

DECISION RECORD

Section 390, Energy Policy Act of 2005, Categorical Exclusion 3 (CX3), WY-070-390CX3-13-265 Yates Petroleum Corporation, Application for Permit to Drill (APD), Flying Federal #27H Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves the application for permit to drill (APD) from Yates Petroleum Corporation (Yates) to drill 1 horizontal oil and gas well and construct associated infrastructure as described in the CX3, WY-070-390CX3-13-265, incorporated here by reference.

Compliance. This decision complies with or supports:

- 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 Final Environmental Impact Statement (FEISs), 1985, 2003 (2011).
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.
- Wyoming BLM State Director Review, SDR No. WY-2013-025, Yates Petroleum v. BLM, 2013.

A summary of the details of the approval follows. The CX analysis, WY-070-390CX3-13-265, for the 1 oil and gas well, above, includes the project description, including site-specific mitigation measures which are incorporated by reference into that CX3 from earlier analysis. The proposed well is 25 miles east of Buffalo, in Johnson County, Wyoming. This Yates well proposal has 1 APD and associated infrastructure, to develop and produce oil and gas from the Shannon Formation. The well is a horizontal bore proposed on a 640 acre spacing pattern with 1 well on location.

Approvals: BLM approves the following APD and associated infrastructure:

| Well Name/ Well # | Qtr | Sec | Twp | Rng | Surface Lease |
|---------------------|------|-----|-----|-----|----------------------|
| Flying Federal #27H | SESE | 21 | 50N | 78W | WYW143880, WYW162090 |

Limitations. See conditions of approval (COAs).

The Operator will need to submit applications and receive authorizations for specific Rights of Ways prior occupying or crossing Federal Surface for all non-unitized off lease actions identified within the Flying Federal #27H surface use plan of operations.

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. NEPA analyses to which this CX3 tiers received a FONSI, thus a new FONSI or EIS are not required.

Summary of New Information. BLM posted this APD for 30 days and received no public comments. Since receipt of this APD, BFO received clarified policies on bond adequacy reviews. .

DECISION RATIONALE. The approval of this project is because:

1. Mitigation measures and COAs, analyzed in the CX3, in environmental impact statements, or environmental analysis to which the CX3 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 GSG 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 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, committed to:
 - 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 POD (PRB FEIS ROD, p. 7).
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 lease(s) 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. The operator certified there is a surface access agreement with the landowners 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 master surface use plan of operations, drilling plan, water management plan, and information in the 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.

Acting Field Manager:  Date: 2/12/14

Categorical Exclusion 3 (CX3), WY-070-390CX3-13-265
Application for Permit to Drill (APD) Flying Federal #27H, Yates Petroleum Corporation
Section 390, Energy Policy Act of 2005
Bureau of Land Management, Buffalo Field Office, Wyoming

Description of the Proposal. Yates Petroleum Corporation (Yates) proposes to drill 1 conventional oil and gas well on 1 well pad and construct associated infrastructure as follows:

Table 1.1. Proposed Well

| Well Name/ Well # | Qtr | Sec | Twp | Rng | Surface Leases |
|---------------------|------|-----|-----|-----|----------------------|
| Flying Federal #27H | SESE | 21 | 50N | 78W | WYW143880, WYW162090 |

The proposal is to explore by drilling for, and possibly develop oil and gas reserves in geologic mineral formations leased by Yates using standard split jurisdiction rules. The proposed location is 25 miles east of Buffalo, Wyoming, in Johnson County. The proposed well will be on a single well pad. BLM's need for this project is to determine how and under what conditions to balance natural resource conservation with allowing the operator to exercise conditional lease rights to develop fluid minerals by drilling 1 horizontal well. The proposed Flying Federal #27H's surface hole location straddles federal leases WYW143880 and WYW162090, as described in the APD's, surface use plan of operations (SUPO), and drilling plan - all 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 and regulations.

Reasonably foreseeable activity is found in the Crown Prospect Federal 41-28-4978SHEH Environmental Assessment (EA), WY-070-EA13-25, 2012. This locality includes but is not limited to the approved Crown Prospect Federal 41-28-4978SHEH well and will fill-in to 640 acre spacing. This also supports the development anticipated in the Powder River Basin Final Environmental Impact Statement (PRB FEIS), 2003 (2011) (see narrative in Section 2, No Action Alternative).

