

DECISION RECORD

**Section 390, Energy Policy Act of 2005, Categorical Exclusion 3 (CX3), WY-070-390CX3-13-219
Application for Permit to Drill (APD)
Peak Powder River Resources LLC, Roush 1-33H Conventional Oil Well
Bureau of Land Management, Buffalo Field Office, Wyoming**

DECISION. The BLM approves the application for permit to drill (APDs) from Peak Powder River Resources LLC (Peak) to drill 1 horizontal oil and gas well and construct the associated access road and infrastructure as described in the Section 390, Energy Policy Act of 2005 Categorical Exclusion 3, WY-070-CX3-13-219, 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 CX3 analysis for the 1 oil and gas wells, above, includes the project description, including site-specific mitigation measures which are incorporated by reference into this CX3 from earlier analysis. The proposed well is approximately 47 miles south of Gillette and 14.9 miles west of Wright in Campbell County, Wyoming. Peak’s proposal has 1 APD along with associated access road and infrastructure, to develop and produce oil and gas from the Shannon Formation of the PRB. The wells are a horizontal bores proposed on a 640 acre spacing pattern.

Approvals: BLM approves the following APD and associated infrastructure:

#	Well Name/ #	Qtr	Sec	Twp	Rng	Surface Lease	CX Number
1	Roush 1-33H	SWSE	33	43N	74W	WYW127712	WY-070-390CX3-13-219

Limitations. See conditions of approval (COAs) and see, above, ROW.

THE FINDING OF NO SIGNIFICANT IMPACT (FONSI). Congress, the Department of Interior and BLM affirmed there was no significant impact of a like-structured project when they created this CX3 analysis process and its limiting parameters. Thus a FONSI and EIS are not required.

Summary of New Information. BLM posted the APDs for 30 days and received no public comments. Since BLM received these APDs it also received a clarification of the Greater Sage-Grouse (GSG) Density and Disturbance Calculation Tool, Instruction Memorandum (IM)-WY-2013-035.

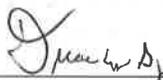
DECISION RATIONALE. The approval of this project is because:

1. Mitigation measures and COAs analyzed in the consolidated CX3 analysis, in environmental impact statements, or environmental analysis to which the CX3 analysis tiers or incorporates by reference, will reduce environmental impacts while meeting the BLM’s need.
2. 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 GSG population. The impact of this development cumulatively contributes to the potential for local extirpation of GSG; 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 this APD complies with the Energy Policy Act of 2005, Section 390, 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215.

3. To reduce the likelihood of a "take" under the Migratory Bird Treaty Act, BLM sensitive species nesting habitat removal will occur outside of the breeding season or be cleared by survey.
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 CX3, 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 operator, in their APD, shall:
 - Comply with all applicable federal, state, and local laws and regulations.
 - Offer water well agreements to the owners of record for permitted water wells within 0.5 mile of a federal producing well in the APD (PRB FEIS ROD, p. 7).
 - Provide water analysis from a designated reference well in each coal zone.
7. The project is clearly lacking in wilderness characteristics because it is amidst mineral development.
8. This decision does not foreclose the lessee or operator to propose a new or supplementary plan for developing the federal oil and gas leases in this project area, including submission of additional APDs to drain minerals in accord with lease rights and law. This decision does not foreclose the lessee or operator to propose using external pumping units via a sundry application process.
9. Peak certified it has a surface use access agreement with the landowners or it posted a bond.
10. This approval is subject to adherence with all of the operating plans, design features, and mitigation measures contained in the surface use plan of operations and drilling plan information in the individual APD.

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: 11/7/13

Categorical Exclusion 3 (CX3), WY-070-390CX3-13-219
Section 390, Energy Policy Act of 2005, Application for Permit to Drill (APD)
Peak Powder River Resources, Roush 1-33H
Bureau of Land Management, Buffalo Field Office, Wyoming

Description of the Proposal. Peak Powder River Resources (Peak) proposes to directionally drill 1 conventional oil and gas well on a single well pad including construction of associated access road and infrastructure as follows:

Table 1.1. Proposed Wells

#	Well Name/ #	Qtr	Sec	Twp	Rng	Surface Lease	CX Number
1	Roush 1-33H	SWSE	33	43N	74W	WYW127712	WY-070-390CX3-13-219

The proposal is to explore by drilling for, and possibly develop, oil reserves in geologic mineral formations leased by Peak using standard split jurisdiction rules. The proposed location is approximately 47 miles south of Gillette, Wyoming, in Campbell County. The one proposed oil well will be on a single well pad. BLM's need for this project is to determine whether, and if so, how and under what conditions to balance natural resource conservation with allowing the Operator to exercise lease rights to develop fluid minerals by drilling the Roush 1-33H horizontal oil well with a surface hole location on federal lease WYW127712 as described in their application for permit to drill (APD), surface use plan of operation (SUPO), and drilling plans, incorporated here by reference. The fluid mineral leasing programs fall under the authority of the Mineral Leasing Act of 1920, the Federal Land Policy Management Act (FLPMA), and other laws.

