

# Environmental Assessment

## Pogo Producing Co. LLC Right-Of-Way-Application

February 2011

**BLM**

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



## **Introduction**

### **Identifying Information:**

#### **Title, EA number, and type of project:**

Pogo Producing Co.LLC, DOI-BLM-WY-R010-2011-0012-EA

#### **Location of Proposed Action:**

T. 51 N., R. 93 W., sec. 18, lot 4; T. 51 N., R. 94 W., sec. 13, S2S2; sec. 23, SENE, E2SE; and sec. 24, W2NW.

#### **Name and Location of Preparing Office:**

Lead Office - Worland FO and number LLWYR01000

#### **Identify the subject function code, lease, serial, or case file number:**

Case file number WYW-165213

#### **Applicant Name:**

Pogo Producing Company LLC

#### **Purpose and Need for Action:**

The purpose of this action is to allow the applicant, Pogo Producing Company LLC to install a buried oil transportation pipeline approximately 10,930.2-ft on BLM administered lands. By approving the installation of the pipeline, this would allow the right-of-way holder to transport oil from the Buffalo Gap Federal 23 1H well to a tie-in point of an existing Williston Basin Oil Pipeline. The need for the action is established by the BLM's responsibility under FLPMA to respond to this type of action.

#### **Scoping, Public Involvement and Issues:**

The Application for Transportation and Utility Systems and Facilities on Federal Lands was received by the Worland Field Office December 16, 2010, as revised. It was determined that the nature of the action is routine and that a public notice session would not be necessary. Staff specialists reviewed the proposal and identified impacts and appropriate mitigation measures.

#### **Decision to be Made**

The Authorized Officer (AO) must determine whether or not to approve the right-of-way and grant construction of the buried oil transportation pipeline across public lands. The AO could decide not to issue a grant if it would cause unnecessary or undue degradation to the public lands, or if it would threaten to violate another Federal law.

If it is decided to issue the right-of-way, the AO must decide what Terms and Conditions, would apply to the grant. Terms and Conditions could include specification of construction, operation 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 impact could be significant, an environmental impact statement would be necessary.

## **Proposed Action and Alternatives**

### **Description of the Proposed Action:**

Pogo Producing Company LLC intends to construct a buried oil transportation pipeline from the Buffalo Gap Federal 23 1H wellsite to a tie-in point on a Williston Basin Interstate Pipeline. The pipeline project is necessary to transport and sell oil from an oil well to be operated by Pogo. Pogo is requesting an additional area 100' X 100' for a construction staging area, pipeline tie in facility and a pig launching station. The allocation and sales meters will be located in the immediate vicinity of the wellhead; the entire length of the pipeline will be authorized under this right-of-way project.

### **Description of Alternatives Analyzed in Detail:**

The Environmental Assessment (EA) for the Project considered three alternatives. Alternative (1), the "Proposed Action" alternative, assessed and disclosed the projected effects of the applicant's proposal as detailed in the "Proposed Action" portion of the environmental assessment.

The "Proposed Action with Conditions of Approval" (2) alternative assessed the proposed action, BLM staff specialists input, and the observations made at the field inspection. It was felt that certain Conditions of Approval were necessary and proper to provide adequate protection of the surface and subsurface. For the purpose of analysis, the Terms and Conditions are part of this alternative.

The "No Action" (3) 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.

### **Alternatives Considered but not Analyzed in Detail**

An alternative including the use of alternate surface locations was considered, but not analyzed further.

### **Conformance**

This plan has been reviewed and been determined that the proposed action is in conformance with the land use plan terms and conditions as required by 43 CFR 1610.5

Name of Plan — Grass Creek Resource Management Plan (RMP)

Date Approved: September 1998

Decision: The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decision(s): GCRMP ROD pg 12; "The planning area will be open for rights-of-way development. Proposals will be addressed on an individual basis with emphasis on avoiding certain conflict or sensitive areas." This proposal would be within an area available for linear right-of-way generally open to rights-of-way, and thus it would be in conformance with the land use plan.

By approving this permit the BLM would be in conformance with the Grass Creek Resource Management Plan and laws and regulations pertaining to rights-of-way.

## **Affected Environment and Analyses of Environmental Effects**

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.

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.

### **Cultural Resources**

The project area was previously inventoried for cultural resources at the class III level (Project #1610070Y). Five cultural resource sites were identified within the proposed right-of-way. None of these known sites are eligible for the National Register of Historic Properties (NRHP).

#### **Alternative 1 – Proposed Action**

The project area was previously inventoried for cultural resources at the class III level (Project #1610070Y). None of the cultural resource sites identified within the proposed right-of-way are eligible for the NRHP. No historic properties will be affected.

#### **Alternative 2 — Proposed Action with Mitigation**

No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations included under Mitigation.

#### **Mitigation**

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 timeframe 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. 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 measures.

#### **Alternative 3 — No Action**

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.

## **Land Use**

The area of the proposed action is undisturbed rangeland, currently utilized mainly for grazing activities, and will tie into the existing Williston Basin transportation line.

### **Alternative 1 – Proposed Action**

The proposed action will serve to transport discovered mineral resources to an existing commercial right-of-way. By permitting the action as proposed, it would allow the operator to transport minerals to commercial market. Under this action there would be approximately 12.55 acres disturbance that would utilize surface resources until installation is complete and reclamation goals and objectives have been met. It is expected this would take approximately 3 to 5 years to establish vegetation to pre-disturbance standards. The operator has adequately addressed reclamation activities to expediently restore land uses.

Indirect impacts would be assumed during the life of the right-of-way. Maintenance actions may be performed periodically on the pipeline, which could re-disturb the reclaimed area. There is the risk of leaks that would require clean-up activities to be performed to protect the environment and future land uses.

### **Alternative 2 — Proposed Action with Mitigation**

No additional effects beyond those in Alternative 1. The use of mitigation measures would ensure the future use of the land is properly protected.

#### **Mitigation**

Under this alternative it would be stipulated that the operator report leaks, or any other maintenance action, and submit plans for the cleanup and restoration that may occur on the pipeline throughout the life of the right-of-way.

