Decision Record Memorandum

Matlock #10 APD

DOI-BLM-WY-R010-2011-0054-EA

BLM

Worland Field Office, Wind River/Bighorn Basin District, Wyoming

April 2011

The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

DOI-BLM-WY-R010-2011-0054-EA

DECISION RECORD

for DOI-BLM-WY-R010-2011-0054-EA
Matlock #10 APD, Application for Permit to Drill

I. DECISION

It is my decision to approve the associated Application for Permit to Drill as described as Alternative 2 of Environmental Assessment No. DOI-BLM-WY-R010-2011-0054-EA, and to include those measures proposed by Phoenix Production Co.'s Application for Permit to Drill application.

This Authorization will be granted subject to the Conditions of Approval as attached.

II. PLAN CONFORMANCE AND CONSISTENCY:

The proposed action conforms to the Record of Decision and Approved Resource Management Plan for the Grass Creek Resource Area dated September 1998, which is under revision and consolidation into the Bighorn Basin Resource Management Plan (expected completion in 2012.) The decisions in the Grass Creek Resource Management Plan provide general management direction and allocation of uses and resources on the public lands in the area. The proposed action falls within alternatives analyzed in the Draft Bighorn Basin RMP revision.

III. ALTERNATIVES CONSIDERED

The Environmental Assessment (EA) for the Project considered three alternatives.

Alternative 1, the "Proposed Action" alternative, assessed and disclosed the projected effects of the operator's proposal as detailed in the "Proposed Action" portion of the environmental assessment.

Alternative 2, the "Proposed Action with BLM incorporated design features", assessed the proposed action and BLM staff specialists input. It was felt that certain mitigation measures were necessary and proper to provide adequate protection of the surface and subsurface. For the purpose of analysis, the design features are part of this alternative.

Alternative 3, the "No Action" alternative assessed the effects of not implementing any portion of the proposal. Under the No Action Alternative, the WFO analyzed the effects of a denial of any further development associated with this project. This alternative provides a benchmark, enabling the decision-maker to compare the magnitude of the environmental effects of the alternatives.

IV. RATIONALE FOR DECISION

Alternative 2 was chosen as being the most environmentally sound alternative. This decision is in conformance with the Grass Creek Resource Management Plan. Conditions of Approval necessary for this action are attached and are considered a part of this approval.

V. APPEALS

Under BLM regulations, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4

/s/Don Krump_____ _04/28/2011___
Authorized Officer Date

Attachments -- EA: DOI-BLM-WY-R010-2011-0054-EA; Conditions of Approval

FONSI

Matlock #10 APD

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April 2011

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DOI-BLM-WY-R010-2011-0054-EA

FINDING OF NO SIGNIFICANT IMPACT

for DOI-BLM-WY-R010-2011-0054-EA
Matlock #10 APD, Application for Permit to Drill

Based on the analysis of potential environmental impacts contained in the environmental assessment DOI-BLM-WY-R010-2011-0054-EA, and considering the significance criteria in 40 CFR 1508.27, I have determined that the selected alternative will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

/s/Don Krump _____ 04/28/2011___
Authorized Officer Date

ENVIRONMENTAL ASSESSMENT

Matlock #10 APD

DOI-BLM-WY-R010-2011-0054-EA

BLM

Worland Field Office, Wind River/Bighorn Basin District, Wyoming

April 2011

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DOI-BLM-WY-R010-2011-0054-EA

Matlock #10 APD
DOI-BLM-WY-R010-2011-0054-EA

Type of Project*:*
Application for Permit to Drill

General Location of Proposed Action:
1851' FSL, 770' FWL 1/4 1/4; sec 22; T.47N., R.101W.

Name and Location of Preparing Office*:*
Worland Field Office
101 S. 23rd St.
Worland, WY 82401

Lease/Serial/Case File Number*:*
WYC-079430,

Applicant Name:
Phoenix Production Co.

1.0 INTRODUCTION

This EA incorporates the Application for Permit to Drill, and the associated access, flowlines and powerlines for the proposed action of drilling one well in the North Sunshine Oil Field, as associated with Oil & Gas leases WYC-079430.

1.1 Purpose and Need for the Proposed Action

This environmental assessment was prepared in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA) and other statutes relevant to the proposal. Authority for the proposed action and alternatives is contained in the Federal Land Policy and Management Act of 1976, as amended (FLPMA) and the regulations in 43 CFR 2200. Section 102(a)(8) of FLPMA states:

"the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use;"

The operator proposes to drill the Matlock #10 for exploration within their lease (s). The proposed well is located on private lands within the administrative boundary of the Worland Field Office in Section 22, Township 47N Range 101W; Park County, Wyoming.

The proposed action involves drilling and testing the oil of the Phosphoria-Tensleep formations. If productive, casing would be run and the well completed. If dry, the well would be plugged and abandoned as per BLM and State of Wyoming requirements. The location and access route have been surveyed and designed by a professional engineer and land surveyor.

1.2 Conformance

The proposed action conforms to the Record of Decision and Approved Resource Management Plan for the Grass Creek Resource Area dated September 1998, which is under revision and consolidation into the Bighorn Basin Resource Management Plan (expected completion in 2012.) The decisions in the Grass Creek Resource Management Plan provide general management direction and allocation of uses and resources on the public lands in the area. The proposed action falls within alternatives analyzed in the Draft Bighorn Basin RMP revision.

1.3 Decision to be Made:

The Authorized Officer (AO) must determine whether or not to approve the APD. The AO could decide not to issue a permit if it would cause unnecessary or undue degradation, or if it would threaten to violate another Federal law.

If it is decided to issue the permits, the AO must decide what Conditions of Approval, would apply to the permit. Conditions of Approval could include specification of construction, drilling, production and abandonment activities for the proposed project area.

Finally, the AO must determine whether or not the proposed action could result in significant impact to the human environment. If not, this determination would be documented in a Finding of No Significant Impact (FONSI.) If the impacts could be significant, an environmental impact statement would be necessary.

1.4 Relationship to Statutes, Regulations, Plans or Other Environmental Analyses

This Environmental Assessment (EA) is prepared in accordance with the National Environmental Policy Act of 1969, as amended (NEPA) and complies with applicable regulations and laws passed subsequent to the Act. In addition, this EA is prepared utilizing the stipulations and format outlined in the BLM NEPA Handbook H-1790-1 (BLM 1988). The Proposed Action and alternatives will comply with relevant federal, state, and local regulations, plans, and policies.

This drilling operation would allow the lessee to exercise their legal right to drill, explore, and produce hydrocarbons from the lease under regulations and policy derived from the Mineral Leasing Act. The Secretary of the Interior has entered into a lease agreement with the proponent that gives them the "exclusive right to drill for, mine, extract, remove and dispose of the oil and gas resources within the lease area." The applicant has submitted a proposed action to the BLM to at least partially exercise their rights under this agreement, in accordance with 43 CFR 3162.3-1 and Onshore Oil and Gas Order No. 1.

Onshore Oil and Gas Order No. 1 (43 CFR 3164.1) requires that an APD provide sufficient detail to permit a complete appraisal of the technical adequacy of, and environmental effects associated with the proposed project. The APD must be developed in conformity with the provisions of the lease, including the lease stipulations. The APD must provide for safe operations, adequate protection of surface resources and must include adequate measures for reclamation of disturbed lands. If the APD(s) are inadequate or incomplete, the applicant must modify or amend the APD(s). The BLM can set forth design features that are necessary for the protection of the surface resources, uses and the environment; and for the reclamation of the disturbed lands. For the purpose of this analysis, the design features for the APD(s) are considered part of Alternative 2, attached as Conditions of Approval.

This project does not fit any of the specified criteria allowing for Categorical Exclusion from NEPA analysis under Section 390 of the Energy Policy Act of 2005 and is therefore being analyzed herein.