Reasonably foreseeable development is found in the Iberlin 1-9H and 1-9TH Environmental Assessment (EA), WY-070-EA13-224, 2013. This locality includes but is not limited to the approved Iberlin 1-9H and 1-9TH wells with 640 acre spacing. This supports the development anticipated in the Powder River Basin Final Oil and Gas Project Environmental Impact Statement (PRB FEIS), (see Section 2, No Action Alternative). The surface owners are in Table 1.2.

Table 1.2. Proposed Well location Information, Elevation and Distances are in Feet

#	Well Name/ #	Surface Elevation @ well stake	Total Vertical Depth	Total Wellbore Length	Total Lateral Length	Surface Owner
1	Roush 1-33H	5302.2	9,831	10,158	4,151	Robert Roush

The project area is in the Powder River Basin (PRB) geographic area (Wyoming Geographic Landforms Map). Topography is moderately rough terrain characterized by moderately incised to rugged arroyos along ephemeral dendritic drainages. The landform is a combination of bedrock residuum and slope-wash deposits. The Powder River is 7 air miles northeast of the proposal. Peak proposes drilling to the Shannon formation. See Table 1.2 for the depths at each well location. The total wellbore length and the total length of the well laterals are in Table 1.2. Refer to Figures 1.1, below for a diagram of lease boundaries, well surface and bottom-hole locations, and lateral bore paths. See Table 1.3, below for APD processing information. BLM conducted initial onsite on March 13, 2013. The onsite evaluated the proposal and BLM made recommendations to modify the SUPO to avoid and/or mitigate environmental impacts.

Table 1.3. APD Submission and Processing Dates

#	Well Name/ #	Date APD received by BLM	APD Onsite Date	Date Deficiencies sent to Peak	Date Revisions received by BLM
1	Roush 1-33H	May 28, 2013	March 13, 2013	July 26, 2013	August 28, 2013

Full effects of the action and recommended mitigation measures are in the Roush 1-33H SUPO, Iberlin 1-9H and 1-9TH EA, WY-070-EA13-224, 2013, and this CX3's Conditions of Approval (COAs) for Conventional Application for Permit to Drill.

Drilling, Construction, and Production design features include:

- Construction of the drilling pad with dimensions of approximately 345 feet by 460 feet flat working area with additional disturbance to accommodate the cut and fill slopes.
- Construction of a temporary water storage tank 150 feet in diameter and 12 feet high (41,000 bbl capacity) for drilling, completion and hydraulic stimulation of the well. The above-ground tank will not require a separate location or additional disturbance.
- Hydraulic stimulation will utilize additional 500 barrel (bbl) hydraulic fracturing (HF) tanks on location for:
 - o Storage vessels to heat HF water,
 - o Store and mixing of HF chemicals prior to pumping down hole
 - o Storage of HF flow back fluids for disposal at an authorized off site facility.
- Peak anticipates starting drilling as soon as possible upon permit approval however the permit is valid for 2 years. Approximately 60 days are needed for drilling and 90 days for completion. Drilling and construction is year-round in the region. Weather may cause delays but delays rarely last multiple weeks. Timing limitations agreements with surface owners may impose longer temporal restrictions.
- After drilling and completion, the fill material and remaining spoil will be used to reduce the back slope and the fore slopes. This will decrease the pad surface area to 270 feet by 270 feet or 2.7 acres.
- A road network consisting of approximately 4.7 miles of existing improved roads; 0.16 miles existing primitive access used for coalbed natural gas (CBNG) field traffic will be upgraded. All roads will be constructed and/or maintained to meet BLM 9113 Manual road standards. Upgrades by widening road to 18 feet running surface and adding turnouts (150 feet by 10 feet) every 1,000 feet or intervisible and curve widening will be made to improve overall safety and match Operator's anticipated use for larger trucks and increased traffic.
- During construction and drilling phases, truck traffic will include rig and ancillary equipment mobilization, drilling water and completion water hauling, and delivery of large production facility equipment such as 400 barrel fluid storage tanks, etc. The average daily traffic (ADT) for the roads associated with drilling the Roush 1-33H is estimated as follows:
 - o Rig mobilization phase: 5 days; approximately 50 trucks per day
 - o Drilling phase: 4 weeks; approximately 10 – 20 trucks per day
 - o Rig demobilization phase: 2 days; approximately 50 trucks per day
- Estimated ADT during production activities is two oil tanker trucks per day.
- Buried electrical cable from the meter drops to the pumping unit at the well location will total 2,144 feet.
- There is existing 3-phase overhead power in the project area.
- The Operator proposes to drill wells using water-based mud (WBM). There will be no drilling reserve pit at the well location. Instead, an on location drilling mud system comprised of a closed loop mud system utilizing four, 500 bbl HF tanks and one, 6,600 square foot, L-shaped, lined cutting pit 10 deep will be utilized.
- The entire well pad location will be fenced during drilling and completion operations so as to effectively keep out wildlife, livestock, unauthorized personnel, and unauthorized vehicle access.
- If determined to be economically viable, each well would be put into production. Production facilities that would be placed on each site include a pumping unit; separator; vertical heater-treater with separator; 4 400-bbl production tanks, 1 400-bbl produced water tank, gas meter buildings and electric meter. A combustor with flare stack will be installed for flaring produced gas until the gas pipelines are installed. A generator will be set on location to power production facilities until permanent power is installed.

