

**DECISION RECORD**  
**Categorical Exclusion 1 (CX1), WY-070-390CX1-12-179 and WY-070-390CX1-12-180**  
**Section 390, Energy Policy Act of 2005**  
**Stroud Petroleum Inc, Mankin Federal 14-1 No. 1 and Mankin Federal 14-9 No. 2**  
**Bureau of Land Management, Buffalo Field Office, Wyoming**

**DECISION.** The BLM approves the proposal from Stroud Petroleum, Inc., (Stroud) for the drilling of 2 oil/gas wells, the Mankin Federal 14-1 No. 1 and Mankin Federal 14-9 No. 2, located in Section 14, T47N R76W, federal lease WYW28680. The operator plans to drill and produce oil and/or gas, as analyzed in the CX1 worksheet, WY-070-390CX1-12-179 and -180, which is incorporated here by reference.

**Compliance.** This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (16 USC 470).
- Endangered Species Act of 1974 (16 USC 1531).
- Buffalo and Powder River Basin (PRB) Final Environmental Impact Statement (FEIS), 1985, 2003.
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.

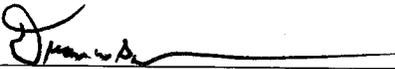
**A summary of the details of the approval follows.** The CX1 worksheet, WY-070-390CX1-12-179 and -180 includes the project description, including site-specific mitigation measures. Mitigation measures will include the conditions of approval (COAs).

**THE FINDING OF NO SIGNIFICANT IMPACT (FONSI).** The US Congress, Department of Interior, and BLM affirmed there was no significant impact of a like-structured project when they created this CX1 and its limiting parameters. Thus a FONSI and an EIS is not required.

**DECISION RATIONALE.** The approval of this project is because:

1. The project will not adversely affect public safety and does not involve any unique or unknown risks.
2. The project will not result in a violation of any federal or known state or local law, statute or ordinance, or other requirement imposed for the protection of the environment.
3. The approved project conditioned by its design features and COAs, will not result in any undue or unnecessary environmental degradation. The PRB FEIS analyzed and predicted that the PRB oil and gas development would have significant impacts to the region's Greater Sage-Grouse (GSG) population. The impact of this development cumulatively contributes to the potential for local extirpation yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS/ROD and current BLM and Wyoming GSG conservation strategies. There are no conflicts anticipated or demonstrated with current uses in the area. This decision approving the Mankin Federal 14-1 No. 1 and Mankin Federal 14-9 No. 2 APDs complies with the Energy Policy Act of 2005, Section 390, 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215.
4. Approval of this project conforms to the terms and the conditions of the 1985 Buffalo RMP (BLM 1985) and subsequent update (BLM 2001) and amendments (BLM 2003, 2011). This project complies with the breadth and constraints of CX1, Energy Policy Act of 2005, and subsequent policy.
5. The selected alternative will help meet the nation's energy need, revenues, and stimulate local economies by maintaining workforces.
6. The project is clearly lacking in wilderness characteristics because it lacks federal surface.
7. This decision does not foreclose the lessee or operator to propose a new or supplementary plan for developing the federal oil and gas lease(s) in this project area, including submission of additional APDs to drain minerals in accord with lease rights and law.

**ADMINISTRATIVE APPEAL:** This decision is subject to administrative appeal in accord with 43 CFR 3165. Request for administrative appeal 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.

Field Manager:  Date: 7/30/12

**Categorical Exclusion 1 (CX1), WY-070-390CX1-12-179 and WY-070-390CX1-12-180**  
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**Description of the Proposed Action**

Stroud Petroleum, Inc. (Stroud) requests approval of their applications for permit to drill (APD) for the Mankin Federal 14-1 No. 1 and Mankin Federal 14-9 No. 2 on the same lease WYW28680. The vertical oil wells will be drilled to the Sussex formation at a total depth of 8,500 feet. The need for this project is to determine whether, how, and under what conditions to support the Buffalo Resource Management Plan’s (RMP) goals, objectives, and management actions (2003 Amendment) with allowing the exercise of the operator’s conditional lease rights to develop fluid minerals on federal leases. APD information is an integral part of this EA, which BLM incorporates here by reference (CFR 1502.21). Conditional fluid mineral development supports the RMP and the Mineral Leasing Act of 1920, the Federal Land Policy Management Act (FLPMA), and other laws and regulations. Jim Mankin (Ruth M Mankin Trust) is the surface owner.

