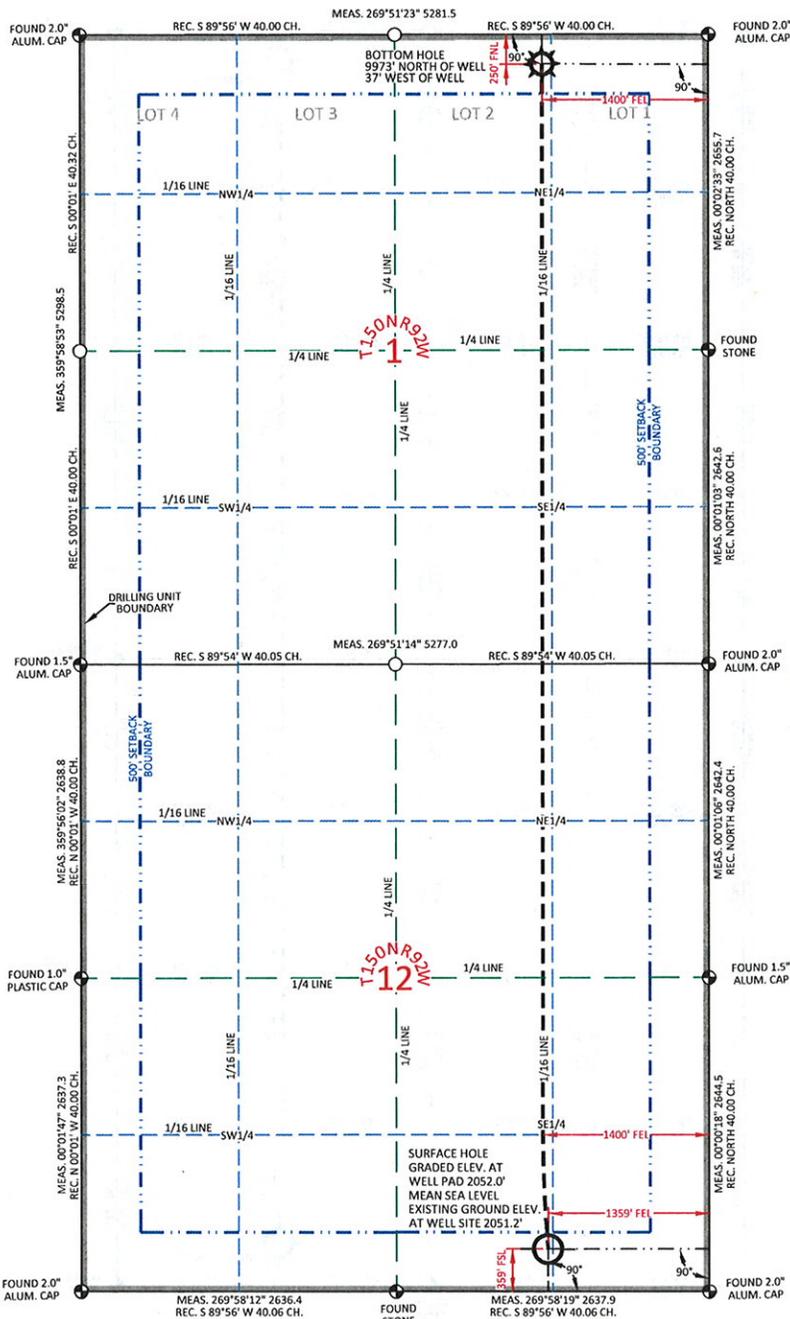
1400 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
SECTION 1, T 150 N, R 92 W, 5TH P.M.

MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
 Lat. 47°49'10.91"
 Long. 102°23'28.54"
 Lat. 47.819698°
 Long. 102.391261°
 Lat. 47°49'10.88"
 Long. 102°23'26.89"
 Lat. 47.819687°
 Long. 102.390804°
 UTM ZONE 13N
 N:17386242.42
 E:2281199.89

BOTTOM HOLE LOCATION
 Lat. 47°50'49.33"
 Long. 102°23'29.08"
 Lat. 47.847035°
 Long. 102.391410°
 Lat. 47°50'49.28"
 Long. 102°23'27.43"
 Lat. 47.847024°
 Long. 102.390954°
 UTM ZONE 13N
 N:17396208.01
 E:2280826.51



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 2 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.4096" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosn.

Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.000149560

Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 350 EAST SECOND NORTH
 GREEN RIVER, WY
 PHONE: 307-875-3638
 307-875-3639
 www.whsmithco.com

DRAWN BY: CED
 PROJECT NO: N/A
 REVISIONS:

CHECKED BY: WHD
 JOB NO: 2011500

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
 SW1/4 SE1/4, SECTION 12,
 T 150 N, R 92 W, 5TH PM.
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

WELL LOCATION PLAT

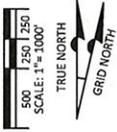
SCALE: 1"=1000'
 DATE: 11/14/2011

EXHIBIT "D"
 SHEET 1 OF 2

HORIZONTAL SECTION PLAT

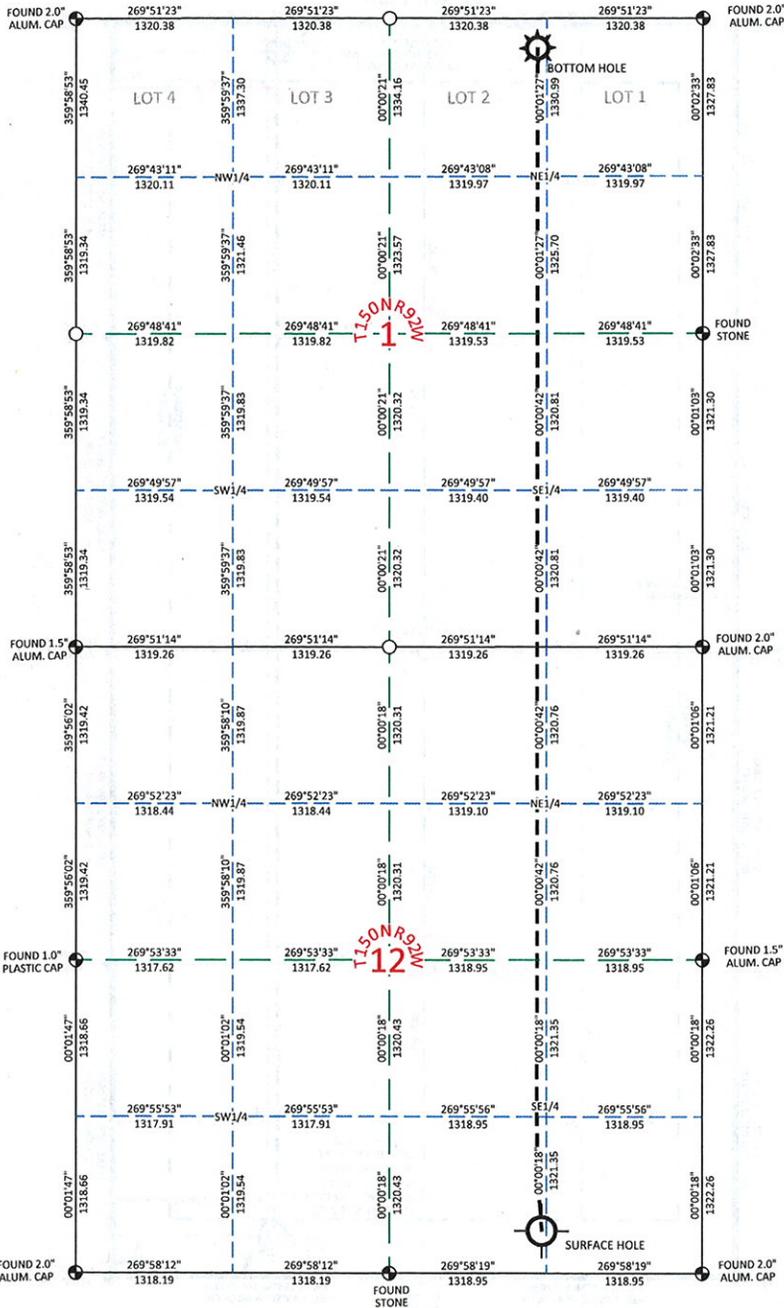
DAKOTA-3 E&P COMPANY LLC
OLSON 12-1HY

1359 FEET FROM THE EAST LINE AND 359 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
1400 FEET FROM THE EAST LINE AND 250 FEET FROM THE NORTH LINE (BOTTOM HOLE LOCATION)
SECTION 1, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'10.91"
Long. 102°23'28.54"
Lat. 47.819698°
Long. 102.391261°
Lat. 47°49'10.88"
Long. 102°23'26.89"
Lat. 47.819687°
Long. 102.390804°
UTM ZONE 13N
N:17386242.42
E:2281199.89

BOTTOM HOLE LOCATION
Lat. 47°50'49.33"
Long. 102°23'29.08"
Lat. 47.847035°
Long. 102.391410°
Lat. 47°50'49.28"
Long. 102°23'27.43"
Lat. 47.847024°
Long. 102.390954°
UTM ZONE 13N
N:17396208.01
E:2280826.51



I, William H. Dolinar, Professional Land Surveyor, ND. RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within Lot 2 of Section 1, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpscon.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
SURVEYING CONSULTANTS
150 EAST SECOND NORTH GREEN RIVER, WY 80430
PHONE: 307-875-3638 307-875-3639
www.whsmsurvey.com

DRAWN BY: CED CHECKED BY: WHD
PROJECT NO: N/A JOB NO: 2011500
REVISIONS:

CONFIDENTIALITY NOTES:
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
SW1/4 SE1/4, SECTION 12,
T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY,
NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

SCALE: 1"=1000'
DATE: 11/14/2011

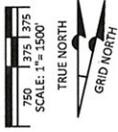
EXHIBIT "D"
SHEET 2 OF 2

WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC

FBIR 13-24HC

1689 FEET FROM THE EAST LINE AND 477 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
2050 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)
SECTION 24, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA

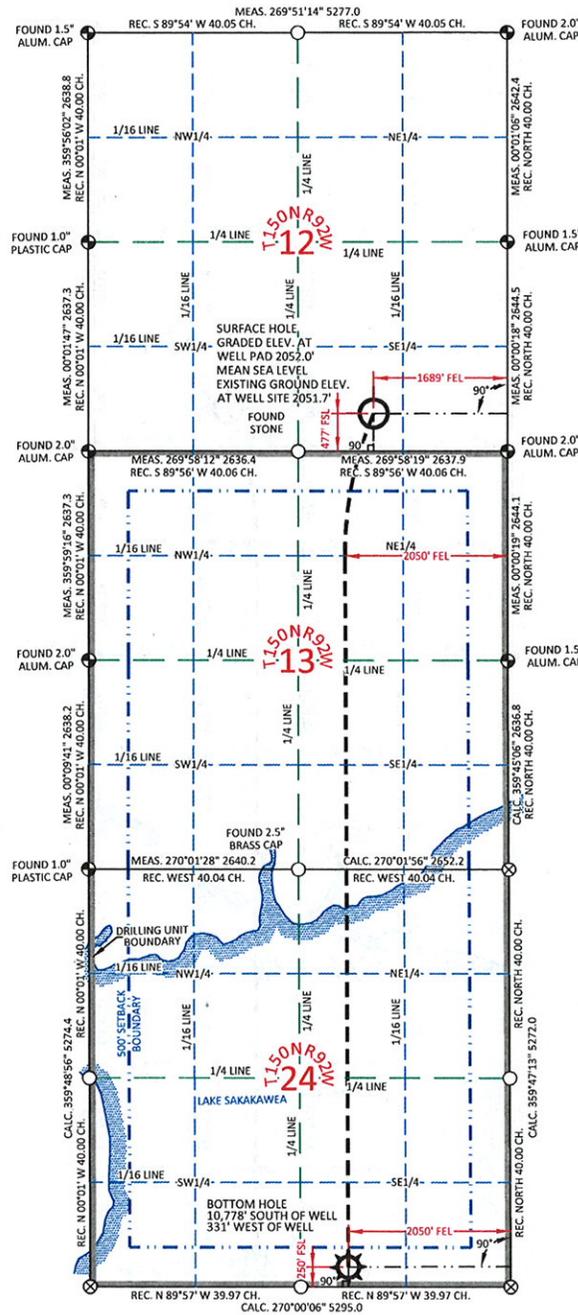


SURFACE HOLE LOCATION

Lat. 47°49'12.07"
Long. 102°23'33.37"
Lat. 47.820019°
Long. 102.392604°
Lat. 47°49'12.03"
Long. 102°23'31.73"
Lat. 47.820008°
Long. 102.392146°
UTM ZONE 13N
N:17386348.28
E:2280866.25

BOTTOM HOLE LOCATION

Lat. 47°47'25.71"
Long. 102°23'38.23"
Lat. 47.790475°
Long. 102.393953°
Lat. 47°47'25.67"
Long. 102°23'36.58"
Lat. 47.790464°
Long. 102.393495°
UTM ZONE 13N
N:17375565.37
E:2280898.32



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and/or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SW1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosn.

Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.000149560

Location shown here on is not an "ASBUILT" location.

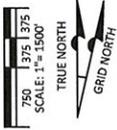


	<p>CONFIDENTIALITY NOTES: The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.</p>	<p>LEGEND</p> <ul style="list-style-type: none"> FOUND MONUMENT MONUMENT SEARCHED FOR NOT FOUND CALCULATED CORNER SURFACE HOLE LOCATION BOTTOM HOLE LOCATION 	<p>LOCATION OF PLATTED WELL SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM. MOUNTRAIL COUNTY, NORTH DAKOTA</p>	<p>DAKOTA-3 E&P COMPANY LLC</p>
				<p>WELL LOCATION PLAT</p>
<p>DRAWN BY: CED PROJECT NO: N/A REVISIONS:</p>	<p>CHECKED BY: WHD JOB NO: 2011500</p>	<p>SCALE: 1"=1000' DATE: 11/14/2011</p>	<p>EXHIBIT "E" SHEET 1 OF 2</p>	

HORIZONTAL SECTION PLAT

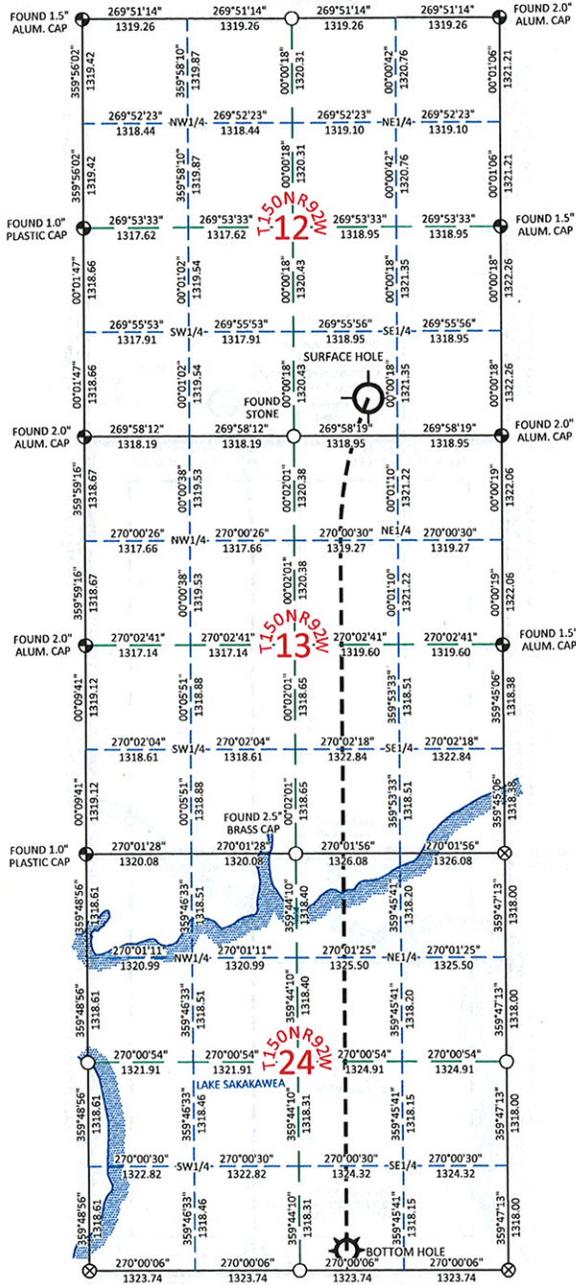
DAKOTA-3 E&P COMPANY LLC
FBIR 13-24HC

1689 FEET FROM THE EAST LINE AND 477 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
2050 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)
SECTION 24, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'12.07"
Long. 102°23'33.37"
Lat. 47.820019°
Long. 102.392604°
Lat. 47°49'12.03"
Long. 102°23'31.73"
Lat. 47.820008°
Long. 102.392146°
UTM ZONE 13N
N:17386348.28
E:2280866.25

BOTTOM HOLE LOCATION
Lat. 47°47'25.71"
Long. 102°23'38.23"
Lat. 47.790475°
Long. 102.393953°
Lat. 47°47'25.67"
Long. 102°23'36.58"
Lat. 47.790464°
Long. 102.393495°
UTM ZONE 13N
N:17375565.37
E:2280898.32



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SW1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorp.

Vertical Datum used is of NAVD88.
Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C. SURVEYING CONSULTANTS
550 EAST SECOND NORTH GREEN RIVER, WY
PHONE: 307-875-3688 307-875-3639
www.whsmitthac.com

DRAWN BY: CED CHECKED BY: WHD
PROJECT NO: N/A JOB NO: 2011500
REVISIONS:

CONFIDENTIALITY NOTES.
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM, MOUNTRAIL COUNTY, NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

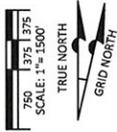
SCALE: 1"=1000'
DATE: 11/14/2011

EXHIBIT "E"
SHEET 2 OF 2

WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC

FBIR 13-24HD
 1595 FEET FROM THE EAST LINE AND 443 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
 SECTION 12, T 150 N, R 92 W., 5TH P.M.
 600 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)
 SECTION 24, T 150 N, R 92 W., 5TH P.M.
 MOUNTRAIL COUNTY, NORTH DAKOTA

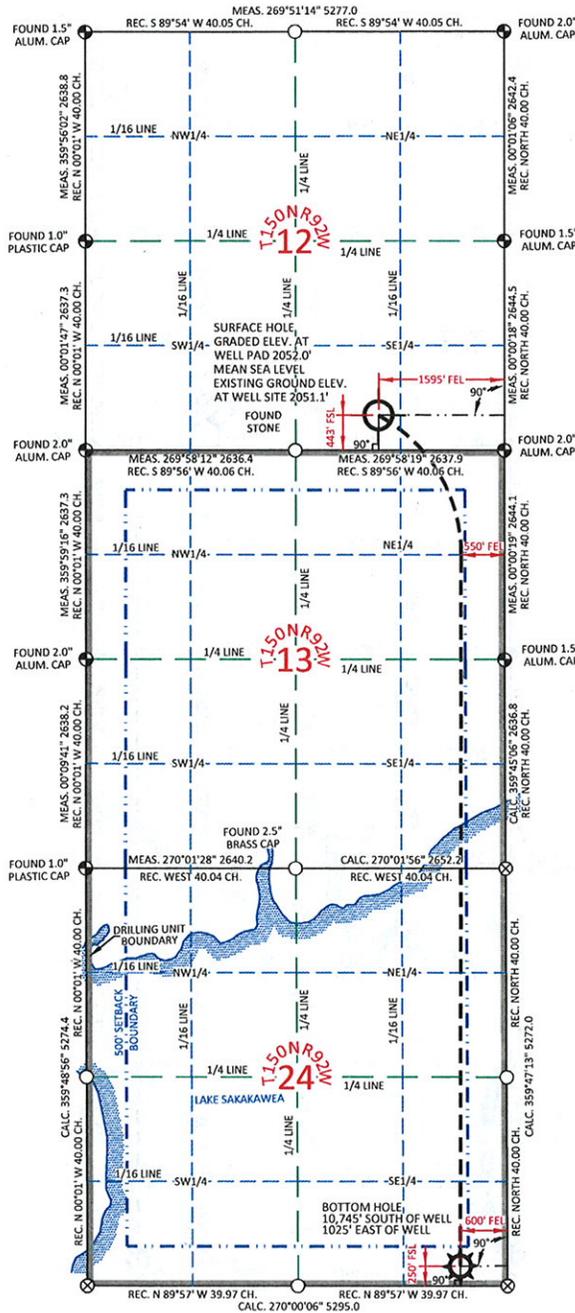


SURFACE HOLE LOCATION

Lat. 47°49'11.74"
 Long. 102°23'31.99" } NAD 83
 Lat. 47.819928°
 Long. 102.392220° }
 Lat. 47°49'11.70"
 Long. 102°23'30.35" } NAD 27
 Lat. 47.819917°
 Long. 102.391763°
 UTM ZONE 13N
 N:17386318.03
 E:2280961.57

BOTTOM HOLE LOCATION

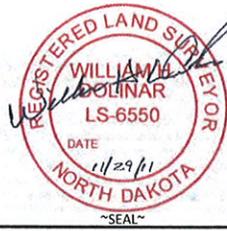
Lat. 47°47'25.71"
 Long. 102°23'17.00" } NAD 83
 Lat. 47.790474°
 Long. 102.388055° }
 Lat. 47°47'25.67"
 Long. 102°23'15.67" } NAD 27
 Lat. 47.790464°
 Long. 102.387597°
 UTM ZONE 13N
 N:17375614.17
 E:2282347.44



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or person under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SE1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosn.