- No produced oil or water pipelines are proposed for this project. Providing these items become necessary, the Operator will submit a sundry notice to the BLM to gain approval prior to construction.
- Produced water during the production phase will be stored in 1 produced water tank. These tanks will be emptied as needed using water tanker trucks. Produced water, including fracing flowback fluid, will be disposed at permitted facilities.
- 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.

For a detailed description of design features and construction practices associated with the proposed project, refer to the SUPO and Drilling Plans included with the APD. Also, see the SUPO for maps showing the proposed well location, access roads and associated facilities described above. Table 1.4 below shows the total surface disturbance for the proposed action is 10.2 acres, reduced to 5.4 acres of long term disturbance after interim reclamation or 53% of the initial disturbance.

Table 1.4. Surface Disturbance Summary for the 3 APDs / Wells and Infrastructure

Facility	Construction Disturbance (Short Term)	Interim Disturbance (Long Term)
Number of Horizontal Wells	1	1
Engineered Pads	5.8 acres	2.7 acres
New Crown and Ditched Roads	2,341 feet (2.7 acres)	1 acres
Existing Roads Improvements (Add 5 Turnouts)	0.23 acres	0.23 acres
Buried Gas Pipeline	NA	NA
Buried Electric Powerline	0 acres	0 acres
Overhead Power	2,144 feet (1.48 acres)	1.48 acres
Total Acre Disturbance	10.2	5.4 Acres

BLM incorporated and analyzed the implementation of committed mitigation measures in the SUPO and drilling plan, in addition to the COAs in the PRB FEIS ROD, as well as changes made at the onsite.

Plan Conformance, Compliance, and Justification with the Energy Policy Act of 2005

The Energy Policy Act of 2005, Section 390(a) 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, Section 390(b), CX unless BLM rebuts the presumption. This CX analysis is NEPA compliance categorically excluded from an EA or EIS or their analysis; it is not an exclusion from all analysis. (40 CFR 1508.4 and BLM H-1790, p. 17.) The proposal conforms to the terms and conditions of the Approved Resource Management Plan (RMP) for the public lands administered by the BLM, BFO, 1985, the PRB FEIS, January 2003, and the Record of Decision (ROD) and Resource Management Amendments for the Powder River Oil and Gas Project, Amendments of 2001, 2011 as required by 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215. The Roush 1-33H well location is clearly lacking in wilderness characteristics as it is amidst natural gas development. BLM finds that the conditions and environmental effects found in the senior EA and PRB FEIS remain valid.

The applicable categorical exclusion from the Energy Policy Act of 2005, Section 390, is exclusion number (b)(3) which is *drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well.*

BLM has 3 requirements to use a Section 390 CX3, (BLM H-1790, Appendix 2, #3, p. 143):

- 1) The proposed APD is in a developed oil or gas field (any field with a completed confirmation well).

Table 1.5 is a list of existing/approved oil and gas development that is within or adjacent to the Roush 1-33H project area. This information shows the reader that BLM conducted analysis.

Table 1.5. Oil & Gas NEPA Analyses Adjacent to, Overlapping and Incorporated by Reference

NEPA Document Name	NEPA Document #	# Wells	Decision Date
Iberlin 1-9H and 1-9TH EA,	WY-070-EA13-224	2 Oil	8/16/2013
Sahara POD	WY-070-EA13-72	21 Oil	3/05/2013
Crown Prospect Federal 41-28-4978SHEH	WY-070-EA13-25	1 Oil	12/28/2012
Barlow Ranch Federal 074974-3NH	WY-070-EA12-173	1 Oil	8/10/2012
Mufasa Fed 11-31H Well EA,	WY-070-EA12-062	1 Oil	4/20/2012
Powder River Basin FEIS	FEIS (WY-070-02-065) & Record of Decision		4/30/2003

The area had historic conventional oil and gas exploration and production, and is adjacent to or inside the boundaries of 1 CBNG unitization agreement area (Unit) that include 5,658 federal CBNG wells. There are 349 existing oil and gas wells within a 4 mile radius of the proposed well (Wyoming Oil and Gas Conservation Commission as of October 17, 2013). There are existing NEPA analyses (and the RMP) containing reasonably foreseeable development scenario for this action. There are several existing NEPA analyses that reasonably foresaw CBNG development with 80 acre well-spacing and 640 acre well spacing for conventional oil and gas wells. BLM reviewed these documents and determined they considered the potential environmental effects associated with the proposed activity at a site specific level. All approved EAs tier into the PRB FEIS (2003).