Operations would occur in the following location:

APD/Well Name	Qrt/Qrt	Sec	Twp	Rng	Lease	CX1
Mankin Federal 14-1 No. 1	NENE	14	47N	76W	WYW28680	WY-070-390CX1-12-179
Mankin Federal 14-9 No. 2	NESE	14	47N	76W	WYW28680	WY-070-390CX1-12-180

The project is subject to the conditions-of-approval (COAs) for drilling an oil well in the BFO area under standard split estate jurisdiction. For a detailed description of design features and construction practices associated with the proposed project, refer to the APDs’ surface use plan (SUP) and drilling plan.

Operations would include the following performed by Stroud and/or their contractors:

- Construction of drilling pads with dimensions of approximately 375 by 275 feet accounting for 4.6 acres of disturbance.
- After drilling and completion, the well pad areas will be reduced to approximately 0.6 acres for the production phase by reclamation of disturbed areas created during construction that would not be needed should the well be placed into production.
- A road network consisting of an existing improved road to the Mankin Federal 14-9 requiring ¾ miles of additional gravel surfacing. A primitive road to the Mankin Federal 14-1 will require crown and ditching and graveling.
- No pipelines (oil, gas, water) are proposed for this project. If the well is determined to be economically viable and put into production, a water disposal strategy will be proposed by sundry application.
- Drilling, testing and completion of the well. If determined to be economically viable, the well would be put into production. Production facilities would be placed on the site, including a pump jack, separation equipment and storage tanks according to the Production Facility Pad/Shrink Map attached to the Surface Use Plan. The facilities and site would be operated and maintained for the life of the well.
- Temporary living accommodation on well pad during drilling and completion operations as addressed in the Surface Use Plan narrative.
- For drilling operations fresh water will be obtained from an approved commercial facility.
- If the well is not found to be economically viable, all areas disturbed during construction would be reclaimed to approximate pre-disturbance condition, and the well bore would be plugged per State of Wyoming and BLM policy and regulations.

The total new surface disturbance for this action consists of: 7.5 acres (see table, below).

**Plan Conformance**

The proposed project conforms to the terms and the conditions of the Buffalo Resource Management Plan (RMP), 1985, amended 2001, 2003, and 2011. The development area is clearly lacking wilderness characteristics as it is in the midst of extensive coalbed natural gas (CBNG) development with miles of mechanically maintained roads, (see DOI Order 3310). The Energy Policy Act of 2005 subjects oil or gas exploration or development to a rebuttable presumption that the use of a categorical exclusion under the National Environmental Policy Act (NEPA) applies. Thus BLM must use an Energy Policy Act CX unless BLM can prove such CX is inapplicable. This CX worksheet is a form of NEPA compliance categorically excluded from the analysis that occurs in an EA or EIS. BLM H-1790, p. 17.

The applicable categorical exclusion from the Energy Policy Act of 2005 is exclusion number (b)(1) which is *individual surface disturbances of less than 5 acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.*

A Section 390 Categorical Exclusion 1 (BLM NEPA Handbook, Appendix. 2) has 3 requirements:

- 1) The project must disturb less than 5 acres on the site. If more than 1 action is proposed for a lease (for example 2 or more wells), each activity is counted separately and each may disturb up to 5 acres. Similarly, the 5-acre limit applies separately to each activity requiring discrete BLM action, such as each APD, even though for processing efficiency purposes the operator submits for BLM review a large master development plan addressing many wells. The surface disturbance for the Mankin Federal 14-1 and 14-9 wells are as follows:

**Disturbance Summary for the Mankin Federal 14-1 and 14-9 wells.**

Facility	No. or Mileage	Factor	Disturbance (acres)	Duration
14-1 Well Pad During Drilling & Construction Operations	1 375 ft. x 260 ft.	W*L/43560 acre	2.2 acres	Short term
14-9 Well Pad During Drilling & Construction Operations	1 370 ft. x 280 ft.	W*L/43560 acre	2.4 acres	Short term
14-1 Well Pad After Drilling & Completion During Production	175 ft. x 150 ft.	W*L/43560 acre	0.6 acres	Long term
14-9 Well Pad After Drilling & Completion During Production	175 ft. x 150 ft.	W*L/43560 acre	0.6 acres	Long term
14.1 Existing primitive access needing upgrades	8,448 ft	15 ft.	2.9 acres	Long term
Pipelines (oil, gas, water)	0	30 ft.	N/A	Short term
<b>Total</b>			<b>7.5 acres</b>	

\*NOTE: After the drilling & construction phase, the pad size will be reduced to 1.50 acres of disturbance during production, reducing the disturbance by 3.12 acres. This figure is not cumulative and has not been added to the total disturbance.

- 2) The current un-reclaimed surface disturbance readily visible on the entire leasehold must not be greater than 150 acres, including this proposed project. This includes previous disturbances supporting lease development. The 150-acre limit applies separately to each federal lease supporting the development. Lease WYW28680 has less than 150 acres of total surface disturbance.
- 3) There must be a site-specific NEPA document (not just leasing) that covers the boundaries of the proposed project. This NEPA document may be an exploration or development EA/EIS; it may be part of a specific master development plan, a multi-well EA/EIS, or an individual permit approval EA/EIS. The

NEPA document must have analyzed the type of activity or project being considered; yet it need not have addressed the specific permit or application being considered.

The area had historic conventional oil and gas exploration and production, and recent coalbed natural gas (CBNG) development. The project area is within or adjacent to the boundaries of 3 CBNG plans of development (PODs). This proposal falls within the foreseeable development scenario that was analyzed in the tiered NEPA documents required to use a CX1.

**Table 1. Adjacent or Overlapping CBNG & Oil Well Development**

NEPA Document Name	NEPA Document or #	Decision Date
BBC Pumpkin Creek POD	WY-070-EA07-186	09/21/2007
Veranda 1 & 2 POD	WY-070-EA09-039	10/29/2010
Triangle Unit North POD	WY-070-EA06-282	09/18/2006
Powder River Basin FEIS	FEIS (WY-070-02-065) & Record of Decision (ROD)	04/30/2003

**Plan of Operations**

The proposal design conforms to all Bureau standards and incorporates appropriate best management practices, required and design mitigation measures determined to reduce the effects on the environment. BFO reviewed a surface use plan (SUP) of operations which described all proposed surface-disturbing activities and approves the SUP pursuant to Section 17 of the Mineral Leasing Act, as amended.

**Cultural Resources**

A previously reviewed and accepted Class III cultural resource inventory (BFO # 70070065) adequately covered the proposed project area. No cultural resources are in the area of potential effect. On July 23, 2012 Seth Lambert, BLM Archaeologist, electronically notified the Wyoming State Historic Preservation Office (SHPO) following section VI(A)(1) of the Wyoming State Protocol, of a finding of no effect for the proposed project.

**Water Resources**

The historical use for groundwater in this area was for stock water or domestic purposes. A search of the WSEO Ground Water Rights Database showed 4 registered stock and domestic water wells within 1 mile of the proposed well(s) in the project area with depths from 430 to 490 feet.. For additional information on groundwater, refer to the PRB FEIS (2003), Affected Environment, pp. 3-1 to 3-36.

Adherence to the drilling COAs, the setting of casing at appropriate depths, following safe remedial procedures in the event of casing failure, and using proper cementing procedures should protect any fresh water aquifers above the target coal zone. This will ensure that ground water will not be adversely impacted by well drilling and completion. The operator will run surface casing to 2,000 feet, total vertical depth to protect shallow aquifers. The top of cement for the production string will be calculated to 1,000 feet above the Fox Hills formation.