Vertical Datum used is of NAVD 88.
 Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
 Distances shown are Ground Distances using a combined scale factor of 1.000149560
 Location shown here on is not an "ASBUILT" location.

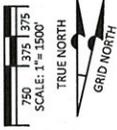


	<p>WILLIAM H. SMITH & ASSOCIATES P.C. SURVEYING CONSULTANTS 550 EAST SECOND NORTH GREEN RIVER, WY PHONE: 307-875-3638 307-875-3639 www.whsmithpc.com</p>	<p>CONFIDENTIALITY NOTES: The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.</p>	<p>LEGEND FOUND MONUMENT MONUMENT SEARCHED FOR NOT FOUND CALCULATED CORNER SURFACE HOLE LOCATION BOTTOM HOLE LOCATION</p>	<p>LOCATION OF PLATTED WELL SW1/4 SE1/4, SECTION 12, T 150 N, R 92 W, 5TH PM. MOUNTRAIL COUNTY, NORTH DAKOTA</p>	<p>DAKOTA-3 E&P COMPANY LLC</p>
<p>WELL LOCATION PLAT</p>					
<p>DRAWN BY: CED CHECKED BY: WHD PROJECT NO: N/A JOB NO: 2011500</p>		<p>REVISIONS:</p>		<p>SCALE: 1"=1000' EXHIBIT "F" DATE: 11/14/2011 SHEET 1 OF 2</p>	

HORIZONTAL SECTION PLAT

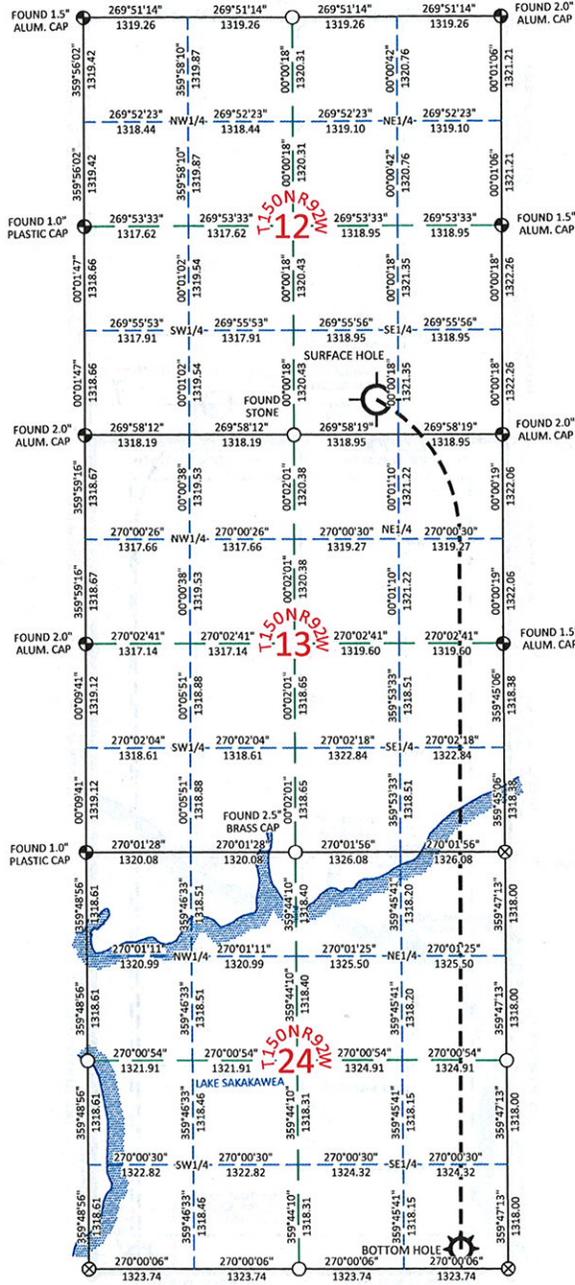
DAKOTA-3 E&P COMPANY LLC
FBIR 13-24HD

1595 FEET FROM THE EAST LINE AND 443 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
600 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)
SECTION 24, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'11.74"
Long. 102°23'31.99"
Lat. 47.819928°
Long. 102.392220°
Lat. 47°49'11.70"
Long. 102°23'30.35"
Lat. 47.819917°
Long. 102.391763°
UTM ZONE 13N
N:17386318.03
E:2280961.57

BOTTOM HOLE LOCATION
Lat. 47°47'25.71"
Long. 102°23'17.00"
Lat. 47.790474°
Long. 102.388055°
Lat. 47°47'25.67"
Long. 102°23'15.67"
Lat. 47.790464°
Long. 102.387597°
UTM ZONE 13N
N:17375614.17
E:2282347.44



I, William H. Dolinar, Professional Land Surveyor, ND. RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SE1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'04.40496" West Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
SURVEYING CONSULTANTS
850 EAST SECOND NORTH
GREEN RIVER, WY
PHONE: 307-875-3638
307-875-3639
www.whsmah.com

DRAWN BY: CED
PROJECT NO: N/A
REVISIONS:

CHECKED BY: WHD
JOB NO: 2011500

CONFIDENTIALITY NOTES:
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
SW1/4 SE1/4, SECTION 12,
T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY,
NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

SCALE: 1"=1000'
DATE: 11/14/2011

EXHIBIT "F"
SHEET 2 OF 2

WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC

FBIR 13-24HZ

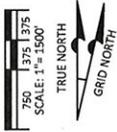
1642 FEET FROM THE EAST LINE AND 460 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)

SECTION 12, T 150 N, R 92 W, 5TH P.M.

1300 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)

SECTION 24, T 150 N, R 92 W, 5TH P.M.

MOUNTRAIL COUNTY, NORTH DAKOTA

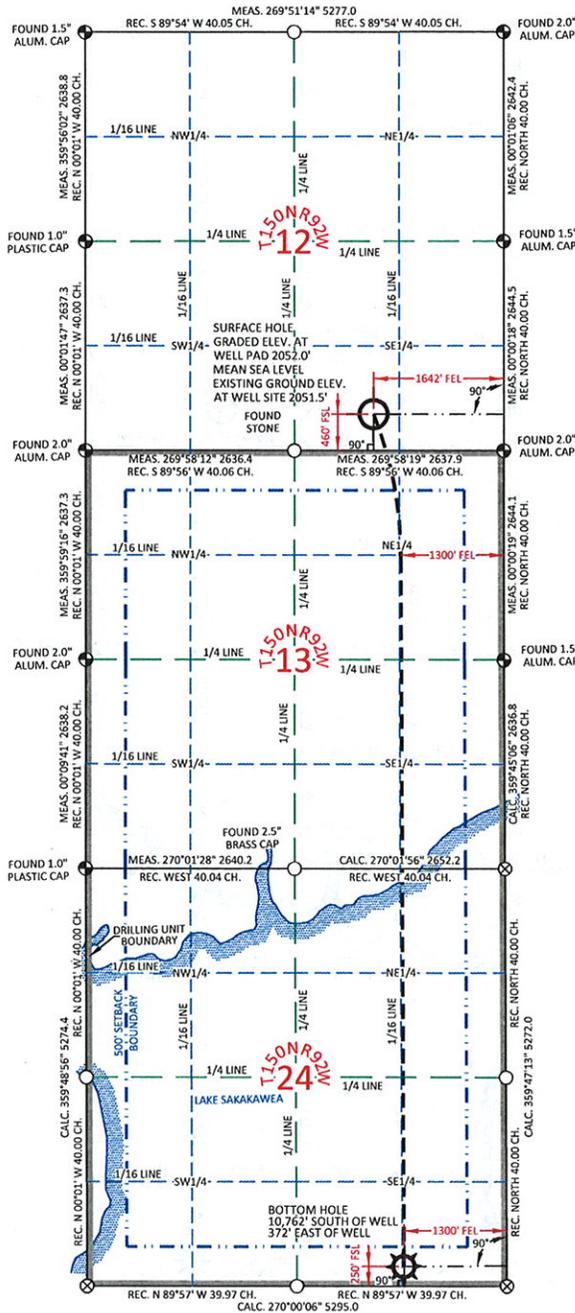


SURFACE HOLE LOCATION

Lat. 47°49'11.90"
 Long. 102°23'32.68"
 Lat. 47.819973°
 Long. 102.392412°
 Lat. 47°49'11.86"
 Long. 102°23'31.04"
 Lat. 47.819962°
 Long. 102.391955°
 UTM ZONE 13N
 N:17386333.16
 E:2280913.91

BOTTOM HOLE LOCATION

Lat. 47°47'25.71"
 Long. 102°23'27.25"
 Lat. 47.790475°
 Long. 102.390902°
 Lat. 47°47'25.67"
 Long. 102°23'25.60"
 Lat. 47.790464°
 Long. 102.390445°
 UTM ZONE 13N
 N:17375590.61
 E:2281647.86



I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SE1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosn.

Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.000149560

Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 500 EAST SECOND NORTH GREEN RIVER, WY
 PHONE: 307-875-3638 307-875-3639
 www.whs-withac.com

DRAWN BY: CED CHECKED BY: WHD
 PROJECT NO: N/A JOB NO: 2011500
 REVISIONS:

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION OF PLATTED WELL
 SW1/4 SE1/4, SECTION 12,
 T 150 N, R 92 W, 5TH PM.
 MOUNTRAIL COUNTY,
 NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

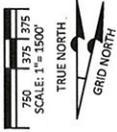
WELL LOCATION PLAT

SCALE: 1"=1000' EXHIBIT "G"
 DATE: 11/14/2011 SHEET 1 OF 2

HORIZONTAL SECTION PLAT

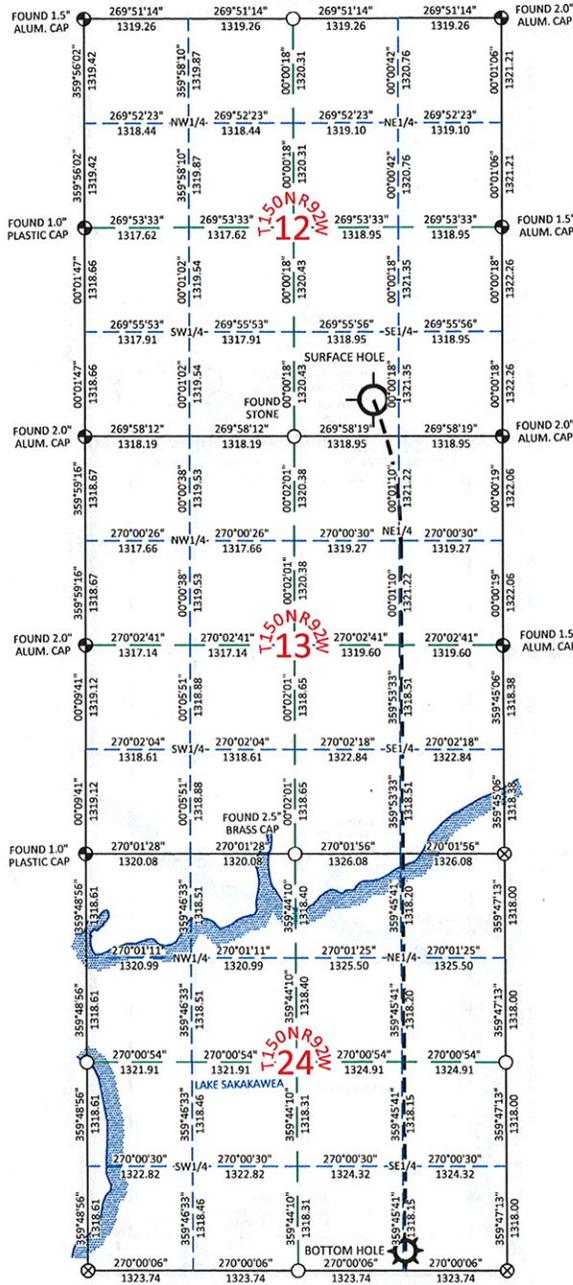
DAKOTA-3 E&P COMPANY LLC
FBIR 13-24HZ

1642 FEET FROM THE EAST LINE AND 460 FEET FROM THE SOUTH LINE (SURFACE HOLE LOCATION)
SECTION 12, T 150 N, R 92 W, 5TH P.M.
1300 FEET FROM THE EAST LINE AND 250 FEET FROM THE SOUTH LINE (BOTTOM HOLE LOCATION)
SECTION 24, T 150 N, R 92 W, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA



SURFACE HOLE LOCATION
Lat. 47°49'11.80"
Long. 102°23'32.68"
Lat. 47.819973°
Long. 102.392412°
Lat. 47°49'11.86"
Long. 102°23'31.04"
Lat. 47.819962°
Long. 102.391955°
UTM ZONE 13N
N:17386333.16
E:2280913.91

BOTTOM HOLE LOCATION
Lat. 47°47'25.71"
Long. 102°23'27.25"
Lat. 47.790475°
Long. 102.390902°
Lat. 47°47'25.67"
Long. 102°23'25.60"
Lat. 47.790464°
Long. 102.390445°
UTM ZONE 13N
N:17375590.61
E:2281647.86



I, William H. Dollnar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) I and/or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Location and Elevation of platted well being located within the SW1/4 SE1/4, of Section 12, T150N R92W and the Bottom Hole Location being located within the SE1/4 SE1/4, of Section 24, T150N, R92W, both being of the 5th P.M., Mountrail County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'40.40496" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcosm.

Vertical Datum used is of NAD83.
Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.
Distances shown are Ground Distances using a combined scale factor of 1.000149560
Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
SURVEYING CONSULTANTS
550 EAST SECOND NORTH
GREEN RIVER, WY 82901
PHONE: 307-875-3638
307-875-3639
www.whs-withac.com

DRAWN BY: CED
PROJECT NO: N/A
REVISIONS:

CHECKED BY: WHD
JOB NO: 2011500

CONFIDENTIALITY NOTES:
The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

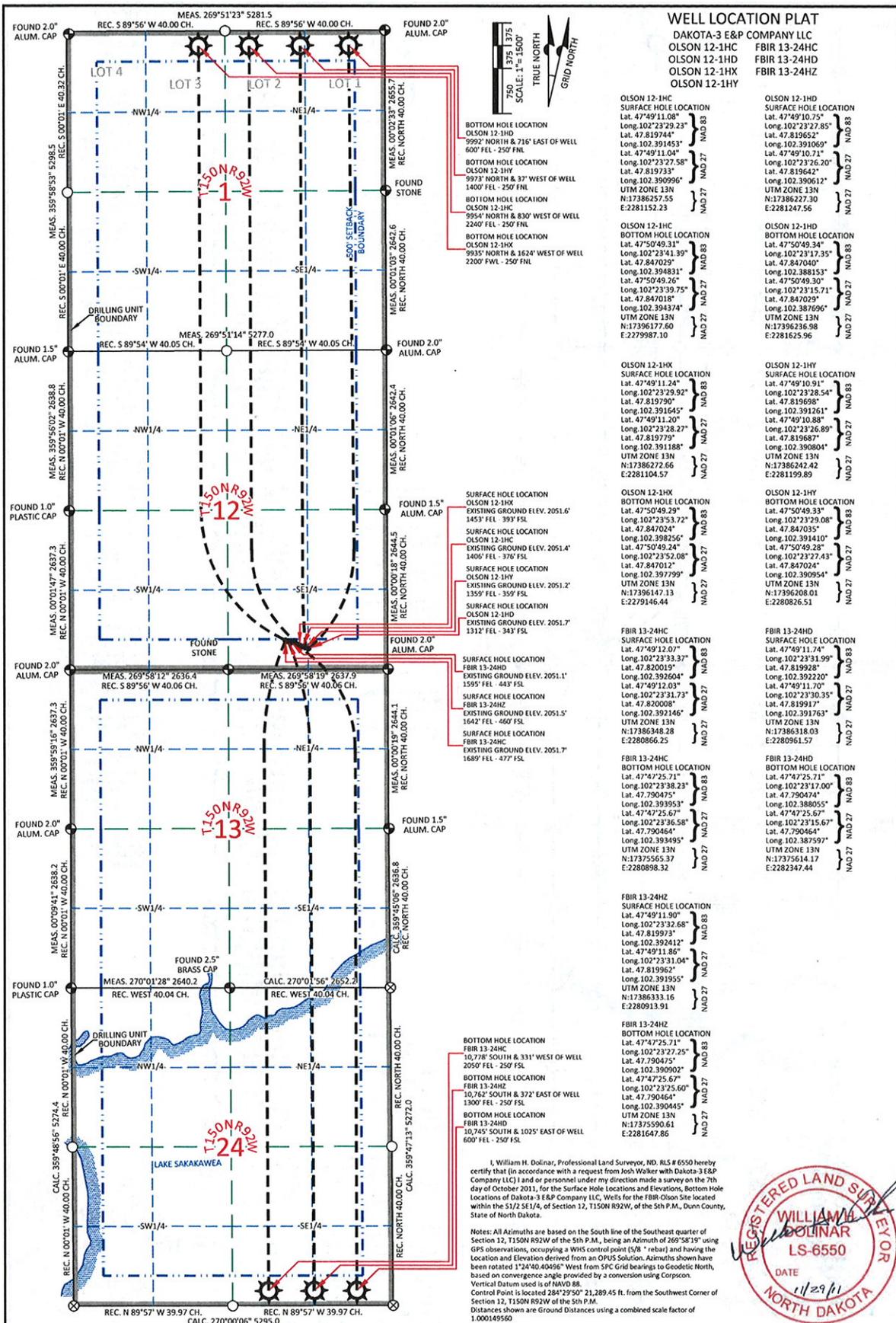
LOCATION OF PLATTED WELL
SW1/4 SE1/4, SECTION 12,
T 150 N, R 92 W, 5TH PM,
MOUNTRAIL COUNTY,
NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

SCALE: 1"=1000'
DATE: 11/14/2011

EXHIBIT "G"
SHEET 2 OF 2



WELL LOCATION PLAT

DAKOTA-3 E&P COMPANY LLC
 OLSON 12-1HC FBIR 13-24HC
 OLSON 12-1H FBIR 13-24HD
 OLSON 12-1HX FBIR 13-24HX
 OLSON 12-1HY FBIR 13-24HY