The area was assessed as per the Wyoming Instruction Memorandum (IM) WY-IM-2010-012 (Greater Sage-grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Lands including the Federal Mineral Estate). The IM directs the BLM to analyze Greater Sage-grouse habitat out to a minimum of four miles from the project location. This analysis is to occur both within and outside of the Greater Sage-grouse core areas (core areas as designated by the Wyoming Governor's Executive Order EO 2010-4). This project does not fall within a Greater Sage-grouse core area and conforms to the guidance above.

The BLM Land Use Planning Handbook (H.1601-1) states that the BLM must consider the management of lands with wilderness characteristics during the land use planning process. The criteria used to identify these lands are essentially the same criteria used for determining wilderness characteristics for wilderness study areas (WSA). However, the authority set forth in Section 603(a) of FLPMA to complete the three part wilderness review process (inventory, study, and report to Congress) expired on October 21, 1993; therefore, FLPMA does not apply to new WSA proposals and consideration of new WSA proposals on BLM-administered public lands is no longer valid. As required by FLPMA, Section 201, as well as consistent with Secretarial Order 3310, the alternatives were evaluated and screened in accordance with the SO 3310 and the Draft Manuals.

1.5 Scoping, Public Involvement and Issues

The proposed action was reviewed by an interdisciplinary team. Based on the size and routine nature of the proposed project, it was determined that external scoping was not necessary.

The Application for Permit to Drill was received by the Worland Field Office on March 25, 2011. In accordance with 43 CFR 3162.3-1 (g), the notice was made available to the public for comment for 30 days ending April 24, 2011. Notification of preparation of this EA was also provided on the Wyoming BLM internet NEPA register (http://www.wy.blm.gov/nepa/search/index.php) on March 25, 2011. There were no issues raised by the public during this review. It was determined that the nature of the action is routine and that further public notification would not be necessary. Staff specialists reviewed the proposal and identified impacts and appropriate mitigation measures. The application was considered complete on April 1, 2011.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Project Description

Phoenix Production Co. has submitted an Application for Permit to Drill an infill well within the North Sunshine Oil Field. This submission includes their Drilling Plan and Surface Use Plan. The proposed action includes the construction, operation, and reclamaiton of one well pad and its access road, as well as the construction, operation and reclamation of associated underground gathering/sales pipelines, overhead power-lines and utility corridors.

2.2 Alternatives Considered

2.2.1 Alternative 1 (Proposed Action) --

The APD is on file in the Worland Field Office Branch of Minerals and Lands, and is considered an integral part of this Environmental Assessment (EA) by reference. The drilling plan and the operator's surface use plan are considered part of the proposed action. These documents include site-specific plans describing the proposed development (i.e., drilling plans with casing/cementing program; surface use plans with road and drill pad construction details; site-specific reclamation plans, etc.) Approval of all planned operations would be obtained in accordance with authority prescribed in Onshore Oil and Gas Order No. 1 (Approval of Operations on Onshore Federal and Indian Oil and Gas Leases).

The proposed location has been surveyed and staked by Grosch Construction. An onsite of the location was conducted on March 30, 2011 with the following people in attendance:

Tom Faulkner-- Phoenix Production Co.
Linda and Richard Herman – Landowner representatives
Holly Elliott – NRS, WFO

2.2.1.1 Construction and Drilling

The following is a general discussion of proposed construction techniques to be used in the proposed action. Roads and flowlines constructed in association with this project could require BLM right-of-way (ROW) authorizations and/or Sundry Notices and could include additional mitigation to minimize environmental impacts.

2.2.1.1.1 Access Road (Existing and New Construction)

To access the proposed well site, turn west of State Highway 120 onto State Highway 290 at Meeteetse, Wyoming. Proceed 6.6 miles west, then turn south onto Park County Road 4DT. Proceed south approximately 5 miles then turn south onto Park County Road 4CP (approx. 0.3 miles past Wood River Bridge) for 1.7 miles to the well location.

Approximately 221' of new access road would be constructed for this location. The width would be 18-22' crowned and ditched, and upgraded and maintained as necessary to prevent soil erosion and accommodate year-round traffic.

No culverts, gates or cattleguards would be necessary for drilling operations.

2.2.1.1.2 Well Pad Design and Construction

The well pad would be prepared by clearing an area approximately 230' x 160'. The well location would be cleared of vegetation and topsoil (up to six inches), which would be stockpiled for future use in reclamation. The pad would be leveled using standard cut-and-fill construction techniques. Construction would not commence during times when soils are saturated or when damage to adjacent water sheds could occur. Construction would not use frozen materials.

The well pad would include an earthen reserve pit approximately 49' x 130' to hold water, drilling muds, and fluid. A minimum of one half of the total depth of the pit at its deepest point would be below original ground surface. A minimum of two feet of freeboard would be maintained at all times. The operator has proposed to line the reserve pit.

A separate unlined flare pit would be constructed 150' from the drilling hole to vent any gas produced during the testing phase.

The pits may remain open for up to six months to allow for evaporation of fluids including water, bentonite, and/or gel polymer. To prohibit wildlife or livestock use, the reserve pit would be fenced on three non-working sides during drilling and the fourth side at the time the rig is removed. Posts would be firmly set in the ground and fencing would be set back at least two feet from the edge of the pit. Fencing would be maintained in good condition until the pit is closed. Electric fencing would not be used.

2.2.1.1.3 Drilling Operations and Well Completion

The well would be drilled directionally to the top of the Amsden formation and completed as a Phosphoria-Tensleep producer. Drilling the well would utilize a completion drilling rig. Additional equipment and material needed for drilling operations would be trucked to the well site. The wells' proposed depth would be 4214'. It is estimated that total depth of the well would be reached within approximately 16 days from the spud date. An additional estimated 10 days would be needed for well completion operations.

All produced fluids from completion operations would be trucked to and disposed of at a permitted facility.

A blowout preventer would be used throughout the drilling operation.

Hydrogen Sulfide gas (H_2S) may be encountered in the Phosphoria and Tensleep formations, safety equipment would be in operation prior to drilling in the Phosphoria formation.

2.2.1.1.4 Location of Water Supply

Water for drilling would be purchased and hauled by a local contractor. The water would be trucked over existing roads to the proposed well location. No new construction would be required on or along the proposed water haul route.

2.2.1.1.5 Waste Disposal

Drilling fluids – including salts and chemicals would be contained in the reserve pit and allowed to evaporate. The reserve pit would be designed to prevent the collection of surface runoff and would be constructed with a minimum of one-half the total depth below the original ground level at the lowest point in the pit.

Cuttings – the cuttings would be deposited in the reserve pit.

Produced Fluids – any oil produced during drilling would be removed and taken to a tank in the State 27 Battery. Oil and water produced during completion operations would be stored in a steel tank on location prior to being moved to the State 27 Battery. Any spill of potentially noxious substances would be cleaned up and immediately removed to an approved disposal site.

Sewage – A portable self-contained chemical toilet would be provided for human waste disposal. Upon completion of operations, or as required, all sewage would be removed to an approved treatment facility. Sewage disposal would be in strict accordance with Wyoming Department of Environmental Quality (DEQ) rules and regulations regarding sewage treatment and disposal.

Trash – All garbage and non-flammable waste materials would be contained in a self contained, portable dumpster or trash cage. Upon completion of operations, or as needed, the accumulated trash would be hauled off-site to a Wyoming DEQ approved sanitary landfill. No trash would be placed in the reserve pit.

Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash case would be cleaned up and removed from the well location. No adverse materials or substances would be left on location. The reserve pit would be fenced three sided during drilling operations, with the fencing closed on the fourth side after the removal of the drilling rig. The fence shall be maintained until such time as the pit is backfilled.

2.2.1.1.6 Ancillary Facilities

Ancillary facilities would be temporary and would consist of two to four trailer houses on the drill site. One trailer would be for Phoenix personnel and the others would be for contractor personnel.

