

## CHECKLIST ENVIRONMENTAL ASSESMENT

**Proposed Action:** Approve Drilling Permit (Form 22)

**Project/Well Name:** Coral Creek Unit MC44-09SH

**Operator:** Denbury Onshore, LLC

**Location:** T6N, R60E, Sec 9 SESE

**County:** Fallon MT; **Field (or Wildcat):** Lookout Butte

**Proposed Project Date:** 7/16/2018

### I. DESCRIPTION OF ACTION

Denbury Onshore plans to drill a horizontal well into the Mission Canyon Formation 12,729' MD / 7,193' TVD. Surface casing to be set at 2,000' and cemented to surface.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

Montana Bureau of Mines and Geology, GWIC website (Fallon County Wells).

US Fish and Wildlife, Region 6 website

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Fallon County

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T6N R60E

Montana Cadastral Website

Surface Ownership and surface use Section 9 T6N R60E

Montana Department of Natural Resources MEPA Submittal

#### 2. ALTERNATIVES CONSIDERED

No Action Alternative: The proposed well would not be drilled.

Action Alternative: Denbury Onshore, LLC. would have permission to drill the well.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

#### 3. AIR QUALITY

Long drilling time: No, 7-10 days.

Unusually deep drilling (high horsepower rig): No, triple derrick rig.

Possible H<sub>2</sub>S gas production: Yes, possible H<sub>2</sub>S gas, slight chance from Mississippian Formations.

In/near Class I air quality area: No Class I air quality area in the area of review.

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

Comments: No special concerns – using rig to drill to 12,729' MD / 7,193' TVD. If there are no gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

#### 4. WATER QUALITY

Salt/oil based mud: Surface hole to be drilled with freshwater mud system. Intermediate hole to be drilled with oil based mud system. Production hole to be drilled with saltwater based mud system.

High water table: No high-water table at this well location.

Surface drainage leads to live water: Yes, Buffalo Creek is located 1/5 of a mile to the south. An unnamed ephemeral drainage to Buffalo Creek is located 1/10 of a mile to the north. A stock pond is located 1/10 of a mile to the south.

Water well contamination: No water wells in 1/2 mile radius.

Porous/permeable soils: Sandy clay.

Class I stream drainage: No class I streams in the area.

Groundwater vulnerability area: No.

Mitigation:

Lined reserve pit:

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system

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

Comments: Steel surface casing set and cemented to surface to protect ground water. (Rule 36.22.1001).

#### 5. SOILS/VEGETATION/LAND USE

Vegetation: Area is grassland.

Steam crossings: No stream crossings anticipated.  
High erosion potential: Large cut of 20.0' and medium fill of 13.2' required.  
Loss of soil productivity: No, location will be restored after drilling if nonproductive.

Unusually large wellsite (Describe dimensions): No, 460' X 310' location.

Damage to improvements: Slight.  
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

Access Road: Access will be off existing Coral Creek Road, an access of 62' will be built into location.

Drilling fluids/solids: All solids will be hauled to Oaks Disposal Facility in Marmarth, ND. Liquids will be recycled.

## 6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residents within a ½ mile radius.  
Possibility of H2S: Yes possible H2S gas, slight chance from Mississippian Formations.  
Size of rig/length of drilling time: Triple derrick rig, 7 -10 days drilling time.

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other:

## 7. WILDLIFE/RECREATION

Sage Grouse: In Core habitat and requires sage grouse approval from the Sage Grouse Habitat Conservation Program. Program received 3-12-2018.

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

Proximity to recreation sites: None.

Creation of new access to wildlife habitat: No.

Conflict with game range/refuge management: No.

Threatened or endangered Species: Species listed as endangered or threatened in Fallon County are the Whooping Crane, Northern Long-eared Bat, and piping Plover. Interior Least Tern, and the Red Knot.

The Montana Natural Heritage Program website lists four (4) species of concern: Great Blue Heron, Chestnut-collared Longspur, Greater Sage-Grouse, Brewer's Sparrow.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DNRC Trust Lands)
- Screening/fencing of pits, drillsite
- Other:

Comments: Private cultivated surface lands. There may be 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. No concerns.

**IV. IMPACTS ON THE HUMAN POPULATION**

**8. HISTORICAL/CULTURAL/PALEONTOLOGICAL**

Proximity to known sites:

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DNRC Trust Lands L, federal agencies)

Other:

**9. SOCIAL/ECONOMIC**

Substantial effect on tax base

- Create demand for new governmental services
- Population increase or relocation

Comments: No concerns.

**IV. SUMMARY**

No long term impacts expected. Some short term impacts will occur, but can be mitigated. 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.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> John Gizicki <b>Title:</b> Compliance Specialist
<b>Signature:</b>	<b>Date:</b> 04/16/18