At the time of permitting, the volume of water that will be produced in association with these federal minerals is unknown. The operator will have to produce the well for a time to be able to estimate the water production. In order to comply with the requirements of Onshore Oil and Gas Order #7, Disposal of Produced Water, the operator will submit a sundry to the BLM within 90 days of first production which includes a representative water analysis as well as the proposal for water management.

Historically, the quality of water produced in association with conventional oil and gas has been such that surface discharge would not be possible without treatment. Initial water production is quite low in most

cases. There are three common alternatives for water management: Re-injection, deep disposal or disposal into pits. All alternatives would be protective of groundwater resources when performed in compliance with State and Federal regulations.

**Wildlife Resources**

The wildlife biologist determined that the proposed APDs, combined with the COAs are: (1) consistent with the FEIS (WY-070-02-065) and its supplements, to include biological opinion (ES-6-WY-02-F006), the RMP and its Amendments, and the above tiered EAs; and (2) consistent with the effects analyzed in the site specific Endangered Species Act section 7 consultation and does not change the determinations in that consultation.

**Greater Sage-Grouse (GSG)**

New information regarding GSG includes the 2012 BLM-contracted population viability analysis for the Northeast Wyoming GSG. That study found that there remains a viable population of GSG in the PRB (Taylor et al. 2012); however threats from energy development and West Nile Virus (WNV) are impacting future viability (Taylor et al. 2012). The study indicated that effects from energy development, as measured by male lek attendance, are discernible out to a distance of 12.4 miles.

The PRB FEIS predicted that the PRB oil and gas development would have significant impacts to the GSG population. The impact of the proposed development may cumulatively contribute to the potential for local extirpation yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS/ROD and current BLM and Wyoming GSG conservation strategies. To mitigate breeding and nesting impacts, the BLM will impose a timing limitation prohibiting surface disturbance from March 15 to June 30.

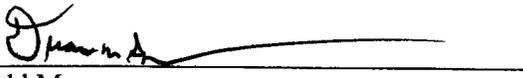
**Persons and Agencies Consulted**

<b>Name</b>	<b>Company/Agency</b>	<b>Title</b>
Bill Ostheimer	BLM	Wildlife Biologist
Seth Lambert	BLM	Archeologist
Matthew Warren	BLM	Petroleum Engineer
Karen Klaahsen	BLM	LIE
Mike Garrett	BLM	Geologist
John Kelley	BLM	Planning & Environmental Coordinator
Jenna Foss	Grouse Mountain Consultants	Permit Agent
John Kennedy	Fitzsimmons, LLC	Landman
Teri Strey	Fitzsimmons, LLC	Landman
Josh Johnson	Big Horn Engineering	P.E.
Jim Mankin		Surface Owner

**Decision and Rationale on Action**

I approve the Mankin Federal 14-1 and 14-9 APDs using the rationale from the above CX1 worksheet and the (COAs) attached as Appendix A.

The COAs provide mitigation and further the justification for this decision and may not be segregated from project implementation without further NEPA review. I reviewed the plan conformance statement and determined that the proposed Mankin Federal 14-1 No. 1 and Mankin Federal 14-9 No. 2 CX1 APDs and infrastructure conform to the applicable land use plans. I reviewed the proposal to ensure the appropriate exclusion category as described in Section 390 of the Energy Policy Act of 2005 is correct. It is my determination that there is no requirement for further environmental analysis.



Field Manager

7/30/12  
Date

**Contact Person**

For additional information concerning this decision, contact: Casey Freise, Supervisor Natural Resource Specialist, Buffalo Field Office, 1425 Fort Street, Buffalo WY 82834, 307-684-1058.

**References:**

Taylor, R. L., D. E. Naugle, L. S. Mills. 2012. Viability analyses for conservation of sage-grouse populations: Buffalo Field Office, Wyoming. Final Report. February 27, 2012. University of Montana, Missoula, MT.

**Appendix A, COAs**

**CONDITIONS OF APPROVAL FOR THE APPLICATION FOR PERMIT TO DRILL  
Categorical Exclusion 1 (CX1), Section 390, Energy Policy Act of 2005  
Mankin Federal 14-1 No. 1 – WY-070-390CX1-12-179 and  
Mankin Federal 14-9 No. 2 – WY-070-390CX1-12-180  
Bureau of Land Management, Buffalo Field Office, Wyoming**

Operator: Stroud Petroleum Inc.