<p>OLSON 12-1HC SURFACE HOLE LOCATION Lat. 47°49'11.08" Long. 102°23'23.23" Lat. 47.819744° Long. 102.391453° Lat. 47°49'11.04" Long. 102.391453° Lat. 47.819733° Long. 102.390996° UTM ZONE 13N N:1738627.30 E:2281152.23</p>	<p>OLSON 12-1HD SURFACE HOLE LOCATION Lat. 47°49'10.75" Long. 102°23'22.85" Lat. 47.819652° Long. 102.391069° Lat. 47°49'10.71" Long. 102°23'26.20" Lat. 47.819642° Long. 102.390612° UTM ZONE 13N N:1738627.30 E:2281247.56</p>
<p>OLSON 12-1HC SURFACE HOLE LOCATION Lat. 47°50'49.31" Long. 102°23'41.39" Lat. 47.847029° Long. 102.394831° Lat. 47°50'49.26" Long. 102°23'39.75" Lat. 47.847012° Long. 102.394374° UTM ZONE 13N N:17396177.60 E:2279987.10</p>	<p>OLSON 12-1HD SURFACE HOLE LOCATION Lat. 47°50'49.31" Long. 102°23'17.35" Lat. 47.847040° Long. 102.388153° Lat. 47°50'49.30" Long. 102°23'15.71" Lat. 47.847029° Long. 102.391696° UTM ZONE 13N N:17396236.98 E:2281625.96</p>
<p>OLSON 12-1HX SURFACE HOLE LOCATION Lat. 47°49'11.24" Long. 102°23'28.92" Lat. 47.819790° Long. 102.391645° Lat. 47°49'11.20" Long. 102°23'28.27" Lat. 47.819779° Long. 102.391188° UTM ZONE 13N N:17386272.66 E:2281104.57</p>	<p>OLSON 12-1HY SURFACE HOLE LOCATION Lat. 47°49'10.91" Long. 102°23'28.54" Lat. 47.819688° Long. 102.391261° Lat. 47°49'10.88" Long. 102°23'28.89" Lat. 47.819687° Long. 102.390804° UTM ZONE 13N N:17386242.42 E:2281199.89</p>
<p>OLSON 12-1HX SURFACE HOLE LOCATION Lat. 47°50'49.29" Long. 102°23'53.72" Lat. 47.847024° Long. 102.398256° Lat. 47°50'49.24" Long. 102°23'52.08" Lat. 47.847012° Long. 102.397999° UTM ZONE 13N N:17396147.13 E:22799146.44</p>	<p>OLSON 12-1HY SURFACE HOLE LOCATION Lat. 47°50'49.33" Long. 102°23'29.08" Lat. 47.847035° Long. 102.391410° Lat. 47°50'49.28" Long. 102°23'27.47" Lat. 47.847024° Long. 102.390954° UTM ZONE 13N N:17396208.01 E:2280826.51</p>
<p>FBIR 13-24HC SURFACE HOLE LOCATION Lat. 47°49'12.07" Long. 102°23'33.37" Lat. 47.820019° Long. 102.392604° Lat. 47°49'12.03" Long. 102.391737° Lat. 47.820008° Long. 102.392146° UTM ZONE 13N N:17386348.28 E:2280866.25</p>	<p>FBIR 13-24HD SURFACE HOLE LOCATION Lat. 47°49'11.74° Long. 102°23'31.99° Lat. 47.819928° Long. 102.392220° Lat. 47°49'11.70° Long. 102°23'30.35° Lat. 47.819917° Long. 102.391763° UTM ZONE 13N N:17386318.03 E:2280961.57</p>
<p>FBIR 13-24HC SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'38.23" Lat. 47.790475° Long. 102.393953° Lat. 47°47'25.67" Long. 102°23'36.58" Lat. 47.790464° Long. 102.393495° UTM ZONE 13N N:17375565.37 E:2280898.32</p>	<p>FBIR 13-24HD SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'17.00° Lat. 47.790474° Long. 102.388055° Lat. 47°47'25.67" Long. 102°23'15.67° Lat. 47.790464° Long. 102.387997° UTM ZONE 13N N:17375614.17 E:2282347.44</p>
<p>FBIR 13-24HC SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'37.68" Lat. 47.819973° Long. 102.392412° Lat. 47°49'11.86° Long. 102°23'31.04° Lat. 47.819962° Long. 102.391955° UTM ZONE 13N N:17386333.16 E:2280913.91</p>	<p>FBIR 13-24HD SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'27.25° Lat. 47.790475° Long. 102.390992° Lat. 47°47'25.67° Long. 102°23'25.60° Lat. 47.790464° Long. 102.390454° UTM ZONE 13N N:17375590.61 E:2281647.86</p>
<p>FBIR 13-24HC SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'27.25° Lat. 47.790475° Long. 102.390992° Lat. 47°47'25.67° Long. 102°23'25.60° Lat. 47.790464° Long. 102.390454° UTM ZONE 13N N:17375590.61 E:2281647.86</p>	<p>FBIR 13-24HD SURFACE HOLE LOCATION Lat. 47°47'25.71" Long. 102°23'27.25° Lat. 47.790475° Long. 102.390992° Lat. 47°47'25.67° Long. 102°23'25.60° Lat. 47.790464° Long. 102.390454° UTM ZONE 13N N:17375590.61 E:2281647.86</p>

I, William H. Dolinar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that (in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) and or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Locations and Elevations, Bottom Hole Locations of Dakota-3 E&P Company LLC, Wells for the FBIR Olson Site located within the S1/2 SE1/4, of Section 12, T150N R92W, of the 5th P.M., Dunn County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (5/8" rebar) and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 172440.40496° West from SFC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Carpscon.

Vertical Datum used is of NAVD 88.

Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.000149560

Location shown here on is not an "ASSULT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 150 EAST SECOND NORTH
 GREEN RIVER, WY
 www.whsmithac.com
 PHONE: 307-875-3638
 307-875-3639

DRAWN BY: CED CHECKED BY: WHD
 PROJECT NO: N/A JOB NO: 2011500

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

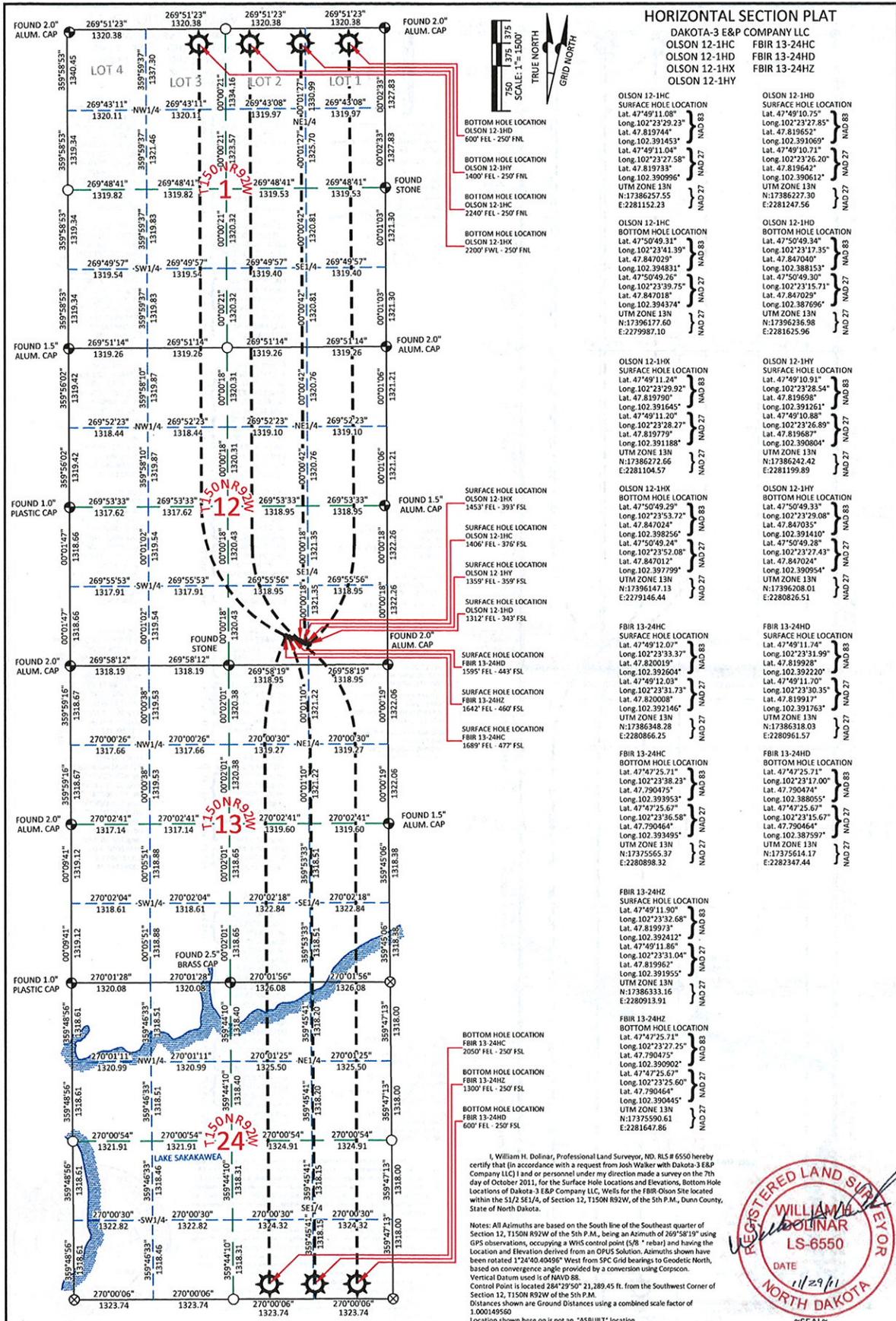
- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION:
 OLSON 12-1HC, 12-1HD, 12-1HX, 12-1HY, FBIR 13-24HC, 13-24HD, 13-24HZ
 S1/2 SE1/4, SEC. 12, T150N, R92W, MOUNTAIN COUNTY, NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

WELL LOCATION PLAT

SCALE: 1"=150'
 DATE: 11/14/2011 EXHIBIT "H"
 SHEET 1 OF 2



HORIZONTAL SECTION PLAT

DAKOTA-3 E&P COMPANY LLC
 OLSON 12-1HC FBIR 13-24HC
 OLSON 12-1HD FBIR 13-24HD
 OLSON 12-1HX FBIR 13-24HX
 OLSON 12-1HY

OLSON 12-1HC SURFACE HOLE LOCATION
 Lat. 47°49'10.15" Long. 102°23'29.23"
 Lat. 47.819652° Long. 102.391069°
 Lat. 47°49'11.04" Long. 102°23'27.85"
 Lat. 47.819652° Long. 102.391069°
 Lat. 47°49'11.04" Long. 102°23'27.85"
 Lat. 47.819652° Long. 102.391069°
 UTM ZONE 13N N:17386257.55 E:2281152.23

OLSON 12-1HC SURFACE HOLE LOCATION
 Lat. 47°49'11.34" Long. 102°23'29.29"
 Lat. 47.819698° Long. 102.391645°
 Lat. 47°49'11.34" Long. 102°23'29.29"
 Lat. 47.819698° Long. 102.391645°
 UTM ZONE 13N N:17396147.13 E:2279146.44

FBIR 13-24HC SURFACE HOLE LOCATION
 Lat. 47°49'11.74" Long. 102°23'33.37"
 Lat. 47.819928° Long. 102.392604°
 Lat. 47°49'11.74" Long. 102°23'33.37"
 Lat. 47.819928° Long. 102.392604°
 UTM ZONE 13N N:17375653.37 E:2280898.32

FBIR 13-24HC SURFACE HOLE LOCATION
 Lat. 47°49'11.90" Long. 102°23'32.68"
 Lat. 47.819937° Long. 102.392412°
 Lat. 47°49'11.90" Long. 102°23'32.68"
 Lat. 47.819937° Long. 102.392412°
 UTM ZONE 13N N:17386333.16 E:2280913.91

I, William H. Dolnar, Professional Land Surveyor, ND, RLS # 6550 hereby certify that in accordance with a request from Josh Walker with Dakota-3 E&P Company LLC) and/or personnel under my direction made a survey on the 7th day of October 2011, for the Surface Hole Locations and Elevations, Bottom Hole Locations of Dakota 3 E&P Company LLC, Wells for the FBIR Olson Site located within the S1/2 SE1/4, of Section 12, T150N R92W, of the 5th P.M., Dunn County, State of North Dakota.

Notes: All Azimuths are based on the South line of the Southeast quarter of Section 12, T150N R92W of the 5th P.M., being an Azimuth of 269°58'19" using GPS observations, occupying a WHS control point (S/B "rebar") and having the Location and Elevation derived from an OPUS Solution. Azimuths shown have been rotated 1°24'50.40456" West from SPC Grid bearings to Geodetic North, based on convergence angle provided by a conversion using Corpcorss.

Vertical Datum used is of NAVD 88.
 Control Point is located 284°29'50" 21,289.45 ft. from the Southwest Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are Ground Distances using a combined scale factor of 1.00049560

Location shown here on is not an "ASBUILT" location.



WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 850 EAST SECOND NORTH PHOENIX: 307-475-3638
 GREEN RIVER, WY 307-875-3639
 www.whsmls.com

DRAWN BY: CED CHECKED BY: WHD
 PROJECT NO: N/A JOB NO: 2011500
 REVISIONS:

CONFIDENTIALITY NOTES:
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

LEGEND

- FOUND MONUMENT
- MONUMENT SEARCHED FOR NOT FOUND
- CALCULATED CORNER
- SURFACE HOLE LOCATION
- BOTTOM HOLE LOCATION

LOCATION:
 OLSON 12-1HC, 12-1HD, 12-1HX, 12-1HY, FBIR 13-24HC, 13-24HD, 13-24HX
 S1/2 SE1/4, SEC. 12, T150N, R92W, MOUNTAIN TRAIL COUNTY, NORTH DAKOTA

DAKOTA-3 E&P COMPANY LLC

HORIZONTAL SECTION PLAT

SCALE: 1"=1500'
 DATE: 11/14/2011

EXHIBIT "H"
 SHEET 2 OF 2

**DAKOTA-3 E&P COMPANY, LLC.
PAD, ROAD, PIPELINE, UTILITY, FIBER OPTIC, & ABOVE GROUND
APPURTENANCES RIGHT-OF-WAY ON TRIBAL LANDS
(FOR OLSON 12-14, FBR 13-24H)**

A strip of land located in the east half (E1/2) and Southeast quarter (SE1/4) of the Southeast quarter (SW1/4) of the Southeast quarter (SE1/4) of Section 12, Township 150 North, Range 92 West, Mountzrail County, State of North Dakota, being one hundred thirty feet (30') in width, lying sixty five feet (65') on each side of the following described center line:

Commencing at the East Quarter Corner of Section 12, Township 150 North, Range 92 West (Found 4" Alum. Cap.); thence North 87°41'29" West a distance of 198.34 feet, to the POINT OF BEGINNING;
 thence, South 01°02'11" West a distance of 1459.56 feet (Sta. 14+59.56);
 thence, South 88°36'25" West a distance of 951.63 feet (Sta. 24+11.19);
 thence, South 63°31'26" West a distance of 707.76 feet (Sta. 31+18.95);
 thence, South 22°34'46" West a distance of 93.32 feet (Sta. 32+12.27);
 thence, South 18°21'35" East a distance of 37.6 feet (Sta. 32+49.87), to the POINT OF ENDING; said ending point being located North 52°44'19" East a distance of 1,091.75 feet from the South 1/4 corner of Section 12, Township 150 North, Range 92 West (Found Marked Stone).

Said centerline is 3249.87 feet or 196.96 rods and contains 9.62 Acres more or less.

Bearings are grid bearings based on the North Dakota State Plane Coordinate System North Zone NAD 83 from GPS observations, occupying a WMS control point (5/8" rebar) and having the location and elevation derived from an OPUS Solution.
 Control Point is located North 75°40'09" West a distance of 23,846.63 ft. from the South Quarter Corner of Section 12, T150N R92W of the 5th P.M.

Distances shown are e Ground Distances using a combined scale factor of 1.000150063

Location shown here on is not an "ASBULL" location.

SURVEYOR'S CERTIFICATE:
 William H. Doherty states he is by occupation a Registered Land Surveyor employed by Dakota-3 E&P Company, LLC, a Subsidiary of Williams, to make the survey of the right-of-way as shown on this map. He certifies that the survey was made under his supervision and authority, commencing on the 9th day of October, 2011, and that such survey is accurately represented upon this map.

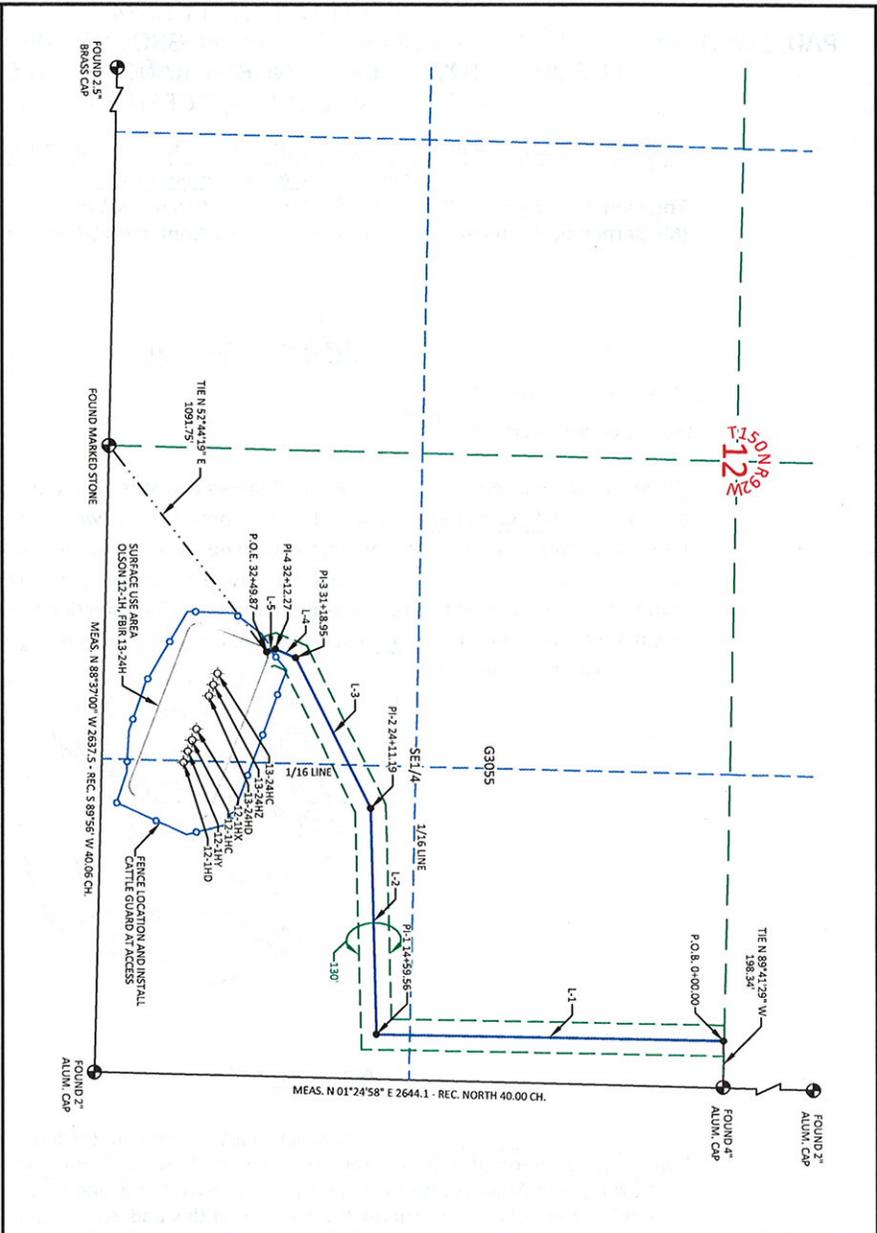


WILLIAM H. SMITH & ASSOCIATES P.C.
 SURVEYING CONSULTANTS
 500 E. 16th Street, Suite 200
 Bismarck, ND 58101
 Phone: 701-837-8889
 Fax: 701-837-8899
 www.williamhsmith.com

DAKOTA-3 E&P COMPANY, LLC
 A SUBSIDIARY OF WILLIAMS

PAD, ROAD, PIPELINE, UTILITY, FIBER OPTIC, & ABOVE GROUND APPURTENANCES RIGHT-OF-WAY ON TRIBAL LANDS
 MOUNTZRAIL COUNTY, NORTH DAKOTA
 SECTION 12, T150N, R92W

DRAWN BY: CED
 PROJECT NO: N/A
 SCALE: 1"=500'
 DATE: 11/29/2011
 SHEET 1 OF 1



LINE TABLE

PI.#	STATION	LINE	BEARING	DISTANCE
P.O.B.	0+00.00	L-1	S 01°02'11" W	1459.56
PI-1	14+59.56	L-2	S 88°36'25" W	951.63
PI-2	24+11.19	L-3	S 63°31'26" W	707.76
PI-3	31+18.95	L-4	S 22°34'46" W	93.32
PI-4	32+12.27	L-5	S 18°21'35" E	37.6
P.O.E.	32+49.87			

DISTURBANCE SUMMARY

ALLOTTEE G3055	RIGHT-OF-WAY LENGTHS
DRILLING PAD DISTURBANCE (FENCED AREA)	10.12 ACRES
R-O-W DISTURBANCE	9.62 ACRES
TOTAL DISTURBANCE - G3055	19.74 ACRES
TOTAL DISTURBANCE	10.12 ACRES
DRILLING PAD DISTURBANCE (FENCED AREA)	9.62 ACRES
TOTAL DISTURBANCE	19.74 ACRES

RIGHT-OF-WAY LENGTHS

ALLOTTEE	FEET	ACRES	RODS
G3055 - NE1/4 SE1/4 SW1/4 SEC. 13	3249.87	9.62	196.96



CONFIDENTIALITY NOTES
 The information contained in this plat is legally privileged and confidential information intended only for the use of the recipients. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.

DAKOTA-3 E&P COMPANY, LLC.
OLSON 12-1H, FBIR 13-24H
PAD, ROAD, PIPELINE, UTILITY, FIBER OPTIC, & ABOVE GROUND APPURTENANCES RIGHT-OF-WAY
SECTION 12, TOWNSHIP 150 NORTH, RANGE 92 WEST, 5TH P.M.
MOUNTRAIL COUNTY, NORTH DAKOTA

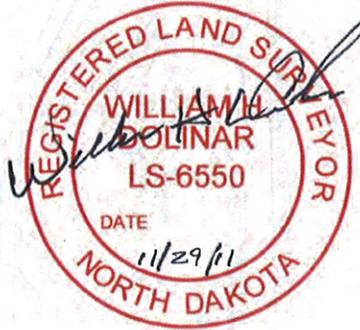
TOTAL PAD, ROAD, PIPELINE, UTILITY, FIBER OPTIC, & ABOVE GROUND APPURTENANCES
RIGHT-OF-WAY ON TRIBAL LANDS

Total length of Right-Of-Way is 3,249.87 feet or 0.616 miles. Width of Right-Of-Way is 130'
(65' perpendicular on each side of the centerline). Contains 9.62 Acres more or less.