It is recommended that the area not be re-disturbed to remove the pipeline upon abandonment. The pipeline should be purged and capped in place; a representative of the authorized officer should be present to witness these actions, if practical.

### **Alternative 3 — No Action**

Under this alternative the pipeline would not be installed and land uses would remain consistent with other resource values and permits. The operator would not have permission to transport their product through these means and would have to consider alternative methods for transportation of their product to market.

## **Livestock Grazing**

The South Basin #00577 Allotment is located immediately west and southwest of Basin, WY in Big Horn County in T51N and T50N and R94W and R93W. Elevations range from 4000 to 4200 feet through most of the allotment except for the southwest corner which rises to almost 4700 feet. Topography consists of large benches interspersed with natural breaks. Three streams with ephemeral flow regimes bisect the allotment from west to east, Antelope Creek in the north, Elk Creek in the middle, and South Fork of Elk Creek in the south. Primary water sources include numerous reservoirs located throughout the allotment and snow in the wintertime.

The allotment falls within the 5 to 9 inch precipitation zone according to the Bureau of Land Management rain gauge Basin Flats, which is located approximately 7 miles east of the allotment.

The average annual precipitation at the Basin Flat rain gauge for the years 1984 to 2010 is 7.78 inches and the annual growing season precipitation, defined as mid-April to the end of June, is 3.01 inches. Growing season precipitation was below average between 2000 and 2004 due to a severe hydrologic drought.

Range sites by percent acres according to the 1984 vegetation inventory include saline upland (60%), shallow sandy (6%), sandy (5%), loamy (4%) and rock outcrop (24%) with gravelly, lowland, and saline lowland range sites at less than 1 percent. Plant species that occur in the allotment include Gardner's saltbush (*Atriplex gardneri*), bottlebrush squirreltail (*Elymus elymoides*), needle-and-thread (*Hesperostipa comata*), Sandberg bluegrass (*Poa secunda*), western wheatgrass (*Pascopyrum smithii*), Indian ricegrass (*Achnatherum hymenoides*), cactus (*Opuntia polyacantha*), and Wyoming sagebrush (*Artemisia tridentata*). Key forage species for this allotment would be needle-and-thread and bottlebrush squirreltail.

The grazing permit currently authorizes 1185 sheep from March 1 to April 15, 1756 sheep from April 16 to June 20, and 2182 sheep from October 1 to February 28 at 95% public land (PL) for a total of 3,123 public AUMs. The permittee uses a herder. The allotment is presently stocked at 13 acres/AUM according to the grazing permit. The average livestock density is one animal per 19 acres during the fall/winter use period and one animal per 23 acres during the critical growing season.

### **Alternative 1 – Proposed Action**

Under this alternative approximately 2.1 miles or 12 acres will be disturbed by the proposed action. The proposed action would mean the temporary loss of less than one AUM of grazing, which is negligible. The permittee also employs a herder when sheep are in the allotment and can avoid the area during time of construction if given notification. Therefore the proposed action will not affect livestock grazing in the allotment.

### **Alternative 2 — Proposed Action with Mitigation**

Same as Alternative 1

#### **Mitigation**

If construction occurs when the permittee is authorized to be in the allotment with sheep, the company should notify the permittee so he can instruct his herder to avoid this area until after construction is completed.

### **Alternative 3 — No Action**

Under this alternative no construction would occur and livestock grazing would occur as permitted.

## **Recreation and Visual Resources**

### **Recreation**

The proposed pipeline is located within BLM-administered public lands managed as an Extensive Recreation Management Area (ERMA), where recreation management is custodial and addresses use and user conflicts, public health and safety, and resource protection. Although recreation use and resources are recognized, the project area is not managed exclusive to provide for recreational opportunities. The project area's settings are assessed as middle country, and observed recreational uses include motorized use (OHV and 4-wheel drive), hiking, hunting, rock

hounding, sightseeing, and wildlife viewing. Administrative controls are scarce if not present. Travel and Transportation Management limits motorized use to existing roads and trails.

Section 201 of FLPMA requires the BLM to maintain an inventory of all public lands and their resources. The primary function of inventory maintenance is to determine the presence or absence of lands with wilderness characteristics. Lands within the project area were inventoried, and determined that wilderness characteristics are absent.

### **Visual Resource Management**

The project area is within BLM-administered public lands managed as Visual Resource Management Class IV. VRM Class IV objectives are 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.

### **Alternative 1 – Proposed Action**

#### **Recreation**

The pipeline will temporarily alter the environmental physical settings in the immediate project area from a middle country setting to that of a more rural setting. The unnatural presence of the disturbed swath will minimize wildland recreation experiences within the area. The presence of the disturbed corridor may affect the recreational experiences of those who wish to experience a natural landscape, who may be displaced to alternative areas, which may not be as desirable. This impact will be temporary and will be observed until the corridor is successfully reclaimed. Once the corridor reaches successful reclamation, the corridor may go unnoticed by the casual observer. Impacts to recreation is expected to be minimal.

The 50 foot corridor created by pipeline installation activities may invite other motorized recreational uses. This may act as a new route accessing BLM-administered public lands normally not accessible via motorized transportation. This may also conflict with other non-motorized users by altering the desired settings, as well as encourage more motorized use that may not be a desired route to be managed for under the travel and transportation system. With the limited amount of observed recreational use, and adherence to the installation plan, these impacts are expected to be minimal.

#### **Visual Resource Management**

The pipeline corridor will introduce contrasting elements of form, line, texture, and color against the surrounding natural elements. The distinct, horizontal elements will contrast against the smooth and homogenous elements of form, line, texture, and color observed in the landscape and the vegetation. These contrasting elements will bring the observers' attention away from the surrounding landscape to the pipeline corridor. These elements will further be enhanced if the corridor is used as a motorized route by other uses such as recreation. However, these contrasting elements are expected to be temporary and will be subordinate against the surrounding natural elements once successful reclamation is established. Also, similar contrasting linear elements shown through other access routes can be observed in the immediate surrounding areas, so the temporary contrasting elements from the disturbed corridor will not introduce new contrasting elements, but echo other contrasting elements as well. Other land uses are observed in the area,

which all exhibit contrasting elements of form, line, color, and texture. The area is managed under Visual Resource Management (VRM) Class IV objectives, which allows for a high degree of contrasts. Because of the surrounding land uses and the temporary nature of the disturbed pipeline corridor, the project may go unnoticed from the casual observer. The project is within VRM Class IV objectives.