2.2.1.2 Production Operations

2.2.1.2.1 Well Production Facilities

Should the well be completed as a producer, the produced fluid would be transported to the State 27 Battery via buried flowlines. No temporary production facilities would be constructed onsite.

2.2.1.2.2 Power Generation

New electrical power would be provided from the Matlock #7 location, with three new poles being installed totaling a length of approximately 600'.

2.2.1.2.3 Flowlines

A new flowline would be constructed from the wellhead and tie the existing flowline at the Matlock #7 location. The line would be approximately 575' in length and buried 3'-6' below ground.

2.2.1.2.4 Operations and Maintenance

All operations would be conducted in accordance with industry standards for safe and efficient operation. The access road and the well would be inspected periodically by the operator and the BLM and maintained by the operator to minimize any resource damage or loss and ensure safe operating conditions.

2.2.1.2.5 Workforce and Traffic

The drilling and completion operation would require approximately ten to fifteen people at a time; including personnel for logging and cementing activities. Subsequent to drilling and completion activity, this project would require the use of less vehicle traffic for day-to-day operations. Lighter traffic would include the use of field vehicles to visit the well daily. Heavy truck traffic would be associated with occasional work-over activities.

2.2.1.3 Summary of Estimated Disturbances

Implementation of the proposed action would result in surface disturbance. The area of the well site is within the proposed catch lines, and does include the areas used for temporary storage of topsoil and waste material. The proposed action would include disturbances for the proposed access roads, power generation, and flowline installation.

Drilling Well Pad Disturbance	Access Roads	Flowline Assuming 15' right-of-way width	Power generation (assuming a 15' right-of-way width)
1.40 acres	.112 acres	.198 acres	.207 acres

2.2.1.4 Interim Reclamation and Final Abandonment

2.2.1.4.1 Interim Reclamation

Backfilling, leveling and re-contouring would be conducted as soon as the cuttings have dried. All wasted materials would be disposed of upon termination of drilling and completion activities. If production is established, the unneeded areas of the location would be reclaimed as soon as the cuttings have dried. For production, the cut slopes would be reduced from a 1.5:1 slope to a 3:1 slope, and the fill slopes would be reduced from a 2:1 slope to a 3:1 slope.

Upon completion of backfilling, leveling and recontouring, all unnecessary disturbed surfaces would be scarified and the stockpiled topsoil would be evenly spread over the reclaimed area. The seedbed would be prepared by disking on the contour to an approximate depth of four to six inches, leaving no depressions that would trap water or form ponds.

2.2.1.4.2 Final Reclamation

Final reclamation of the well pad would occur after the plugging and abandonment of the well. The following would be conducted:

- The flowline to the well would be cut, flushed with fresh water and capped at both ends.
- All rig anchors would be removed, along with any facilities on the location.
- The surface would be recontoured to near original conditions utilizing existing spoil and pad material. The remaining topsoil would be evenly spread across the reclaimed area.
- The seedbed would be prepared by disking on the contour to an approximate depth of four to six inches, leaving no depressions that would trap water or form ponds

2.2.2 Alternative 2 (Proposed Action with BLM incorporated Design Features)—

Based on BLM staff specialists input and the observations made at the joint field inspection, it was felt that additional measures were necessary and proper to provide adequate protection of the surface and subsurface.

The BLM can set forth design features that are necessary for the protection of the surface resources, uses and the environment; and for the reclamation of the disturbed lands. Design features are those specific means, measures, or practices that make up the proposed action and alternatives. Additional design features are added as needed to the proposed action or alternatives. Regulations, standard operating procedures, stipulations, and operator committed measures, and best management practices are usually considered design features. Design features are incorporated into this alternative to reduce or avoid adverse effects.

For the purpose of this analysis, the design features for the APD(s) are considered part of Alternative 2 and attached in the Conditions of Approval.

2.2.3 Alternative 3 (No Action) –

With this alternative BLM would not approve the APD and the applicant would not be allowed to drill the proposed well. No action implies that on-going development and activities would be allowed to continue in the area, but the proposed action would be disallowed. Additional APD's and ROW actions would be considered by the BLM on a case-by-case basis. BLM's authority to implement the No Action Alternative may be limited because oil and gas leases allow drilling in the lease area subject to the stipulations of the specific lease agreement. BLM can deny the APD if the proposal would violate lease stipulations, applicable laws and /or regulations and also can impose restrictions to prevent undue or unnecessary environmental degradation. If BLM were to deny the APD, the applicant could attempt to reverse BLM's decision through administrative appeals, seek to exchange its lease for leases in other locations or seek compensation from the Federal government. The outcome of these actions is beyond the scope of this EA as they cannot be projected or meaningfully analyzed at this time.

2.3 Alternatives Considered but not Analyzed in Detail

The surface location of the proposed action could be situated at different locations within the lease. Different surface locations may result in a deviation of effects from the proposed alternative, and may result in a net positive or net negative change in potential effects. During the onsite inspection it was determined that the proposed location is the best feasible to minimize potential direct effects upon other resource values. This left no unresolved resource conflicts and no identified needs to consider additional alternatives.

3.0 AFFECTED ENVIRONMENT

Resources and features not present, and not discussed in this EA, include: Environmental Justice, Prime or Unique Farmlands, Flood Plains, Native American Religious Concerns, riparian areas, Class I visual management areas, Class I Airsheds, Wild and Scenic Rivers, Wetlands, Wilderness Values or Inventoried Lands with Wilderness Characteristics.

The North Sunshine Field is located on the western edge of the Big Horn Basin of Wyoming, approximately 11 miles SSW of Meeteetse, Wyoming (located off Highway 120 & 290). Topographic elevation ranges from 6,400' to nearly 7.000' across the prospect area. Vegetation ground coverage includes low sagebrush and other various brush and grasses. Fauna consists of elk, deer, antelope, rabbits, and various smaller vertebrates and invertebrates. The mean annual precipitation for this area is 10-14 inches, with most precipitation occurring in the spring and fall months in the form of rainfall. Much of the moisture that falls in the latter part of the summer is lost by evaporation and much of the moisture that falls during the winter is lost by sublimation. Average snowfall exceeds 20 inches annually. Temperatures show a wide range between summer and winter and between daily maximums and minimums, due to the high elevation and dry air, which permits rapid incoming and outgoing radiation. The mean annual temperature is 46.2 ° F. The average frost-free period is 74-149 days.

3.1 Land Use

The proposed well is located in Park County, Wyoming, and 6th principal meridian. The proposed well would be located on lands privately owned with mineral rights managed by the BLM. The lease associated with the well was issued in 1949 (WYC-079430). The primary surface use in the vicinity of the proposed wells is oil and gas development, wildlife habitat and livestock grazing. There are no occupied dwellings within a 1-mile radius of the location. Surface ownership of the involved lands containing the road, pad, flowline, and powerline is Private. Phoenix has obtained a surface use agreement for the well.

Other than livestock grazing, oil and gas production, and wildlife use, there are no known land uses, or proposals for use, that occur in the area such as special recreation areas that would be affected by, or have the potential for cumulative impacts with this proposed action.

3.2 Air Quality

The air quality of the area is generally very good. There is no Class I Airshed in the project area.

3.3 Geological Resources

Surface geology: Mowry-Thermopolis SH Fm covered by thin (< 1 meter) Quaternary alluvium

Depth to top of Muddy SS: ~447'
Depth to top of Dakota Ss: ~ 862'
Depth to top of Lakota Ss: ~ 1150'
Depth to top of Morrison Fm: ~1230'
Depth to top of Sundance Fm: ~1520'
Depth to top of Gypsum Springs Fm: ~1970'
Depth to top of Chugwater Fm: ~2125'
Depth to top of Dinwoody: ~3400'

Depth to top of Phosphoria Fm: ~3500'
Depth to top of Tensleep Ss: ~3900'

Depth to the base of potentially useable water: ~ likely in the intercalated sandstones of the Cody Shale and/or Frontier Fm.