SURVEYOR'S AFFIDAVIT

STATE OF NORTH DAKOTA }
COUNTY OF MOUNTRAIL } SS

William H. Dolinar, being first duly sworn, deposes and states that he is the registered land surveyor for Dakota-3 E&P Company, LLC, that these surveys were made by him (or under his supervision); that he has examined the field notes of the surveys of the pad, road, pipeline, utility, fiber optic and above ground appurtenances right-of-way as described and shown on this map; that this map was prepared under his direction from said field notes; and that said right-of-way, 0.616 miles in length beginning and ending as shown on this map is accurately represented.



William H. Dolinar
REGISTERED LAND SURVEYOR
REGISTRATION NO. 6550
STATE OF NORTH DAKOTA

APPLICANT'S CERTIFICATE

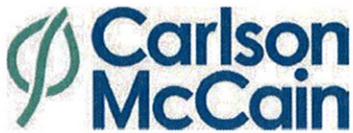
I, _____, do hereby certify that I am the agent for Dakota-3 E&P Company, LLC, hereinafter designated the applicant; That William H. Dolinar who subscribed to the foregoing Affidavit, is employed by the applicant as a land surveyor and that he was directed by the applicant to survey the location of this pad, road, pipeline, utility, fiber optic, & above ground appurtenances Right-Of-Way, 0.616 miles in length beginning at Sta. 0+00.00 and ending at Sta. 32+49.87, that said pad, road, pipeline, utility, fiber optic, & above ground appurtenances Right-Of-Way is accurately represented on this map; That such survey as represented on this map has been adopted by the applicant as the definite location of the Right-Of-Way thereby shown; and that the map has been prepared to be filed with the Secretary of the Interior or his duly authorized representative as part of the application for said Right-Of-Way to be granted the applicant, its successors and assigns, with the right to construct, maintain, and repair improvements, thereon and thereover, for such purposes, and with the further right in the applicant, its successors and assigns to transfer this Right-Of-Way by assigned, grant, or otherwise.

APPLICANT

TITLE

Appendix C

Scoping and Concurrence Request Letters



ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

January 17, 2012

Ronald Melhouse
Bureau of Reclamation
P.O. Box 1017
Bismarck, ND 58502

RE: Request for Comments
Dakota D-3 E&P Company, LLC

Dear Mr. Melhouse,

On behalf of Dakota-3 E&P Company, LLC, Carlson McCain is submitting information concerning development of a proposed oil and gas extraction location to drill three horizontal wells on the Fort Berthold Reservation (Reservation). The Bureau of Indian Affairs (BIA) is preparing an environmental assessment (EA) under the National Environmental Policy Act (NEPA) for the proposed action(s). The proposed surface location for the well pad is illustrated on the Project location map (Figure 1).

- Dancing Bull 16-21H

Associated appurtenances include pipelines (gas, oil, produced water, fresh water) and utilities (electrical and fiber optic) installed underground in the same right-of-way as the road and connecting to the established Van Hook Gathering System (VHGS). A closed-loop drilling system will be utilized to drill the well and an 18-inch berm will be in place top of on pad to protect the drainage to Little Shell Creek.

In accordance with NEPA requirements, we are requesting comments regarding the proposed project. Comments are requested to be sent before February 17, 2012, so they may be incorporated into the final decision making. Please send comments to my attention at the address below.

2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

Sincerely,

Ryan J. Krapp
Ecologist
rkrapp@carlsonmccain.com



ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

January 17, 2012

US Fish and Wildlife Service
Mr. Jeffrey Towner
Field Supervisor
3425 Miriam Avenue
Bismarck, ND 58501

**Re: Request for Comments
Proposed Oil & Gas Well Pad
Dancing Bull 16-21H
Dakota D-3 E&P Company, LLC**

Dear Mr. Towner:

On behalf of Dakota-3 E&P Company, LLC (a subsidiary of Williams), Carlson McCain, Inc. is submitting information concerning development of the proposed Dancing Bull 16-21H well pad. The proposed well site will include three well bores into the Bakken and Three Forks formations. The well pad, the access road and the utility corridor (Project) is located on the Fort Berthold Reservation in Section 16, T150N, R92W in Mountrail County (Figure 1).

An on-site biological assessment of the project was conducted on October 26, 2011, with the Bureau of Indian Affairs (BIA). At the initial on-site visit the proposed well site and access road/utility corridor right-of-way (ROW) were "soft" staked and the location was reviewed in consideration of topography, natural drainage and erosion control, vegetation, T&E species, migratory birds, wildlife and habitats, historical and cultural resources and other surface impacts within a 300-foot wide survey corridor. Site-specific mitigation measures were discussed and incorporated into the final project design to minimize impacts to evaluated resources.

Project Description

The proposed project is planned to have three well bores, drilled horizontally to access petroleum resources of the Bakken and Three Forks formation under sections 16 and 21 (Figure 2). The proposed well pad working surface will initially be constructed approximately 530-feet by 330-feet in size, or approximately 3.8 acres (Figure 3). The maximum disturbance area (fenced) for pad construction, including fill slopes and temporary soil piles, will be approximately 5.5 acres. Interim site reclamation after well completions will reduce the pad working surface size to approximately half of original size and with surrounding area recontoured and seeded.

The access route will begin at BIA 6 and proceed northeast to the pad approximately 300 feet. A ROW of 130-feet (maximum disturbance width) will result in approximate 0.9 acres of surface disturbance. The project is located within a native prairie community.

Dakota-3 E&P commits to drilling this well utilizing a closed-loop drilling (pit-less) system. Drilling materials will be contained in tanks and disposed of properly at an approved waste disposal facility. Additionally an 18-inch high containment berm will be constructed on top of the pad to contain pad surface runoff. A shallow diversion ditch or berm will be placed on the top of the cut side of pad to divert water around site. The topsoil from site will be removed at a depth of six-inches and stored on the northeast and southeast sides of the pad and will act as secondary containment during drilling. The topsoil will then be spread at interim and final reclamation. The corners of the proposed well pad have been rounded to reduce surface disturbance and to avoid a cultural resource site. The pad layout was designed to maintain an approximate 150-foot buffer from the drainage to Little Shell Creek. Best Management Practices (BMP's) including the use of a containment berm(s), fiber rolls, fiber matting, soil compaction and seeding of native species will be utilized during construction and after final reclamation. Pipelines (gas, oil, produced water, fresh water) and utilities (electrical and fiber optic) will be installed underground in the same access road ROW corridor. The evaluated ROW to the pad site will intersect the Van Hook Gathering System to which it will be connected.

High Value Habitat Avoidance

The ND Parks and Recreation Department (NDPRD) maintains the North Dakota Natural Heritage biological conservation database. A request for record review will be done to determine if any current or historic plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area.

The proposed pad site is located on gentle southwest slope within a native prairie community. Western wheatgrass (*Agropyron smithii*), blue grama (*Bouteloua gracilis*), and prairie junegrass (*Koeleria pyramidata*) are the dominant grasses. Forbs mixed across the landscape included yellow sweet clover (*Melilotus officinalis*), buckbrush (*Symphoricarpos occidentalis*), fringed sagebrush (*Artemisia frigid*), purple coneflower (*Echinacea angustifolia*), Silver leaf scurfpea (*Psoralea argophylla*). The invasive Kentucky bluegrass (*Poa pratensis*), and crested wheatgrass (*Agropyron cristatum*) is prevalent in the northwest corner near previous disturbance area (farmstead).

A closed-loop drilling (pit-less) system will be employed. Drilling materials will be contained in tanks and disposed of off-site eliminating or greatly reducing potential for contamination or leaching. No high value wildlife habitat will be compromised by pad construction but there will be an overall loss of native grassland cover. At the time of the field visit, no significant ecological communities were observed.

Disturbed areas and spoil piles will be seeded with a native seed mix as specified by the BIA. Dakota-3 E&P and the BIA will monitor the seeding success and weed species control over life of project.

Migratory Birds and Raptors

Proposed oil and gas development in the area may affect raptor and migratory bird species through direct mortality, habitat degradation, and/or displacement of individual birds. These impacts are regulated in part through the *Migratory Bird Treaty Act* (916 USC 703-711) and the Bald and Golden Eagle Protection Act (BGEPA).

A ground survey for cliff, tree, and ground raptor nests was conducted within line-of sight of the proposed project. No nests were observed during the on-site review on October 26, 2011. The project area was also

evaluated for the potential of other migratory bird species. At the time of the site visit no wildlife was observed using the immediate area. Due to the timing of the survey and the location of the proposed project in a native grassland community, a raptor and migratory bird nesting survey will be conducted five days prior to construction (February 1 - July 15) and/or mowing and grubbing will take place on the site in the preceding fall. If mowing or grubbing does take place maintenance of the habitat in a degraded state will occur until construction begins. If nests are discovered during spring survey, construction will be delayed in the immediate area and the BIA and USFWS will be consulted for additional information on how to proceed. Mitigation measures recommended will be taken to avoid any disturbance of raptor or migratory bird nesting sites.

Cumulative Impacts

The project will result in approximately 6.4 total acres of agricultural land (pasture) loss. Potential impacts to wildlife will be minimal in the context of development and the available grassland habitat within the immediate area. Access road and pad construction is near established roads oil facilities and should not significantly negatively affect unlisted species, including migratory birds, small and large mammals, and other wildlife species.

There are no wetlands, floodplains, or major drainage facilities that will be significantly negatively affected by the proposed project. Mitigation efforts committed to within will greatly reduce potential negative effects of the wells drilled near drainage to Little Shell Creek and Lake Sakakawea. Current land uses are expected to continue with little change other than the acreage required for development. Increased truck traffic on adjacent roadways can be expected and has a documented negative, but manageable, impact on road conditions. The installation of the gathering system near the same time as well drilling is proposed and will help alleviate heavy truck traffic.

Biological Species Assessment

Assessments for Federally listed threatened and endangered species were conducted by evaluating historic and present occurrences and by determining if potential habitat exists within the project area. A determination was made concerning direct and cumulative effects of the proposed activities on each species. Threatened and endangered species with documented occurrences in Mountrail County are listed in Table 1.

Table 1. Mountrail County Threatened, Endangered and Candidate Species List¹

Species	Status
Interior Least Tern	Endangered
Whooping Crane	Endangered
Pallid Sturgeon	Endangered
Gray Wolf	Endangered
Piping Plover and Designated Critical Habitat	Threatened
Sprague's Pipit	Candidate
Dakota Skipper	Candidate

¹ USFWS (updated October 1, 2011)

Determinations made for federally listed species are:

- No effect
- May affect, is not likely to adversely affect
- May affect, is likely to adversely affect

Gray Wolf

Gray wolves, an Endangered Species in North Dakota, were historically found throughout much of North America including the Upper Great Plains. Human activities have restricted their present range to the northern forests of Minnesota, Wisconsin, and Michigan and the Northern Rocky Mountains of Idaho, Montana, and Wyoming. They now only occur as occasional visitors in North Dakota. The most suitable habitat for the gray wolf is found around the Turtle Mountains region where documented and unconfirmed reports of gray wolves in North Dakota have occurred (Grondahl and Martin, no date). Due to the transient nature and no recent recorded sightings in the area the proposed project **may affect, is not likely to adversely affect** this species.

Interior Least Tern

The interior least tern nests on midstream sandbars along the Yellowstone and Missouri River systems. Interior least terns construct bowl-shaped depression nests on sparsely vegetated sandbars and sandy beaches. Their nesting period occurs between mid-May through mid-August. During the nesting season the least tern has been documented to travel 7.5-miles or more from the lake to forage in wetlands. The proposed well site is located approximately 2.6-miles from and not within line-of-sight of the Missouri River system shoreline. No individuals were observed in the area during the onsite visit. The pad site will not impact any wetlands and mitigation practices will be employed to protect drainages and lake. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** this species.

Pallid Sturgeon

Pallid sturgeon are found in the Mississippi, Missouri, and Yellowstone River systems and are adapted for living close to the bottom of large, shallow rivers with sand and gravel bars. Pallid sturgeon populations in North Dakota have decreased since the 1960's (Grondahl and Martin no date). The proposed well site is located approximately 2.6-miles from and not within line-of-sight of Lake Sakakawea. BMP's will be implemented, including a containment berm surrounding the proposed well pad site and utilizing a closed-loop (pit-less) drilling system, as such the project will have **no effect** on this species.

Whooping Crane

The primary nesting area for the whooping crane is in Canada's Wood Buffalo National Park. Arkansas National Wildlife Refuge in Texas is the primary wintering area for whooping cranes. In the spring and fall, the cranes migrate primarily along the Central Flyway. During the migration, cranes make numerous stops, roosting in large shallow marshes, and feeding and loafing in harvested grain fields. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss (Texas Parks and Wildlife 2008).

The proposed well site is located within the Central Flyway. Approximately 75% of the whooping crane sightings in North Dakota occur within a 90-mile corridor that includes the proposed well location.

Because collisions with power lines are the primary cause for fledgling mortality, it is BIA directive that any utility lines be constructed underground. Land use in the area is rolling native pasture dissected by treed drainages. The pad and access road are placed in a location that has little potential for whooping crane stop-over habitat. No individual whooping cranes were observed in the area during the on-site visits.

Construction activities may cause migratory cranes to divert from the area but are not likely to result in fatalities. If a crane is sighted within one mile of the project area, construction activities will cease and will be immediately reported to the US Fish and Wildlife Service (USFWS), North Dakota Game and Fish Department (NDGFD), and the BIA. In coordination with the USFWS and the BIA construction will resume once the bird(s) have left the area. Following these guidelines, it is reasonable to expect that the proposed activities *may affect, is not likely to adversely affect* whooping cranes.

Piping Plover and Critical Habitat

Piping plovers are found along the Missouri and Yellowstone River systems on gravel shorelines and sandbars and also on large alkaline wetlands. Nesting sites have been documented on the shorelines of Lake Sakakawea. In addition, critical habitat has been designated along Lake Sakakawea. NDPRD will be consulted on historic records indicating piping plover sightings and critical habitat within 2-miles of the project site.

The proposed well site is located in pasture lands and approximately 2.6-miles from and not within line-of-sight of the Missouri River system shoreline. No individuals were observed in the area during the onsite visit and critical habitat is not located in the area. The pad site will not impact any wetlands and mitigation practices will be employed to protect drainage to Little Shell Creek and Lake Sakakawea. Following these guidelines, it is reasonable to expect that the proposed activities *may affect, is not likely to adversely affect* this species.

Sprague's Pipit

The Sprague's pipit is a ground nesting bird that breeds and winters on open grasslands. It feeds mostly on insects and spiders and some seeds. The Sprague's pipit is closely tied with native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota and South Dakota as well as south-central Canada. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358.3 ac). The species prefers to breed in well-drained, open grasslands and avoids grasslands with excessive shrubs. Preferred grass height is estimated to be between 10 and 30 cm. They may avoid roads, trails, and habitat edges.

The proposed pad site will be developed within a native prairie pasture dissected by drainages, near a private driveway and BIA 6. The pasture was not grazed and vegetation height was moderate to high (>30cm). Based upon these landscape conditions the proposed activities *may affect, is not likely to adversely affect* this species.

Dakota Skipper

Dakota skippers are found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; and 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple coneflower and upright coneflowers and blanket flower. Dakota skipper populations have declined historically due to widespread conversion of native prairie.

The proposed pad site will be developed within a native prairie pasture. The dry, rolling pasture does have needlegrass and coneflowers present as a good percentage of the dominant vegetation.

Based upon these landscape conditions the proposed activities *may affect, is not likely to adversely affect* this species.

Conclusion

The BIA has required the following site-specific construction procedures be implemented to help reduce potential impacts to wildlife and habitat:

- Use of a closed-loop drilling system (pit-less)
- Construction of an 18-inch high containment berm on the pad
- Raptor and migratory bird survey five-days prior to construction (Feb 1- July 15)
- Interim and final reclamation including:
 - Use of BMPs (soil compaction, fiber rolls, berms, sediment fences, fabric etc.) to reduce erosion potential
 - Monitoring and maintenance of potential erosion areas.
 - Seeding of native species.
 - Indefinite monitoring of seeding success and weed species control.

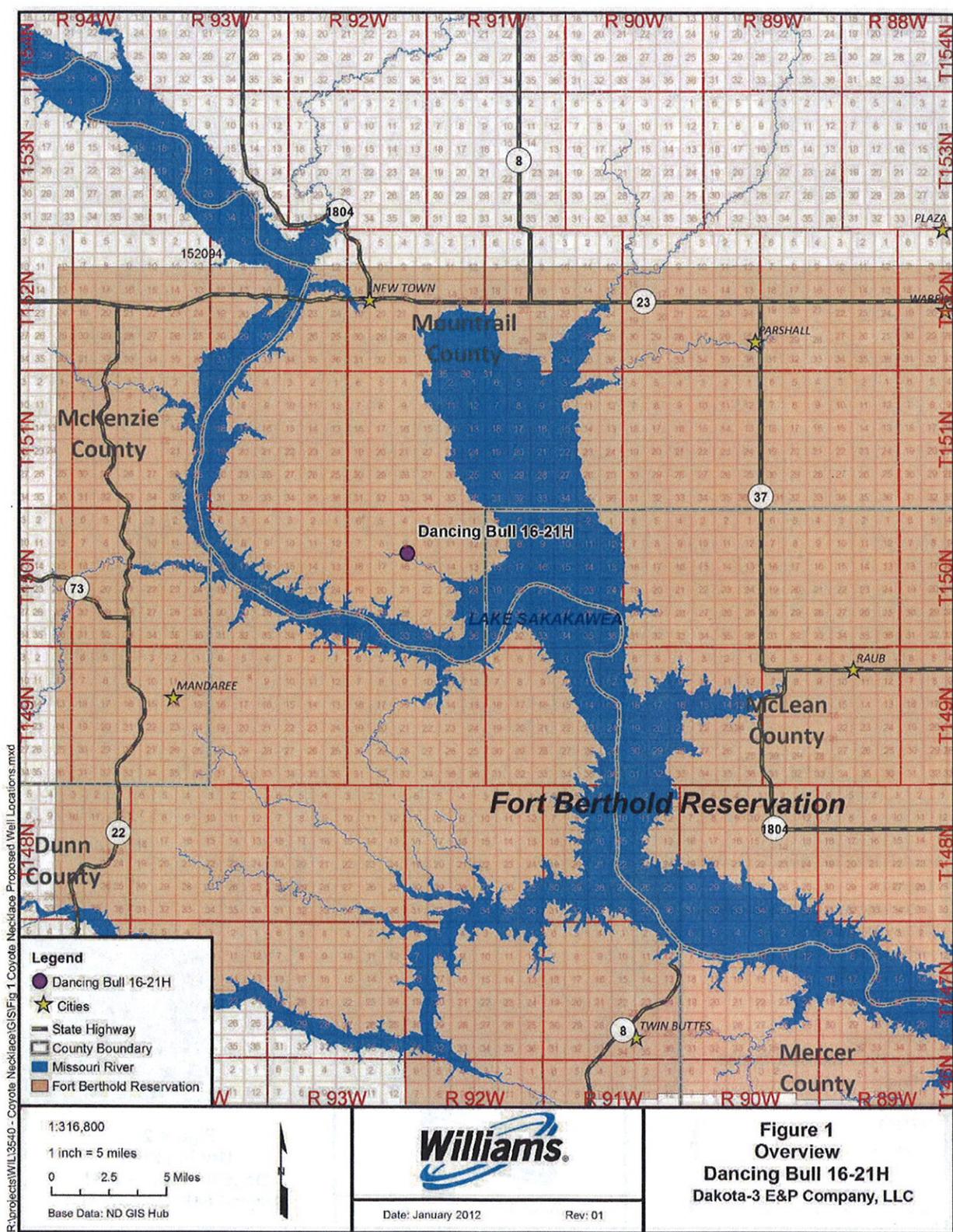
Based on a review of a list of federally listed or proposed endangered or threatened species under U.S. Fish and Wildlife Service jurisdiction, in addition to occasional transient individuals, we have determined that these actions will either have *no effect* or *may affect, but is not likely to adversely affect* listed threatened, endangered or candidate species and habitats.

Please call me at 701-255-1475 if you have any questions or need additional information.

