

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Virginia 25-36 #4H

Operator: Kraken Operating, LLC

Location: SW SE Section 24 T28N-R58E

County: Roosevelt MT; **Field (or Wildcat):** Wildcat

Proposed Project Date: 1/7/2024

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Middle Bakken Formation test, 20,602'MD/10,129'TVD.

II. PROJECT DEVELOPMENT

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

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

US Fish and Wildlife, Region 6 website

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T28N R58E

Montana Cadastral Website

Surface Ownership and surface use Section 24 T28N R58E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

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

Action Alternative: Kraken Operating LLC would have permission to drill the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 5-10 days.

Unusually deep drilling (high horsepower rig): No

Possible H2S gas production: Potentially in 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 – Triple derrick drilling rig to drill a single lateral horizontal Middle Bakken Formation test, 20,602'MD/10,129'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: Will drill with oil based invert drilling fluids for the intermediate casing hole.

Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system, Rule 36.22.100.1

Surface drainage leads to live water: No, the nearest drainage is an unnamed ephemeral drainage about 1/10 of a mile to the southeast, a stock pond is located along this drainage about 2/5 of a mile to the east.

Water well contamination: GWIC lists a stockwater well just over 1/4 of a mile to the northwest. Another stockwater well is listed as being 400' to the southeast and is 34' deep.

Porous/permeable soils: No, 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 to be set at 2,000' to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossings: None anticipated.

High erosion potential: Slight, large cut of 20.1' and a medium fill of 10.9' required.

Loss of soil productivity: No, location to be restored after drilling, if plugged.

Unusually large wellsite (Describe dimensions): A large wellsite for a five well pad, 537' by 565'.

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: US-2 E and existing road. A new access of 1069' will be built into location.

Drilling fluids/solids: Drilling solids and fluids will be hauled to a state approved disposal facility.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within a 1/4 mile radius. An occupied structure is listed as being 1,487' to the east of the proposed location. Nearest town is Fairview, MT and is about 9 miles to the southeast.

Possibility of H2S: Possibility in Mississippian formations.

Size of rig/length of drilling time: Triple derrick, 5-10 days.

Mitigation:

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

7. WILDLIFE/RECREATION

Sage Grouse: No.

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

Proximity to recreation sites: None.

Creation of new access to wildlife habitat: None.

Conflict with game range/refuge management: None.

Threatened or endangered Species: Species listed as threatened or endangered in Roosevelt County, MT are the Pallid Sturgeon, Piping Plover, Whooping Crane, and Northern Myotis. The Montana Natural Heritage Program lists Three (3) species of concern, the Whooping Crane, Bobolink, and LeConte's Sparrow. The Monarch is a candidate species.

Mitigation:

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

Comments: Private grasslands. 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: Chief Field Inspector	Date: 10/4/23
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