3.4 Cultural Resources, Traditional Cultural Properties, Native American Religious Concerns

1611039N--
A Class III Cultural Inventory was conducted of the project area (BLM Project #1611039N). No cultural resources were identifed.

3.5 Vegetation

3.5.1 Native Vegetation

The historic climax plant community consists of 75% grasses or grass-like plants, 10% forbs, and 15% woody plants. The major grasses include Griffiths and bluebunch wheatgrasses, rhizomatous wheatgrasses, needleandthread, and Indian ricegrass. Other grasses occurring in this site include bottlebrush squirreltail, prairie junegrass, and Sandberg bluegrass. Big sagebrush is a conspicuous element of this ecological site and occurs in a mosaic pattern. Big sagebrush makes up approximately 5-15% of the annual production. The current state of the vegetative community at the proposed well-site represents the historic climax plant community for ecological conditions identified.

3.5.2 Invasive, Non Native Species Noxious Weeds

No known noxious weed populations occur in the project area.

3.6 Paleontology

The surface formation is Mowry/Thermopolis Shales which have a PFYC (Potential Fossil Yield Classification) rating of 3 or moderate. This means the formation has a moderate sensitivity for paleontological resources. Typical fossils found within this formation includes marine reptiles and fish. A paleontological inventory was not necessary for the project location. Project is within an area of soil development and vegetation growth with little chance for significant fossils.

3.7 Recreation and Visual Resource Management; Special Designations (Including ACECs, Wild and Scenic Rivers, Lands with Wilderness Characteristics)

Recreation
The project area is located within the extensive recreational management area (ERMA). Recreation management in an ERMA consists of custodial duties, such as signage, recreation maintenance, and maintaining public health and safety. It is considered roaded natural on or near improved county roads. Landscape partially modified by roads, utility lines, etc, but none of the modifications overpower natural landscape features.

Recreation use within this area is very limited due to the amount of private land parcels surrounding public lands as well as the industrial presence in the area. The Wood River Road provides access through the project area to popular destination areas located within the Shoshone National Forest. Recreational activities available within the National Forest, the Wood River Road, and for visitors with permission to access the surrounding private lands consists of site seeing, hunting, camping, driving for pleasure (ORV and 4WD), destination travel for viewing the area and general dispersed recreation. The Grass Creek Resource Management Plan's

direction for travel management is limited to existing roads and trails. Group size is usually 2-4 people per group and encounters with other users may exceed 10 per day. Encounters off motorized routes are less. Basic (BLM) maps and minimal on site signing is available to users. Enforcement patrols and BLM uniformed presence are infrequent.

Lands with Wilderness Characteristics

Wilderness characteristics are resource values that include naturalness, outstanding opportunities for solitude, and outstanding opportunities for primitive and unconfined recreation. Areas evaluated for wilderness characteristics generally occur in undeveloped locations 5,000 contiguous acres and greater, or of sufficient size to be practical to manage for these characteristics. The BLM Land Use Planning Handbook (H.1601-1) states that the BLM must consider the management of lands with wilderness characteristics during the land use planning process. The criteria used to identify these lands are essentially the same criteria used for determining wilderness characteristics for wilderness study areas (WSA). However, the authority set forth in Section 603(a) of FLPMA to complete the three part wilderness review process (inventory, study, and report to Congress) expired on October 21, 1993; therefore, FLPMA does not apply to new WSA proposals and consideration of new WSA proposals on BLM-administered public lands is no longer valid. As mandated by FLPMA, Section 201, the BLM is still required to maintain an inventory of BLM-administered public lands to determine whether they possess wilderness characteristics. Recent inventories have found BLM-administered public lands that are within proximity to the immediate project area absent of wilderness characteristics.

VRM

The project areas are located in Visual Resource Management (VRM) Class IV. The objective of class IV is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements of form, line, color, and texture.

3.8 Soils

The soils reflect the mountain-foothill environment in which formed. They are characterized by having a thick, dark brown (10YR 3/3) clay loam surface horizon referred to as a mollic epipedon. The subsurface is brown (7.5YR 4/2) clay loam. These are deep and well drained soils. Slopes are nearly level. The soil reaction is mildly alkaline (pH 7.4-7.8).

These soils have a good reclamation potential due to the thick, well developed mollic epipedon. The climate is also favorable for reclamation. The upper 10 inches of the soil profile provide excellent soil reclamation material (topsoil) that is high in organic matter. The substratum or B horizon, though lacking in organic matter, could provide an intermediate cover for reclamation activities.

Due to the nearly level slopes there is little runoff and erosion.

This soil supports a Loamy 10-14 in. pz. ecological site.

3.9 Hydrology (Water Quality and Prime or Sole Source of Drinking Water, Wetlands and Riparian Zones)

Project area is located in the Wood River subwatershed and is located along a bench above the Wood River. The topography of the area is very flat with mininal slope around the area. There is an exisiting county road in good condition to access the proposed site. There is one 12" culvert from the road along the proposed site. One minor gully downstream of the culvert is present along the southeastern edge of the well site. This gully trends in a northeastern direction to an unnamed ephemeral draw of the Wood River.

3.10 Wildlife

The wildlife habitat within the proposed project area is within the Absaroka mountain foothills and is a mostly open upland bench bounding the Wood River valley, with the vegetative community dominated by perennial grasses, various forbs, and Mountain sagebrush. There are also small communities of Limber pine and Juniper near by. The project area is within a small oilfield and this oilfield is characterized by several wells, well pads, related access roads and facilities, all from past or current oil and gas production activity associated with the North Sunshine Oil Field. This area provides habitat for numerous wildlife species, some seasonally and some yearlong. Although the area is not mapped big game crucial winter range, mule deer and antelope inhabit this area year around and larger herds of elk could be anticipated in the winter.

The closest active sage-grouse lek is approximately 2.5 miles East in the Rooser Creek drainage. Sage-grouse nesting habitat, or sagebrush cover, within the proposed project area does not appear to be suitable for nesting and/or brood rearing, primarily because there is very little sagebrush and also because of existing disturbances. The area surrounding the proposed APD also provides habitat for black bear, mountain lion, bobcat and coyote. There is some potential for both Grizzly bear and Grey wolf occurrencewithin the proposed project area. Grizzly bear occurrence is possible in and around the proposed project area particularly in the spring and fall, and during poor food production years. Occasional wolf occurrence is possible in the area also, and this would most likely occur during winter and early spring when larger concentrations of elk are present. There are also numerous other small mammals, predators, passerines, and raptors that use this area, some yearlong. Other than the Grizzly bear and the Grey wolf there are no other known threatened or endangered animal species known to inhabit this proposed project area.

3.11 Socioeconomic

The lease was issued in 1949. In compliance with the Mineral Leasing Act, the lessee has the right to explore, drill, and extract hydrocarbons from their lease. The oil and gas sector plays an important role, generating tax revenues and vendor/employment incomes. Oil and gas exploration and development in the region has been part of the economic base for Park County since the early 1900's.

3.12 Hazardous or Solid Wastes, Public Health and Safety

Throughout the life of the well(s) there is a potential for the operator to use chemicals that could be classified as hazardous. The following list contains material that may be used on location throughout the life of the well:

Table 3.1 Potential Hazardous Materials List

Hazardous Material	Purpose
Diesel	Fuel
Gasoline (unleaded)	Fuel
Grease	Equipment Lubrication
Engine oil	Engine lubrication
Ethylene glycol	Engine coolant
Cement	Cementing casing in hole
Calcium chloride	Cement additive
Hydraulic fluid	Hydraulic equipment
Acetylene	Fuel for torch
Propane	De-icing of lines and equipment
Methanol	De-icing of gas and water lines
Liquid polymer	Drilling mud flocculating agent
Bentonite gel	Drilling mud viscosity agent
¾ inch bentonite chips	Well plugging
Pipe joint compound (no lead)	Pipe thread lubrication
Pipe thread compound (no lead)	Pipe thread sealant

H_2S may be encountered in the Phosphoria and Tensleep formations. H_2S is a colorless gas. It has a foul odor similar to that of rotten eggs, when it is present in low concentrations. In large concentrations, or over long periods of exposure to low concentrations, the characteristic odor of H_2S cannot be relied upon for warning, since it will deaden the sense of smell. H_2S is heavier than air and on still days tends to accumulate in low areas. It is flammable in concentrations of 4.3 to 46.0 percent by volume in air.