## **Alternative 2 — Proposed Action with Mitigation**

### **Mitigation**

#### **Recreation**

Impacts to recreation will be the same as those in Alternative 1, with the exception of recreation and related resources benefitting from the mitigations placed by the other resource programs. No additional mitigation is necessary.

#### **Visual Resource Management**

Impacts to Visual Resource Management (VRM) will be the same as those addressed in alternative 1, with the exception of visual resource management benefitting from the mitigations placed by the other resource programs. No additional mitigations are necessary.

## **Alternative 3 — No Action**

#### **Recreation**

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

#### **Visual Resource Management**

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

#### **Paleontological Resources**

The surface formation is Willwood which has a PFYC (Potential Fossil Yield Classification) rating of 5 or very high. This means the formation has a very high sensitivity for paleontological resources. Significant fossil localities are common within this formation. Typical localities found within this formation include mammalian and plant fossils. A paleontological inventory was completed for the proposed project location (Project #P101003). No significant paleontological localities were located within the proposed project location.

## **Alternative 1 – Proposed Action**

The surface formation is Willwood Formation which has a very high sensitivity for paleontological resources. A paleontological inventory (Project #P1010003) completed for the proposed project location identified no significant paleontological localities.

## **Alternative 2 — Proposed Action with Mitigation**

No additional consequences would be expected under this alternative. The project authorization is recommended with standard stipulations included under Mitigation.

## **Mitigation**

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 paleontological localities, or for collecting vertebrate fossils. If paleontological materials are uncovered during operations, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO).

Within five (5) working days the AO will evaluate the discoveries and take necessary actions to protect or remove the resource. Decisions regarding the appropriate measures to mitigate effects to such resources will be made in consultation with the operator.

## **Alternative 3 — No Action**

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.

## **Soils**

The proposed pipeline is in an arid landscape in the 5 to 9 inch precipitation zone. Soils are well drained. They formed in alluvium and residuum over soft shale and sandstone. Soil depth ranges from 10 to 40+ inches. The soils support a salt desert shrub plant community represented by a Saline Upland 5–9" pz ecological site (R032XY144WY). These soils are naturally high in soluble salts and saturated sodium. Surface textures are clay loams, silty clay loams and loams. Clay and saturated sodium increase with depth in the subsoil often being expressed as argillic and natriargid horizons. Slopes across the landscape range from 0 to 60 percent but along the proposed pipeline slopes are only 1 to 3 percent.

Erosion rates specific to the project location for undisturbed soil, calculated for the by the Water Erosion Prediction Project (WEPP), U.S. Forest Service web based interface, are minimal.

Soils pose no significant limitations to project development. High levels of soluble salts and saturated sodium, combined with low annual precipitation, create severe limitations for reclamation.

## **Alternative 1 – Proposed Action**

Surface disturbance increases soil erosion. Erosion rates predicted by WEPP could average 0.03 tons per acre per year during the time that the surface is bare. In the event of a 50 year storm cycle, WEPP predicts erosion to increase 10–fold to 0.32 tons per acre per year. With the initial reestablishment of vegetation (1 to 5 years) WEPP predicts erosion rates could be reduced to an average only 0.009 tons per acre per year, after which time, erosion rates would approximate pre-disturbance rates. No off-site erosion impacts are anticipated. The Bighorn River located 3 miles to the east is the nearest perennial water; no impacts to perennial waters from soil erosion are anticipated.

## **Alternative 2 — Proposed Action with Mitigation**

No additional mitigations for the protection of soil and water resources are being proposed for this project. Impacts under this alternative would be the same as the preferred alternative.

## **Mitigation**

No additional mitigation measures are being proposed for the soil or water resources.

### **Alternative 3 — No Action**

Under this alternative the pipeline would not be developed and as such, there would be no surface disturbance. Runoff and erosion rates would not change from background levels.

## **Wildlife**

The wildlife habitat within the proposed project area consists of rolling hills and incised drainages with the primary vegetative community being saline uplands dominated by Gardner saltbush, perennial grasses and various forbs. The area does provide habitat for numerous wildlife species, some seasonally and some yearlong. Just west of the proposed ROW, is mapped as crucial winter range for antelope. Larger concentrations of antelope could be expected during the winter, as well as smaller numbers of antelope and some mule deer expected to inhabit this area yearlong. The area also provides habitat to a disperse but large white-tailed prairie dog colony, and is also likely providing some breeding and nesting habitat for burrowing owls and Mountain Plover as well. There are no known raptor nest locations within the proposed project area, but the Ferruginous hawk is likely using this area foraging habitat. There are numerous other small mammals, predators, passerines, and raptors that use this area, some yearlong. No known threatened or endangered animal species are known to inhabit this area, but the White-tailed prairie dog, mountain plover, burrowing owl and Ferruginous hawk are all BLM sensitive species.

### **Alternative 1 – Proposed Action**

Some displacement to wintering antelope could be anticipated but because the majority of the proposed ROW is not within mapped crucial winter range, significant impacts from disturbance or displacement are not anticipated, and the application of the big game crucial winter range seasonal stipulation for wintering antelope is not required. Depending on when surface disturbing and disruptive activities associated with this proposal will occur, there could be potential impacts to Mountain plover, burrowing owl and white-tailed prairie dog. Surface disturbing activities and motor vehicle traffic associated with the proposed activity along the access route and the proposed pipeline from April through June, could potentially destroy and or disturb Mountain plovers and their nests. This same disturbance later in the summer could potentially result in displacement of, or increased road collision mortality to white-tailed prairie dogs and borrowing owls as well. Any above ground structures constructed or installed associated with this proposed ROW could potentially result in increased predation rates on these species by providing artificial raptor perches and enhanced foraging opportunities.