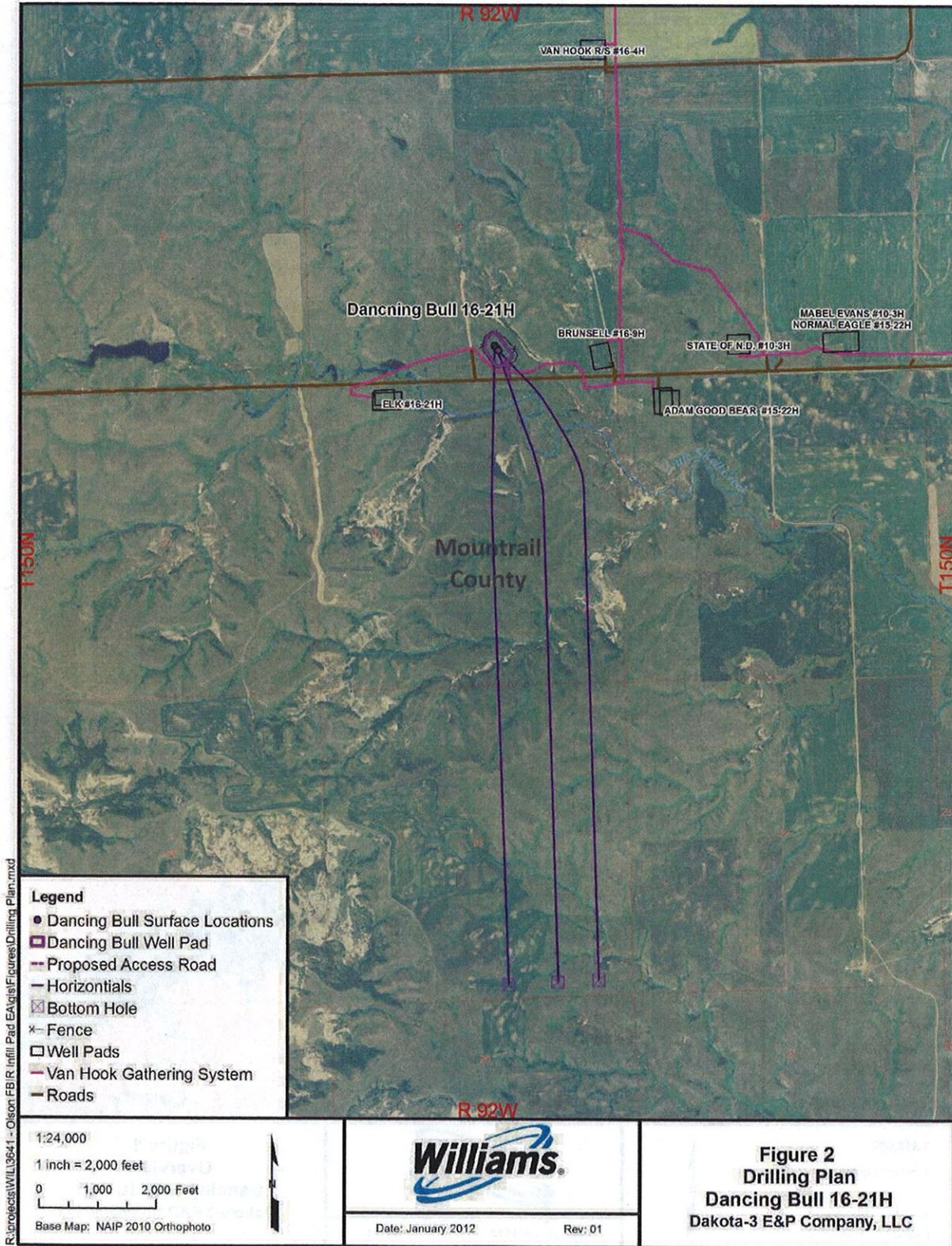
Sincerely,

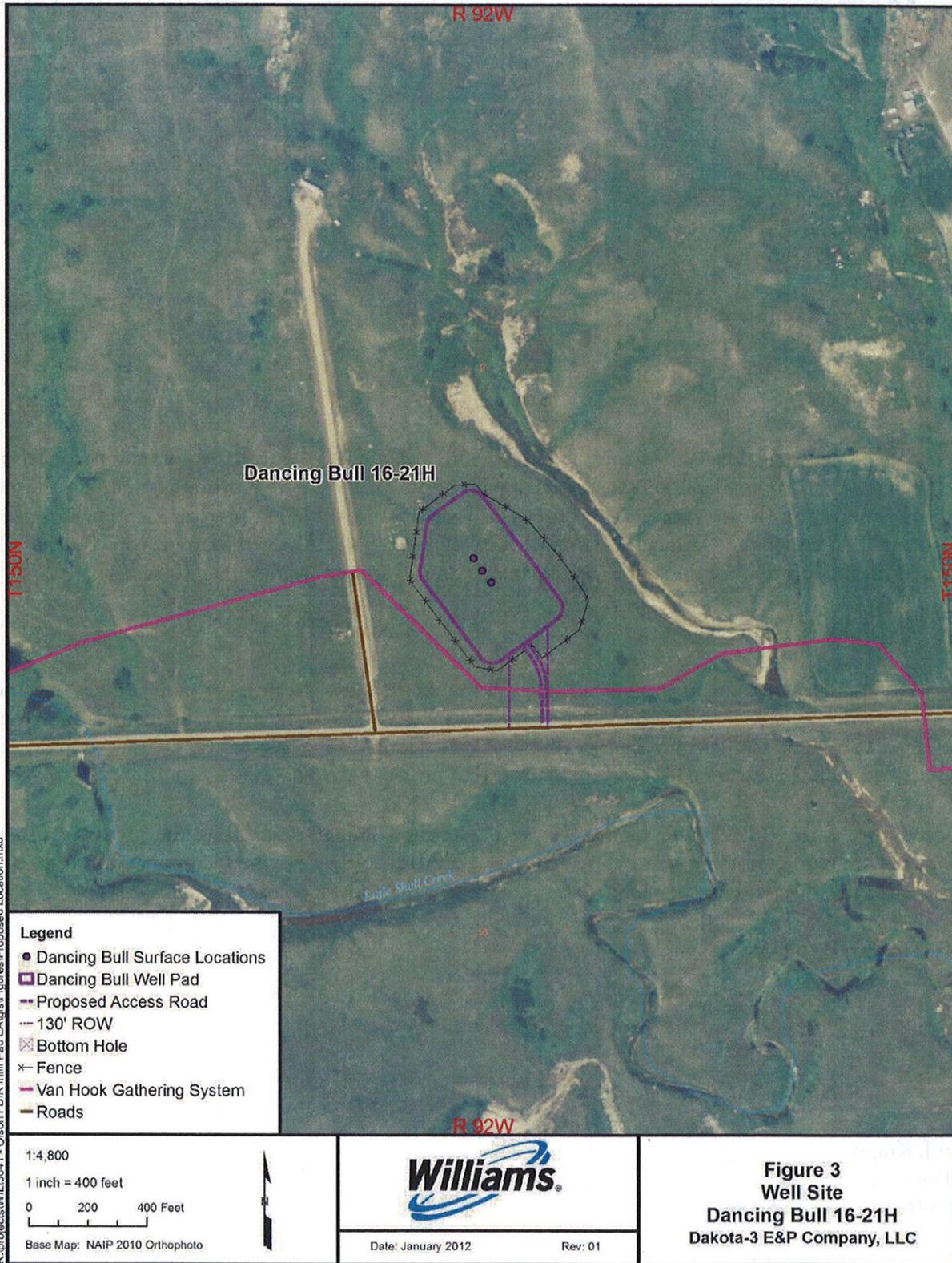


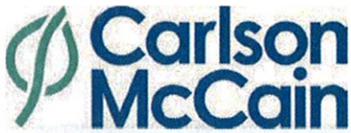
Ryan J. Krapp
Ecologist/GIS Specialist



R:\projects\W\13540 - Coyote Necklaces\GIS\Fig 1 Coyote Necklaces Proposed Well Locations.mxd







ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

January 17, 2012

Marvin Danks - Director
Fort Berthold Rural Water Supply
404 Frontage Road
New Town, ND 58763

RE: Request for Comments
Dakota D-3 E&P Company, LLC

Dear Mr. Danks,

On behalf of Dakota-3 E&P Company, LLC, Carlson McCain is submitting information concerning development of a proposed oil and gas extraction location to drill seven horizontal wells on the Fort Berthold Reservation (Reservation). The Bureau of Indian Affairs (BIA) is preparing an environmental assessment (EA) under the National Environmental Policy Act (NEPA) for the proposed action(s). The proposed surface location for the well pad is illustrated on the Project location map (Figure 1).

- Olson-FBIR Multi-well pad:

Associated appurtenances include pipelines (gas, oil, produced water, fresh water) and utilities (electrical and fiber optic) installed underground in the same right-of-way as the road and connecting to the established Van Hook Gathering System (VHGS). A closed-loop drilling system will be utilized to drill the well and a 48-inch berm will be in place top of on pad to protect Lake Sakakawea.

In accordance with NEPA requirements, we are requesting comments regarding the proposed project. Comments are requested to be sent before February 17, 2012, so they may be incorporated into the final decision making. Please send comments to my attention at the address below.

2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

Sincerely,

Ryan J. Krapp
Ecologist
rkrapp@carlsonmccain.com



ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

January 17, 2012

US Fish and Wildlife Service
Mr. Jeffrey Towner
Field Supervisor
3425 Miriam Avenue
Bismarck, ND 58501

**Re: Request for Comments
Proposed Oil & Gas Well Pad
Olson-FBIR Multi-well Pad
Dakota D-3 E&P Company, LLC**

Dear Mr. Towner:

On behalf of Dakota-3 E&P Company, LLC (a subsidiary of Williams), Carlson McCain, Inc. is submitting information concerning development of the proposed Olson-FBIR well pad. The proposed well site will include seven horizontal well bores into the Bakken and Three Forks formations. The well pad, the access road and the utility corridor (Project) is located on the Fort Berthold Reservation in Section 12, T150N, R92W in Mountrail County (Figure 1).

An on-site biological assessment of the project was conducted on October 10, 2011, with the Bureau of Indian Affairs (BIA). At the initial on-site visit the proposed well site and access road/utility corridor right-of-way (ROW) was "soft" staked and the location was reviewed in consideration of topography, natural drainage and erosion control, vegetation, T&E species, migratory birds, wildlife and habitats, historical and cultural resources and other surface impacts within a 300-foot wide survey corridor. Site-specific mitigation measures were discussed and incorporated into the final project design to minimize impacts to evaluated resources.

Project Description

The proposed project is planned to have seven well bores, drilled horizontally to access petroleum resources of the Bakken and Three Forks formation under sections 1, 12, 13 and 24 (Figure 2). The proposed well pad working surface will initially be constructed approximately to 680-feet by 255-feet, or approximately 4.0 acres (Figure 3). The maximum disturbance area (fenced) for pad construction, including fill slopes and temporary soil piles, will be approximately 8.3 acres. Interim site reclamation after well completions will reduce the pad working surface size to approximately half of original size and the surrounding area recontoured and seeded.

The access route will begin at BIA 602 and proceed south and then west to the pad approximately 3,260 feet. A ROW of 130-feet (maximum disturbance width) will result in approximate 9.6 acres of surface disturbance. The project is located within a previously cultivated mixed grass prairie community.

Dakota-3 E&P commits to drilling this well utilizing a closed-loop drilling (pit-less) system. Drilling materials will be contained in tanks and disposed of properly at an approved waste disposal facility. Additionally a 48-inch high containment berm will be constructed on top of the fill side of pad to contain pad surface runoff. The topsoil from site will be removed at a depth of 8 inches and stored on the northeast and southeast sides of the pad and will act as a secondary containment during drilling. The topsoil will then be spread at interim and final reclamation. The corners of the proposed well pad have been rounded to reduce surface disturbance. Best Management Practices (BMP's) including the use of a containment berm(s), fiber rolls, sediment fencing, soil compaction and reseeded of native species will be utilized during construction and after final reclamation. Pipelines (gas, oil, produced water, fresh water) and utilities (electrical and fiber optic) will be installed underground in the same access road ROW corridor and will be connected to the established Van Hook Gathering System (VHGS). Shut-off valves will be placed on the well pad and at the lateral connection to the VHGS.

High Value Habitat Avoidance

The ND Parks and Recreation Department (NDPRD) maintains the North Dakota Natural Heritage biological conservation database. A request for record review will be done to determine if any current or historic plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area.

The proposed pad site is located within a rolling mixed grass prairie community. A mostly native mix of needle-and-thread (*Stipa comata*), thread-leaf sedge (*Carex filifolia*), porcupine grass (*Stipa spartea*), western wheatgrass (*Agropyron smithii*), and Big bluestem (*Andropogon gerardii*) is found on the hillside near the west edge of the pad. Purple coneflower (*Echinacea angustifolia*) and white sage (*Artemisia ludoviciana*) are the prominent forbs found in the area. Near the eastern edge of pad and along the proposed ROW Kentucky bluegrass (*Poa pratensis*) is mixed with smooth brome (*Bromus inermis*), and western wheatgrass. Forbs mixed across the landscape included buckbrush (*Symphoricarpos occidentalis*), yellow sweet clover (*Melilotus officinalis*), Missouri goldenrod (*Solidago missouriensis*) and purple coneflower. Green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus Americana*) and hawthorne (*Crateagus spp.*) drainages flank the proposed pad site but will not be disturbed.

A closed-loop drilling (pit-less) system will be employed. Drilling materials will be contained in tanks and disposed of off-site eliminating or greatly reducing potential for contamination or leaching. High value wildlife habitat will not be compromised by pad construction but there will be an overall loss of grassland cover. At the time of the field visit, no significant ecological communities were observed.

Disturbed areas and spoil piles will be reseeded with a native seed mix as specified by the BIA. Dakota-3 E&P and the BIA will monitor the seeding success and weed species control over life of project.

Migratory Birds and Raptors

Proposed oil and gas development in the area may affect raptor and migratory bird species through direct mortality, habitat degradation, and/or displacement of individual birds. These impacts are regulated in

part through the *Migratory Bird Treaty Act* (916 USC 703-711) and the Bald and Golden Eagle Protection Act (BGEPA).

A ground survey for cliff, tree, and ground raptor nests was conducted within line-of sight of the proposed project. No nests were observed during the on-site review on October 10, 2011. The project area was also evaluated for the potential of other migratory bird species. At the time of the site visit no wildlife was observed using the immediate area. Due to the timing of the survey, the location of the proposed project in a grassland community and within line-of-sight of Lake Sakakawea, a raptor and migratory bird nesting survey will be conducted five days prior to construction (February 1 - July 15) and/or mowing and grubbing will take place on the site in the preceding fall. If mowing or grubbing does take place maintenance of the habitat in a degraded state will occur until construction begins. If nests are discovered during spring survey, construction will be delayed in the immediate area and the BIA and USFWS will be consulted for additional information on how to proceed. Mitigation measures recommended will be taken to avoid any disturbance of raptor or migratory bird nesting sites.

Cumulative Impacts

The project will result in approximately 17.9 total acres of agricultural land (pasture) loss. Potential impacts to wildlife will be minimal in the context of development and the available grassland habitat within the immediate area. Access road and pad construction should not significantly negatively affect unlisted species, including migratory birds, small and large mammals, and other wildlife species.

There are no wetlands, floodplains, or major drainage facilities that will be significantly negatively affected by the proposed project. Mitigation efforts committed to within will greatly reduce potential negative effects of the wells drilled near Lake Sakakawea. Current land uses are expected to continue with little change other than the acreage required for development. Increased truck traffic on adjacent roadways can be expected and has a documented negative, but manageable, impact on road conditions.

Biological Species Assessment

Assessments for Federally listed threatened and endangered species were conducted by evaluating historic and present occurrences and by determining if potential habitat exists within the project area. A determination was made concerning direct and cumulative effects of the proposed activities on each species. Threatened and endangered species with documented occurrences in Mountrail County are listed in Table 1.

Table 1. Mountrail County Threatened, Endangered and Candidate Species List¹

Species	Status
Interior Least Tern	Endangered
Whooping Crane	Endangered
Pallid Sturgeon	Endangered
Gray Wolf	Endangered
Piping Plover and Designated Critical Habitat	Threatened
Sprague's Pipit	Candidate
Dakota Skipper	Candidate

¹ USFWS (updated October 1, 2011)

Determinations made for federally listed species are:

- No effect
- May affect, is not likely to adversely affect
- May affect, is likely to adversely affect

Gray Wolf

Gray wolves, an Endangered Species in North Dakota, were historically found throughout much of North America including the Upper Great Plains. Human activities have restricted their present range to the northern forests of Minnesota, Wisconsin, and Michigan and the Northern Rocky Mountains of Idaho, Montana, and Wyoming. They now only occur as occasional visitors in North Dakota. The most suitable habitat for the gray wolf is found around the Turtle Mountains region where documented and unconfirmed reports of gray wolves in North Dakota have occurred (Grondahl and Martin, no date). Due to the transient nature and no recent recorded sightings in the area the proposed project should have **no effect** on this species.

Interior Least Tern

The interior least tern nests on midstream sandbars along the Yellowstone and Missouri River systems. Interior least terns construct bowl-shaped depression nests on sparsely vegetated sandbars and sandy beaches. Their nesting period occurs between mid-May through mid-August. During the nesting season the least tern has been documented to travel 7.5 miles or more from the lake to forage in wetlands. The proposed well site is located approximately 5,300-feet (>1-mile) from but is within direct line-of-sight of the Missouri River system shoreline. No individuals were observed in the area during the onsite visit. The pad site will not impact any wetlands or cross any drainages. BMP's will be employed, including a containment berm surrounding the proposed well pad site and utilizing a closed-loop (pit-less) drilling system to protect drainages and the lake. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** this species.

Pallid Sturgeon

Pallid sturgeon are found in the Mississippi, Missouri, and Yellowstone River systems and are adapted for living close to the bottom of large, shallow rivers with sand and gravel bars. Pallid sturgeon populations in North Dakota have decreased since the 1960's (Grondahl and Martin no date). The proposed well site is located approximately 5,300-feet (>1-mile) from Lake Sakakawea. BMP's will be implemented, including a containment berm surrounding the proposed well pad site and utilizing a closed-loop (pit-less) drilling system, as such the project should have **no effect** on this species.

Whooping Crane

The primary nesting area for the whooping crane is in Canada's Wood Buffalo National Park. Arkansas National Wildlife Refuge in Texas is the primary wintering area for whooping cranes. In the spring and fall, the cranes migrate primarily along the Central Flyway. During the migration, cranes make numerous stops, roosting in large shallow marshes, and feeding and loafing in harvested grain fields. The primary threats to whooping cranes are power lines, illegal hunting, and habitat loss (Texas Parks and Wildlife 2008).

The proposed well site is located within the Central Flyway. Approximately 75% of the whooping crane sightings in North Dakota occur within a 90-mile corridor that includes the proposed well location. Because collisions with power lines are the primary cause for fledgling mortality, it is BIA directive that any utility lines be constructed underground. Land use in the area is rolling mixed grass pasture. The pad and access road are placed in a location that has some potential for whooping crane stop-over habitat. No individual whooping cranes were observed in the area during the on-site visits.

Construction activities may cause migratory cranes to divert from the area but are not likely to result in fatalities. If a crane is sighted within one mile of the project area, construction activities in the area will cease and will be immediately reported to the US Fish and Wildlife Service (USFWS), North Dakota Game and Fish Department (NDGFD), and the BIA. In coordination with the USFWS and the BIA construction will resume once the bird(s) have left the area. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** whooping cranes.

Piping Plover and Critical Habitat

Piping plovers are found along the Missouri and Yellowstone River systems on gravel shorelines and sandbars and also on large alkaline wetlands. Nesting sites have been documented on the shorelines of Lake Sakakawea. In addition, critical habitat has been designated along Lake Sakakawea. NDPRD will be consulted on historic records indicating piping plover sightings and critical habitat within 2-miles of the project site.

The proposed well site is located in pasture lands and approximately 5,300 feet (>1-mile) from but is within direct line-of-sight of the Missouri River system shoreline. No individuals were observed in the area during the onsite visit and critical habitat is not located in the area. The pad site will not impact any wetlands and BMP's will be employed, including a containment berm surrounding the proposed well pad site and utilizing a closed-loop (pit-less) drilling system to protect drainages and the lake. Following these guidelines, it is reasonable to expect that the proposed activities **may affect, is not likely to adversely affect** this species.

Sprague's Pipit

The Sprague's pipit is a ground nesting bird that breeds and winters on open grasslands. It feeds mostly on insects and spiders and some seeds. The Sprague's pipit is closely tied with native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota and South Dakota as well as south-central Canada. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 145 ha (358.3 ac). The species prefers to breed in well-drained, open grasslands and avoids grasslands with excessive shrubs. Preferred grass height is estimated to be between 10 and 30 cm. They may avoid roads, trails, and habitat edges.

The proposed pad site will be developed within a mixed grass prairie pasture dissected by treed drainages. The pasture was not grazed and vegetation height was moderate to high (>30cm). Shrub species (hawthorn and chokecherry) and green ash occupy the immediate landscape. Based upon these landscape conditions the proposed activities **may affect, is not likely to adversely affect** this species.