- 2) The PRB FEIS analyzed foreseeable development in the PRB. The PRB foreseeable development included 3,200 oil wells. The Spacing Unit dedicated to this 1 well is 640 acres. The Roush 1-33H well is in the foreseeable development scenario analyzed in EAs in Table 1.5 and in the PRB FEIS's Appendix A.
- 3) The tiered NEPA document was finalized or supplemented within 5 years of spudding (drilling) the proposed well.

The Roush 1-33H CX3 tiers to and incorporates by reference, as appropriate, to the NEPA analyses in Tables 1.5 and 1.6.

Table 1.6. NEPA Document Finalized Within Anticipated Spud Date of the Roush 1-33H

#	APD Name	Environmental Assessment #	Approved Wells	Decision Date
1	Iberlin 1-9H and 1-9TH EA,	WY-070-EA13-224	2	8/16/2013

In summary, the NEPA analyses in Tables 1.5. and 1.6 analyzed in detail the anticipated direct, indirect, residual, and cumulative effects that would result from the approval of this 1 APD. Access road and associated supporting infrastructure in Roush 1-33H project is similar to both the qualitative and quantitative analysis in the above NEPA analyses. The BFO reviewed those NEPA documents and considered potential environmental effects associated with the proposal at a site specific level. The APDs' SUPO and drilling plans are incorporated here by reference and show adequate protection of surface lands and ground water, including the Fox Hills formation. The APDs' acres of surface disturbances are within the PRB FEIS analysis parameters.

Plan of Operations

The proposal conforms to all Bureau standards and incorporates appropriate best management practices, required and designed mitigation measures determined to reduce the effects on the environment. BLM reviewed and approved a SUPO describing all proposed surface-disturbing activities pursuant to Section 17 of the Mineral Leasing Act, as amended. This CX3 analysis also incorporates and analyzes the implementation of committed mitigation measures contained in the SUPO, drilling plan, in addition to the Standard COAs found in the PRB FEIS ROD, Appendix A.

Traffic will increase with approval of the wells. Peak did not supply specific information related to traffic in the surface use plan therefore BLM made assumptions based on operations conducted by other operations on similar projects; see WY State Director Review, 2013-007, pp. 10-11. Mobilizing the drilling rig and associated equipment requires 50 or more truckloads. The Operator estimate what the ADT would be 100 vehicle trips per day or less during well drilling and completion operations.

The other anticipated impact associated with hydraulic fracturing (HF) involves the large amount of heavy truck traffic (200-700 truck trips/well) to transport water storage containers, water and other HF materials to the location as well as truck traffic anticipated for removing the storage tanks and HF flow-back fluid from the HF. Peak's SUPO does not provide specific information of the HF operations but BLM anticipates the process to be a 24 hour operation lasting 2-4 weeks. During the production phase of the well, heavy trucks are expected to visit the well every 1 to 2 days to haul oil or water from the location, in addition to pumper traffic for production equipment inspections.

Well Pad

The well sites to facilitate horizontal well drilling and HF operations require constructed well pads including cut and fill slopes which are considerably larger in scale compared to typical CBNG well locations. Peak' proposed well pad has a 345 by 460 foot flat working area. Total disturbance area for each pad varies dependent upon topography, slope, and dirt balance but the Roush 1-33H is estimated to be 5.8 acres by the Operator. Additional information on the impacts to soils, and its influence on cumulative effects from energy development can be found in the affected environment and environmental effects sections (Section 3.2 and 4.4) of the Barlow Ranch Federal 074974-3NH EA, WY-070-EA12-173, as well as Iberlin 1-9H and 1-9TH EA, WY-070-EA13-224, both incorporated here by reference.

To minimize the impacts to the soil resources and to promote successful reclamation consistent with the Wyoming BLM Reclamation Policy, BLM will require that interim reclamation be implemented as soon as is practicable. Re-contouring and interim reclamation will be initiated as soon as is practicable but not more than 6 months from the date of the last well completion incorporating stored soil material into that portion of the well pad not needed for well production.

The map unit that makes up the minority of the project area (15%) also holds the soil with most limiting chemical and physical soil properties, Renohill-Shingle-Worf complex, 3 to 15% slopes. The map unit that makes up the dominant soil type, Theedle-Kishona-Shingle loams, 0 to 6% slopes, is rated as a fair source of topsoil and reclamation material. The majority of the proposed access road is over this map unit.