Field Office: Buffalo Field Office  
Address: 1425 Fort Street  
Buffalo, Wyoming 82834

Office Telephone Number: 307-684-1100

The spud date will be reported electronically, (see website location above) to the Authorized Officer 24 HOURS BEFORE SPUDDING, unless otherwise required in site specific conditions of approval.

Spud Notice Site:

[http://www.wy.blm.gov/minerals/og/og\\_notices/spud\\_notice.php](http://www.wy.blm.gov/minerals/og/og_notices/spud_notice.php)

WELL NAME	QRT/QRT	SEC	TOWNSHIP	RANGE	Lease
Mankin Federal 14-1 No. 1	NENE	14	47N	76W	WYW28680
Mankin Federal 14-9 No. 2	NESE	14	47N	76W	WYW28680

**SITE SPECIFIC**

**Surface Use**

1. The proposed improved road to the Mankin Federal 14-1 No. 1 must be fully built (including all water control structures such as wing ditches, culverts, relief ditches, low water crossings, surfacing, etc.) and functional to BLM standards prior to drilling of the well.
2. The existing improved road to the Mankin Federal 14-9 No. 2 will need to be fully graveled prior to drilling the well.
3. The operator will collect a water sample representative of the water produced from this well for analysis within 30 to 60 days of initial production. Results of the analysis will be submitted to the BLM Authorized Officer as soon as they become available. The constituents analyzed in the water quality analyses will be the same as those required by the WDEQ for WYPDES permit using approved EPA test procedures (40CFR136 or 40CRF136.5).
4. After well completion, the operator shall submit a Sundry Notice for approval of disposal of all produced water in accordance with Onshore Oil and Gas Order No. 7, Disposal of Produced Water.

- The operator will seed on the contour to a depth of no more than 0.5 inch. To maintain quality and purity, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used. On BLM surface or in lieu of a different specific mix desired by the surface owner, use the following:

**10-14” Precipitation Zone: Shallow Loamy Ecological Site Seed Mix**

<b>Species</b>	<b>% in Mix</b>	<b>Lbs PLS*</b>
<b>Thickspike Wheatgrass</b> ( <i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i> )	50	6.0
<b>Bluebunch wheatgrass</b> ( <i>Pseudoroegneria spicata</i> ssp. <i>Spicata</i> )	35	4.2
<b>Prairie coneflower</b> ( <i>Ratibida columnifera</i> )	5	0.6
<b>White or purple prairie clover</b> ( <i>Dalea candidum</i> , <i>purpureum</i> )	5	0.6
<b>Rocky Mountain beeplant</b> ( <i>Cleome serrulata</i> ) /or <b>American vetch</b> ( <i>Vicia americana</i> )	5	0.6
<b>Totals</b>	<b>100%</b>	<b>12lbs/acre</b>

\*PLS = pure live seed. Northern Plains adapted species  
Double this rate if broadcast seeding

**Wildlife**

- No surface disturbing activities are permitted during sage-grouse breeding and nesting periods (March 15 – June 30).
- For any surface-disturbing activities proposed in sagebrush shrublands, the operator will conduct clearance surveys for sage-grouse breeding activity during the sage-grouse’s breeding season before initiating the activities. The surveys must encompass all sagebrush shrublands within 0.5 miles of the proposed activities. This will apply to the approved well and infrastructure. All survey results shall be submitted in writing to a Buffalo BLM biologist no later than July 31 of the current year. This condition will be implemented on an annual basis for the duration of surface disturbing activities.
- If a previously unknown lek is identified during surveys (April 1-May 7), a Buffalo BLM biologist shall be notified.

**STANDARD**

**General**

- If any cultural values [sites, artifacts, human remains (Appendix L FEIS and ROD)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. 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 BLM 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. 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.
2. If paleontological resources, either large or conspicuous, and/or a significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.
  3. Please contact Casey Freise, Supervisory Natural Resource Specialist, at (307) 684-1189, Bureau of Land Management, Buffalo, if there are any questions concerning the following surface COAs.