Dakota Skipper

Dakota skippers are found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; and 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needle-grass, pale purple coneflower and upright coneflowers and blanket flower. Dakota skipper populations have declined historically due to widespread conversion of native prairie.

The proposed pad site and ROW will be developed within a mixed grass prairie pasture. The dry, rolling pasture does contain needle-grass, bluestem grasses and coneflower species. Based upon these landscape conditions the proposed activities ***may affect, is not likely to adversely affect*** this species.

Conclusion

The BIA has required the following site-specific construction procedures be implemented to help reduce potential impacts to wildlife and habitat:

- Use of a closed-loop drilling system (pit-less)
- Construction of an 48" high containment berm on the pad
- Raptor and migratory bird survey five-days prior to construction (Feb 1- July 15)
- Interim and final reclamation including:
 - Use of BMPs (soil compaction, fiber rolls, berms, sediment fences, fabric etc.) to reduce erosion potential
 - Monitoring and maintenance of potential erosion areas.
 - Seeding of native species.
 - Indefinite monitoring of seeding success and weed species control.

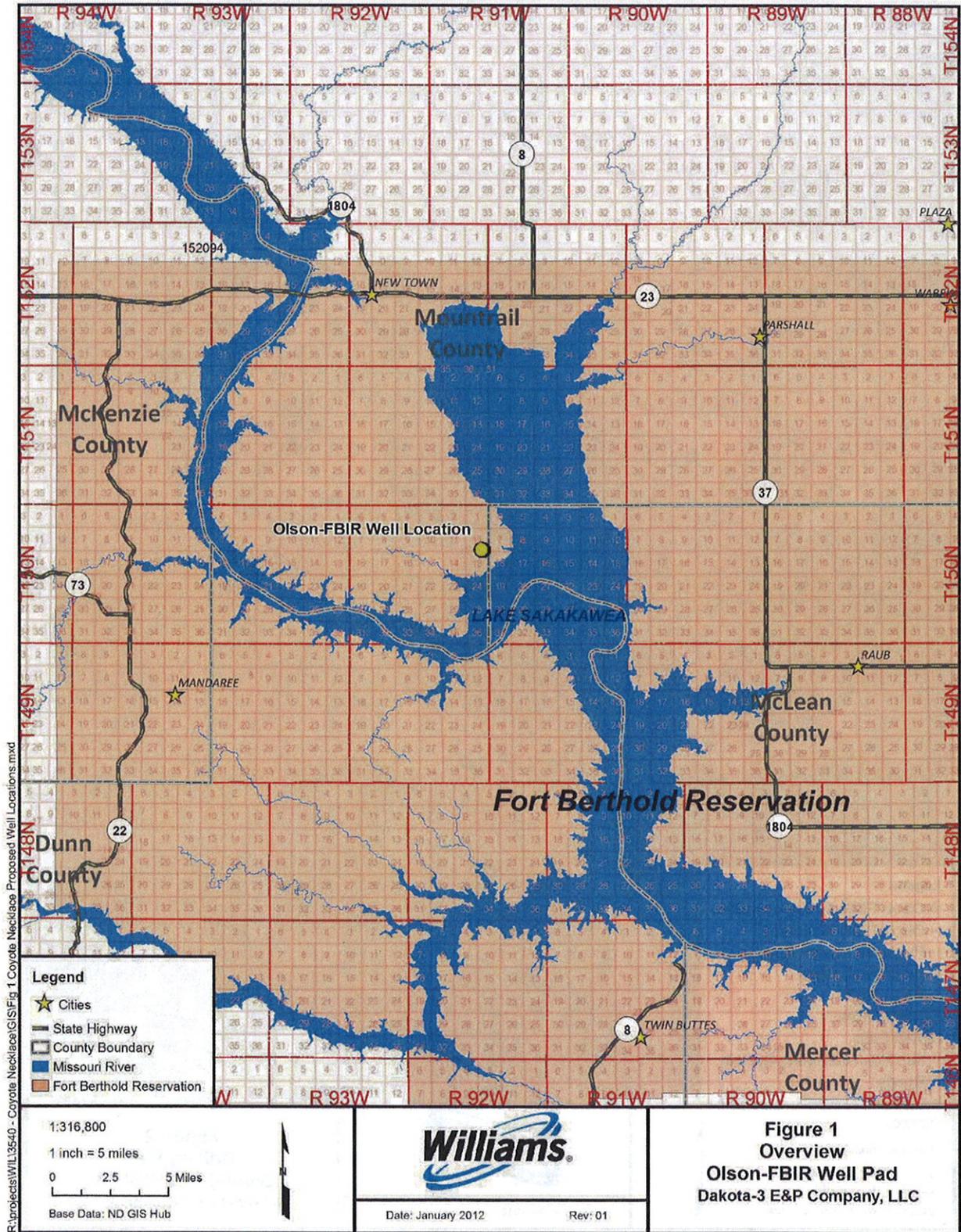
Based on a review of a list of federally listed or proposed endangered or threatened species under U.S. Fish and Wildlife Service jurisdiction, in addition to occasional transient individuals, we have determined that these actions will either have ***no effect*** or ***may affect, but is not likely to adversely affect*** listed threatened, endangered or candidate species and habitats.

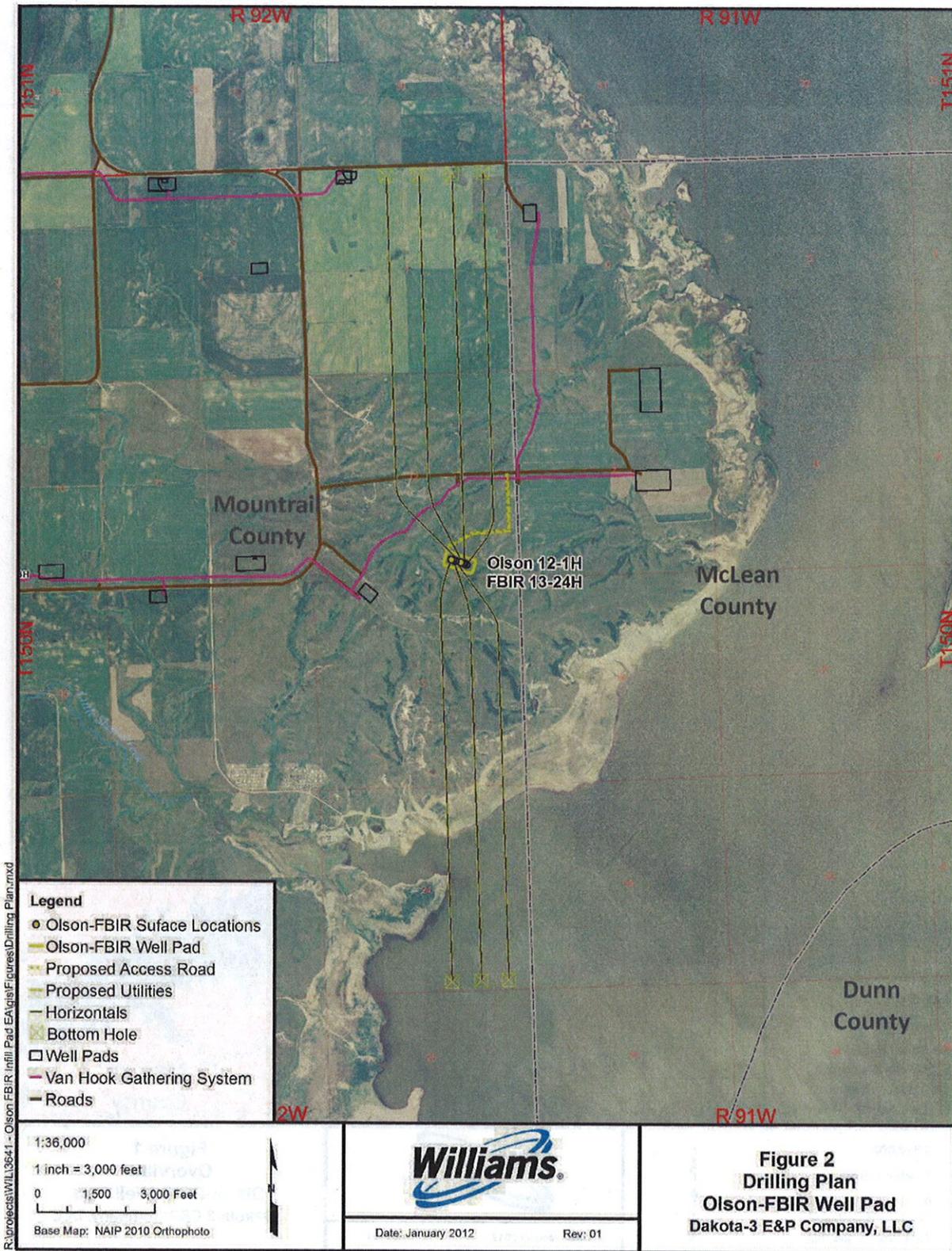
Please call me at 701-255-1475 if you have any questions or need additional information.

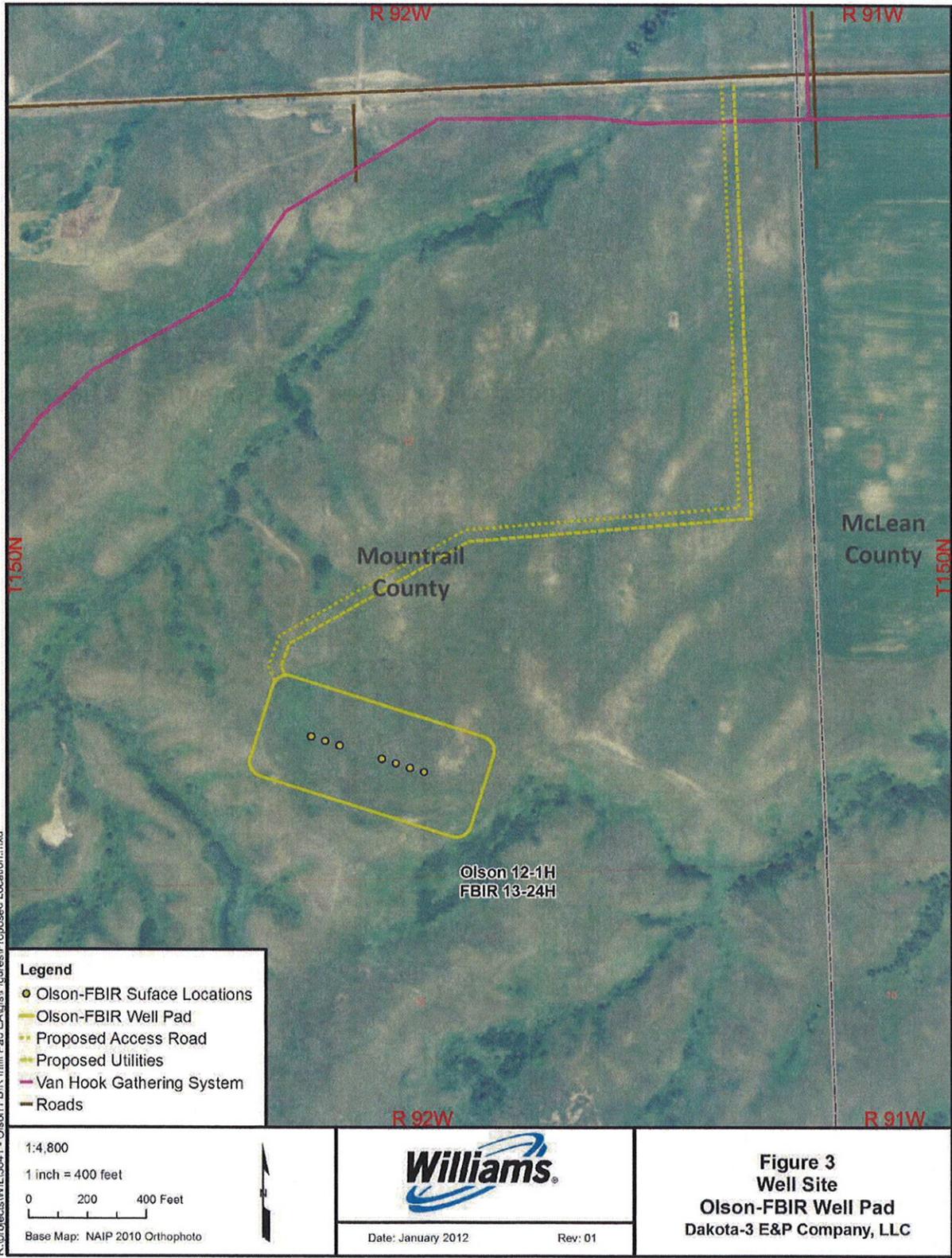
Sincerely,



Ryan J. Krapp
Ecologist/GIS Specialist







Appendix D

Scoping Responses and Concurrence Letters



ENVIRONMENTAL • ENGINEERING • LAND SURVEYING

January 17, 2012

US Fish and Wildlife Service
Mr. Jeffrey Towner
Field Supervisor
3425 Miriam Avenue
Bismarck, ND 58501

Re: Request for Comments
Proposed Oil & Gas Well Pad
Olson-FBIR Multi-well Pad
Dakota D-3 E&P Company, LLC

Dear Mr. Towner:

On behalf of Dakota-3 E&P Company, LLC (a subsidiary of Williams), Carlson McCain, Inc. is submitting information concerning development of the proposed Olson-FBIR well pad. The proposed well site will include seven horizontal well bores into the Bakken and Three Forks formations. The well pad, the access road and the utility corridor (Project) is located on the Fort Berthold Reservation in Section 12, T150N, R92W in Mountrail County (Figure 1).

An on-site biological assessment of the project was conducted on October 10, 2011, with the Bureau of Indian Affairs (BIA). At the initial on-site visit the proposed well site and access road/utility corridor right-of-way (ROW) was "soft" staked and the location was reviewed in consideration of topography, natural drainage and erosion control, vegetation, T&E species, migratory birds, wildlife and habitats, historical and cultural resources and other surface impacts within a 300-foot wide survey corridor. Site-specific mitigation measures were discussed and incorporated into the final project design to minimize impacts to evaluated resources.

Project Description

The proposed project is planned to have seven well bores, drilled horizontally to access petroleum resources of the Bakken and Three Forks formation under sections 1, 12, 13 and 24 (Figure 2). The proposed well pad working surface will initially be constructed approximately to 680-feet by 255-feet, or approximately 4.0 acres (Figure 3). The maximum disturbance area (fenced) for pad construction, including fill slopes and temporary soil piles, will be approximately 8.3 acres. Interim site reclamation after well completions will reduce the pad working surface size to approximately half of original size and the surrounding area recontoured and seeded.

U.S. FISH AND WILDLIFE SERVICE ECOLOGICAL SERVICES ND FIELD OFFICE	
Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area and/or are not likely to be adversely affected. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.	
2-22-12 Date	 Jeffrey K. Towner Field Supervisor

Dakota Skipper

Dakota skippers are found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; and 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needle-grass, pale purple coneflower and upright cone-flowers and blanket flower. Dakota skipper populations have declined historically due to widespread conversion of native prairie.

The proposed pad site and ROW will be developed within a mixed grass prairie pasture. The dry, rolling pasture does contain needle-grass, bluestem grasses and coneflower species. Based upon these landscape conditions the proposed activities *may affect, is not likely to adversely affect* this species.

Conclusion

The BIA has required the following site-specific construction procedures be implemented to help reduce potential impacts to wildlife and habitat:

- Use of a closed-loop drilling system (pit-less)
- Construction of an 48" high containment berm on the pad
- Raptor and migratory bird survey five-days prior to construction (Feb 1- July 15)
- Interim and final reclamation including:
 - Use of BMPs (soil compaction, fiber rolls, berms, sediment fences, fabric etc.) to reduce erosion potential
 - Monitoring and maintenance of potential erosion areas.
 - Seeding of native species.
 - Indefinite monitoring of seeding success and weed species control.

Based on a review of a list of federally listed or proposed endangered or threatened species under U.S. Fish and Wildlife Service jurisdiction, in addition to occasional transient individuals, we have determined that these actions will either have *no effect* or *may affect, but is not likely to adversely affect* listed threatened, endangered or candidate species and habitats.

Please call me at 701-255-1475 if you have any questions or need additional information.

Sincerely,



Ryan J. Krapp
Ecologist/GIS Specialist



January 17, 2012

US Fish and Wildlife Service
Mr. Jeffrey Towner
Field Supervisor
3425 Miriam Avenue
Bismarck, ND 58501

Re: Request for Comments
Proposed Oil & Gas Well Pad
Dancing Bull 16-21H
Dakota D-3 E&P Company, LLC

Dear Mr. Towner:

U.S. FISH AND WILDLIFE SERVICE ECOLOGICAL SERVICES ND FIELD OFFICE	
Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area and/or are not likely to be adversely affected. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.	
<i>2-22-12</i> Date	<i>Jeffrey K. Towner</i> Jeffrey K. Towner Field Supervisor

On behalf of Dakota-3 E&P Company, LLC (a subsidiary of Williams), Carlson McCain, Inc. is submitting information concerning development of the proposed Dancing Bull 16-21H well pad. The proposed well site will include three well bores into the Bakken and Three Forks formations. The well pad, the access road and the utility corridor (Project) is located on the Fort Berthold Reservation in Section 16, T150N, R92W in Mountrail County (Figure 1).

An on-site biological assessment of the project was conducted on October 26, 2011, with the Bureau of Indian Affairs (BIA). At the initial on-site visit the proposed well site and access road/utility corridor right-of-way (ROW) were "soft" staked and the location was reviewed in consideration of topography, natural drainage and erosion control, vegetation, T&E species, migratory birds, wildlife and habitats, historical and cultural resources and other surface impacts within a 300-foot wide survey corridor. Site-specific mitigation measures were discussed and incorporated into the final project design to minimize impacts to evaluated resources.

Project Description

The proposed project is planned to have three well bores, drilled horizontally to access petroleum resources of the Bakken and Three Forks formation under sections 16 and 21 (Figure 2). The proposed well pad working surface will initially be constructed approximately 530-feet by 330-feet in size, or approximately 3.8 acres (Figure 3). The maximum disturbance area (fenced) for pad construction, including fill slopes and temporary soil piles, will be approximately 5.5 acres. Interim site reclamation after well completions will reduce the pad working surface size to approximately half of original size and with surrounding area recontoured and seeded.

The access route will begin at BIA 6 and proceed northeast to the pad approximately 300 feet. A ROW of 130-feet (maximum disturbance width) will result in approximate 0.9 acres of surface disturbance. The project is located within a native prairie community.

Dakota Skipper

Dakota skippers are found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; and 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple coneflower and upright coneflowers and blanket flower. Dakota skipper populations have declined historically due to widespread conversion of native prairie.

The proposed pad site will be developed within a native prairie pasture. The dry, rolling pasture does have needlegrass and coneflowers present as a good percentage of the dominant vegetation. Based upon these landscape conditions the proposed activities *may affect, is not likely to adversely affect* this species.

Conclusion

The BIA has required the following site-specific construction procedures be implemented to help reduce potential impacts to wildlife and habitat:

- Use of a closed-loop drilling system (pit-less)
- Construction of an 18-inch high containment berm on the pad
- Raptor and migratory bird survey five-days prior to construction (Feb 1- July 15)
- Interim and final reclamation including:
 - Use of BMPs (soil compaction, fiber rolls, berms, sediment fences, fabric etc.) to reduce erosion potential
 - Monitoring and maintenance of potential erosion areas.
 - Seeding of native species.
 - Indefinite monitoring of seeding success and weed species control.

Based on a review of a list of federally listed or proposed endangered or threatened species under U.S. Fish and Wildlife Service jurisdiction, in addition to occasional transient individuals, we have determined that these actions will either have *no effect* or *may affect, but is not likely to adversely affect* listed threatened, endangered or candidate species and habitats.

Please call me at 701-255-1475 if you have any questions or need additional information.

Sincerely,



Ryan J. Krapp
Ecologist/GIS Specialist



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
1513 SOUTH 12TH STREET
BISMARCK ND 58504-6640

January 26, 2012

North Dakota Regulatory Office

Carlson McCain
Attn: Ryan J. Krapp, Ecologist
2718 Gateway Avenue, Suite 101
Bismarck, North Dakota 58503

Dear Mr. Krapp:

This is in response to your solicitation letter on behalf of **Dakota-3 E&P Company , LLC**, received on January 19, 2012 requesting Department of the Army (DA), United States Army Corps of Engineers (Corps) comments concerning the proposed oil and gas extraction locations within the Fort Berthold Indian Reservation to drill seven horizontal wells each at the following two well pad locations:

- Dancing Bull 16-21H
- Olson-FBIR Multi-well pad

Corps Regulatory Offices administer Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act regulates work in or affecting navigable waters. This would include work over, through, or under Section 10 water. Section 10 waters in North Dakota are the Missouri River (including Lake Sakakawea and Lake Oahe), Yellowstone River, James River south of Jamestown, North Dakota, Bois de Sioux River, Red River of the North, and the Upper Des Lacs Lake. Section 404 of the Clean Water Act regulates the discharge of dredge or fill material (temporarily or permanently) in waters of the United States. Waters of the United States may include, but are not limited to, rivers, streams, ditches, coulees, lakes, ponds, and their adjacent wetlands. Fill material includes, but is not limited to, rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mines or other excavation activities and materials used to create any structure or infrastructure in waters of the United States.