### **Alternative 2 — Proposed Action with Mitigation**

Some displacement to wintering antelope could be anticipated but because the majority of the proposed ROW is not within mapped crucial winter range, significant impacts from disturbance or displacement are not anticipated, and the application of the big game crucial winter range seasonal stipulation for wintering antelope is not required. No real impacts to Mountain plover breeding or nesting activities are expected this first year. Some amount of disturbance or displacement to prairie dogs and burrowing owls could occur during the summer and early fall months with the proposed pipeline installation activities. This disturbance should only displace burrowing owls and prairie dog concentrations away from the proposed ROW route during installation, and then these species should slowly return post reclamation. Some minor disturbance to Mountain plovers

could be anticipated from the proposed breeding and nesting surveys, but these impacts should not be of issue. If this Buffalo Gap Federal 23 1H well is found to be productive, subsequent impacts to wintering antelope Mountain plovers, burrowing owls and White-tailed prairie dogs could be seen in future years from additional Surface disturbance and disruptive activities associated with future production.

### **Mitigation**

The proposed ROW route and associated access routes should be surveyed, following standard Mountain plover survey guidelines, for Mountain Plover breeding and nesting activity prior to any surface disturbing or disruptive activities. If Mountain plovers and or their nests are present then these areas should be avoided if possible, by at least a ¼ mile. If these areas cannot be avoided or if surveys are not conducted, then we recommend the application of a TLS from 4/10 – 7/10 for all ROW activities to avoid potential disturbance to nesting Mountain plovers. To reduce impacts to White-tailed prairie dogs and burrowing owls, burrows should be avoided where ever possible when laying out the proposed pipeline. And to reduce raptor predation on these species as well as the Mountain plovers, all above ground structures constructed or installed as part of this proposal should be as low profile as possible and be fitted with anti raptor perch devices.

### **Alternative 3 — No Action**

Under the No Action Alternative, the installation and maintenance activities proposed for this ROW would not occur. No resulting effects on wildlife resources would be expected to occur beyond the current situation.

### **Cumulative Effects**

No cumulative impacts were identifies during analysis.

## **Tribes, Individuals, Organizations, or Agencies Consulted:**

**Table 1. List of Persons, Agencies and Organizations Consulted**

<b>Name</b>	<b>Purpose &amp; Authorities for Consultation or Coordination</b>
Christopher A. Noonan	Permit Agent for Pogo Producing Company LLC
Bob Noonan	Banko Petroleum Management Inc.
J. T. Willismson	Pogo Producing Company LLC

## List of Preparers

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

**Table 2. List of Preparers**

<b>Name</b>	<b>Title</b>	<b>Responsible for the Following Section(s) of this Document</b>
Teryl Shryack	Range Management Specialist	Range
Marit Bovee	Archaeologist	Cultural Resources/ Paleontological Resources
Tim Stephens	Wildlife Biologist	Wildlife/T&E Wildlife
Paul Rau	Recreation Specialist	Recreation/VRM/ Wilderness/ACECs
Karen Hepp	Range Management Specialist	T&E Plants
Steve Kiracofe	Soil Scientist	Soils
Jared Dalebout	Hydrologist	Hydrology
CJ Grimes	NRS	Invasive Species
Holly Elliott	NRS	Fluid Minerals

## Project Information

NEPA (ePlanning) Number	DOI-BLM-WY-R010-2011-0012-EA
Project Name	Pogo Producing Co.LLC
Project Lead/Manager	Carol Sheaff,
Project/Activity Type	ROW, R&PP, etc.
Case File Number	WYW-165213
Comment Due Date	
Applicant/Proponent	Pogo Producing Company LLC
Cost Code	
General Location	T. 51 N., R. 93 W., sec. 18, lot 4; T. 51 N., R. 94 W., sec. 13, S2S2; sec. 23, SENE, E2SE; and sec. 24, W2NW.
Legal Description	
Map (7.5-minute USGS topo map)	
Amount of new disturbance (acres)	12.545 Acres more or less
Amount of previous disturbance (acres)	
Amount of TOTAL disturbance (acres)	
Duration of project	01/12/2011 —
Tiered off EA/EIS/BO/ other	

Description: Pogo Producing Company LLC intends to construct a buried oil transportation pipeline from the Buffalo Gap Federal 23 1H wellsite to a tie-in point on a Williston Basin Interstate Pipeline. The pipeline project is necessary to transport and sell oil from an oil well to be operated by Pogo. Pogo is requesting an additional area 100' X 100' for a construction staging area, pipeline tie in facility and a pig launching station. The allocation and sales meters will be located in the immediate vicinity of the wellhead; the entire length of the pipeline will be authorized under this right-of-way project.

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

- NP = not present in the area impacted by the proposed or alternative actions
- NI = present, but not affected to a degree that detailed analysis is required
- PI = present with potential for relevant impact that need to be analyzed in detail in the EA

**Table 3. Affected Resources Form**

<b>Deter- mina- tion</b>	<b>Resource</b>	<b>Digital check off</b>	<b>Date</b>	<b>Time Spent Reviewing</b>
NP	Air Resources			
NP	Areas of Critical Environmental Concern	Paul Rau	1/19/2011	2 hours
NP	BLM Natural Areas			
NI	Cultural Resources	Marit Bovee	1/19/2011	1 hour
NP	Greenhouse Gas Emissions			
NP	Environmental Justice			
NP	Farmlands (Prime or Unique)			
PI	Fish and Wildlife Excluding Federally Listed Species	Tim Stephens	01/25/2011	2 hours
NP	Floodplains			
NP	Fuels/Fire Management			
NI	Geology / Mineral Resources/Energy Production	Holly Elliott	2/7/2011	1/2 hour
	Hydrologic Conditions			
	Invasive Species/ Noxious Weeds			
PI	Lands/Access	Holly Elliott	2/7/2011	1/2 hour
	Livestock Grazing			
	Migratory Birds			
NP	Native American Religious Concerns	Marit Bovee	1/19/2011	
NI	Paleontology	Marit Bovee	1/19/2011	1 hour
PI	Rangeland Health Standards	Teryl Shryack	2/7/2011	2 hours
PI	Recreation	Paul Rau	1/19/2011	2 hours
	Socio-Economics			
PI	Soils	Steve Kiracofe	1/26/2011	4 hours
	Threatened, Endangered or Candidate Plant Species			
PI	Threatened, Endangered or Candidate Animal Species	Tim Stephens	01/25/2011	2 hours
	Wastes (hazardous or solid)			
	Water Resources/ Quality (drinking/ surface/ground)			

