

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Unit MC 43-19NH

Operator: Denbury Onshore, LLC

Location: Section 19 T7N-R60E NE SE

County: Fallon **MT;** **Field (or Wildcat):** Pennel

Proposed Project Date: 11/3/2019

I. DESCRIPTION OF ACTION

Denbury plans to drill a horizontal well into the Mission Canyon Formation 15,054' MD / 7,199' 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, T7N R60E

Montana Cadastral Website

Surface Ownership and surface use Section 19 T7N 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 H₂S gas production: Yes, possible H₂S from the Mississippian Formations.

In/near Class I air quality area: No.

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 15,054' MD / 7,199' 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.

High water table: No.

Surface drainage leads to live water: No, nearest drainage is located 1/10 of a mile to the northeast and southwest of location. Lake Baker is located about 1.3 mile to the northwest.

Water well contamination: No water wells within a ½ mile radius.

Porous/permeable soils: Sandy clay.

Class I stream drainage: No.

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 will be run and cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossings: Only on established roads.

High erosion potential: No, small cut of 2.9' and small fill of 2.6' required.

Loss of soil productivity: Location to be restored after drilling well if well is nonproductive.

Unusually large wellsite (Describe dimensions): No, 400' X 350'.

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 Coral Creek Rd and an established dirt road off of Coral Creek Rd. A new access of 89' will be built to the location.

Drilling fluids/solids: All solids will be hauled to a licensed disposal facility.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: The town of Baker, MT is located about 1.2 miles to the northwest. Baker Municipal Airport (runway) is located just over ½ of a mile to the southwest.

Possibility of H2S: Yes, possible H2S from the Mississippian Formations.

Size of rig/length of drilling time: 7-10 days.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other:

7. WILDLIFE/RECREATION

Sage Grouse: Yes, in core area. 5 Leks in Density Disturbance Calculation Tool analysis area. Program analysis received 10-31-2018.

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

Proximity to recreation sites: Lake Baker is 1.2 miles to the northwest.

Creation of new access to wildlife habitat: No.

Conflict with game range/refuge management: No.

Threatened or endangered Species: Species identified as threatened or endangered in Fallon County are the Whooping Crane, Northern Long-eared Bat, and Piping Plover. The Montana Natural Heritage Program Website lists four (4) species of concern: The Chestnut-collared Longspur, Swift Fox, Greater Sage-Grouse, and Baird's Sparrow.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DNRC Trust Lands, **Sage Grouse Habitat**

Conservation Program)

Screening/fencing of pits, drillsite

Other: Sage Grouse Habitat Conservation Program to limit work times.

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, 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.

**EA Checklist
Prepared By:**

Name: John Gizicki
Title: Compliance Specialist

Date: 10/31/2018