ERRATA

for
The Rocktober Unit Project, McCullough Peaks Area, Seven Exploratory Wells, and Associated Facilities,
Environmental Assessment

June 26, 2009

The following changes are for the above referenced Environmental Assessment (EA # WY-020-EA08-117, Case File Number: WYW-175579X).

1. Section 2.2 (Proposed Action): Acreage numbers in the EA are listed as 23,677 acres within the Rocktober Unit.
   a) Correct acreage is 24,581. The total amount of acreage of public land is 23,140 (94%), 1,320 (5.5%) acres of State owned land, and 121 (0.5%) acres of privately owned land).

2. 2.4 Alternative Considered but Eliminated from Further Analysis:

   [Insert the following paragraph.]

   2.4.7 Closed Loop System.
   There is no reason to use a closed loop system in drilling the Rocktober wells. The Proposed Action states that reserve pits would be lined if required by BLM. Standard drilling techniques (including isolating all water-bearing formations in the well bore with pipe and cement) will adequately protect aquifers. In addition, all ground water resources in the area are at a depth of approximately 600-700 ft, and there are no known water wells near the project area. The nearest water wells are approximately 2+ miles away and in a hydraulically up-gradient direction and therefore have little to no risk from project operations. The Proposed Action states that drill cuttings would be contained in the pit and buried on location.

3. 3.3.7 Wildlife Resources:
   [Replace first sentence with the following:]

   The Unit provides yearlong habitat for both pronghorn and mule deer.

   [Add last sentence to second paragraph]

   This area is important wintering habitat for golden eagles and rough-legged hawks.

[Move discussion of Northern Leopard Frog to 3.3.8 Special Status Species]

4. Chapter 3 Affected Environment, page 3-16 (Section 3.3.8.3 Sage Grouse,

   [Replace first paragraph with the following:]

   There are eight (8) sage grouse leks inside the Rocktober Unit. There are four (4) sage grouse leks within a one-mile radius outside of the Rocktober Unit boundaries, for a total of 12 leks in the vicinity of this project.

   Six of the eight leks inside the Rocktober Unit Boundaries are within 2 miles from proposed wells.

   Recent lek attendance at seven leks is shown in table 3.8.

5. Chapter 4, Environmental Impacts. Page 4-10 Section 4.2.7.1

   [Last sentence of first paragraph should read as follows:]

   The project would disturb approximately 155 acres (0.6 percent of the Unit).

   [Replace second paragraph in this section, page 4-10 with the following]

   In addition to the direct loss of habitat due to construction of well pads, pipelines, roads, and the compressor station, disturbance from drilling activities and traffic would affect utilization of habitats immediately adjacent to these areas. Pronghorn have been found to habituate to increased traffic volumes (Reeve 1984) and heavy machinery as long as the machines moved in a predictable manner. The nature of this operation would be unpredictable and pronghorn would not likely habituate and may be disturbed during critical life stages, like parturition, which may cause fawn abandonment, in some cases. However, timing limitations applied for sage grouse lek attendance season would also protect parturition disturbance in the short term, but long term impacts would persist should the production phase occur. Mule deer responses to human activity have been observed to vary, ranging from habituation to traffic (Ward et al. 1980) and drilling activities (Easterly et al. n.d.) to displacement due to some disturbance types (Sawyer et al, 2006 and Hiatt and Baker 1981).

   [Replace first paragraph on page 4-11 with the following:]

Some unquantifiable amount of displacement of pronghorn and mule deer would occur, resulting in reduced year long, winter parturition use of existing habitat (Sawyer, 2006). Displacement would likely occur at its highest levels during the construction and drilling phases when human activities occur at their highest levels and would occur in the vicinity of the ongoing disturbance (such as a well being drilled or completed). During the production phase, disturbance would be less, but would still cause the habitat to become less suitable and there would still be disturbance through the life of the wells and may have negative effects during parturition and winter periods (Sawyer et al, 2006).