Topsoil depth ranges from 0 to 23 inches with low organic content of 0 to 2%. The soil has a slightly sodic horizon within 30 inches of the surface. The subsoil below 30 inches in depth is the component is of greatest concern due to the lack of organic matter, high EC, high SAR with high erosion potential. Approximately 80% (up to 17,360 cubic yards) of the material excavated to construct the well pad will be material from the *Cr* soil horizon. In its current undisturbed state, the sterile *Cr* material is isolated from the surface by 30 to 60 inches of overlying soil horizons.

Once the soils at the well site are inverted from well pad and road construction there is the potential that the surface soil properties could be degraded by the subsoil. The subsoil material dominated has severe erosion potential that will require disturbed areas to be stabilized to avoid contamination of topsoil. Likewise, stockpiled topsoil stabilization measure (stabilization efforts may include mulching, matting, soil amendments, etc.) in a manner which eliminates accelerated erosion until a self-perpetuating native plant community has stabilized the site in accordance with the Wyoming Reclamation Policy. Stabilization efforts shall be finished within 30 days of the initiation of construction activities.

Open Reserve Pit versus Closed Loop Drilling System

Peak proposes a pad design for the Roush 1-33H well that utilizing a closed loop system. Drilling water would be stored on location in 3, 500 bbl HF tanks and drilling fluids would be stored in 2, 500bbl HF tanks. A “shaker” separates the cutting from the fluids which are removed to 2, 60 by 150 foot, lined bermed containment areas on location. Minimal additional excavation is required to construct the containment areas. After the well is drilled and completed, the dried cuttings would be either be buried on location or disposed of at an authorized facility. Drilling fluids would be disposed of at an authorized facility or location. The total working pad is approximately 3.6 acres with additional space needed to store 320 cubic yards of excess spoil and 4,190 cubic yards of topsoil which if stock piled 10 feet high will require 0.36 acres. The entire disturbance area will be enclosed within a 5.8 acre fenced area to exclude livestock and wildlife.

This alternative is consistent with Wyoming BLM’s Instruction Memorandum No. WY-2012-007 (November 15, 2011), incorporated here by reference. Use of enclosed tanks and closed loop or semi-closed loop systems is environmentally preferable over the use of open pits and is to be encouraged by the BLM. Closed tanks and systems minimize waste, entry by wildlife, fugitive emissions that affect air quality, and reduce the risk of soil and groundwater contamination. In addition, the use of tanks instead of pits expedites the ability to complete interim reclamation. Benefits to the Operators utilizing closed loop and semi-closed loop systems include but are not limited to considerable cost savings through the recycling and reuse of drilling fluids and expedient reclamation reducing surface damage payments. Additional costs may be reduced with the use of tanks, particularly when open pits require netting (to exclude migratory birds) and/or solidification.

Peak anticipates 6-12 months for the pits to dry naturally. BLM’s will require reserve pits to be closed as soon as practical but no later than 6 months after the well is completed.

Access Road

There is increased soil disturbance associated with construction and/or upgrade of the roads with a 18 foot running surface and 20 foot sub-grade greatly increasing the soil disturbance depending on site topography. Geomorphic effects of roads and other surface disturbance range from chronic and long-term contributions of sediment into waters of the state to catastrophic effects associated with mass failures of road fill material during large storms. Roads can affect geomorphic processes primarily by: accelerating erosion from the road surface and prism itself through mass failures and surface erosion processes; directly affecting stream channel structure and geometry; altering surface flow paths, leading to diversion or extension of channels onto previously un-channelized portions of the landscape; and causing interactions among water, sediment, and debris at road-stream crossings. The Operator proposes to construct 2,341feet of new access road and to make improvements to 2.5 miles of existing roads. The Operator is responsible for the construction of the road to meet Bureau 9113 Manual road standards. The road improvements to be completed, including road widening, rebuilding ditches, adding turnouts, and gravel surfacing before the drilling rig or other drilling equipment moves onto the pad in order to protect soils from as well as to maintain safe operations.

Locatable Minerals

There are a total of 15 individual mining claims located within 1-mile surrounding the proposed oil well. These mining claims were very likely located for uranium. Three active and proposed uranium mining projects (all using in-situ recovery, ISR) occur within 4 miles of the proposed well location. Possible conflict(s) may occur between any uranium projects planned/underway and these proposed wells. For example, Pine Tree is a proposed uranium project whose boundary surrounds the well location. It is unlikely, however, that this project will be developed for quite some time, due to recent lowering of uranium price and other uranium projects in the area are already producing or in development. For another example, AUC, LLC, is beginning the approval process for its proposed Reno Creek uranium project, and this project lies approximately 2.2 miles east of Roush 1-33H. BLM encourages oil and gas operators to check for uranium projects in the areas of these wells, and contact those companies.