	Wetlands/Riparian Zones			
NP	Wild and Scenic Rivers	Paul Rau	1/19/2011	2 hours
NP	Wilderness/WSA	Paul Rau	1/19/2011	2 hours
NP	Woodland / Forestry			
	Vegetation Excluding Federally Listed Species			
PI	Visual Resources	Paul Rau	1/19/2011	2 hours
NP	Wild Horses and Burros			
NP	Areas with Wilderness Characteristics	Paul Rau	1/19/2011	2 hours

**Terms and Conditions**  
WYW-165213

The following Terms & Conditions are for the construction, operation, maintenance, and termination of Pogo Producing Company LLC's 6" buried oil transportation pipeline.

**General**

**Erosion Control**

1. 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.
2. 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.

**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 material appears 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 timeframe 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. 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 measures.

**Paleontological**

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 paleontological localities, or for collecting vertebrate fossils. If paleontological materials are uncovered during operations, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO).

Within five (5) working days the AO will evaluate the discoveries and take necessary actions to protect or remove the resource. Decisions regarding the appropriate measures to mitigate effects to such resources will be made in consultation with the operator.

**Wildlife**

The proposed ROW route and associated access routes should be surveyed, following standard Mountain Plover survey guidelines, for Mountain Plover breeding and nesting activity prior to any surface disturbing or disruptive activities. If Mountain Plovers and or their nests are present then these areas should be avoided if possible, by a least a ¼ mile. If these areas cannot be avoided or if surveys are not conducted,

then we recommend the application of a TLS from 4/10 – 7/10 for all ROW activities to avoid potential disturbance to nesting Mountain Plovers. To reduce impacts the White-tailed prairie dogs and burrowing owls, burrows should be avoided where ever possible when laying out the proposed pipeline. And to reduce raptor predation on these species as well as the Mountain Plovers, all above ground structures contracted or installed as part of this proposal should be as low profile as possible and fitted with anti raptor perch devices.

## **Construction**

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

The Holder shall notify the grazing permittee 5 days prior to beginning any construction activity so the herder can avoid the area until construction is completed.

The holder shall construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the application/plan of development which was approved and made part of the grant on its effective date. Any relocation, additional construction, or use that is not in accord with the approved plan of development, shall not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations and approved plan of development, shall be made available on the right-of-way area during construction, operation, and termination to the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

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.

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.

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.

The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U. S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holders shall be responsible for the survey cost.

The holder will be responsible for taking such measures as may be necessary to protect other authorized facilities on public lands from damage due to construction or use of this right-of-way. The holder is responsible for contacting those other users and coordinating with them.

## **Operation**

A regular weed treatment program shall be developed and followed for the life of the pipeline. 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.

If during any phase of the construction, operation, or termination of the pipeline or related facilities any oil or other pollutants should be discharged from the pipeline system, or from 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 holder, regardless of fault. Upon failure of holder 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 holder. Such action by the authorized officer shall not relieve the holder of any liability or responsibility.

The holder shall report leaks, or any other maintenance action, to the BLM, Worland Field Office, Authorized Officer, Minerals and Lands, and submit plans for the cleanup and restoration that may occur on the pipeline throughout the life of the right-of-way.

## **Abandonment**

The pipeline shall not be re-disturbed to remove the pipeline upon abandonment. The pipeline shall be purged and capped in place. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a joint inspection of the right-of-way. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, abandonment procedures. The authorized officer must approve the plan in writing prior to the holder's commencement of any termination activities and at the authorized officers discretion, may require BLM personnel to witness the abandonment procedures.

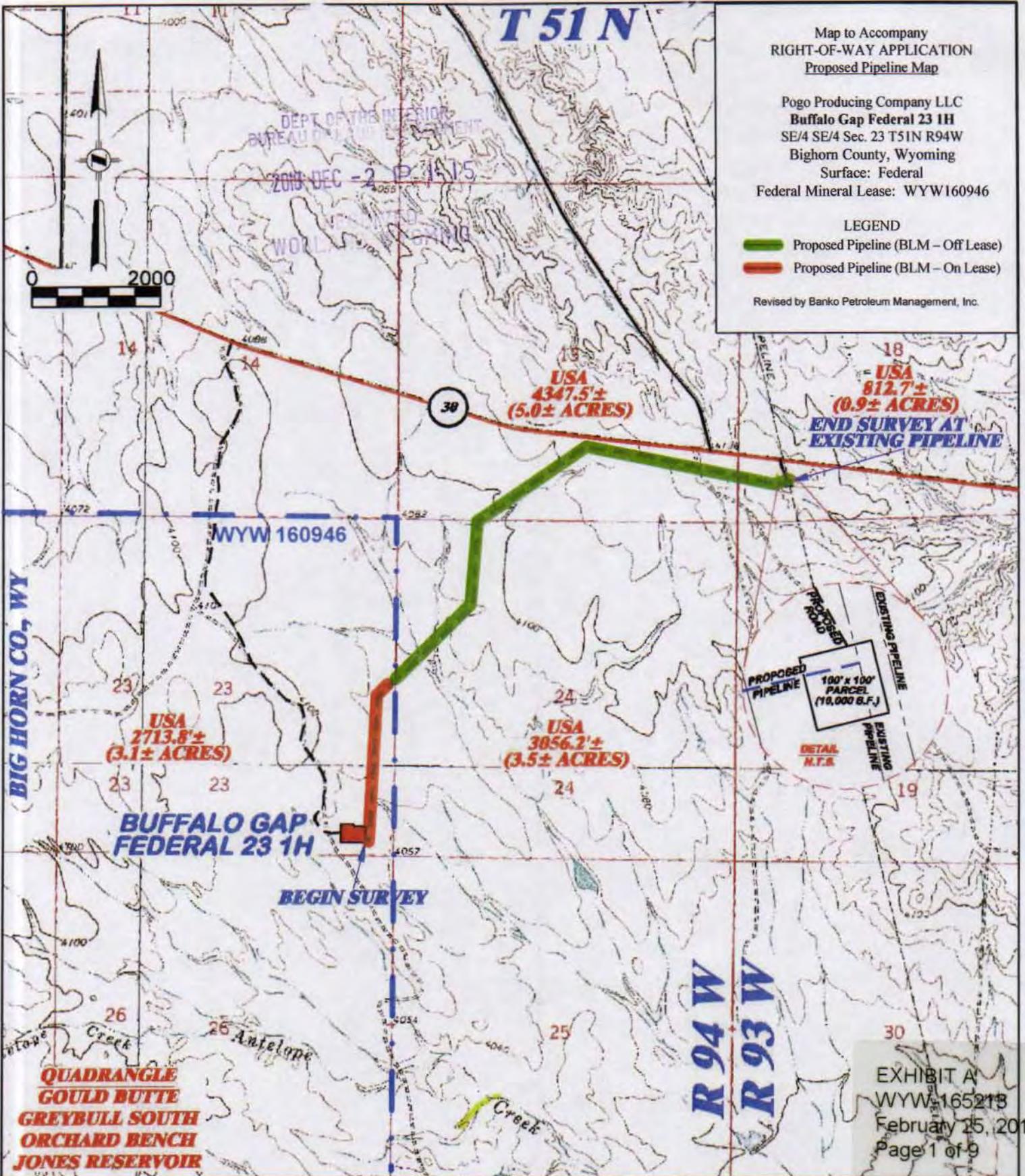
Map to Accompany  
RIGHT-OF-WAY APPLICATION  
Proposed Pipeline Map