[Replace fourth paragraph on page 4-11 with the following:]

Direct impacts to nongame and small mammals would include mortality of animals during construction particularly ground-dwelling species and a potential increase in mortality from animal/vehicle collisions. Whereas nongame and small mammals would be adversely affected by increased human activity in the project area, primary effects would occur in direct proportion to the amount of habitat removed. Since total initial surface disturbance represents 0.6 percent of the Unit and rare habitats (e.g., wetlands or riparian areas) would be avoided, and mitigation measures instituted for big game animals would benefit nongame and small mammals as well, impacts on nongame and small mammals are expected to be limited to disturbance areas and produce a population sink for adjacent populations. Impacts to wildlife due to hazardous materials would be unlikely because of safeguards observed during transportation and use of such materials.

[Replace last paragraph on page 4-11, regarding golden eagle nest with the following paragraph:]

If the golden eagle nest is active when development occurs, BLM's seasonal restrictions would protect the nest by delaying project activities within 0.75 miles of the nest. Topographic features would block visual and audible impacts on nesting from gas production activities in the long-term. Increased production activity though would reduce habitat quality and disturb foraging activities, which may cause a reduction in the suitability for nesting in this area.

6. 4.2.8 Special Status Species, The Proposed Action, page 4-12

[Replace first paragraph with the following:]

General.
No special status plant species are known occur in the Unit, so the potential for impacts is negligible. Special status animal species would be

impacted by the same factors described for wildlife-direct habitat loss, displacement from suitable habitats, and animal/vehicle collisions. Long-billed curlew would also experience minimal habitat loss.

[Insert the following topic]

Sage Thrasher, Brewer's Sparrow, Sage Sparrow, Loggerhead Shrike.
These species are sagebrush obligate species and their habitat would be directly impacted on the 155 total acres of disturbance. According to Ingelfinger and Anderson, 2004, natural gas development has a negative impact on sagebrush obligate species through increased traffic, habitat fragmentation, weed spread, and predator access.
These impacts are likely to occur in this project area to the actual acres disturbed and indirectly to adjacent affected habitat.

7. Chapter 4 Environmental Impacts, page 4-13, Section 4.2.8.1)

[Replace entire Sage-Grouse discussion with the following:]

Greater Sage Grouse:
Appropriate leases restrict or prohibit surface occupancy within 0.25 miles of a lek. No development—neither wells nor road construction/improvement- - would occur within 0.25 miles of any greater sage-grouse lek. Six of the seven wells would occur within 2.0 miles from leks, whereas one of the seven wells is outside the 2.0 miles of the lek. Federal well 24-2 is approximately 0.4 miles from one lek and 0.65 miles and 0.70 miles from two other leks. Breeding, nesting, and brooking could be impacted by project activities within 2.0 mile from a lek; however, federal leases for the unit provides for protection of nesting/brooding greater sage-grouse from March 15 to July 15 by restricting development activities, and the Cody ROD lists the season restriction as February 1 to July 31. If development activity did occur during this closed period, it could result in impacts to lek activity. These impacts would be primarily from noise and most likely would occur at the six leks that are within 2 miles of the proposed project. Impacts to lek activities would occur when noise levels are more than 10 dBA above background, (the limit suggested by Wyoming Game and Fish Department {WGFD}), noise. However, construction, drilling, and completion activities for any given well would not last for more than some portion of one lek/nesting/brooding period, after which the only disturbance would be from production activities that would generally consist of a relatively few truck per day on Unit roads.

The Lek closest to the compressor station is more than 4.5 miles from the station, and the closest 2.0 mile buffer is approximately 3.0 miles from

the station; therefore, noise levels at leks would not be elevated more than 10 dBA above natural ambient noise as a result of comprsso4e station operations, and there is no reason to believe that compressor station operations would disturb birds on the leks. Because the compressor station is more than 4.5 miles from any lek, impacts to nesting and brooding birds within a 2.0 mile radius from a lek would be minimized.

