

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)
Project/Well Name: Little Beaver East MC11-08NH
Operator: Denbury Onshore, LLC

Location: T4N, R62E, Sec 8 NWNW
County: Fallon MT; **Field (or Wildcat):** Little Beaver East

Proposed Project Date: 9/2019

I. DESCRIPTION OF ACTION

Denbury Onshore plans to drill a horizontal well into the Mission Canyon Formation 16,852' MD / 6,853' 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, T4N R62E

Montana Cadastral Website
Surface Ownership and surface use Section 8 T4N R62E

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 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 16,852' MD / 6,853' 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: No, closest drainage is an unnamed ephemeral drainage about 1,000' to the southwest.

Water well contamination: No. GWIC lists one unused domestic water well 2/5 of a mile to the southeast and lists no depth.

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

5. SOILS/VEGETATION/LAND USE

Vegetation: Area is grassland.

Stream crossings: No stream crossings anticipated.

High erosion potential: Small cut of 6.1' and small fill of 4.3' required.

Loss of soil productivity: No, location will be restored after drilling if nonproductive.

Unusually large wellsite (Describe dimensions): No, 400' X 350' location for a two well pad.

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 dirt road, an access of 319' will be built into location.

Drilling fluids/solids: No reserve pit to be used, closed loop system.

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. Waiting to receive the letter.

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. The Montana Natural Heritage Program website lists two (2) species of concern: Greater Sage-Grouse and Brewer's Sparrow.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DNRC Trust Lands, **Montana Sage Grouse Habitat Conservation Program**)

Screening/fencing of pits, drillsite

Other:

Comments: In Core area. Subject to Sage Grouse Program stipulations. 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
Signature:	Date: 07/19/19