Pogo Producing Company LLC  
Buffalo Gap Federal 23 1H  
SE/4 SE/4 Sec. 23 T51N R94W  
Bighorn County, Wyoming  
Surface: Federal  
Federal Mineral Lease: WYW160946

LEGEND

-  Proposed Pipeline (BLM - Off Lease)
-  Proposed Pipeline (BLM - On Lease)

Revised by Banko Petroleum Management, Inc.



**DRG** RIFFIN & ASSOCIATES, INC.  
1414 ELK ST., ROCK SPRINGS, WY 82901  
(307) 362-9020

DRAWN: 9/7/10 - MMM	SCALE: 1" = 2000'
REVISED: 9/30/10 - JMB	DRG JOB No. 18008
PIPELINE REROUTE	TOPO MAP B

**PROPOSED PIPELINE FOR  
POGO PRODUCING COMPANY LLC.  
BUFFALO GAP FEDERAL 23 1H  
SECTION 23, T51N, R94W**

TOTAL PROPOSED LENGTH: 10,930.2'±

PROPOSED PIPELINE — — —	EXISTING ROAD ———
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STANDARD FORM 299  
 RIGHT-OF-WAY SUMMARY  
 Pipeline on Federal Lands

Buffalo Gap Federal 23 1H  
 Federal Mineral Lease: WYW160946

7. c. (continued)

**New Pipeline Construction**

**BLM surface**

T51N R94W	Sec. 23	0.5 mi	± 2,714'	E2SE	On Lease
T51N R94W	Sec. 24	0.6 mi	± 3,056'	W2NW	Off Lease
T51N R94W	Sec. 13	0.8 mi	± 4,348'	S2	Off Lease
T51N R93W	Sec. 18	0.2 mi	± 813'	SWSW	Off Lease
		<b>1.6 mi</b>	<b>± 8,216'</b>		

Detailed pipeline footages are approximate and may be revised by surveyor.

Total BLM Pipeline ROW (On Lease):	0.5 mi	=	±2,714'
Total BLM Pipeline ROW (Off Lease):	1.6 mi	=	±8,216'
<b>TOTAL BLM Pipeline ROW Requested:</b>	<b>2.1 mi</b>	<b>=</b>	<b>±10,930'</b>

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PLAN OF DEVELOPMENT  
TO ACCOMPANY  
OIL PIPELINE  
RIGHT-OF-WAY APPLICATION

Pogo Producing Company LLC

**Buffalo Gap Federal 23 1H**

**API No. 49-003-21633**

Surface: 350' FSL 660' FEL (SE/4 SE/4)

BHL: ±700' FNL ±2,014' FEL (NW/4 NE/4) within a 40' radius

Sec. 23 T51N R94W

Big Horn County, Wyoming

Surface: Federal

Federal Mineral Lease: WYW160946

**REVISED DECEMBER 14, 2010**

Pogo Producing Company LLC (Pogo) intends to construct one (1) buried oil transportation pipeline on Bureau of Land Management (BLM) surface from the Buffalo Gap Federal 23 1H wellsite to the tie-in point on the Williston Basin Interstate Pipeline in the SW/4 SW/4 Sec. 18 T51N R93W. The project is necessary to transport and sell oil from an oil well to be operated by Pogo, which will provide oil to United States citizens/consumers, along with royalty and tax revenues to the United States.

The Right-of-Way (ROW) Plan of Development (POD) submittal covers one (1) proposed buried oil transportation pipeline located on federal land to connect the Pogo operated Buffalo Gap Federal 23 1H. The pipeline will extend from the east side of the Buffalo Gap Federal 23 1H wellpad located in the SE/4 SE/4 Sec. 23 T51N R94W and traverse northerly, northeasterly, northerly, northeasterly, southeasterly, and northeasterly to the tie-in point in SW/4 SW/4 Sec. 18 T51N R93W. (Please refer to the pipeline Topo Map B attached.) Pogo also requests access for lands located in SW/4 SW/4 Sec. 18 T51N R93W, measuring 100' x 100', to be considered for possible use as:

A: Temporary construction staging area

B: Pipeline tie in facility

C: Pig launching station

Operations will be kept to an as needed basis and the area will be reclaimed as specified in the original ROW application. The total pipeline length is ±10,930' (2.1 miles), and is entirely on federal lands.