Halloran (2005) suggested that current BLM development stipulations are inadequate to maintain greater sage-grouse breeding population in natural gas fields. He suggested that maintaining well densities of one well or less per section within 1.9 miles of a lek could reduce the consequences of gas field development, but a distance of 3.1 miles would be better. In the Proposed Action, six of the seven wells would be within 1.9 miles of a lek. Halloran (2005) also suggested that vehicular activity on roads within 0.8 miles of a lek during the daily strutting periods intensified the impacts.

In the Proposed action, Federal 24.2 project roads would be within 0.8 miles or more from 3 leks. Walker et al (2007) also suggests that the current 0.25 mile buffer lease stipulation is insufficient; however, his studies were conducted in full-field coalbed methane development, whereas the Rocktober Unit Project entails seven exploratory wells. The distance traveled by male birds from the lek during the breeding season generally averages 0.6 miles (Colorado Greater Sage-Grouse Conservation Plan Steering Committee, 2008), and females breeding on leks within 1.9 miles of natural gas development had lower nest initiation rates and nested farther from the lek compared to non-impacted females (Lyon and Anderson, 2003). Six of the seven proposed wells would be within 1.9 miles from a lek. Leks tend to remain active when well pad densities within 1.9 miles of leks are less than one pad per square mile (Halloran 2005)., and leks tend to become inactive at higher pad densities (Halloran 2005, Naug et al. 2006). Well pad densities in the western portion of the unit would be more than one pad per mile within 1.9 mile of the Stone Barn Lek Complex. Well densities in the eastern portion of the unit would be less than one pad per square mile.

Habitat fragmentation is also a factor that can have adverse impacts on greater sage-grouse; however it is difficult to assess the impacts in advance. Most of the project roads already exist, although many would be improved and traffic would increase, especially ring drilling and completion. Well pads likely would affect habitat fragmentation, but to what extent it is impossible to tell. Comparisons of the Rocktober Unit project on greater sage-grouse populations to the impacts of full-field development (much denser spacing of wells) in other areas is not a reliable predictor of impacts.

Table 4.1 compares development in the unit to the Governor's Executive Order 2008-2 regarding grater sage-grouse core area protection ,and Table 4.2 compares Unit development with recommendations received from the WGFD during public scoping (only six leks are included in tables 4.1 and 4.2).

Based on the relative locations of leks and proposed wells, impacts to greater sage-grouse would be likely negligible to low.

[Continue with Table 4.1 of EA.]

8. 4.2.9.1 Migratory Birds, the Proposed Action.
   [Replace last sentence of this discussion with the following:]

   Migratory birds would be impacted by the same factors as wildlife and special status animals. Whereas migratory birds would likely be adversely affected by increased human activity in the Unit, primary effects would occur in direct proportion to the amount of a species' habitat that would be removed. Initial surface disturbance of approximately 155 acres represents 0.6 percent of the Unit, and special habitats such as wetlands and riparian areas would be avoided. Approximately 75 percent of the disturbance would be short-term. An increase in mortality due to increased traffic would be expected. Measures already described to mitigate surface disturbance and other project activities would reduce impacts to migratory birds.

9. See New Wildlife Issues Map: (Attached)

10. Appendix B: Greater Yellowstone Coalition and David DeWitt Dominick's comment letters (missing in Appendix B of EA) have been incorporated in the Administrative Record. Information listed in these letters has been considered by other letters listing the same concerns.

11. Appendix E: Lining and solidification of the reserve pits by Solibond©, was not mentioned in the EA, but is listed to be used by the Operator's Surface Use Plan to expedite closure and reclamation of reserve pits and will be required.

12. Appendix E: Days to begin and end drilling, construction, workover is between 90-240 days, depending on depth of well.

13. Appendix G, Conditions of Approval, Number 29:

[Replace language with the following:]

The BLM may consider exceptions to the APD Conditions of Approval (COAs, timing limit stipulations), if we determine there will be no impacts to sensitive species (sage grouse, etc).