The project area is in the 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 approximately 6 miles east of the proposal.

Yates submitted the APD for the well to the BLM on June 21, 2013. Onsites field inspections were conducted August 7, 2013. The onsite evaluated the proposal and BLM made recommendations to modify the SUPO to avoid and/or mitigate environmental impacts. On August 23, 2013, BLM sent post onsite deficiencies to Yates notifying them of Onshore Oil and Gas Order No. 1 deficiencies. BLM received revisions from Yates on multiple dates: October 17, 2013. See Table 1.2, below, for APD processing information.

Table 1.2. APD Submission and Processing Dates

| Well Name & # | APD Receipt | APD Onsite | Deficiencies sent | Revisions received |
|---------------------|-------------|------------|-------------------|--------------------|
| Flying Federal #27H | 6/21/2013 | 8/7/2013 | 8/23/2013 | 10/17/2013 |

Drilling, Construction, and Production design features include:

- Construction of the drilling pads with dimensions of approximately 400 feet by 400 feet; the total disturbance area varies between locations due to slope and topography, i.e. cut & fill slopes.
- Yates anticipates starting drilling as soon as possible upon permit approval. 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.

- A road network of approximately 8.9 miles of existing improved roads and another 3,843 feet of new construction of crown and ditch road as access onto the well pad. Yates plans to upgrade 8,765 feet of existing access road also being used to access the Flying Federal #25H, 2013 under CX3, WY-070-390CX3-13-172. Upgrades by widening road to 16 feet running surface and adding turnouts (150 feet long by 10 feet wide) every 1,000 feet or intervisible will be made to improve overall safety and match Yate’s anticipated use for larger trucks and increased traffic. Estimated average daily traffic (ADT) on existing and improved roads during production activities is two trucks per day. During construction and drilling phases, ADT (200-700 truckloads) will include rig and ancillary equipment mobilization, drilling water and completion water hauling, and delivery of large production facility equipment such as 500 barrel fluid storage tanks, etc. Yates anticipates 40,000 barrels of water needed for drilling completion operations.
- There is existing 3-phase overhead power in the project area.
- The operator proposes to drill wells using water-based mud (WBM).
- If determined to be economically viable, the well would be put into production. Production facilities that would be placed on the site include a pumping unit; separator; vertical heater-treater with separator; 5 500-bbl production tanks, 1 - 500-bbl produced water tank, gas meter buildings and an electric meter building. A generator will be set on location to power production facilities until permanent power is installed.
- There are 1,200 feet of buried gas pipeline and 1,150 feet of buried electrical powerline proposed.
- Production produced water will be stored in 1 produced water tank. This tank will be emptied as needed using water tanker trucks. Produced water will be disposed at 1 of 9 Permitted facilities authorized by WY Department of Environmental Quality (WYDEQ).
- It is anticipated that 40,000 bbls of water will be needed for drilling and completion operations. The fresh water for drilling operations will be trucked from multiple sources or piped to the location via a 1,200 foot temporary surface pipeline; see p. 3 of the SUPO the for listed water sources.
- Yates intends using above ground tanks for onsite water storage for the completion (hydraulic fracturing (HF)) at the pad. The tanks do not require a separate location or additional disturbance.
- 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 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 for the proposal, refer to the SUPO and drilling plans included with the APD; see administrative record (AR). Also, see the APD for maps showing the proposed well location and associated facilities. Table 1.3, below, shows the total surface disturbance for the proposal is 21.9 acres, reduced to 13.3 acres of long term disturbance after interim reclamation of the well site and roads for a 39% reduction. 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. It is reasonably foreseeable activity that operators may seek approvals to drill adjacent wells on 640 acre spacing, drill more wells from this pad, or seek approvals for infrastructure enhancements.