**Total New Pipeline Construction BLM On Lease:**

±2,714' (0.5 miles) in E2SE Sec. 23 T51N R94W

**Total New Pipeline Construction BLM Off Lease:**

±3,056' (0.6 miles) in W2NW Sec. 24 T51N R94W

±4,348' (0.8 miles) in S2 Sec. 13 T51N R94W

±813' (0.2 miles) in SWSW Sec. 18 T51N R93W

Sub Total: ±8,216' (1.6 miles)

**\*Total BLM ROW Requested:**

±10,930' (2.1 miles)

The wellsite was originally staked at 690' FSL 709' FEL (SE/4 SE/4) of Sec. 23 T51N R94W on August 3, 2010, by D.R. Griffin & Associates, Inc (DRG), surveyor, on a site that was geologically and topographically acceptable. The site was restaked and surveyed by DRG at 350' FSL 660' FEL (SE/4

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SE/4) on August 30, 2010. The Bottom Hole Location (BHL) is located at ±700' FNL ±2,014' FEL (NW/4 NE/4) of Sec. 23 T51N R94W within a 40' radius.

A Notice of Staking (NOS) was submitted via Well Information System (WIS) to the BLM in Worland on August 24, 2010, for the originally staked location. Per a request from Pogo, the location was moved 350' south and 49' east (343.5' southeast) of the original staked location. An onsite meeting was held on September 1, 2010. Requirements were discussed at the onsite meeting. The Application for Permit to Drill (APD) applicant, Pogo, agrees to abide by all specific concerns of the BLM representatives voiced at the onsite meeting and are addressed herein, as are specific stipulations from the BLM.

An APD for the Buffalo Gap Federal 23 1H was submitted to the BLM September 15, 2010, via the WIS system and Wyoming Oil & Gas Conservation Commission (WOGCC) on September 20, 2010. The well was assigned API No. 49-003-21633. WOGCC approval was granted on October 27, 2010. BLM approval was granted on November 1, 2010.

The archaeological field work has been completed by Western Archaeological Services and a report covering this location was submitted under separate cover to BLM on October 15, 2010. A Paleontological survey was also conducted by PaleoWest and a report covering this location was submitted to the BLM on October 8, 2010.

The proposed drillsite surface location is:

Buffalo Gap Federal 23 1H – 350' FSL 660' FEL (SE/4 SE/4) of Sec. 23 T51N R94W

Pogo intends to construct ±10,930' (2.1 miles) of a buried oil transportation pipeline, both on and off lease on federal lands, to gather and transport oil from the Buffalo Gap Federal 23 1H wellsite to the tie-in point located in the SW/4 SW/4 Sec. 18 T51N R93W. This pipeline length includes ±2,714' (0.5 miles) on-lease and ±8,216' (1.6 miles) off-lease. Please see the attached Topo Map B highlighting the entire proposed route: ±10,930.2' x 50' = ±546,510 ft<sup>2</sup> (±12.55 acres) on federal lands.

Ownership of the Right-of-Way to be utilized is as follows:

**Buffalo Gap Federal 23 1H**

New Pipeline Construction:

On Lease	T51N R94W	Sec. 23	Federal	±2,714'	0.5 mi
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New Pipeline Construction:

Off Lease	T51N R94W	Sec. 24	Federal	±3,056'	0.6 mi
-----------	-----------	---------	---------	---------	--------

		Sec. 13	Federal	±4,348'	0.8 mi
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	T51N R93W	Sec. 18	Federal	±813'	0.2 mi
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<b>Total Off-Lease Pipeline Length</b>				<b>±8,216'</b>	<b>1.6 mi</b>
--	--	--	--	----------------	---------------

<b>Total Federal ROW Requested</b>				<b>±10,930'</b>	<b>2.1 mi</b>
------------------------------------	--	--	--	-----------------	---------------

**TOTAL LENGTH – PIPELINE ROW TO BE UTILIZED ON FEDERAL LANDS (See Topo Map B)**

NEW CONSTRUCTION (On-Lease): 0.5 MILES

NEW CONSTRUCTION (Off-Lease): 1.6 MILES

TOTAL ROW: 2.1 MILES

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Pogo intends to construct one (1) 6" buried oil transportation pipeline,  $\pm 10,930.2'$  (2.1 miles) in length. The oil transportation pipeline will be buried on federal lands and extend from the east side of the Buffalo Gap Federal 23 1H well pad in SE/4 SE/4 Sec. 23 T51N R94W. The pipeline will traverse northerly, northeasterly, northerly, northeasterly, southeasterly, and northeasterly to the tie-in point in SW/4 SW/4 Sec. 18 T51N R93W.

The pipeline construction specifications are as follows:

Buried Oil Transportation Pipeline:

Diameter:	6.625" O.D. (6" nominal)
Wall Thickness:	0.432"
Grade:	Sched 80, A106 grade B, smls, fusion bonded live pipe with shrink sleeves installed over each weld
Design Pressure:	1,739 psi
Actual Pressure:	900 psi
Pressure Test Fluid:	Fresh water
Pipeline depth:	36" - 48"
Temperature:	80° - 100°

**The allocation and sales meters will be located in the immediate vicinity of the wellhead for the well location unless otherwise modified by a Sundry Notice (SN).**

PIPELINES AND FLOWLINES

- A) Pipeline shall be constructed as shown on the attached map. Graders shall be used to construct or to clear the pipeline ROW wherever feasible. The ROW shall not be cleared more than an additional twenty five (25) feet wide (preferably five (5) feet wide on the soil stockpile side, and twenty (20) feet wide on the working side of the placement line) without approval. Bladed materials shall be placed back into the cleared route once construction is completed.
- B) Pipeline construction shall not block, nor change, the natural course of any drainage. Trenches will be dug with 1-4 backhoes; the number is subject to availability at the time of construction. A trencher would be used only if the backhoes are not available. Suspended pipelines, which are not currently anticipated but if needed, shall provide adequate clearance for maximum runoff.
- C) Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be maintained in order to correct settlement and erosion. Road crossings are not anticipated.
- D) The pipeline will be hydrostatically tested to 1,000 psi with fresh water prior to filling the trench.
- E) Water, if necessary, will be obtained from a commercial source in the town of Basin, WY. Trucks will be used to transport drilling water to location via the coinciding water haul route map detailed in the Buffalo Gap Federal 23 1H APD. Any water which requires disposal will be trucked to a local Wyoming Department of Environmental Quality disposal facility. Appropriate permits will be obtained.