Uranium recovery would entail the addition of disturbance activities for construction of roads, facilities and well locations. Earth-moving activities associated with ISR uranium recovery are nearly the same for those of CBNG projects. It involves construction of surface facilities, access roads, well fields, and pipelines and would include clearing of top soil, land grading, and interim reclamation. There is potential for timing and/or location conflicts between the Peak's Roush 1-33H project and future uranium exploration and/or mining projects. Different situations may occur that could change the location or layout of the approved APDs or the infrastructure associated with the APDs. It is important that both companies potentially affected take the initiative to keep the others informed about their status and design plans for pipelines, electrical power, roads, so they may optimize their own project without impeding the others' project and thus preclude top-down federal or state solutions being imposed.

Drilling of wells and installation of pipelines will occur. Low levels of traffic generated by construction activities and daily operations when the project is operational would not significantly increase traffic or accidents on roads in the vicinity. However, the addition of ISR uranium recovery projects within the Project vicinity will add to the cumulative effect of soil disturbances and may delay interim and final reclamation on some of the roads proposed for use in Peak's horizontal oil well project.

Wildlife

Grouse Mountain Environmental Consultants (GMCE) completed a habitat assessment and wildlife surveys of the area April 24, 2013 for Peak. Inventory surveys were completed for sharp-tailed grouse, Greater Sage-Grouse (GSG), raptor nests, mountain plover, and prairie dog colonies as well as other BLM special status (sensitive) species (SSS). GMCEC conducted surveys per the PRB Interagency Working Group's protocols; see: http://www.blm.gov/wy/st/en/field_offices/Bufalo/wildlife.html.

The affected environment within 4 miles of the proposed well has 349 existing oil and gas wells (36 of which are plugged and abandoned) and associated access roads and infrastructure to support the wells' production. There are also 66 approved APDs for new wells. Habitat quality in the area is highly impacted by oil and gas development with an average of 6.9 wells square mile currently on the landscape.

Raptors

There are no known raptor nests within 0.5 mile of the Roush 1-33H location or the access road to the well and no new nests were observed during the nest survey. However, suitable nesting habitat and prey species are present throughout the area.

The PRB FEIS analyzed direct and indirect effects to raptors, pp. 4-216 to 4-221. This project will result in a direct loss of foraging habitats (approximately 10.2 acres). The cumulative effects associated with the project are within the analysis parameters and impacts described in the PRB FEIS. Refer to the PRB FEIS for details on expected cumulative impacts, p. 4-221.

BLM analyzed affects to raptors in the Iberlin 1-9H and 1-9TH EA which includes a requirement to survey known raptor nests following the current BLM protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist. A 0.5 mile timing restriction (February 1 through July 31) will be applied if a nest is identified as active. Measures intended to avoid, minimize, and mitigate impacts to raptors are outlined in the COAs, including Operator committed measures and site-specific COAs. For example, to reduce the risk of adverse impacts to nesting raptors, no surface-disturbing activity will occur within 0.5 mile of all identified raptor nests from February 1 through July 31, annually, prior to a raptor nest occupancy survey.

Greater Sage-Grouse (GSG)

Effects to GSG from surface disturbing and disruptive activities associated with development of horizontal oil wells were analyzed in the Sahara POD EA, WY-070-EA13-72, 2013, Section 4.6.4.1, pp. 34-37, incorporated here by reference. Activities associated with development of Peak' Roush 1-33H well are anticipated to be similar in nature, with the following additional site-specific information.

The Roush 1-33H well and proposed access road occur in an area of suitable nesting and brood rearing habitat for GSG - using a geospatial habitat model. The onsite inspection confirmed that the sage brush habitat at the well location is of a stand height and density to meet the habitat needs of the species. There are 4 producing CBNG wells, 1 producing oil well and an overhead powerline all within line of sight of each of the proposed well. Wyoming State Highway 50 is 1.6 miles west of the project area. The surrounding area has moderately dense to dense sagebrush stands and rolling topography.

Construction of the well pad, access road and buried utilities will result in the removal of sagebrush. Drilling, HF activities and well production are also anticipated to negatively impact GSG nesting in suitable habitat within 0.6 mile of the project area.

The 2012 BLM-contracted population viability analysis for the Northeast Wyoming GSG found there remains a viable population of GSG in the PRB (Taylor et al. 2012). 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 distribution of existing and proposed wells in relation to those 28 leks that occur within 12.4 miles of the proposed well. Additional information regarding the population viability analysis, and its influence on cumulative effects from energy development is found in the affected environment and environmental effects sections (Section 3.7.12 and 4.8.2 – Candidate Species – Greater Sage-grouse (Sage-grouse)) of the Mufasa Fed 11-31H Well EA, WY-070-EA12-062, incorporated here by reference. The application of the timing limitation will minimize the impacts that would reduce connectivity between GSG leks within the vicinity of the project area.