For any proposed well where the well line and/or bottom hole is under or crosses under Lake Sakakawea, regardless of depth, we require that project proponent provide a DA permit application (ENG Form 4345) to the Corps.

Enclosed for your information is the fact sheet for Nationwide Permit 12, Utility Line Activities. Pipeline projects are already authorized by Nationwide Permit 12 **provided the utility line can be placed without any change to pre-construction contours and all other proposed construction activities and facilities are in compliance with the Nationwide's permit conditions and 401 Water Quality Certification is obtained**. Please note the pre-construction notification requirements on page 2 of the fact sheet. **If a project involves any one of the seven notification requirements, the project proponent must submit a DA application**. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 12 and 13 of the fact sheet. [The following info is for activities on a reservation] Please be advised that the United States Environmental Protection Agency (EPA), Region 8 has denied 401 Water Quality Certification for activities in perennial drainages and wetlands. Furthermore, EPA has placed conditions on activities in ephemeral and intermittent drainages. It is recommended you contact the U.S. Environmental Protection Agency, Region 8, Attn: Brent Truskowski, 1595 Wynkoop Street, Denver, Colorado 80202-1129 to review the conditions pursuant to Section 401 of the Clean Water Act prior to any construction.

Also enclosed for your information is the fact sheet for Nationwide Permit 14, Linear Transportation Projects. Road crossings are already authorized by Nationwide Permit 14 **provided the discharge**

does not cause the loss of greater than ½ acre of waters of the United States per crossing and all other proposed construction activities are in compliance with the Nationwide's permit conditions. Please note the pre-construction notification requirements on the front page of the fact sheet. **If a project involves (1) the loss of waters of the United States exceeding 1/10 acre per crossing; or (2) there is a discharge in a special aquatic site, including wetlands, the project proponent must submit a DA application prior to the start of construction.** Please reference General Condition 27, Pre Construction Notification on page 8 of the fact sheet. Furthermore, a project must also be in compliance with the "Regional Conditions for Nationwide Permits within the State of North Dakota", found on pages 11 and 12 of the fact sheet. [The following is included for activities on a reservation] Enclosed is a copy of the United States Environmental Protection Agency, Region 8's; General Conditions for all Nationwide Permits and specific conditions for Nationwide Permit 14.

In the event your project requires approval from the U.S. Army Corps of Engineers and cannot be authorized by Nationwide Permit(s), a Standard or Individual Permit will be required. A project that requires a Standard or Individual Permit is intensely reviewed and will require the issuance of a public notice. A Standard or Individual Permit generally requires a minimum of 120 days for processing but based on the project impacts and comments received through the public notice may extend beyond 120 days.

This correspondence letter is neither authorization for the proposed construction nor confirmation that the proposed project complies with the Nationwide Permit(s).

If any of these projects require a Section 10 and/or Section 404 permit, please complete and submit the enclosed Department of the Army permit application (ENG Form 4345) to the U.S. Army Corps of Engineers, North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota 58504. If you are unsure if a permit is required, you may submit an application; include a project location map, description of work, and construction methodology.

If we can be of further assistance or should you have any questions regarding our program, please do not hesitate to contact this office by letter or phone at (701) 255-0015.

Sincerely,



Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosure
ENG Form 4345
Fact Sheet NWP 12 and 14
EPA 401 Conditions for Nationwide Permits
CF w/o encl
EPA Denver (Brent Truskowski)



STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA

Jack Dalrymple
Governor of North Dakota

North Dakota
State Historical Board

Gerold Gertholtz
Valley City - President

Calvin Grinnell
New Town - Vice President

A. Ruric Todd III
Jamestown - Secretary

Albert L. Berger
Grand Forks

Diane K. Larson
Bismarck

Chester E. Nelson, Jr.
Bismarck

Margaret Puetz
Bismarck

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Mark Zimmerman
*Director
Parks and Recreation
Department*

Francis Ziegler
*Director
Department of Transportation*

Merlan E. Paaverud, Jr.
Director

*Accredited by the
American Association
of Museums since 1986*

January 23, 2012

Mr. Ryan Krapp
Ecologist
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck ND 58503

NDSHPO REF. 12-0476 BIA/BLM/MHAN THPO Dakota-3 E&P Company,
LLC One new multi-well gas and oil well pad, utilities and access road
Olson-FBIR [T150N R92W Sections 12 & 13] Mountrail County, North
Dakota

Dear Mr. Krapp,

We received your correspondence regarding NDSHPO REF. 12-0476
BIA/BLM/MHAN THPO Dakota-3 E&P Company, LLC One new multi-well
gas and oil well pad, utilities and access road Olson-FBIR, North Dakota. We
request that a copy of cultural resource site forms and reports be sent to this
office so that the cultural resources archives can be kept current for researchers.

Thank you for your consideration. Consultation is with MHAN THPO. If you
have any questions please contact Susan Quinnell, Review & Compliance
Coordinator at (701)328-3576 or squinnell@nd.gov

Sincerely,


Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)

c: Elgin Crows Breast, THPO MHAN
c: Justin Peters, BLM, Dickinson, ND



**STATE
HISTORICAL
SOCIETY**
OF NORTH DAKOTA

Jack Dalrymple
Governor of North Dakota

January 23, 2012

North Dakota
State Historical Board

Mr. Ryan Krapp
Ecologist
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck ND 58503

Gerekl Gernholz
Valley City - President

Calvin Grinnell
New Town - Vice President

NDSHPO REF. 12-0477 BIA/BLM/MHAN THPO Dakota-3 E&P Company,
LLC One new multi-well gas and oil well pad, utilities and access road
Dancing Bull 16-21H [T150N R92W Section 9] Mountrail County, North
Dakota

A. Ruric Todd III
Jamestown - Secretary

Albert I. Berger
Grand Forks

Dear Mr. Krapp,

Diane K. Larson
Bismarck

We received your correspondence regarding NDSHPO REF. 12-0477
BIA/BLM/MHAN THPO Dakota-3 E&P Company, LLC One new multi-well
gas and oil well pad, utilities and access road Dancing Bull 16-21H [T150N
R92W Section 9] Mountrail County, North Dakota. We request that a copy of
cultural resource site forms and reports be sent to this office so that the cultural
resources archives can be kept current for researchers.

Chester E. Nelson, Jr.
Bismarck

Margaret Puetz
Bismarck

Thank you for your consideration. Consultation is with MHAN THPO. If you
have any questions please contact Susan Quinnell, Review & Compliance
Coordinator at (701)328-3576 or squinnell@nd.gov

Sara Otte Coleman
*Director
Tourism Division*

Kelly Schmidt
State Treasurer

Sincerely,

Alvin A. Jaeger
Secretary of State


Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)

Mark Zimmerman
*Director
Parks and Recreation
Department*

c: Elgin Crows Breast, THPO MHAN
c: Justin Peters, BLM, Dickinson, ND

Francis Ziegler
*Director
Department of Transportation*

Merlan E. Paaverud, Jr.
Director

*Accredited by the
American Association
of Museums since 1986*

United States Department of Agriculture



Natural Resources Conservation Service
P.O. Box 1458
Bismarck, ND 58502-1458

January 31, 2012

Ryan J. Krapp
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

RE: Olson-FBIR Multi-well pad

Dear Mr. Krapp:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated January 17, 2012, concerning the development of a proposed oil and gas extraction location to drill seven horizontal wells on the Fort Berthold Reservation.

Important Farmlands - NRCS has a major responsibility with Farmland Protection Policy Act (FPPA) in documenting conversion of farmland (i.e., prime, statewide, and local importance) to non-agricultural use when the project utilizes federal funds. It appears your proposed project is not supported by federal funding; therefore, FPPA does not apply and no further action is needed.

Wetlands - The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA-benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

Helping People Help the Land

An Equal Opportunity Provider and Employer

Mr. Krapp
Page 2

NRCS would recommend that impacts to wetlands be avoided. If the alignment of the project requires passage through a wetland, NRCS can complete a certified wetland determination, if requested by the landowner/operator.

If you have additional questions pertaining to FPPA, please contact Steve Sieler, State Soil Liaison, NRCS, Bismarck, North Dakota (701-530-2019).

Sincerely,

A handwritten signature in cursive script that reads "Steve Sieler acting".

MICHAEL G. ULMER
State Soil Scientist/MO 7 Leader (Acting)

United States Department of Agriculture



Natural Resources Conservation Service
P.O. Box 1458
Bismarck, ND 58502-1458

January 31, 2012

Ryan J. Krapp
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

RE: Dancing Bull 16-21H

Dear Mr. Krapp:

The Natural Resources Conservation Service (NRCS) has reviewed your letter dated January 17, 2012, concerning the development of a proposed oil and gas extraction location to drill seven horizontal wells on the Fort Berthold Reservation.

Important Farmlands - NRCS has a major responsibility with Farmland Protection Policy Act (FPPA) in documenting conversion of farmland (i.e., prime, statewide, and local importance) to non-agricultural use when the project utilizes federal funds. It appears your proposed project is not supported by federal funding; therefore, FPPA does not apply and no further action is needed.

Wetlands - The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

Helping People Help the Land

An Equal Opportunity Provider and Employer

Mr. Krapp
Page 2

NRCS would recommend that impacts to wetlands be avoided. If the alignment of the project requires passage through a wetland, NRCS can complete a certified wetland determination, if requested by the landowner/operator.

If you have additional questions pertaining to FPPA, please contact Steve Sieler, State Soil Liaison, NRCS, Bismarck, North Dakota (701-530-2019).

Sincerely,

A handwritten signature in cursive script that reads "Steve Sieler acting".

MICHAEL G. ULMER
State Soil Scientist/MO 7 Leader (Acting)



Jack Dabrymple, Governor
Mark A. Zimmerman, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

February 6, 2012

Mr. Ryan Krapp
Carlson McCain
2718 Gateway Ave.
Suite 101
Bismarck, ND 58503

Re: Proposed Oil & Gas Well Pad, Dancing Bull 16-21H Well Pad, Dakota D-3 E&P Company, LLC

Dear Mr. Krapp,

The North Dakota Parks and Recreation Department (the Department) has reviewed the above referenced proposal for the development of 3 well bores into the Bakken and Three Forks formation on the Fort Berthold Indian Reservation in Mountrail County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no documented occurrences in our database within or adjacent to project area. Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact Kathy Duttonhefner (701-328-5370 or kaduttonhefner@nd.gov) of our staff. Thank you for the opportunity to comment on this proposed project.

Sincerely,


Jesse Hanson, Manager
Planning and Natural Resources Division

R.USNDNH#2012_020 KD2/3/2012DL2.9.2012

.....
Play in our backyard!



Jack Dabrymple, Governor
Mark A. Zimmerman, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

February 6, 2012

Mr. Ryan Krapp
Carlson McCain
2718 Gateway Ave.
Suite 101
Bismarck, ND 58503

Re: Proposed Oil & Gas Well Pad, Olson-FBIR Multi-well Pad, Dakota D-3 E&P Company, L.L.C

Dear Mr. Krapp,

The North Dakota Parks and Recreation Department (the Department) has reviewed the above referenced proposal for the development of 7 horizontal well bores into the Bakken and Three Forks formation on the Fort Berthold Indian Reservation in Mountrail County.

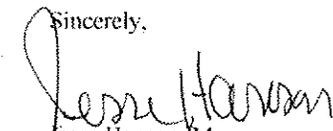
Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no documented occurrences in our database within or adjacent to project area. Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources.

The Department recommends that the project be accomplished with minimal impacts and that all efforts be made to ensure that critical habitats not be disturbed in the project area to help secure rare species conservation in North Dakota. Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact Kathy Dutenhefner (701-328-5370 or kgdutenhefner@nd.gov) of our staff. Thank you for the opportunity to comment on this proposed project.

Sincerely,

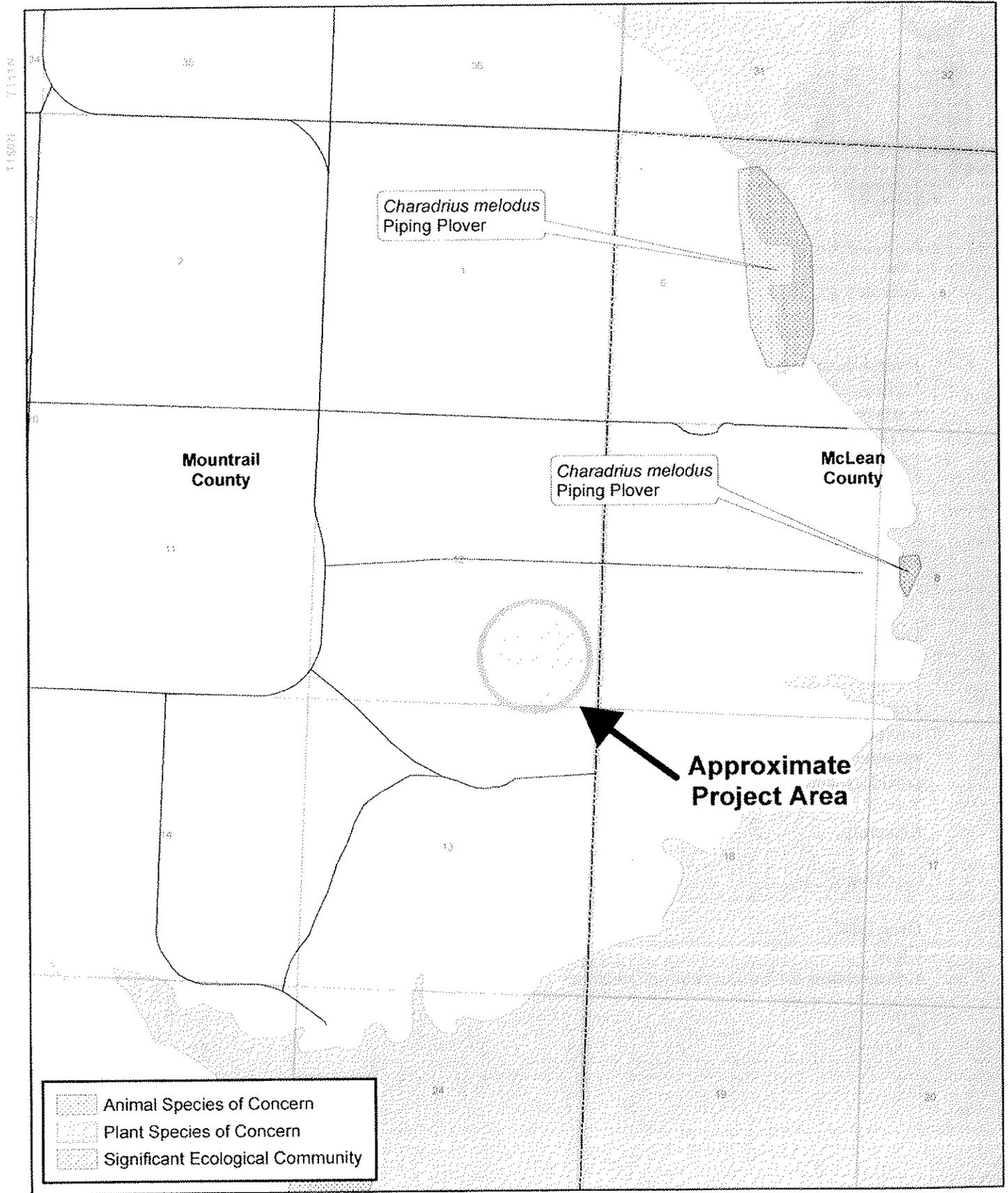


Jesse Hanson, Manager
Planning and Natural Resources Division

R:\USND\NHI*2012_020 KD2/3/2012\DL.2.9.2012

.....
Play in our backyard!

NORTH DAKOTA PARKS AND RECREATION DEPARTMENT
North Dakota Natural Heritage Inventory



R03W R02W



"VARIETY IN HUNTING AND FISHING"

NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

February 15, 2012

Ryan J. Krapp
Ecologist/GIS Specialist
Carlson McCain, Inc.
2718 Gateway Ave, Suite 101
Bismarck, ND 58503

Dear Mr. Krapp:

RE: Dancing Bull 16-21H
Olson-FBIR Multi-well Pad

Dakota-3 E&P Company, LLC is proposing ten oil and gas wells located on two well pads on the Fort Berthold Reservation in Mountrail County, North Dakota.

Our primary concern with oil and gas development is the fragmentation and loss of wildlife habitat associated with construction of the well pads and access roads. We recommend that construction be avoided to the extent possible within native prairie, wooded draws, riparian corridors, and wetland areas.

Sincerely,

A handwritten signature in cursive script, appearing to read "Greg Link".

Greg Link
Chief
Conservation & Communication Division

js



January 27, 2012

Mr. Ryan J. Krapp, Ecologist
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

Re: Olson-FBIR Multi-well Pad by Dakota-3 E& P Company, LLC
Fort Berthold Reservation, Mountrail County

Dear Mr. Krapp:

This department has reviewed the information concerning the above-referenced project submitted under date of January 17, 2012, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Development of the production facilities and any access roads or well pads should have a minimal effect on air quality provided measures are taken to minimize fugitive dust. However, operation of the wells has the potential to release air contaminants capable of causing or contributing to air pollution. We encourage the development and operation of the wells in a manner that is consistent with good air pollution control practices for minimizing emissions. Detailed guidance is available at www.ndhealth.gov/AQ/OilAndGasWells.htm.

Any questions about air pollution control or permitting requirements should be addressed to Ms. Kathleen Paser at the U.S. Environmental Protection Agency, Region 8. She may be reached at (303) 312-6526 or Paser.Kathleen@epa.gov.

2. Aggregate to be used for road construction should not contain any erionite. Aggregate sources should be tested for erionite following guidelines found at www.ndhealth.gov/EHS/Erionite. For questions regarding erionite testing, please call Mark Dihle at 701-328-5188.
3. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.



NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov



January 26, 2012

Mr. Ryan J. Krapp, Ecologist
Carlson McCain
2718 Gateway Avenue, Suite 101
Bismarck, ND 58503

Re: Dancing Bull 16-21H Well Pad by Dakota-3 E& P Company, LLC
Fort Berthold Reservation, Dunn County

Dear Mr. Krapp:

This department has reviewed the information concerning the above-referenced project submitted under date of January 17, 2012, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. Development of the production facilities and any access roads or well pads should have a minimal effect on air quality provided measures are taken to minimize fugitive dust. However, operation of the wells has the potential to release air contaminants capable of causing or contributing to air pollution. We encourage the development and operation of the wells in a manner that is consistent with good air pollution control practices for minimizing emissions. Detailed guidance is available at www.ndhealth.gov/AQ/OilAndGasWells.htm.

Any questions about air pollution control or permitting requirements should be addressed to Ms. Kathleen Paser at the U.S. Environmental Protection Agency, Region 8. She may be reached at (303) 312-6526 or Paser.Kathleen@epa.gov.

2. Aggregate to be used for road construction should not contain any erionite. Aggregate sources should be tested for erionite following guidelines found at www.ndhealth.gov/EHS/Erionite. For questions regarding erionite testing, please call Mark Dihle at 701-328-5188.
3. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

Environmental Health
Section Chief's Office
701.328.5150

Division of
Air Quality
701.328.5188

Division of
Municipal Facilities
701.328.5211

Division of
Waste Management
701.328.5166

Division of
Water Quality
701.328.5210

4. Oil and gas related construction activities located within tribal boundaries within North Dakota may be required to obtain a permit to discharge storm water runoff from the U.S. Environmental Protection Agency. Further information may be obtained from the U.S. EPA's website or by calling the U.S. EPA - Region 8 at (303) 312-6312. Also, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,



L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc

Attach.

cc: Mark Dihle, Division of Air Quality



Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

U.S. Department of Homeland Security
Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267



FEMA

R8-Mitigation

January 24, 2012

Ryan J Krapp, Ecologist
Carlson McCain
2718 Gateway Ave. Suite 101
Bismarck, ND 58503

Dear Mr. Krapp:

Thank you for your invitation to comment on the Olson-FBIR Multi-well location. For floodplain management purposes, FEMA's major concern is if the proposed project is located within a mapped Special Flood Hazard Area on a FEMA Flood Insurance Rate Map (FIRM). Under the National Flood Insurance Program (NFIP), development in these areas requires further consideration.

Our records show that the Mclean County is a participating community in the NFIP and has never been mapped.. We recommend that you contact the County Floodplain Manager for Mclean County, Marlan Hvinden, Risk Manager, at 701-462-8541 to receive further guidelines regarding any special permits required in order to adhere to the regulations and policies of the NFIP.

