

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Denbury Onshore, LLC  
**Well Name/Number:** 04-03 OW  
**Location:** NE NW Section 4 T9S R54E  
**County:** Powder River, **MT;** **Field (or Wildcat)** Bell Creek

**Air Quality**

(possible concerns)

Long drilling time: No, 3 to 4 days drilling time.

Unusually deep drilling (high horsepower rig): No, single or double drilling rig, to drill to 2600' TD vertical Steele Formation seismic monitoring well.

Possible H<sub>2</sub>S gas production: None anticipated.

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

Air quality permit (AQB review)

Gas plants/pipelines available for sour gas

Special equipment/procedures requirements

Other: \_\_\_\_\_

Comments: No special concerns – using a single or double derrick drilling rig to drill to 2600' TD vertical Steele Formation seismic monitoring well.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater and freshwater mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainage is Wright Creek, an ephemeral drainage, about 1/8 of a mile to the north and about 3/16 of a mile to the west from this location.

Water well contamination: None, closest water wells are about 3/4 of a mile to the east, about 3/4 of a mile to the south southwest and about 7/8 of a mile to the southeast from this location. Depth of these wells are 126' and 342'. This well will drill surface hole with freshwater to 120' and will set and cement 9 5/8" surface casing to protect shallow groundwater.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

Lined reserve pit

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system

Off-site disposal of solids/liquids (in approved facility)

Other: \_\_\_\_\_

Comments: 120' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

## Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: No, crossings anticipated will be using existing lease roads within the Bell Creek Oil Field.

High erosion potential: No high erosion potential at this location, moderate cut, up to 10.0' and a small fill, up to 8.1', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive, unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 200'X205' location size required.

Damage to improvements: Slight, surface use is a grazing land.

Conflict with existing land use/values: Slight

Mitigation

Avoid improvements (topographic tolerance)

Exception location requested

Stockpile topsoil

Stream Crossing Permit (other agency review)

Reclaim unused part of wellsite if productive

Special construction methods to enhance reclamation

Other \_\_\_\_\_

Comments: Access will be over existing county roads and existing well lease roads. A short new access will be built off an existing well lease road into this location. Cuttings will be buried in the lined reserve pit. Freshwater drilling fluids will be hauled to Class II disposal well or allowed to dry in the pit. Pit will be allowed to dry and backfilled with subsoils and clays. No special concerns.

## Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Nearest residences are about 1/2 of a mile to the south southwest and about 1.125 miles to the northwest from this location.

Possibility of H2S: None anticipated.

Size of rig/length of drilling time: Single or double drilling rig/short 3 to 4 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: \_\_\_\_\_

Comments: Adequate surface casing and operational BOP equipment should mitigate any problems. No concerns.

## Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered species in Powder River County is the Black-Footed Ferret. Candidate species are the Greater Sage

Grouse and the Sprague's Pipit. NH Tracker website lists two (2) species of concern. They are as follows: Ferruginous Hawk and Snapping Turtle.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DSL)
- Screening/fencing of pits, drillsite
- Other: \_\_\_\_\_

Comments: Surface is private grazing land. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites None identified.

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DSL, federal agencies)
- Other: \_\_\_\_\_

Comments: Surface use is private grazing land. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

### **Social/Economic**

(possible concerns)

- Substantial effect on tax base
- Create demand for new governmental services
- Population increase or relocation

Comments: Monitoring well in an existing oil field, Bell Creek Oil Field. No economic impact at all. This well will never produce. No concerns.

### **Remarks or Special Concerns for this site**

Well is a 2600' Steele Formation seismic monitoring well in the Bell Creek Oil Field. This monitoring well will have geophones cemented from bottom to top inside this hole.

### **Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected. Some short term impacts will occur.

---

---

---

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the

human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki  
(title:) Chief Field Inspector  
Date: March 28, 2013

Other Persons Contacted:  
Montana Bureau of Mines and Geology, GWIC website  
(Name and Agency)  
Powder River County water wells  
(subject discussed)  
March 28, 2013  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES  
MONTANA COUNTIES, Powder River County  
(subject discussed)

March 28, 2013  
(date)

Montana Natural Heritage Program Website (FWP)  
(Name and Agency)  
Heritage State Rank= S1, S2, S3, T9S R54E  
(subject discussed)

March 28, 2013  
(date)

Montana Cadastral Website  
(Name and Agency)  
Surface Ownership and surface use Section 4 T9S R54E  
(subject discussed)

March 28, 2013  
(date)

If location was inspected before permit approval:  
Inspection date: \_\_\_\_\_  
Inspector: \_\_\_\_\_  
Others present during inspection: \_\_\_\_\_