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- F) All above ground permanent structures, including production equipment (valving and piping, etc.), will be painted a non-contrasting color to blend harmoniously with the surrounding landscape. The color specified is given with the Munsell Color Chart® reference color, Carlsbad Canyon (2.5Y 6/2).
- G) Topsoil, as available, will be removed prior to pipeline construction from along the working side of the pipeline ROW and stockpiled for future reclamation. Topsoil depth of 6" to be removed as stipulated by BLM.
- H) Pipeline markers will be installed where appropriate.
- I) Pipeline construction is anticipated to be approximately four (4) to six (6) weeks.
- J) Anticipated equipment is as follows:
  - 3 - Trucks
  - 3 - Dozer, Track hoe, Blade
- K) Anticipated full time personnel are as follows:
  - 1 - Supervisor
  - 1 - Pipeline supervisor
  - 3 - Trenching crew (welders with helpers)

Part-time technical support persons will be on-site from time to time as necessary.  
 No intermediate staging area will be used.

- L) Waterbars, if necessary, are to be constructed at least 1' deep, on the contour with approximately 2' of drop per 100' of waterbar to ensure drainage, and extended into established vegetation.

All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

% SLOPE	SPACING INTERVAL (feet)
2 or <	200
2 - 4	100
4 - 5	75
5 or >	50

ANCILLARY FACILITIES

No ancillary facilities will be necessary.

SURFACE RESTORATION (General)

- A) Topsoil will be removed prior to construction from all disturbed areas. Topsoil depth to be removed is 6" as stipulated by BLM.
- B) Backfilling, leveling and contouring are planned as soon as all construction areas have dried. Waste and spoils materials will be buried immediately after construction is completed.
- C) The soil-banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula by BLM.
- D) The rehabilitation will begin after construction equipment removed and completion of the pipeline construction. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in fall, unless requested otherwise.

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- E) An anticipated seed mixture for this location is:
  - 2#/acre PLS – Thickspike wheatgrass
  - 2#/acre PLS – Western wheatgrass
  - 2#/acre PLS – Indian ricegrass
  - 1#/acre PLS – Sandberg bluegrass
  - 2#/acre PLS – Four wing saltbrush
  - 1#/acre PLS – Scarlet globemallow
  - ½#/acre PLS – Sulfur buckwheat
  - 1#/acre PLS – Annual ryegrass
  - 11.5#/acre PLS – TOTAL
- F) Seeding will be done during fall planting season, September 15 through first frost.

GENERAL INFORMATION

- A) Project area is situated in the undulated uplands of the west of the Big Horn Basin.
- B) Topographic and geologic features - low relief area, moderately drained, silt deposition.
- C) Soil characteristics – clay.
- D) Flora consists of: Gardner saltbrush, Prickly pear, Bluegrass, Indian ricegrass, Halogen, and Bottlebrush squirreltail.
- E) Fauna – observed: none; assume: antelope, coyotes, rabbits, raptors, and rodents.
- F) Concurrent surface use - grazing and hunting.
- G) Mineral Lessor - Bureau of Land Management  
 Worland Field Office  
 101 South 23rd  
Worland, WY 82401 Phone: 307-347-5100
- H) Surface Owner  
 Drillsite/Pipeline Route -  
 Bureau of Land Management  
 Worland Field Office  
 101 South 23<sup>rd</sup> Street  
Worland, WY 82401 Phone: 307-347-5100
- I) Proximity of water, occupied dwellings or other features: un-named intermittent drainage ±600’ to the southwest; flowing into Antelope Creek.
- J) Archaeological, cultural and historical information for the new construction on federal lands was covered in a report submitted separately by Western Archaeological Services (Western) on October 15, 2010. A Paleontological survey was also conducted by PaleoWest and a report covering this location was submitted to the BLM on October 8, 2010.
- K) If any fossils are discovered during construction, the operator shall cease construction immediately and notify the AO so as to determine the significance of the discovery.
- L) A Class III (100% pedestrian) cultural resource inventory shall be completed prior to disturbance by a qualified professional archaeologist in the following areas: Well location. A report of the inventory will be submitted and approved by the BLM with stipulations as appropriate in order to comply with EO 11593 and Section 106 of the National Historic Preservation Act of 1966. See Section “General Information – K” above.

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- M) 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 AO. The AO will inform the operator as to the work needed to determine the following:
- 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 site preservation is not necessary); and,
  - A timeframe for the AO to complete an expedited review to acquire the State Historic Preservation Officer's concurrence that the findings of the AO are correct and that mitigation is appropriate.

#### HAZARDOUS MATERIALS

Pogo maintains a file, per 29 CFR 1910.1200(g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be transported across these lands may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous substances, EHS, and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment. See the attached Table 1.

Pogo and its contractors will comply with all applicable federal laws and regulations existing or thereafter enacted or promulgated. Pogo and its contractors will locate, handle and store hazardous substances in an appropriate manner that prevents them from contaminating soil and water resources or otherwise sensitive environments. Any release of hazardous substances (leaks, spills, etc.) in excess of the reportable quantities established by 40 CFR, Part 117, would be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended. If the release of a hazardous substance in a reportable quantity would occur, a copy of a report would be furnished to the BLM's AO and all other appropriate federal and state agencies.

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LESSEE'S OR OPERATOR'S REPRESENTATIVE:

Operator

Pogo Producing Company LLC  
717 Texas Avenue, Suite 2100  
Houston, TX 77002  
Phone: 713-579-6000  
Fax: 713-579-6611

Bob Tierney – 713-579-6579

Permit Agent

Banko Petroleum Management, Inc.  
385 Inverness Parkway, Suite 420  
Englewood, Colorado 80112-5849  
Phone: 303-820-4480  
Fax: 303-820-4124

+ David Banko – Consulting Petro Engineer  
*david@banko1.com*  
Keith Dana – Range Mgmt. Consultant  
Cell: 307-389-8227  
*krlcdana@fascination.com*

+ For any questions or comments regarding this application.

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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-R010-2011-0012-EA**