#### **DRILLING AND PRODUCTION OPERATIONS**

1. Verbal notification shall be given to the Authorized Officer at least 24 hours before formation tests, BOP tests, running and cementing casing, and drilling over lease expiration dates.
2. New hard-band drill pipe shall not be rotated inside any casing. Hard-band drill pipe shall be considered new until it has been run at least once.
3. All Blow Out Prevention Equipment tests shall include a 5 minute low pressure test between 250 psi and 500 psi with no drop in pressure with the only exception being the chokes. The chokes are only required to have the high pressure test held for a minimum length of time necessary to verify their functional integrity.
4. All operations must be conducted in accordance with all applicable laws and regulations: with the lease terms, Onshore Oil and Gas Orders, NTL's; and with other orders and instructions of the Authorized Officer, unless a variance has been granted in writing by the Authorized Officer.
5. The Operator shall install an identification sign consistent with the requirements of 43 CFR 3162.6 immediately upon or before the completion of the well pad construction operations.
6. All Blow Out Prevention Equipment rated 5M or greater shall be isolated from the casing and tested to stack working pressure. All Blow Out Prevention Equipment tests shall be performed by a suitable test pump, not the rig-mud pumps and recorded on a chart. The chart shall be submitted to the Buffalo Field Office.
7. Low test on Blow Out Prevention Equipment shall be performed and passed before moving onto the high test for each component.
8. If there are indications of inadequate primary cementing of the surface, intermediate, or production casing strings; such as but not limited to no returns to surface, cement channeling, fallback or

mechanical failure of equipment, the operator will evaluate the adequacy of the cementing operations. This evaluation will consist of running a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO) no sooner than 12 hours and no later than 24 hours from the time the cement was first pumped.

9. If the evaluation indicates inadequate cementing, the operator shall contact a BLM Buffalo Field Office Petroleum Engineer for approval of remedial cementing work.
10. The adequacy of the remedial cementing operations shall be verified by a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO). All remedial work shall be completed and verified prior to drilling out the casing shoe or perforating the casing for purposes other than remedial cementing.
11. The cement mix water used must be of adequate quality so as not to degrade the setting properties of the cement. Any water that does not meet municipal quality water standards shall be tested by mixing the water and cement in a lab and comparing the results to the municipal quality water mix results. If the results show that the cement qualities are not the same or greater, than the non-municipal water shall not be used for mixing cement in the well.
12. All oil and gas operations shall be conducted in a manner to prevent the pollution of all freshwater resources. All fresh waters and waters of present or probable future value for domestic, municipal, commercial, stock or agricultural purposes will be confined to their respective strata and shall be adequately protected. Special precautions will be taken to guard against any loss of artesian water from the strata in which it occurs and the contamination of fresh water by objectionable water, oil, condensate, gas or other deleterious substance to such fresh water.
13. Any changes to the approved drilling plan and/or these conditions of approval shall be approved by the BLM-Buffalo Field Office Petroleum Engineer prior to being implemented.  
After hours number: Petroleum Engineer: Matthew Warren      Cell Telephone: 307-620-0103

### **Construction**

1. Construction and drilling activity will not be conducted using frozen or saturated soil material during periods when watershed damage or excessive rutting is likely to occur.
2. Remove all available topsoil (depths vary from 4 inches on ridges to 12+ inches in bottoms) from constructed well locations including areas of cut and fill, and stockpile at the site. Topsoil will also be salvaged for use in reclamation on all other areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Any topsoil stockpiled for one year or longer will be signed and stabilized with annual ryegrass or other suitable cover crop.
3. The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impede watershed and drainage flows.
4. Construct the backslope no steeper than ½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
5. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.