Please feel free to contact me at 303-235-4721 if you require additional assistance. Thank you for giving us the opportunity to assist you in the project in the Fort Berthold Reservation.

Sincerely,

Dave Kyner
Dave Kyner
Natural Hazards Program Specialist

U.S. Department of Homeland Security
Region VIII
Denver Federal Center, Building 710
P.O. Box 25267
Denver, CO 80225-0267



FEMA

R8-Mitigation

January 24, 2012

Ryan J Krapp, Ecologist
Carlson McCain
2718 Gateway Ave. Suite 101
Bismarck, ND 58503

Dear Mr. Krapp:

Thank you for your invitation to comment on the Dancing Bull 16-21H location. For floodplain management purposes, FEMA's major concern is if the proposed project is located within a mapped Special Flood Hazard Area on a FEMA Flood Insurance Rate Map (FIRM). Under the National Flood Insurance Program (NFIP), development in these areas requires further consideration.

Our records show that the Fort Berthold Reservation is a non-participating community in the NFIP and has never been mapped. We recommend that you contact the State Floodplain Manager for North Dakota, Jeff Kline with the State Water Commission at 721-328-2750 to receive further guidelines regarding any special permits required in order to adhere to the regulations and policies of the NFIP.

Please feel free to contact me at 303-235-4721 if you require additional assistance. Thank you for giving us the opportunity to assist you in the project in the Fort Berthold Reservation.

Sincerely,


Dave Kyner
Natural Hazards Program Specialist

From: Sorensen, Charles G. NWO
To: Ryan Krapp
Cc: Ames, Joel O. NWO
Subject: Comments for the Dancing Bull 16-21H oil and gas well (UNCLASSIFIED)
Date: Monday, January 23, 2012 2:18:41 PM

Classification: UNCLASSIFIED
Caveats: NONE

Ryan

Thank you for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project comment on Dakota-3 E&P Companies, LLC proposed, Dancing Bull 16-21H oil and gas well located on the Fort Berthold Indian Reservation.

At this time the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project would request that Dakota-3 E&P Company, LLC consider and implement the following management practices during the exploration phase of the aforementioned wells.

Due to the close proximity of the well locations to lands managed by the U.S. Army Corps of Engineers (USACE) there is a high risk that any storm water runoff from the well location will enter the Missouri River/Lake Sakakawea. As such the USACE would request that Dakota-3 E&P Company, LLC construct an impervious lined trench located on the down sloping side of the well pad to catch and hold any surface run off from the well pad. Fluids that accumulate in the trench should be pumped/removed from the trench and disposed of properly. In addition to the catch trench, the USACE would like to also recommend that the entire well pad have an impervious type liner placed on the well pad prior to the construction of the pad.

As previously mentioned the location of the proposed well site is extremely close to lands managed by the USACE and the possibility for contamination of the Missouri River/Lake Sakakawea from the well pads and wells is a great concern to this agency. To aid in the prevention of hazardous wastes from entering the aforementioned bodies of water, the USACE would strongly recommend that a Closed Loop Drilling Method be used in the exploration phase of the well to include all drilling fluids and cuttings.

Should living quarters be established onsite it is requested that all sewage collection systems be of a closed design and all holding tanks are to be either double walled or contained in a secondary containment system. All sewage waste removed from the well site location should be disposed of properly.

Should additional fill material required for the construction of the well pad. Said material should be obtained from a private supplier whose material has been certified as being free of all noxious weeds.

Prior to the drilling rig and associated equipment being moved/ placed that all equipment be either pressure washed or air blasted off Tribal lands to prevent the possible transportation of noxious or undesirable vegetation onto Tribal lands as well as USACE managed lands.

That no surface occupancy be allowed within ½ mile of any known Threatened or Endangered Species critical habitat.

If possible, all construction activities should occur between August 15th

and April 1st.

If trees are present, the appropriate dates are August 15th - February 1st. By constructing during these dates, disruptions to wildlife during the breeding season maybe kept to a minimum.

Cumulative impacts are often overlooked, in the completion of NEPA compliance. To adequately assess cumulative impacts, the following activities should consider.

- a. Has the project area already been degraded, and if so, to what extent?
- b. Are other ongoing activities in the area causing impacts, and if so, to what extent?
- c. What is the likelihood that this project will lead to a number of associated projects?
- d. What are the trends for activities and impacts in the area?

If you have any questions regarding the above recommendations, please feel free to contact me

Charles Sorensen
Natural Resource Specialist
U.S. Army Corps of Engineers
Garrison Dam/Lake Sakakawea Project
Riverdale, North Dakota Office
(701) 654 7411 ext 232

Classification: UNCLASSIFIED
Caveats: NONE

From: [Sorensen, Charles G NWO](#)
To: [Ryan Krapp](#)
Cc: [Ames, Joel O NWO](#)
Subject: Comments for the Olson-FBIR oil and gas well (UNCLASSIFIED)
Date: Monday, January 23, 2012 2:18:52 PM

Classification: UNCLASSIFIED
Caveats: NONE

Ryan

Thank you for letting the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project comment on Dakota-3 E&P Companies, LLC proposed, Olson-FBIR oil and gas well located on the Fort Berthold Indian Reservation.

At this time the U.S. Army Corps of Engineers Garrison Dam/Lake Sakakawea Project would request that Dakota-3 E&P Company, LLC consider and implement the following management practices during the exploration phase of the aforementioned wells.

Due to the close proximity of the well locations to lands managed by the U.S. Army Corps of Engineers (USACE) there is a high risk that any storm water runoff from the well location will enter the Missouri River/Lake Sakakawea. As such the USACE would request that Dakota-3 E&P Company, LLC construct an impervious lined trench located on the down sloping side of the well pad to catch and hold any surface run off from the well pad. Fluids that accumulate in the trench should be pumped/removed from the trench and disposed of properly. In addition to the catch trench, the USACE would like to also recommend that the entire well pad have an impervious type liner placed on the well pad prior to the construction of the pad.

As previously mentioned the location of the proposed well site is extremely close to lands managed by the USACE and the possibility for contamination of the Missouri River/Lake Sakakawea from the well pads and wells is a great concern to this agency. To aid in the prevention of hazardous wastes from entering the aforementioned bodies of water, the USACE would strongly recommend that a Closed Loop Drilling Method be used in the exploration phase of the well to include all drilling fluids and cuttings.

Should living quarters be established onsite it is requested that all sewage collection systems be of a closed design and all holding tanks are to be either double walled or contained in a secondary containment system. All sewage waste removed from the well site location should be disposed of properly.

Should additional fill material required for the construction of the well pad. Said material should be obtained from a private supplier whose material has been certified as being free of all noxious weeds.

Prior to the drilling rig and associated equipment being moved/ placed that all equipment be either pressure washed or air blasted off Tribal lands to prevent the possible transportation of noxious or undesirable vegetation onto Tribal lands as well as USACE managed lands.

That no surface occupancy be allowed within ½ mile of any known Threatened or Endangered Species critical habitat.

If possible, all construction activities should occur between August 15th

and April 1st.

If trees are present, the appropriate dates are August 15th - February 1st. By constructing during these dates, disruptions to wildlife during the breeding season maybe kept to a minimum.

Cumulative impacts are often overlooked, in the completion of NEPA compliance. To adequately assess cumulative impacts, the following activities should consider.

- a. Has the project area already been degraded, and if so, to what extent?
- b. Are other ongoing activities in the area causing impacts, and if so, to what extent?
- c. What is the likelihood that this project will lead to a number of associated projects?
- d. What are the trends for activities and impacts in the area?

If you have any questions regarding the above recommendations, please feel free to contact me

Charles Sorensen
Natural Resource Specialist
U.S. Army Corps of Engineers
Garrison Dam/Lake Sakakawea Project
Riverdale, North Dakota Office
(701) 654 7411 ext 232

Classification: UNCLASSIFIED
Caveats: NONE

Charles Sorensen
Natural Resource Specialist
U.S. Army Corps of Engineers
Garrison Dam/Lake Sakakawea Project
Riverdale, North Dakota Office
(701) 654 7411 ext 232

Classification: UNCLASSIFIED
Caveats: NONE



United States Department of the Interior

BUREAU OF RECLAMATION

Dakotas Area Office

P.O. Box 1017

Bismarck, North Dakota 58502



IN REPLY REFER TO:

DK-5000
ENV-6.00

JAN 17 2012

Mr. Ryan J. Krapp
Ecologist
Carlson McCain
2718 Gateway Avenue – Suite 101
Bismarck, ND 58503

Subject: Solicitation for an Environmental Assessment by BIA for the Proposed Construction of Three Exploratory Horizontal Oil and Gas Wells, Multiple Pipelines, and Utilities on a Single Pad for Dakota-3 E&P on the Fort Berthold Indian Reservation in Mountrail County, North Dakota

Dear Mr. Krapp:

This letter is written to inform you that we received your January 17, 2012, letter and the information and maps of your proposed well pad and wells have been reviewed by Bureau of Reclamation staff.

The proposed well pad is sited in:

Dancing Bull 16-21H Multiwell pad - Sec. 9, T.150N., R.92W., New Town SW,
North Dakota, Mountrail County

There are federal Reclamation facilities within Section 9. In this case, those facilities are the rural water pipelines of the Fort Berthold Rural Water System. Please note that municipal, rural, and industrial water lines (red and blue lines) commonly follow roads.

Our map should aid you in identification of potential for adverse effect to or need for crossing federal facilities while developing your well pad, access roads, pipelines, and utilities. Also, should you need to cross a Fort Berthold Rural Water System pipeline while accessing your proposed project, please contact our engineer Colin Nygaard, as shown below, and refer to the enclosed sheet for pipeline crossing specifications.

Since Reclamation is the lead federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Lester Crows Heart, Fort Berthold Rural Water Director, Three Affiliated Tribes, 308 4 Bears Complex, New Town, North Dakota 58763.



United States Department of the Interior

BUREAU OF RECLAMATION

Dakotas Area Office

P.O. Box 1017

Bismarck, North Dakota 58502



IN REPLY REFER TO
DK-5000
ENV-6.00

JAN 26 2012

Mr. Ryan J. Krapp
Ecologist
Carlson McCain
2718 Gateway Avenue – Suite 101
Bismarck, ND 58503

Subject: Solicitation for an Environmental Assessment by BIA for the Proposed Construction of Seven Exploratory Horizontal Oil and Gas Wells, Multiple Pipelines, and Utilities on a Single Pad for Dakota-3 E&P on the Fort Berthold Indian Reservation in Mountrail County, North Dakota

Dear Mr. Krapp:

This letter is written to inform you that we received your January 17, 2012, letter and the information and maps of your proposed well pad and wells have been reviewed by Bureau of Reclamation staff.

The proposed well pad is sited in:

Olson-FBIR Multiwell pad - Sec. 12, T. 150 N., R. 92 W., New Town SW, ND,
Mountrail County

There are federal Reclamation facilities within Section 12. In this case, those facilities are the rural water pipelines of the Fort Berthold Rural Water System. Please note that municipal, rural, and industrial water lines (red and blue lines) commonly follow roads.

Our map should aid you in identification of potential for adverse effect to or need for crossing federal facilities while developing your well pad, access roads, pipelines, and utilities. Also, should you have a need to cross a Fort Berthold Rural Water System pipeline while accessing your proposed project, please contact our engineer Colin Nygaard, as shown, below and refer to the enclosed sheet for pipeline crossing specifications.

Since Reclamation is the lead federal agency for the Fort Berthold Rural Water System, we request that any work planned on the reservation be coordinated with Mr. Lester Crows Heart, Fort Berthold Rural Water Director, Three Affiliated Tribes, 308 4 Bears Complex, New Town, North Dakota 58763.

Thank you for providing the information and opportunity to comment on your proposal. If you have any further environmental questions, please contact me at 701-221-1287 or for engineering questions Colin Nygaard, Civil Engineer, at 701-221-1260.

Sincerely,

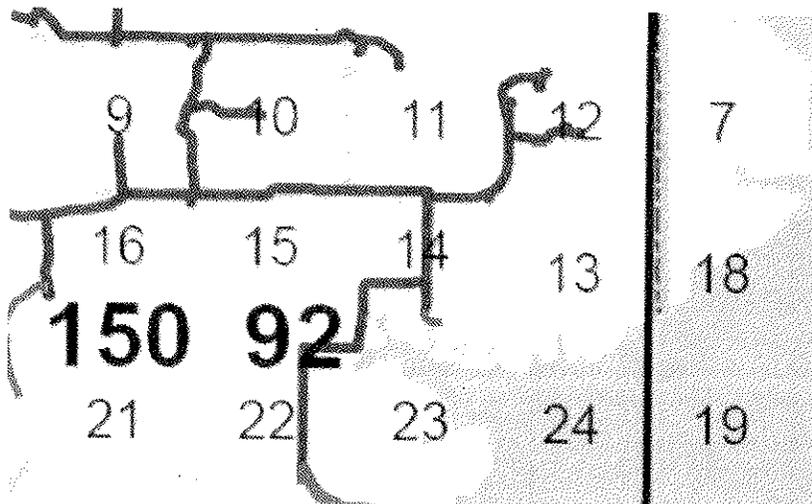


Kelly B. McPhillips
Environmental Specialist

Enclosure

cc: Bureau of Indian Affairs
Great Plains Regional Office
Ms. Marilyn Bercier
Supervisory Environmental Protection Specialist
115 Fourth Avenue S.E.
Aberdeen, SD 57401

Mr. Lester Crows Heart
Fort Berthold Rural Water Director
Three Affiliated Tribes
308 4 Bears Complex
New Town, ND 58763
(w/encl)



Olson-FBIR Multiwell pad - Sec. 12, T.150N., R.92W., New Town SW, ND, Mountrail County



United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E., Suite 400
Aberdeen, South Dakota 57401



IN REPLY REFER TO:
DESCRM
MC-208

MAR 09 2012

Elgin Crows Breast, THPO
Mandan, Hidatsa and Arikara Nation
404 Frontage Road
New Town, North Dakota 58763

Dear Mr. Crows Breast:

We have considered the potential effects on cultural resources of two proposed oil well pads in Mountrail County, North Dakota. Approximately 75.82 acres were intensively inventoried using a pedestrian methodology. Potential surface disturbances are not expected to exceed the areas depicted in the enclosed reports. Two archaeological sites (32MN923, 32MN924) were located, the latter of which 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 (42 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 sites will be avoided. Catalogued as **BIA Case Number AAO-2065/FB/12**, the proposed undertakings, locations, and project dimensions are described in the following reports:

Leroy, Adam D.

(2012) A Class I and Class III Cultural Resource Inventory of the Dancing Bull #16-21H Well Pad and Utility Corridor, Fort Berthold Indian Reservation, Mountrail County, North Dakota. SWCA Environmental Consultants for WPX Energy Williston, LLC, Tulsa, OK.

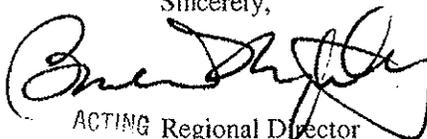
Reinhart, Damien, and Chandler S. Herson

(2012) A Class I and Class III Cultural Resource Inventory of the Olson #12-1H and FBIR #13-24H Well Pad and Utility Corridor, Fort Berthold Indian Reservation, Mountrail County, North Dakota. SWCA Environmental Consultants for WPX Energy Williston, LLC, Tulsa, OK.

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

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

Sincerely,



ACTING Regional Director

Enclosures

cc: Chairman, Three Affiliated Tribes
Superintendent, Fort Berthold Agency

Notice of Availability and Appeal Rights

WPX Energy: Dancing Bull 16-21HC, 16-21HZ, 16-21HD &
Olson 12-1HX, 12-1HC, 12-1HY, 12-1HD / FBIR 13-24HC, 13-24HZ & 13-24HD Wells, Pads, Access Roads and Utility
Corridors

The Bureau of Indian Affairs (BIA) is planning to issue administrative approvals to Authorize Land Use for the construction of the Dancing Bull 16-21HC, 16-21HZ, 16-21HD & Olson 12-1HX, 12-1HC, 12-1HY, 12-1HD / FBIR 13-24HC, 13-24HZ & 13-24HD Wells, Pads, Access Roads and Utility Corridors on the Fort Berthold Reservation as shown on the attached map. Construction by WPX Energy is expected to begin in 2012.

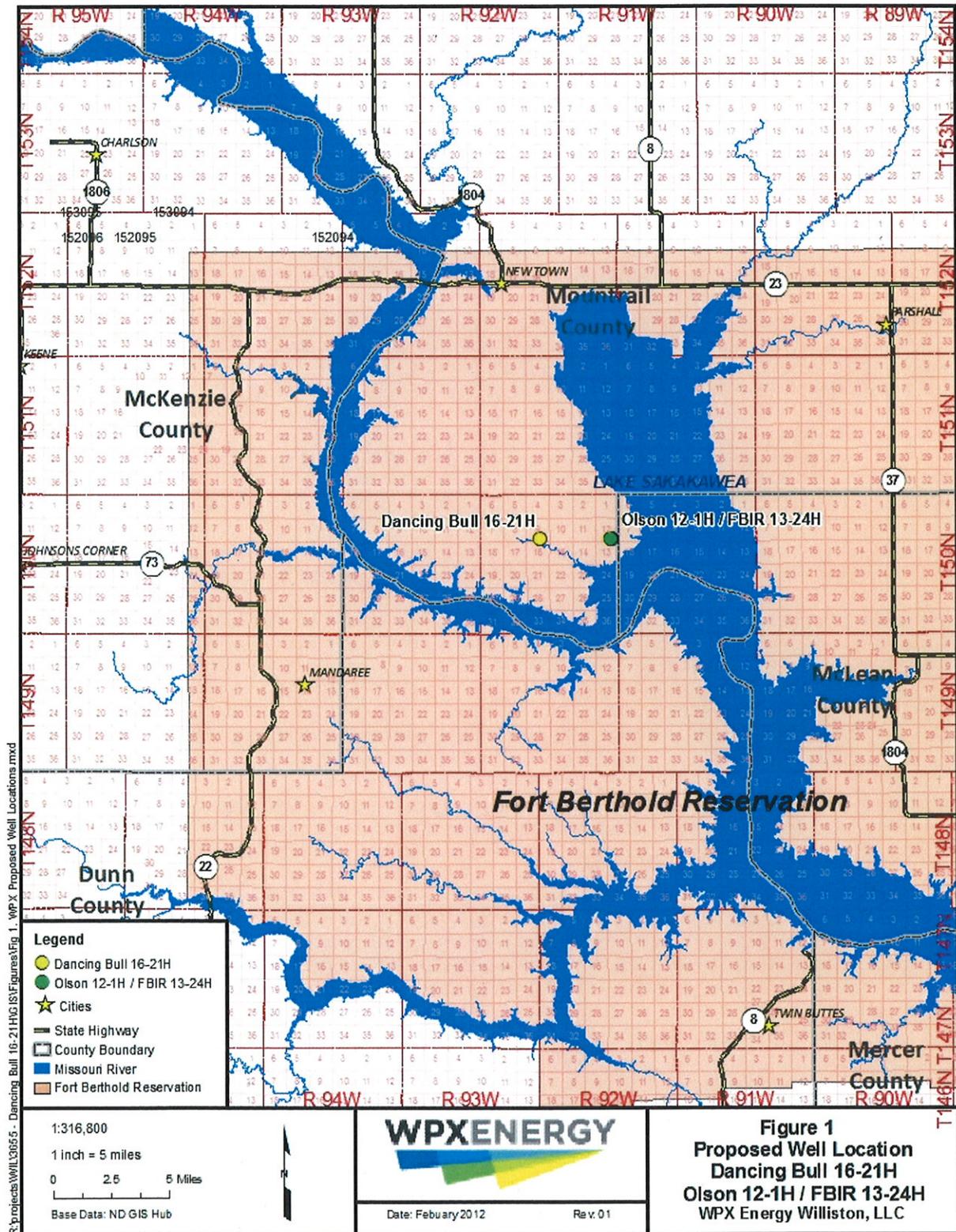
An environmental assessment (EA) determined that proposed activities will not cause significant impacts to the human environment. An environmental impact statement is not required. Contact Earl Silk, Superintendent at 701-627-4707 for more information and/or copies of the EA and the Finding of No Significant Impact (FONSI).

The FONSI is only a finding on environmental impacts – it is not a decision to proceed with an action and *cannot* be appealed. BIA's decision to proceed with administrative actions *can* be appealed until June 14, 2012, by contacting:

**United States Department of the Interior
Office of Hearings and Appeals
Interior Board of Indian Appeals
801 N. Quincy Street, Suite 300, Arlington, Va 22203.**

Procedural details are available from the BIA Fort Berthold Agency at 701-627-4707.

Project locations.



R:\projects\WILL3655 - Dancing Bull 16-21H\GIS\Figures\Fig. 1 - WPX Proposed Well Locations.mxd