Table 1.3. Flying Federal #27H Surface Disturbance

| Facility | Construction Disturbance (Short Term) | Interim Disturbance (Long Term) |
|----------------------------|--|------------------------------------|
| Number of Horizontal Wells | 1 | 1 |

| Facility | Construction Disturbance (Short Term) | Interim Disturbance (Long Term) |
|--|---------------------------------------|---------------------------------|
| Engineered Pads (co-located) | 6 acres | 3.2 acres |
| New Template Roads | 1,200 feet (2.1 acres) | (1.0 acres) |
| Engineered Access Roads | 2,643 feet (3.0 acres) | (2.1 acres) |
| Reconstruction of Existing Roads (Widen to 16 feet and add Turnouts) | 8,765 feet (10.1 acres) | (7.0 acres) |
| Buried Gas Pipeline/Electrical Powerline (not with access road) | 1,150 feet (0.7 acres) | (0 acres) |
| Overhead Power | Existing | Existing |
| Total Acre Disturbance | 21.9 Acres | 13.3 Acres |

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 CX3 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, 2003 (2011), 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 Flying Federal #27H APD and area clearly lack wilderness characteristics as they are amidst oil and gas development. BLM finds that the conditions and environmental effects found in the senior EAs 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 1.4, is a list of existing/approved oil and gas development that is within or adjacent to the Flying Federal #27H proposal area. This information shows the reader that BLM conducted analysis.

Table 1.4. Overlapping Oil & Gas NEPA Analyses that Account for Reasonable Foreseeable Activity and Completed within 5 Years of Spudding the Flying Federal #27 Proposal

| NEPA Analysis Name | NEPA Analysis # | # Wells/Type/# Drilled | Decision Date |
|---|----------------------|------------------------|---------------|
| LOG Bear Draw Unit Gamma POD | WY-070-EA11-172 | 71 / CBNG / 65 | 8/17/2011 |
| WPX Crown Prospect Federal 41-28-4978SHEH | WY-070-EA13-25 | 7 / Oil / 0 | 12/28/2013 |
| APC Powder Valley Unit Epsilon | WY-070-EA10-232 | 68 CBNG / 68 | 7/30/2010 |
| YPC Flying Federal #25 | WY-070-390CX3-13-172 | 1 / Oil / 0 | 8/9/2013 |

The area had historic conventional oil and gas exploration and production, and coalbed natural gas (CBNG) development. The project area is adjacent to or inside the boundaries of 6 CBNG plans of development (PODs) that include 137 wells; see Tables 1.4 and 1.5). There are 381 existing oil and gas wells within a 4 mile radius of the area for this proposal (Wyoming Oil and Gas Conservation

Commission, January 27, 2013); 18 of which are plugged and abandoned. There are also 10 deep oil/gas wells within the 4 mile radius.

Table 1.5. Overlapping or Adjacent NEPA Analyses or those in Substantially Similar Habitats that Are Incorporated Here by Reference for the Effected Environment and Environmental Effects or Oil Drilling Practices

| NEPA Analysis Name | NEPA Analysis # | # Wells / Type | Decision Date |
|---|--------------------------------|------------------------|--|
| Sahara POD | WY-070-EA13-72 | 21 Oil | 03/05/2013 |
| Barlow Ranch Federal 074974-3NH | WY-070-EA12-173 | 1 Oil | 08/10/2012 |
| Ruby POD | WY-070-04-264 WY-070-04-326 | 37 CBNG 2 CBNG | 09/27/2004 2005 |
| YPC Skyward POD | WY-070-EA05-187 | 32 CBNG | 09/23/2005 06/05/2006 09/28/2006 |
| LOG Bear Draw Unit Gamma | WY-070-EA11-172 | 71 CBNG | 08/17/2011 |
| LOG Tear Drop POD | WY-070-EA08-72 | 43 CBNG | 4/4/2008 |
| APC Powder Valley Unit Delta POD | WY-070-EA08-143 | 44 CBNG | 8/22/2008 |
| Powder River Basin FEIS & Records of Decision | WY-070-02-065 WY-080-135 | 51,000 CBNG; 3,200 Oil | 2003 2011 |