6. To minimize electrocution potential to birds of prey, all overhead electrical power lines on BLM surface will be constructed to standards identified by the Avian Power Line Interaction Committee (2005). BLM encourages the use of buried powerlines.
7. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.
8. The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having a 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.
9. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
10. Culverts will be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them, and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.
11. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
12. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
13. Maximum design speed on all operator constructed and maintained roads will not exceed 25 miles per hour.
14. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.
15. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
16. During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.
17. Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb five or more acres (changing to one acre in March 2005). This general construction storm water permit must be obtained from WDEQ prior to any surface disturbing activities and can be obtained by following directions on the WDEQ website at <http://deq.state.wy.us>. Further information can be obtained by contacting Barb Sahl at (307) 777-7570.

18. The operator shall submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD Surface Use Plan.

### **Operations/Maintenance**

1. Confine all equipment and vehicles to the access road, pad, and area specified in the approved APD.
2. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.
3. Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.
4. The operator will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) 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 on public land, the holder shall obtain from the BLM 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 to such use.
5. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
6. The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of this well will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.
7. Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Order #7.
8. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes. These include:
  - drilling muds & cuttings
  - rigwash
  - excess cement and certain completion & stimulation fluids defined by EPA as exemptIt does not include drilling rig waste, such as:
  - spent hydraulic fluids
  - used engine oil
  - used oil filter
  - empty cement, drilling mud, or other product sacks
  - empty paint, pipe dope, chemical or other product containers
  - excess chemicals or chemical rinsate

Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM Authorized Officer requiring specific testing and closure requirements.

9. Operators are advised that prior to installation of any oil and gas well production equipment which has the potential to emit air contaminants, the owner or operator of the equipment must notify the Wyoming Department of Environmental Quality, Air Quality Division (phone 307-777-7391) to determine permit requirements. Examples of pertinent well production equipment include fuel-fired equipment (e.g., diesel generators), separators, storage tanks, engines and dehydrators.

**DryHole/Reclamation**

1. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific COAs.
2. Disturbed lands will be recontoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.
3. The fluids and mud must be dry in the reserve pit before recontouring pit area. The operator will be responsible for recontouring of any subsidence areas that develop from closing a pit before it is completely dry. The plastic pit liner (if any) will be cut off below grade and properly disposed of at a state authorized landfill before beginning to recontour the site.
4. Before the location has been reshaped and prior to redistributing the topsoil, the operator will rip or scarify the drilling platform and access road on the contour, to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.
5. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking following the contour.
6. Waterbars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet 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 (percent)	Spacing Interval (feet)
≤ 2	200
2 – 4	100
4 – 5	75
≥ 5	50

7. BLM will not release the performance bond until the area has been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.
8. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
9. For performance bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.

10. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
11. Any mulch utilized for reclamation needs to be certified weed free.

**Producing Well**

1. Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before recontouring pit area. The operator will be responsible for recontouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
2. Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM Authorized Officer. Reduce slopes by pulling fill material up from foreslope into the toe of cut slopes.
3. Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by the BLM Authorized Officer.
4. A dike will be constructed completely around the production facilities (i.e. production tanks, water tanks, and heater-treater). The dikes for the production facilities must be constructed of impermeable soil, hold 110% of the capacity of the largest tank plus 1-foot of freeboard, and be independent of the back cut.
5. Any chemicals used in treating the wells (e.g., corrosion inhibitor, emulsion breaker, etc.) will be in a secure, fenced-in area with appropriate secondary containment structure (dikes, catchment pan, etc.).
6. The load out line coming from the oil/condensate tank(s) will have a suitable containment structure to capture and recycle any oil spillage that might occur.
7. Individual production facilities (tanks, treaters, etc.) will be adequately fenced off (if entire facility not already fenced off).
8. Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-3A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.
9. Distribute stockpiled topsoil evenly over those areas not required for production and reseed as recommended.
10. Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM Authorized Officer to prevent soil erosion and accommodate safe, environmentally-sound access.
11. Prior to construction of production facilities not specifically addressed in the APD, the operator shall submit a Sundry Notice to the BLM Authorized Officer for approval.
12. If not already required prior to constructing and drilling the well location, the operator shall immediately upgrade the entire access road to BLM standards (including topsoiling, crowning, ditching, drainage culverts, surfacing, etc.) to ensure safe, environmentally-sound, year-round access.