In order to reduce the impacts to GSG associated with noise, construction, and human disturbance resulting from implementation of the proposed project, BLM will implement a timing limitation (March 15-June 30) on surface-disturbing activities within 2 miles of known GSG leks and adjacent to identified nesting habitat across the project area. Because nesting GSG are shown to avoid infrastructure by up to 0.6 miles, the intent of this timing restriction is to decrease the likelihood that GSG will avoid these areas and increase habitat quality by reducing noise and human activities during the nesting season. The known leks nearest to the proposed well location are listed below. The application of the timing limitation will minimize the impacts that would reduce connectivity between GSG priority habitat areas and leks within the vicinity of the project area.

The nearest leks to the Roush 1-33H is the Little Black Butte to the west at 4.5 miles (GMEC). A timing limitation (March 15-June 30) on surface-disturbing activities within 2 miles of GSG leks and/or within identified nesting habitat would typically apply, however, the extensive development in close proximity

of the proposed well location is very likely to preclude the project area from being occupied by GSG during the breeding and nesting periods. Therefore, no timing limitation stipulation is recommended for this project. A clearance survey for breeding and/or nesting GSG, prior to surface disturbing activities is required March 15-June 30 for the duration of surface disturbing activities. The Operator is required to ensure that noise from their facilities at any nearby GSG leks does not exceed 49 decibels (10 dBA above background noise) at the display grounds.

Black-tailed Prairie Dog

The affected environment for black-tailed prairie dogs is discussed in the PRB FEIS, p. 3-179. The black-tailed prairie dog was added to the list of candidate species for federal listing in 2000 (USFWS 2000). It was removed from the list in 2004. Comparisons with 1994 aerial imagery indicated that black-tailed prairie dog acreage remained stable from 1994 through 2001, but aerial surveys conducted in 2003 indicated that approximately 47% of the prairie dog acreage was impacted by Sylvatic plague and/or control efforts (Grenier et al. 2004). Due to human-caused factors, black-tailed prairie dog populations are now highly fragmented and isolated (Miller et al. 1994). Most colonies are small and subject to potential extirpation due to inbreeding, population fluctuations, and other problems that affect long term population viability, such as landowner poisoning and disease (Primack 1993, Meffe and Carroll 1994, Noss and Cooperrider 1994). No prairie dog colonies have been observed within 1-mile of the project area by WGFD, BLM or GMEC. The PRB FEIS discusses impacts to black-tailed prairie dog on pp. 4-255 and pp. 4-256.

Migratory Birds

The PRB FEIS discussed direct and indirect effects to migratory birds on pp. 4-231 to 4-235. The PRB FEIS states on p. 4-231, "Surface disturbance associated with construction, operation, and abandonment of facilities, including roads, has the potential to result in direct mortality of migratory birds. Most birds would be able to avoid construction equipment; however, nests in locations subject to disturbance would be lost, as would any eggs or nestlings." Direct mortality of a bird or destruction of an active nest due to construction activities could result in a "take" as defined (and prohibited) by the Migratory Bird Treaty Act (MBTA), a nondiscretionary statute.

Additional information on the impacts to soils, and its influence on cumulative effects from energy development can be found in the affected environment and environmental effects of the Sahara POD EA, WY-070-EA13-72, 2013, Sections 3.7.2.2 (pg 16-17) and 4.6.2.2 (pg 31-33) incorporated here by reference.

During the onsite, the BLM biologist identified suitable nesting habitat present for several BLM sensitive sagebrush obligates. The BLM confirmed sagebrush habitat, with shrubs in excess of 2 feet, at the proposed well location. Brewer's sparrows and sage thrashers both nest in sagebrush shrubs and occur in the area. Construction of the well pads, access roads and associated infrastructure will remove sagebrush habitat and could result in a "take" (as described above) of BLM sensitive migratory birds if removal occurs during the nesting season.

In an effort to apply the least restrictive measures to be in compliance with the MBTA, while still conforming to EO 13186 and the BLM/FWS MOU regarding conservation of species of concern, the BLM prohibits habitat removal for only those habitats where BLM SSS migratory birds are likely to occur. The BLM has been applying a conditional surface use stipulation for all special status species to all oil and gas leases since 2008 (IM WY-2013-005, p. 2). To reduce the likelihood of a "take" under the MBTA, the BLM biologist recommends that well pad, access road and pipeline construction (vegetation removal) occur outside of the breeding season for the greatest quantity of BLM SSS migratory birds (May 1- July 31) where suitable nesting habitat for sagebrush obligates is present. The timing limitation would apply to habitat removal, unless a pre-construction clearance survey (within approximately 10 days of

construction planned May 1-July 31) is completed. If surveys will be conducted, the Operator will coordinate with BLM biologists to determine a protocol. At a minimum, the surveys will consist of nest searches in areas where vegetation will be removed or destroyed. The BLM recommends construction activities for the Roush 1-33H well pad, access road and associated infrastructure have timing limitations applied for during the nesting season for sagebrush obligate passerines (May 1 to July 31). Timing limitations for active raptor nests (Feb 1 to July 31) which begins prior to timing limitations for sagebrush obligates, and thus may provide additional protection where migratory bird nesting periods and habitats overlap.

