

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Fred 15-22-27 4H

Operator: Kraken Operating LLC

Location: NW NE Section 15 T27N-R57E

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

Proposed Project Date: 1/19/2023

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Middle Bakken Formation test, 24,870'MD/10,147'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, T27N R57E

Montana Cadastral Website

Surface Ownership and surface use Section 15 T27N R57E

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, 5-7 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: Yes, DEQ air quality permit required under 75-2-211. AQB review.

Comments: No special concerns – Using triple derrick drilling rig to drill a single lateral horizontal Middle Bakken Formation test, 24,870’MD/10,147’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: Freshwater to be used on surface hole, oil-based mud will be used on intermediate hole, and a brine system will be used on the horizontal section.
High water table: No.
Surface drainage leads to live water: No, the nearest drainage is an unnamed ephemeral drainage 3/10 of a mile to the northeast and southwest. The Missouri River is located about two miles to the southwest.

Water well contamination: GWIC lists no water wells within a ½ mile radius. The drilling permit lists a water well about 3/10 of a mile to the northeast, GWIC lists this well as a petroleum well.

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 1,950’ and cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Cultivated field.
Stream crossings: None anticipated.
High erosion potential: Slight, large cut of 25.1’ and medium fill of 18.8’.
Loss of soil productivity: No, location to be restored after drilling, if plugged.

Unusually large wellsite (Describe dimensions): Yes, 775’ by 480’ for seven wells.

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 CR 1012 and existing dirt road.

Drilling fluids/solids: All drilling solids/liquid will be transported and disposed of by Wisco.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within a ½ mile radius. Nearest town is Bainville, MT and is about 6 miles to the northeast.

Possibility of H2S: Potentially in Mississippian formations.

Size of rig/length of drilling time: Triple derrick, 5-7 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: 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, Red Knot, Piping Plover, Whooping Crane, and Northern Long-eared Bat. The Monarch Butterfly is a candidate species. The Montana Natural Heritage Program lists nineteen (19) species of concern, Eastern Red Bat, Hoary Bat, Little Brown Myotis, Sprague's Pipit, Golden Eagle, Piping Plover, Whooping Crane, Red-headed Woodpecker, Least Tern, Greater Short-horned Lizard, Northern Redbelly Dace, Blue Sucker, Iowa Darter, Shortnose Gar, Sturgeon Chub, Sicklefin Chub, Paddlefish, Sauger, and Pallid Sturgeon.

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:	Name: John Gizicki	Date: 9/28/22
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