

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Kendrick Heirs 13-32

Operator: Briscoe Petroleum, LLC

Location: SW SW Section 32 1N-35E

County: Big Horn MT; **Field (or Wildcat):** Wildcat

Proposed Project Date: 7/1/2018

I. DESCRIPTION OF ACTION

Briscoe Petroleum, LLC plans to drill a 6,000' MD/TVD oil well with objective formations being the Tensleep and Amsden. Surface casing to be set at 300'.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

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

US Fish and Wildlife, Region 6 website

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Big Horn County

Montana Natural Heritage Program Website (FWP)
Heritage State Rank= S1, S2, S3, T1N R35E

Montana Cadastral Website
Surface Ownership and surface use Section 32 T1N R35E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

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

Action Alternative: Briscoe Petroleum, LLC would have permission to drill the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 4-5 days.
Unusually deep drilling (high horsepower rig): No.

Possible H₂S gas production: No H₂S anticipated.
In/near Class I air quality area: The Crow Reservation is about 1.2 miles to the south,
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 small rig to drill to 6,000' TD. 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: Fresh water based drilling fluids system will be utilized.
High water table: No.
Surface drainage leads to live water: No, the nearest drainage is Little Ninemile Creek which is about 300' to the north.

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

Porous/permeable soils: No, sandy clay.
Class I stream drainage: The Bighorn River is located about 8 miles to the west.
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: None anticipated.
High erosion potential: No, medium cut of 12.4' and small fill of 8.5' required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive, at the point and time when the life of the well is over and the well is plugged, the location will be returned to original grade and productivity per ARM 36.22.1307.

Unusually large wellsite (Describe dimensions): No, 230' X 180' location.

Damage to improvements: Slight, surface use is grassland.

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: Existing access road is off Sarpy Road.

Drilling fluids/solids: Reserve pits will be dewatered, allowed to evaporate and backfilled according to MBOGC rules.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: The town of Hardin is about 10 miles to the southwest. There are no residences within a ½ mile radius.

Possibility of H2S: No H2S anticipated.

Size of rig/length of drilling time: 4-5 days.

Mitigation:

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

7. WILDLIFE/RECREATION

Sage Grouse: In general habitat.

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

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: None identified.

Conflict with game range/refuge management: None identified.

Threatened or endangered Species: Only species identified as threatened or endangered is the Black-footed Ferret. The Montana Natural Heritage Program lists five (5) species of concern: Merriam's Shrew, Preble's Shrew, Great Blue Heron, Plains Hog-nosed Snake, Western Milksnake.

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, 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:

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Date: 05/02/18