Peak proposes using heater treaters in the production phase of the Roush 1-33H. Heater treaters, and similar facilities with vertical open-topped stacks or pipes, can attract birds. Facilities without exclusionary devices pose a mortality risk. Once birds crawl into the stack, escape is difficult and the bird may become trapped (U.S. v. Apollo Energies Inc., 611 F.3d 679 (10th Cir. 2010); see also Colorado Oil and Gas Commission, Migratory Bird Policy, accessed February 13, 2012). The BLM recommends that measures are taken to ensure that migratory birds are excluded from all facilities that pose a mortality risk, including, but not limited to, heater treaters, flare stacks, secondary containment, and standing water or chemicals where escape may be difficult or hydrocarbons or toxic substances are present at the location.

If the timing limitation on habitat removal is applied, it is unlikely that active nests (of BLM sensitive species) will be destroyed, as most nestlings will have fledged by the beginning of August. Nests initiated after the first week in July may be destroyed by construction after August 1st. Ground nesting birds using grassland habitats in the Roush 1-33H proposed disturbance area, may have nests or young destroyed if construction occurs during the nesting season; BLM sensitive migratory bird species are not anticipated to nest in the disturbance area for the well post construction. Migratory birds nesting adjacent to the well pad or road may be displaced, abandon nests, or suffer reduced reproductive success due to construction and production activities. A timing limitation does nothing to mitigate loss and fragmentation of habitat. Suitability of the project area for migratory birds will be negatively affected due to habitat loss and fragmentation and proximity of human activities associated with oil and gas development.

Water Resources

The historical use for groundwater in this area was for stock or domestic water. A search of the Wyoming State Engineer’s Office (WSEO) Ground Water Rights Database showed 1 stock and 1 domestic water well within 1 mile of the proposed well in the project area. See Table 1.7. for specific details. There are also 22 CBNG wells dual permitted as stock water wells. For additional information on groundwater, refer to the PRB FEIS, pp. 3-1 to 3-36.

Table 1.7. Permitted Water Wells within 1 Mile of the Iberlin 1-9H and 1-9TH

#	Well Name/ #	Permit #	Location	Total Depth	Static Water Level	Uses
1	TAYLOR #53-1	P14678.OP	SENE Sec 5, T42N/R74W	64 feet	40 feet	Stock
2	TAYLOR A-4-1	P31766.0W	SWSE Sec 4, T42N/R74W	550 feet	50 feet	Domestic

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 2,500 feet, total vertical depth to protect shallow aquifers.

Table 1.8. Casing Set and Cementing Depths in relation to the Fox Hills

#	Well Name/ Well #	Total Depth of Surface Casing (feet)	Total Depth of Intermediate Casing (feet)	Depth to Fox Hills (feet)
1	Roush1-33H	2,500	9,255	7,026-7,141

The Fox Hills, the deepest known fresh water zone in the PRB lies well above the target Shannon formation. Table 1.8. shows the depths where the drill hole will have casing set and cemented in place approximately 200 feet above the Fox Hills. The operator will verify that cement is set above the Fox Hills with a cement bond log. This will ensure that ground water will not be adversely impacted by well drilling and completion. 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 wells 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. 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 3 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.

Cultural Resources

A class III cultural resource inventory was performed for the Roush 1-33H well prior to on-the-ground project work (BFO project no. 70130049). A class III cultural resource inventory following the Archeology and Historic Preservation, Secretary of the Interior's Standards and Guidelines (48CFR190) and the *Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class II and III Reports* was provided to BLM by Peak Powder River Resources(operator). Seth Lambert, BLM Archaeologist, reviewed the report for technical adequacy and compliance with BLM standards, and determined it to be adequate. There are no eligible sites in the area of potential effect (APE) of the proposed project. Following the Wyoming State Protocol Section VI(A)(1) the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on October 30, 2013 that no historic properties exist in the APE.

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Consulted (Peak – Peak Powder River Resources.)

Name	Agency	Title	Name	Agency	Title
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Karen Klaahsen	BLM	LIE	Duane Spencer	BLM	Field Office Manager

Decision and Rationale on Action

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 Roush 1-33H APD and associated 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

11/7/13

 Signature Date

Contact Person, Jim Verplancke, Natural Resource Specialist, Buffalo Field Office, 1425 Fort Street, Buffalo WY 82834, 307-684-1100.

Figure 1.1 Lease Boundaries, Surface and Bottom Hole Location, and Lateral Bore Path for Roush 1-33H.