- 2) There are existing NEPA analyses (and the RMP) containing reasonably foreseeable activity scenario for this proposal. There are several existing NEPA documents that reasonably foresaw activity to spud additional wells to fill in 80 acre well-spacing. BLM also notes from Table 1.4, above, that of the 147 analyzed APDs, at this time; 137 are drilled; thus 14 undrilled, analyzed foreseeable APDs contribute to the available reasonably foreseeable activity. BLM reviewed these analyses and determined they considered the potential environmental effects associated with the proposed activity at a site specific level. In addition, all approved EAs tier into the PRB FEIS. The PRB EIS analyzed foreseeable development in the PRB. The PRB foreseeable development included 3,200 oil wells; and drilling CBNG wells on 80 acre-spacing resulting in about 51,000 CBNG wells and 3,200 oil wells. The Flying Federal #27 well is in the foreseeable activity or development scenario that was analyzed in NEPA analyses in Table 1.4 and in the PRB FEIS's Appendix A.
- 3) The tiered NEPA analyses in Table 1.4 were finalized within 5 years of spudding (drilling) the proposed well. The Flying Federal #27H Section 390 CX3s tiers to the analyses listed in Table 1.4.

In summary, the EAs in Tables 1.4 analyzed in detail the anticipated direct, indirect, residual, and cumulative effects that would result from the approval of this APD and associated support structure in Flying Federal #27H well is similar to both the qualitative and quantitative analysis in the above mentioned EAs. The BFO reviewed the EA and found that the EA considered potential environmental effects associated with the proposal at a site specific level. The APD's surface use and drilling plans are incorporated here by reference and show adequate protection of surface lands and ground water, including the Fox Hills formation. The proposals' acres of surface disturbances are within the analysis parameters of the PRB FEIS.

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 surface use plan of operations 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.

ADT will increase with approval of the wells. Yates 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. Mobilizing the drilling rig and associated equipment requires 50 or more truckloads. The Operator did not estimate what the ADT would be but BLM anticipates 2-10 vehicle trips per day during drilling operations. The other anticipated impact associated with HF involves the large amount of heavy truck traffic (200-700 trucks/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 flow-back fluid from the HF. The operator's surface use plan does not provide specific information of the HF operations but BLM anticipates the process to be a 24 hour operation lasting approximately 2-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 from equipment inspections.

Soils and Vegetation

The soil and ecological site descriptions prepared by the Natural Resources Conservation Service (NRCS, 2013) for the project area show it as a combination of Loamy and Shallow Clayey soils in the 10-14 inch Northern Precipitation Zone. The interpretive vegetative plant community is a mixed sagebrush/grass plant community. BLM reviewed detailed soil, ecological site and vegetative community descriptions of the project area prepared by NRCS. The map unit that makes up the majority of the proposed disturbance area, the entire well pad and half the proposed access road, is Forkwood-Cushman loams, 6 to 15 percent slopes. The map units that make up the minority soil types also hold the soils with most limiting chemical and physical soil properties: Theedle-Shingle loams, 3 to 30% slopes and Samday-Shingle-Badland complex, 10 to 45 percent slopes. These soils are rated as poor topsoil sources but are a fair source of reclamation source material. Topsoil depth ranges from 0 to 60 inches with an organic content of 0 to 2%. The soil is sodic below 32 inches which makes soil mixing a concern. The soil components of greatest concern the lack of organic matter, droughty, depth to bedrock, and high erosion potential. About 80% (up to 21,270 cubic yards) of the material excavated to build the well pad is material from the *Cr* soil horizon. In its current undisturbed state, the sterile *Cr* material is isolated from the surface by 32 to 60 inches of overlying soil horizons.

Resistance to degradation is typically described as an area's buffering capacity. This depends upon soil type, vegetation, climate, land use, disturbance regime, temporal and spatial scales. The disturbance regime determines the type of stresses placed upon the soil, vegetation, and wildlife components of the site. Thus, soil factors of vulnerability will vary based upon the disturbance regime for a particular site. NRCS soil survey rates the soils as "moderately susceptible" to degradation indicating that the soils have features that are moderately favorable for damage to occur. These soils are also rated as a poor source of construction material.

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 will be completed within 30 days of the initiation of construction activities.