H_2S is considered to be an irritant gas as well as a toxic gas. In lo concentration s (50-500 ppm) H_2S acts primarily as a respiratory irritant. In higher concentration (500-1000 ppm) H2S acts primarily as a systemic poison, causing unconsciousness and death through respiratory paralysis.

4.0 ENVIRONMENTAL EFFECTS

In accordance with 40 C.F.R. 1502.16, this chapter of the EA includes a discussion of the potential environmental consequences of the alternatives on each of the affected resources. An environmental impact is defined as a change in the quality or quantity of a given resource due to a modification in the existing environment resulting from project-related activities. Impacts may be beneficial or adverse, may be a primary result (direct) or secondary result (indirect) of an action, and may be permanent and long-term or temporary and of a short duration. Impacts may vary in degree from a slight discernible change to a total change in the environment. This impact assessment assumes that all Design Features, Conditions of Approval (COAs) or Best Management Practices (BMPs) referenced in Appendix A, would be successfully implemented and maintained. If such measures are not successfully implemented and maintained, additional impacts could occur.

4.1 Land Use

Alternative 1:

The dominant land use for the proposed well site is oil & gas exploration, grazing, and wildlife habitat. The operator has submitted the required documentation of a surface use agreement with the private land owner. The disturbance necessary to construct the well pad, access road, powerline, and pipeline would commit an additional 1.9 acres of private lands to the existing oil field development.

Alternative 2:

Adoption of the Recommended BLM design features, and the implementation of the Operators surface use plan, would reduce the area of surface disturbance.

Interim well site reclamation consists of minimizing the footprint of disturbance by reclaiming all portions of the well site not needed for production. The portions of the cleared well site not needed for operational and safety purposes are to be recontoured to blend with the surrounding topography as much as possible. Since no production equipment is planned for this site, this portion could be as much as 50% of the initial disturbance.

The disturbed areas would be scarified, topsoil spread evenly over areas not needed for all-weather operations, and the area seeded with a certified noxious weed free, BLM approved, seed mix of native species appropriate for the site. Any topsoil and spoil piles not used for interim reclamation would also be seeded to prevent erosion and to help maintain its biological viability.

In addition, all rat and mouse holes (temporary storage of drill pipe) would be backfilled and compacted immediately after well completion and the reserve pit would be dried and backfilled. Interim road reclamation consists of reclaiming portions of the road not needed for vehicle travel. Final reclamation occurs when the operator plugs the well at the end of the production phase.

Conditions would be added that interim reclamation would be initiated upon completion of operations but no later than 6 months after the date of completion. This condition would reduce the size of the well pad and increase the potential wildlife and livestock habitat. If the well is a producer the operator would be required to complete interim reclamation which would reduce

the amount of disturbance to approximately 50% of the proposed pad for the remaining life of the well. Complete reclamation would be initiated within 6 months from final abandonment. To achieve final reclamation of a recently drilled dry hole, the disturbed site would be returned to the original contour or a contour that blends with the surrounding landform, stockpiled topsoil redistributed, and the site revegetated as stated above. To achieve final reclamation of a formerly producing well, all topsoil and vegetation must be stripped from all portions of the initial disturbance that were not previously reshaped to blend with the surrounding contour and seeded as stated above. Gravel and similar materials must be removed from the well location or buried deep in the recontoured cut. Final road reclamation includes recontouring the road back to the original contour, seeding, and any other techniques that would be helpful to improving reclamation success. Any weeds resulting from disturbance associated with the proposed project would be controlled in accordance with guidelines established by the EPA, BLM, or appropriate authorities.

Impacts would not be significant.

Alternative 3:
Under this alternative, the development of the Proposed Action would not occur. No effects on land uses would be expected to occur beyond the existing situation.

4.2 Air Quality

Alternative 1:
In general, oil and gas fields produce air pollutants such as hydrogen sulfide (H_2S), sulfur dioxide (SO_2), and airborne dust from construction activities and the use of haul roads. Operators are responsible for monitoring well-site concentrations in accordance with permit conditions and reporting these levels to the Wyoming DEQ.

Air quality could deteriorate due to emissions from rig engines and emissions and dust from vehicular traffic and construction of the locations. Emissions would result from heavy equipment use, drilling, and completion activities. These emissions are temporary. Loose dust could also cause some temporary effects on air quality in the project area. Dust could be dispersed locally by prevailing winds. Impacts to air quality and vegetation through increased dust are unknown and unquantified at this time.

It is anticipated that air quality would be restored to pre-drilling levels when construction and drilling operations are completed.

Alternative 2:
Dust control would be implemented, such as road watering, to reduce dust if conditions dictate. The effects on air quality through increased particulates would be minimized through the application of dust abatement practices.

Impacts would not be significant.

Alternative 3:
Potential climate and air quality impacts would be less than those described under the Alternative 1, with impacts from existing field emissions sources remaining at the current levels.

4.3 Geological Resources

Alternative 1:
Faulting across this Section could cause unexpected fluid flow, lost circulation, and/or unexpected bit drops. Long-term impacts may include permanent loss by production of oil reserves.

The Mowry-Thermopolis Shale Formations crop out at the surface at this location and extend to about a depth of around 700 feet. At the surface it is covered in places by Quaternary alluvium.

The Operator anticipates possible H2S encounters and potential lost circulation in the Phosphoria and Tensleep Formations. The Operator has an adequate H_2S plan on file with BLM.

The Operator's anticipated BHP of 1,250 psi is reasonable. Field pressure for the field discovery well (Conoco 1) is documented at 2165 psi (WGA, 1989). An appropriate BOP for well control will be used.

Alternative 2:
No additional consequences would be expected under this alternative. Impacts would not be significant.

Alternative 3:
Under this alternative the APD would not be approved. No resulting effects on geological resources would be expected to occur beyond the current situation.

4.4 Cultural Resources, Traditional Cultural Properties, Native American Religious Concerns

Alternative 1:
A Class III Cultural Inventory was conducted of the project area. No cultural resources were identifed.

Alternative 2:
No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations included under Mitigation. Impacts would not be significant.

Alternative 3:
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on cultural resources would be expected to occur beyond the current situation

4.5 Vegetation

4.5.1 Native Vegetation

Alternative 1:
Construction of the proposed well pad and other ancillary features would result in the removal of approximately 1.9 acres of vegetation and could result in the compaction of the soil surface in the short-term. Long –term impacts include the loss of approximately .5 acres of vegetation for the life of the well. This would result in a net loss of vegetative cover which would reduce forage and cover for wildlife and livestock that use the area and may increase runoff and erosion. During the

life of the operation, any vegetation that would start growing on the active part of the pad necessary for production would be removed to minimize weed establishment and fire hazards.

Topsoil would be stockpiled adjacent to the pad and the excavated subsoil would be used as fill to level the pad and construct berms to manage water run-on and run-off, etc. Excess subsoil would be stockpiled adjacent to the pad and would be separated from the topsoil.

The cleared pad would be driven on and would be used for various construction/drilling/completion activities and some of it may be covered with a layer of gravel. There would also be the potential for spills of fluids or other materials used during the construction, drilling, completion, operation, and reclamation of the site. These activities would compact the soil on the pad and/or cause other physical/chemical changes that affect the soils ability to support life. Bare, compacted, and/or chemically altered soil is less permeable and sheds water at a faster rate than unmodified soils do, which increases the potential for soil erosion or can inhibit the re-establishment of plant growth and the success of reclamation.