Well Pad

The well sites to facilitate horizontal well drilling and HF operations require a constructed well pad including cut and fill slopes which may be large in scale compared to typical CBNG well locations

depending on site topography. Yates' proposed well pad is 400 by 400 foot working area. Total disturbance area for each pad varies dependent upon topography, slope, and dirt balance. Additional information on the impacts to soil resources, and its influence on cumulative effects from energy development is found in the affected environment and environmental effects sections (Section 3.2 and 4.4) of the Barlow Ranch Federal 074974-3NH, WY-070-EA12-173, incorporated here by reference.

Open Reserve Pit versus Closed Loop Drilling System

It is the Yates' intent to drill the Flying Federal #27H using an open reserve pit excavated on location. Drilling fluid and drill cuttings would be caught and disposed of on location in the reserve pit 100 by 150 feet and 12 feet deep. Yates' SUPO for the APD and associated well pad diagrams included plans for managing drilling fluid. Following drilling operations, pits will be allowed to dry sufficiently prior to back filling and will be closed as soon as possible.

The material excavated from the reserve pits is calculated to be approximately 4,810 cubic yards of spoil material (substratum not soil) that will need to be stored on the surface until the pit is closed. Cuttings contained in the pit will total approximately 1,120 cubic yards and in addition to 19,300 barrels of drilling fluid. Once the pits are sufficiently dried, they will be backfilled with the spoil material however the volume of cuttings captured in the pits will displace spoil material from being returned into the excavated pit. An alternate option for managing drilling mud and BLM's preference would be using a closed loop system. This alternative is consistent with Wyoming BLM's Instruction Memorandum No. WY-2012-007, 2011, incorporated here by reference. BLM recommended this option to Yates but the Operator chose not to pursue it. Use of enclosed tanks and closed loop or semi-closed loop systems is environmentally preferable to the use of open pits and is encouraged by the BLM.

Open production pits are strongly discouraged by 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. Costs may be reduced with the use of tanks, particularly when the pit requires solidification or netting. Drilling water would be typically be stored on location in 3, 500bbl tanks and drilling fluids would be stored in 2, 500bbl tanks. A "shaker" separates the cutting from the fluids which are removed to a, lined bermed containment area 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. Yates 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. Fluids remaining in the reserve pit may need to be removed by the Operator and disposed of at a permitted facility to accommodate this timeframe.

Access Road

The other anticipated impact associated with HF involves the large amount of heavy ADT (200-700 trucks/well) to transport water storage containers, water and other HF materials to the location, as well as ADT anticipated for removing the storage tanks and flow-back fluid from the completion.

Wildlife

ICF International (ICF) performed a habitat assessment for bald eagles, grouse leks, mountain plover, raptors, prairie dog colonies, and Ute ladies'-tresses orchid. Wildlife inventory surveys were completed for sharp-tailed grouse, Greater Sage-Grouse (GSG), raptor nests, mountain plover and prairie dog colonies in April and May 2013 (ICF2013) and other BLM Special Status (Sensitive) Species. ICF searched for potential Ute ladies'-tresses orchid habitat (ICF 2012). The affected environment within 4 miles of the proposed well consists of 381 existing oil and gas wells (18 of which are plugged and abandoned) and associated access road and infrastructure to support the wells' production. Habitat quality

in the area has been highly impacted by oil and gas development with an average of 7.6 wells per section currently on the landscape. ICF conducted surveys per the PRB Interagency Working Group’s protocols; see: http://www.blm.gov/wy/st/en/field_offices/Bufalo/wildlife.html.

Raptors

BLM analyzed effects to raptors in the Crown Prospect Federal 41-28-4978SHEH EA. A requirement to survey known raptor nests by a biologist, following the most current BLM protocol, between April 15 and June 30, 2013. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities. 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 COA document, 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. A list of 4 known raptor nest within 0.5 mile of proposed surface disturbing activities are listed in Table 1.6, below. All 3 unknown raptor nests were inactive in 2013 and the burrowing owl nest could not be located. Although the prairie dog colony is active where the burrowing owls had been observed nesting in 2007 to 2008, no burrowing owls were observed within the colony during 2009 to 2013 surveys.