If erosion occurs, vegetation growing down slope from the proposed development may be buried by sediment and vegetation located up slope may be undermined.

Reclamation of the proposed surface disturbance would include re-contouring, ripping, seeding with native species to approximate the pre disturbance plant community. If reclamation is successful, the loss of vegetation would no longer be a factor. However, successful reclamation would be dependent on precipitation quantity and timing as well as other factors such as seed viability/vigor, compatibility of the seed relative to site characteristics, and competition with undesirable plants. Successful reclamation would require a longer period of time if any of these factors were less than optimal.

Alternative 2:
Storing topsoil and subsoil properly and using it for interim reclamation would help maintain its biological viability/productivity which would facilitate final restoration of the resulting surface disturbance and minimize long-term negative effects.

To preserve topsoil biological viability/productivity, stock piles should be isolated from sub-soils, protected from erosion and UPS, less than 3 feet high (2' or less is better), seeded with deep-rooted species if it will be stockpiled for a long time (more than a month or two), and re-spread as soon as possible – preferably within 3 months or less (live-spreading of topsoil preserves topsoil biological activity much better than stock-piling, even if the stock-piling follows the mitigation specified above).

Impacts would not be significant.

Alternative 3:
Impacts to vegetation that would have resulted from implementing the proposed action would not occur. Vegetation presently occupying the area that would have/could have been affected by the proposed project will continue to be influenced by the activities and other processes presently occurring within the general area.

4.5.2 Invasive, Non Native Species Noxious Weeds

Alternative 1:
Greatest risk for introduction of noxious weeds to the site is from construction equipment. Newly disturbed areas will be most at risk for weed germination and growth.

Alternative 2:
Same as alternative 1. Impacts would not be significant.

Alternative 3:
Risk of new noxious weed infestation at the site remains low.

4.6 Paleontology

Alternative 1:
The surface formation is Mowry/Thermopolis Shales which have a moderate sensitivity for paleontological resources. Project is within an area of soil development and vegetation growth with little chance for significant fossils. No additional consequences would be expected under this alternative.

Alternative 2:
No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations. Impacts would not be significant.

Alternative 3:
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on paleontological resources would be expected to occur beyond the current situation.

4.7 Recreation and Visual Resource Management; Special Designations Including ACECs, Wild and Scenic Rivers, Lands with Wilderness Characteristics

Recreation
Alternative 1 :
The project area is located within an area where the recreational physical and social settings have been altered. The area provides a naturally appearing landscape although modified from roads and facilities associated with oil & gas development. Cumulative impacts of continued oil & gas field development of roads and facilities will continue to alter the physical and social recreational settings for the area for such things as viewing scenery, hunting quality, feeling of remoteness, naturalness and solitude.

Alternative 2 :
Impacts to recreation will be the same as those addressed in proposed alternative. Impacts would not be significant.

Alternative 3 :
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on recreational resources would be expected to occur beyond the current situation.

Lands with Wilderness Characteristics
Alternative 1 :
There will be no impacts to wilderness characteristics from the proposed action.

Alternative 2 :
Impacts to Lands with Wilderness Characteristics will be the same as those in Alternative 1. Impacts would not be significant.

Alternative 3 :
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on lands with wilderness characteristics would be expected to occur beyond the current situation.

VRM
Alternative 1 :
The proposed project will create contrasting elements of form, line, color, and texture against the surrounding natural elements. However, due to the surrounding development and proximity to any sensitive viewing areas or key observation points, the project will not compromise the visual integrity of the area or compromise the ClassIV objectives. Impacts would not be significant.

Alternative 2 :
Impacts to VRM will be the same as those analyzed in the proposed action. Painting the production equipment an earth tone color which blends into the surrounding landscape and which is approved by the Authorized Officer would reduce the visibility of the facility, and is a standard design feature requirement of the BLM. Impacts would not be significant.

Alternative 3 :
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on visual resources would be expected to occur beyond the current situation.

4.8 Soils

Alternative 1:
There would be minimal runoff and erosion from this site even during the time that the soil is bare. Immediately following surface disturbing activities, including excavation and reclamation, windblown soil could present dust problems though there would be no significant soil loss. Once the soil become wetted, the clay loam texture should form a thin crust that would reduce blowing soil. Soil horizons would become blended and mixed during excavation and reclamation. There should be adequate soil reclamation material (topsoil) to allow for reclamation. The surface horizon would be similar to pre-disturbance conditions. No off site impacts are anticipated.

Alternative 2:
Under this alternative, impacts to the soil resource would be similar to the Proposed Action. With the increased emphasis on interim reclamation, runoff and erosion, though minimal, would be reduced. Interim reclamation would do little to reduce the dust hazard after surface disturbance, following excavation and reclamation. This would be short –lived phenomena that would be greatly reduced once the soil surface becomes wetted and a weak soil crust is formed. No off site impacts are anticipated.

Design features would be incorporated into the constuction and production operations for protection of soil resources during period of wet soil conditions. To reduce impacts to adjacent undisturbed areas, no off-road vehicle traffic would be permitted, other than those areas needed for installation of the powerline and flowline. Design features will be incorporated into the installation of the flowline. The implemented design features would not allow the installation to have mounding to ensure proper settling of the trench and reduce the potential for erosion.

Impacts would not be significant.

Alternative 3:
There would be no impacts to the soil resource if the well was not developed.

4.9 Hydrology (Water Quality and Prime or Sole Source of Drinking Water, Wetlands and Riparian Zones)

Alternative 1:
Surface Water
Minimal effects to the watershed will occur. The removal of native vegetation will reduce infiltration around the site and produce minor amounts of storm water runoff surrounding the site following storm events of magnitude capabable of producing runoff.

Water impacts could occur if a hydrocarbon, chemical, or hazardous waste spills reach downstream surface and/or ground water. Impacts related to runoff and sediment from the proposed action would likely only have local affects, but spills would have the potential to affect a greater area depending on the amount and kind of material (water soluble/insoluble) spilled and the kind and extent/magnitude of a transport mechanism, i.e., gravity/slope verses a major storm event.

Groundwater
Drilling and operating an oil and/or gas well has the potential to impact ground water by possibly allowing the mixing of water from different aquifers/geologic formations, or by introducing hydrocarbons and/or other materials/chemicals used in drilling and/or completing the well into aquifers. Casing failure and blowouts may also result in aquifer contamination. Implementing and actively complying with Wyoming Oil & Gas Conservation Commission/BLM regulations and requirements related to developing, producing, and shutting in oil and gas wells would help reduce the risk of ground water contamination. The operator has proposed to cement casing from TD 4214' to surface to protect known freshwater sources. Additionally, the BLM and WOGCC require the use of freshwater for drilling the surface string of the well to ensure no degradation of current water quality. No water wells are currently proposed to provide the source of water so no impacts will occur from improper installation or operation of water wells. Potential drawdown to other water wells in the area is not expected.

Alternative 2:
Surface water
Impacts to surface water under this alternative would be the same as those described under the Alternative 1. Impacts would not be significant. The following design features would be applied as Conditions of Approval to implement protection of surface water resources:

The project proponent would coordinate with the WYDEQ-Water Quality Division to obtain a Storm Water Discharge Permit (SWDP) and associated Storm Water Pollution Prevention Plan (SWPPP). The SWDP/SWPPP and implementation of and compliance with them could constitute some/all of the mitigation the BLM requires (depends on adequacy) to minimize potential impacts to surface water resources.

The use of soil, water, and spill management BMPs (including actions contained in the appropriate Storm Water Discharge Permit (SWDP) and the associated Storm Water Pollution Prevention Plan (SWPPP) and the proper maintenance of them coupled with quick and effective spill responses would minimize negative impacts to these resources.

Other WYDEQ-WQD permits and BLM authorization would be required before produced water could be discharged to the surface as a result of the proposed action

Groundwater
Impacts to groundwater under Alternative 2 would be the same as those described under the Proposed Action. Design features include lining and proper handling of the reserve pit and materials disposed into minimizing the potential for seepage in to the groundwater system.

The potential for negative impacts would be minimized by obtaining and complying with the associated WYDEQ point source pollution (NPDES) permit (s).

Impacts would not be significant.

Alternative 3:
Surface water/Groundwater
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on water resources would be expected to occur beyond the current situation.

4.10 Wildlife

Alternative 1:
There will likely be a moderate amont of wildlife disturbance and/or displacement from the increased activity associated with this proposed well drilling. But this amount of disturbance is not expected to be significant, primarily because many of the resident wildlife are already acclimated to this oil field and associated disturbances, and this area is not critical or crucial to the surrounding wildlife. The amount of disturbance from this proposal will not significantly differ from the preexisting and ongoing oil field disturbance. Because Grey wolf and Grizzly bear occurrence in this area is not likley, and the habitats within the proposed project area do not provide important or necessary components to support their survival needs, impacts from this proposed well are expected to be insignificant, and would not affect or jeopardized the Grey wolf or Grizzly bear.

Alternative 2 :
There will likely be a moderate amont of wildlife disturbance and/or displacement from the increased activity associated with this poposed well drilling. But this amount of disturbance is not

expected to be significant, primarily because many of the resident wildlife are already acclimated to this oil field and associated disturbances, and this area is not critical or crucial to the surrounding wildlife. The amount of disturbance from this proposal will not significantly differ from the preexisting and ongoing oil field disturbance. Because Grey wolf and Grizzly bear occurrence in this area is not liley, and the habitats within the proposed project area do not provide important or necessary components to support their survival needs, potential impacts from this proposed well are expected to be insignificant, and would not affect or jeopardized the Grey wolf or Grizzly bear.

Alternative 3:
Under the No Action Alternative, the proposed well drilling and associated activities proposed would not occur. No resulting effects on wildlife resources would be expected to occur beyond the current situation.

4.11 Socioeconomic

Alternative 1:
The Proposed Action would incrementally increase local and regional economic conditions and could result in the generation of local, state and federal government tax and royalty revenues. The relatively small, short-term drilling and field development workforce would not generate noticeable population effects or demand for temporary housing or local government services.

The Proposed Action would involve capital investment. Development and operation of the well would require goods and services from a variety of local and regional contractors and vendors, from oil and gas service industry and from other industries. Expenditures by the proponent for these goods and services, coupled with increased employee and contractor spending, would generate increased economic effects for Park County, the Big Horn Basin, and Wyoming. Federal mineral royalties would potentially be gained from this Proposed Action.

Alternative 2:
No additional consequences would be expected under this alternative. Impacts would not be significant.

Alternative 3:
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on socioeconomics would be expected to occur beyond the current situation.

4.12 Hazardous Material, Public Health and Safety

Alternative 1:
Some hazardous materials would be used during drilling, completion, and production of the proposed well.

The term hazardous materials as used here means: 1) any substance, pollutant, or contaminant (regardless of quantity) listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA, 2) any hazardous waste as defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, and 3) any nuclear or nuclear byproduct as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

The operator or any contractor company working for the operator will have Material Safety Data Sheets (MSDS) available for all chemicals, compounds, or substances that are used during the course of drilling, completion, and production operations of this proposed project. Additionally, all chemicals will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment. Because the project operations would comply with all applicable federal and state laws concerning hazardous materials and the operator's Spill Prevention, Control, and Countermeasure Plan, and NTL-3A Reporting of Undesirable Events, minimal impacts are anticipated.
Should hazardous materials be used in an improper manner, there could be environmental impacts resulting from an accidental spill or an inappropriate discharge. This could result in impacts to the soil, water, air, wildlife, and cultural resources, in addition to impacts to human health and safety.

As with any drilling operations, there is a risk to public health and safety. These risks may include increased traffic to the well locations, blowouts, etc.

Hydrogen Sulfide gas (H_2S) may be encountered in the Phosphoria and Tensleep formations. An H_2S Plan has been submitted as part of this approval. Safety equipment would be in operation prior to commencement of drilling operations in these formations.

Alternative 2:
Proper containment of fuels, oil and other hazardous materials in appropriately designed and maintained storage facilities and an immediate response in the event of a release would greatly reduce any potential impacts. The operator is required to report all undesirable events under NTL3-A.

The Operator and their contractors would comply with all applicable federal and state laws and regulations as they relate to hazardous materials. Hazardous materials being those chemicals listed in Title III List of Lists, EPA's Consolidated List of Chemicals Subject to Emergency Planning and the Community Right to Know Act (EPCRA) and Section 112(r) of the Clean Air Act, as amended, or the 40CFR 302.4 Table-List of Hazardous Substances and Reportable Quantities, as amended. In the event any hazardous materials are used, they would be handled in an appropriate manner to prevent environmental contamination. Any release of hazardous materials of reportable quantities, would be reported both to the National Response Center (NRC), as required in the National Oil and Hazardous Materials Contingency Plan (40 CFR 300), and the Worland Field Office, as per the Hazardous Materials Contingency Plan.

The only fluids/waste materials that are authorized to go into the reserve pit are RCRA exempt exploration and production wastes.

Impacts would not be significant.

Alternative 3:
Under the No Action Alternative, the development of the proposed Action would not occur. No resulting effects on public health or safety would be expected to occur beyond the current situation.

4.13 Cumulative Effects

Past – Past actions in the project area include livestock grazing and oil & gas exploration and development. The North Sunshine Oil Field was discovered in 1928.

Present -- Livestock grazing would continue to cause impacts that are similar to those caused in the past, unless the numbers, season of use, duration of livestock grazing, or some other variable is changed. Grazing occurs on Private Lands and is not managed by the BLM under an AMP.

Present oil and gas operations are occurring in the North Sunshine Oil Field. The operator currently has thirty (30) completed wells, six injection wells, and five recently spudded wells within the North Sunshine Oil Field. Surface and Mineral ownership for these wells is split between FEE, State, and Federal. Permitting this well would commit an additional 1.9 acres of land and loss of vegetation in the short term (1-2 years).

Future -- Livestock grazing would continue and it would cause the same kind, amount, and trends of impact that it has in the past unless the livestock numbers and/or kind, season of use, or duration of grazing or some other variable is changed. Grazing occurs on Private Lands and is not managed by the BLM under an AMP.

The proposed well pad, access road, powerline, and flowline would add about 1.9 acres of temporary surface disturbance and related impacts. All impacts are determined to be temporary with the duration of disturbances occurring from 1-2 yrs to achieve Interim Reclamation Goals, and up to 30 yrs to complete final reclamation on the remaining disturbed area if the well is completed as a producer.

This project, if successful, could increase overall interest in developing oil and gas resources in the general area, and future requests for Application for Permit to Drill may be submitted. As of April, 2011; the operator has three additional Permits to Drill on file with the WOGCC that reflect future interest on adjacent Private/State lands.

5.0 TRIBES, INDIVIDUALS, ORGANIZATIONS, or AGENCIES CONSULTED

Person Consulted	Agency/Tribe/Organization
Tom Faulkner	*Phoenix Production Co.*
Linda & Richard Herman	*Landowner representatives*

6.0 LIST OF PREPARERS

The following Worland Field Office personnel reviewed or have been contacted with regard to this EA.

6.1 List of Reviewers

Name	Title
Marit Bovee	Archaeologist
Tim Stephens	Wildlife Biologist
Paul Rau	Recreation/Visual Specialist
Karen A. Hepp	Range Management Specialist (T&E/Sensitive Plants)
Monica Goepferd	Civil Engineer
Steve Kiracofe	Soils Scientist
CJ Grimes	NRS/Weeds
Jared Dalebout	Hydrologist

Conditions of Approval

Matlock #10 APD, Application for Permit to Drill

General Conditions

These Conditions of Approval apply to all phases of operations.