Table 1.6. Raptor Nests Within 0.5 miles of the Project

| BLM Raptor Species - Nest ID # | - | Infrastructure |
|---------------------------------------|----------|---|
| Burrowing Owl - 6066 | within | 100 feet of the Flying Fed #27H well pad |
| Unknown Raptor - 11017 | within | 0.35 mile of the Flying Fed #27H well pad |
| Unknown Raptor - 11038 | within | 0.32 mile of the Flying Fed #27H well pad |
| Unknown Raptor – 11039 | within | 0.32 mile of the Flying Fed #27H well pad |

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 5 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. Although the BLM BFO requires a 0.5 mile radius timing limitation (TL) during the breeding season around active raptor nests to reduce the risk of decreased productivity or nest failure, the project will not have a TL because the nest has been successful and habituated to the existing oil and gas operations in the project area, as well as, the biological buffer between the nest and the project area will more than likely not decrease productivity or nest failure.

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 Yates’ Flying Federal #27H well are anticipated to be similar in nature, with the following additional site-specific information.

The Flying Federal #27H well and proposed access road occurs within suitable nesting and brood rearing habitat for GSG. GSG egg fragments were observed on the location indicating that nesting has occurred in the vicinity of the well location in the past. Construction of the well pads and access roads will result in the removal of sagebrush. The surrounding area is comprised of moderately dense to dense sagebrush stands and rolling topography. The BLM biologist also observed GSG scat in the area. Construction, drilling, and HF activities are anticipated to negatively impact GSG nesting in suitable habitat in the project area. 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.

In order to reduce the impacts to GSG associated with noise, construction, and human disturbance resulting from implementation of the proposal, a timing limitation (March 15-June 30) on surface-disturbing activities within 2 miles of GSG leks (within and adjacent to identified nesting habitat) will apply. There are 3 GSG leks within 2 miles of the Flying Federal #27H, the Tear Drop I (1.8 miles) and Tear Drop II Leks (2.3 miles) to the South and the Bear Draw Lek (1.7 miles) to the North. Yates proposes to reconstruct an existing oil and gas road that passes through the Tear Drop II Lek. (At least 3 companies (Yates, Devon, and Anadarko) use this existing road since 2005 to support developments at Ruby, Tear Drop, and others – in addition to the road’s use by ranchers. BLM thinks that placing restrictions on this road now or creating a new road (new surface disturbance) gains negligible GSG conservation 6 years later in non-priority GSG habitat.) 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 application of the timing limitation will minimize the impacts that would reduce connectivity between Greater Sage-Grouse leks within the vicinity of the project area.

Sharp-Tailed Grouse

ICF International did not locate any dancing grounds in the proposal area during 2013 spring surveys. However suitable breeding and nesting habitat for the species is present throughout the area. The nearest sharp-tailed breeding grounds to the Flying Federal #27H are the Bear Draw I at 5.1 miles and Bear Draw II at just 4.0 miles northwest. ICF’s survey report acknowledges only the Iberlin sharp-tailed lek at 13.6 miles to the south but not the other 5 leks within that same distance. The operator should conduct survey for sharp-tailed grouse between April 1 and May 7, annually, for the duration of surface disturbing activities of the project and results shall be submitted to a BLM biologist. If an active lek is identified during survey, the 0.64 mile timing restriction (March 1-June 15) would be applied and surface-disturbing activities not be permitted until after the nesting season. See also, Barlow Ranch Federal EA, WY-070-012-173, Sections 3.7.2 and 4.9.2, incorporated here by reference.

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 migratory birds, 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 (p. 16-17) and 4.6.2.2 (p. 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 Flying Federal #27H well location. Brewer’s sparrows and sage thrashers both nest in sagebrush shrubs and occur in the area. Construction of the well pad and associated infrastructure will remove over 14 acres of 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 Executive Order (EO) 13186 and the BLM/FWS MOU regarding conservation of species of concern, the BLM prohibits habitat removal for only those habitats where BLM sensitive 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 pad construction (vegetation removal) occur outside of the breeding season for the greatest quantity of BLM sensitive 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 the following well pads and associated infrastructure have timing limitations applied for well pad construction during the nesting season for sagebrush obligate passerines (May 1 to July 31): Flying Federal #27H. Timing limitations for GSG (March 15 to June 30) and active raptor nests (Feb 1 to July 31) both begin prior to timing limitations for sagebrush obligates, and thus may provide additional protection where migratory bird nesting periods and habitats overlap.