Erosion Control

Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb one acre or more. This general construction storm water permit must be obtained from the WDEQ prior to any surface disturbing activities and can be obtained by following direction on the WDEQ website at http://deq.state.wy.us. Further information can be obtained by contacting the NPDES coordinator at (307) 775-7570.

The Operator shall ensure all appropriate measures are taken to control erosion. Upon completion of construction the operator shall initiate the approved Storm Water Discharge Plans on the location and associated access.

Cultural

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,

-a time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

One-Call

The Operator is responsible for inspection of the construction area for the presence of both surface and subsurface utility facilities and shall notify the Wyoming One-Call System (1-800-849-2476, www.onecallofwyoming.com) before construction activities begin. The Operator will use

extra safety precautions when working near or around pipelines, power lines, underground cables, or other utility installations.

Hazardous Materials

The Operator and their contractors shall comply with all applicable federal and state laws and regulations as they relate to hazardous materials. Hazardous materials being those chemicals listed in Title III List of Lists, EPA's Consolidated List of Chemicals Subject to Emergency Planning and the Community Right to Know Act (EPCRA) and Section 112(r) of the Clean Air Act, as amended, or the 40CFR 302.4 Table-List of Hazardous Substances and Reportable Quantities, as amended. In the event any hazardous materials are used, they would be handled in an appropriate manner to prevent environmental contamination. Any release of hazardous materials of reportable quantities, would be reported both to the National Response Center (NRC), as required in the National Oil and Hazardous Materials Contingency Plan (40 CFR 300), and the Worland Field Office, as per the Hazardous Materials Contingency Plan.

Construction / Drilling

1. The operator shall contact the authorized officer a minimum of 5 days prior to beginning any construction activity.

2. Topsoil shall be removed from all areas to be disturbed and from areas where subsoil materials will be stored. Topsoil shall be stripped to an average depth of 6 inches.

3. The reserve pit shall be lined with an impermeable liner having permeability less than 10^{-7} cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand will be used prior to installing the liner.

4. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

5. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

6. Prior to any construction activities, the operator shall assure that all slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the authorized officer are in place, to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

7. Construction activity shall not be conducted using frozen or saturated soil material or during periods when watershed damage or excessive rutting is likely to occur.

8. Transfer of water to the reserve pit with other than truck transport shall require additional authorization.

9. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

Installation of Power lines

1. Traffic shall be restricted to approved routes. Cross-country vehicle travel shall not be allowed.

2. Unless otherwise agreed to by the authorized officer in writing, powerlines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Powerlines, " Raptor Research Foundation, Inc., 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "eagle safe." Such proof shall be provided by a raptor expert approved by the authorized officer. The BLM reserves the right to require modifications or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Installation of Flowlines

1. No surface disturbance or construction activity shall occur outside the approved right-of-way (approximately 7.5' from center). All vehicle traffic shall be kept within the approved right-of-way.

2. Construction activity will not be conducted using frozen or saturated soil material or during periods when watershed damage or excessive rutting is likely to occur. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

3. Topsoil shall be removed at a depth of 4-6inches from all areas of surface disturbance. Topsoil shall be clearly segregated from spoil material.

4. Following construction all disturbed areas shall be restored, topsoil replaced and areas reseeded as prescribed. To prevent erosion, waterbars, mulching, or other protective measures may be required. Backfill shall be thoroughly compacted. Topsoil shall be spread evenly over all areas to be reclaimed.

5. No mounding shall be permitted.

6. Trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.

7. Construction holes left open for more than 24 hours shall be covered or left in a manner to allow for escape of any entrapped animal. Covers shall be secured in place and shall be strong enough to prevent livestock or wildlife from falling through and into a hole.

8. All Undesirable Events shall be reported in compliance with NTL-3A. If during any phase of the construction, drilling, production, or reclamation of the approved actions any oil or other pollutant should be discharged from the approved area, containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the operator, regardless of fault. Upon failure of the operator to control, cleanup, or dispose of such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the authorized officer may take such measures as he deems necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the operator. Such action by the authorized officer shall not relieve the operator of any liability or responsibility.

9. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

10. All disturbed areas shall be drill seeded. Where drilling is impractical, seed shall be broadcast and the area raked or chained to cover seed. If broadcast seeding is used, the approved seed mix shall be doubled. All disturbed areas shall be reseeded with the prescribed seed mixture of all Pure Live Seed. Fall seeding shall be completed after September 1, and prior to ground frost. Spring seeding shall be completed after the frost has left the ground and prior to May 15. Seeding shall be repeated if a satisfactory stand is not obtained.

Production

3. Traffic shall be restricted to approved routes. Cross-country vehicle travel shall not be allowed.

4. If, at anytime, the reserve or production pits acquire hydrocarbons, the operator shall remove all accumulation within 48 hours as per Oil & Gas Onshore Operating Order Number 7 (III.D.3).

5. The access road and drainage controls (culverts, drainage dips, ditching, crowning, wing ditches, surfacing, etc) shall be maintained to prevent soil erosion and accommodate safe, environmentally-sound access. A regular maintenance program will include, but is not limited to, blading, ditching, culvert installation, and surfacing.

6. Interim reclamation of disturbed areas no longer needed for operations shall be initiated within six months of completion operations. This shall include, but is not limited to, blending these areas to best match surrounding terrain and seeding with the prescribed seed mix. Slopes shall be reduced to a minimum of 3:1.

7. Upon removal or evaporation of drilling fluids, the reserve pit shall be backfilled with a minimum of 3 feet of soil material, re-contoured and seeded. Squeezing of pit fluids and cuttings is not authorized. Pits must be dry of fluids or they must be removed via vac-truck or other environmentally acceptable method prior to backfilling.

8. Stockpiled soil for a period longer than one year shall be signed and stabilized with a vegetation cover crop.

9. A regular weed treatment program shall be developed and followed for the life of the well. This program is to be in accordance with BLM and State weed guidelines. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer prior to such use.

10. During the life of the producing well, all permanent above-ground structures such as production tanks and well head equipment, not subject to safety requirements shall be painted and maintained to blend with the natural color of the landscape. The paint used will be a color which simulates "Standard Environmental Colors." The color selected by the Worland Field Office, shall match **Carlsbad Canyon**, or be an acceptable substitute pre-approved by the authorized officer. Standard environmental color charts are available from the local BLM office.

11. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil shall be deemed too wet to adequately support construction equipment.

12. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

Abandonment

1. Reclamation shall be initiated within 30 days of Final Abandonment. This shall include full reclamation of access routes, well pad, and associated facilities. Reclamation shall blend to the existing contour of the surrounding terrain and best match pre-disturbance topography.

2. When the site is abandoned, all refuse, hardware, and other waste material shall be removed from the site. The site shall be recontoured to conform to the surrounding terrain and best match pre-disturbance topography. It shall be ripped or scarified to a depth of 18-24 inches, covered with stockpiled soil, and reseeded. To stop erosion, waterbars, mulching, or other protective measures may be required.

3. Upon completion of approved plugging, the well bore shall be covered with a metal plate at least ¼" thick and welded in place. A weep hole shall be left in the metal plate.

4. Final cut and fill slopes shall be no steeper than 3:1, and shall be left rough or serrated.

5. All disturbed areas shall be drill seeded. Where drilling is impractical, seed shall be broadcast and the area raked or chained to cover seed. If broadcast seeding is used, the approved seed mix shall be doubled.

6. All disturbed areas shall be reseeded with the following mixture of all Pure Live Seed

Species	Pounds PLS/Acre
Bluebunch wheatgrass	4.0
Indian ricegrass	1.0
Needle and thread	1.0
Sandberg bluegrass	.25

Fall seeding shall be completed after September 1, and prior to ground frost. Spring seeding shall be completed after the frost has left the ground and prior to May 15. Seeding shall be repeated if a satisfactory stand is not obtained.