Yates proposes using heater treaters in the production phase of the well. 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 Flying Federal #27H well 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 utilizing grassland habitats in the Flying Federal #27H proposed disturbance areas, 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 proposed disturbance areas for this 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 area’s historical use for groundwater was for stock or domestic water. A search of the WSEO Ground Water Rights Database shows 1 registered domestic water well within 1 mile of the proposed well; the use of this well is likely for stock water since there are no homes in the immediate area. The well is 150 in depth with a static water level at 20 feet. For additional information on groundwater, refer to the PRB FEIS, 2003, 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 2,200 feet, total vertical depth to protect shallow aquifers.

Table 1.7. Casing Set and Cementing Depths in relation to the Fox Hills

| Well Name & # | Total Depth of Surface Casing | Total Depth of Intermediate Casing | Depth to Fox Hills |
|---------------------|-------------------------------|------------------------------------|--------------------|
| Flying Federal #27H | 2,200 feet | 8,667 feet | 6,884 feet |

The Fox Hills, the deepest known fresh water zone in the PRB lies well above the target Shannon formation. Table 1.7, shows the depths where the drill hole will have casing set and cemented in place from surface to below the Fox Hills. This will ensure that ground water will not be adversely impacted by well drilling and completion operations. 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 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 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

Previously reviewed and accepted Class III cultural resource inventories (BFO #'s 70050085, 70070137) adequately covered the proposal area. No historic properties are in the area of potential effect. On January 13, 2014 Seth Lambert, BLM Archaeologist, 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 proposal. If any cultural values [sites, artifacts, human remains (Appendix L PRB 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. Further discovery procedures are in the Standard COA (General)(A)(2).

Literature Cited

- Belnap, J. J. H. Kaltenecker, R. Rosentreter, J. Williams, S. Leonard and D. Eldridge. 2001. Biological Soil Crusts: Ecology and Management.
- Temple, S.A., and B.A. Wilcox. 1986. Introduction: Predicting effects of habitat patchiness and fragmentation. In Wildlife 2000: Modeling Habitat Relationships of Terrestrial Vertebrates, ed. J. Verner, M.L. Morrison, and C.J. Ralph, 261-62. Madison: University of Wisconsin Press.
- Temple S.A., and J. R. Cary. 1988. Modeling dynamics of habitat-interior bird populations in fragmented landscapes. Conservation Biology, 2 :340-347.
- Natural Resources Conservation Service (NRCS) Web Soil Survey, 2013, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Persons & Agencies Consulted

| Name | Agency | Title | Name | Agency | Title |
|-----------------|--------|--------------------------|----------------|--------|---------------------------|
| John Vaselein | YPC | Federal Regulatory Agent | Dennis Camino | YPC | Land Agent |
| Jim Verplancke | BLM | NRS/Wildlife Biologist | Kerry Aggen | BLM | Geologist |
| Seth Lambert | BLM | Archeologist | John Kelley | BLM | NEPA Coordinator |
| Amber Haverlock | BLM | Realty Specialist | Casey Freise | BLM | NRS Supervisor |
| Mark Thomason | BLM | Petroleum Engineer | Bill Ostheimer | BLM | NRS Supervisor |
| Arnie Irwin | BLM | Soil Scientist | Kathy Brus | BLM | NRS Supervisor |
| Sharon Soule | BLM | LIE | Chris Durham | BLM | Asst Field Office Manager |
| Karen Klaahsen | BLM | LIE | Clark Bennett | BLM | Asst 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 Flying Federal #27H APD and infrastructure conform to the applicable land use plans. The Operator will need to submit applications for and receive authorizations for specific rights of ways prior occupying or crossing Federal Surface identified within the Flying Federal #27H project area. 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.

Acting


Field Manager

2/12/14

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 Locations, and Lateral Bore Paths for Flying Federal #27H.

