

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Thor 2756-3-22 #1H

Operator: Kraken Operating LLC

State: Montana

Location: SWSW T28N R56E Sec. 35

County: Roosevelt

Field (or Wildcat): Wildcat

Proposed Project Date: TBD

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 31,444' MD/10,106' TVD.

II. PROJECT DEVELOPMENT

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

10 days from public notification opportunity to protest for hearing:

- Published in Helena Independent Record on 8/14/2025.
- Published in Northern Plains Independent on 8/21/2025.

No written demand for hearing has been filed per ARM 36.22.601 as of 9/1/2025.

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

US Fish and Wildlife, ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County

Montana Natural Heritage Program Website (FWP)
Heritage State Rank= S1, S2, S3, T28N R56E

Montana Cadastral Website
Surface Ownership and surface use Section 35 T28N R56E

Montana Department of Natural Resources MEPA Submittal

USDA Natural Resources Conservation Service-Soils Map

B. ALTERNATIVES CONSIDERED

No Action Alternative: Permit to drill the well would not be issued by BOGC.

Action Alternative: Referred to the BOGC for further environmental review.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

A. AIR QUALITY

Long drilling time: No, 10-20 days.

Unusually deep drilling (high horsepower rig): No

Emission sources: Vehicles traveling on county road to location, combustion engines on location during drilling operations. Fugitive dust from traveling operations and location during active drilling.

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 Bakken Formation test, 31,444' MD/10,106' TVD. If there are no gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

B. WATER QUALITY

Salt/oil-based mud: Steel surface casing hole will be drilled with freshwater and freshwater mud system to 2385', Rule 36.22.100.1. Will drill with oil-based invert drilling fluids for the intermediate casing hole. Horizontal hole will be drilled with saltwater.

High water table: No.

Surface drainage leads to live water: Yes, the Missouri River is approximately ¾ mile to the southwest.

Water well contamination: There is one stockwater well within ½ mile radius, located approximately 1488' to the northwest with a depth of 180' and a static water level of 140'. The surface hole will be drilled with freshwater and freshwater mud to 2385' and steel surface casing will be run and cemented back to the surface to protect groundwater.

Porous/permeable soils: No, clay loam.

Class I stream drainage: None.

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)
- Other:

Comments: Steel surface casing will be run to 2385' and cemented back to surface to protect freshwater zones (Fox Hills aquifer) in adjacent water wells, Rule 36.22.1001. Adequate surface casing and BOP equipment to prevent problems, (5,000 psi annular and double ram), Rule 36.22.1014.

C. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossing: None anticipated.

Erosion potential: Moderate/high, cut of up to 11.9' and fill of up to 18.1'.

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

Unusually large wellsite (Describe dimensions): A well site 465'X 471' required for a three-well pad.

Damage to improvements: Slight, to 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: Access will be from a 11,096' proposed access road from County Road 1018.

Drilling fluids/solids: Kraken Operating LLC will not be utilizing a drilling pit. Drilling fluids and solids will be transported to a state approved disposal facility.

D. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No occupied structures within $\frac{1}{4}$ mile radius. The closest occupied structure is approximately 0.85 miles away in NWSW Section 36 T28N R56E.

Possibility of H2S: Possibility in Mississippian formations.

Size of rig/length of drilling time: 10-20 days.

Mitigation:

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

E. WILDLIFE/RECREATION

Sage Grouse: No.

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 within 5 miles: Long-billed Curlew, Red-headed Woodpecker, Black-billed Cuckoo, Loggerhead Shrike, Whooping Crane, Golden Eagle, Least Tern, Sturgeon Chub, Shortnose Gar, Sauger, Sicklefin Chub, Blue Sucker, Northern Redbelly Dace, Iowa Darter, Pallid Sturgeon, Paddlefish, Silver-haired Bat, Northern Myotis, Little Brown Myotis, Long-legged Myotis, Townsend's Big-eared Bat, Greater Short-horned Lizard, Plains Hog-nosed Snake, and *Stylurus intricatus*.

Mitigation:

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

Comments: State of Montana Trust Lands is the surface owner. There may be species of concern that may be impacted by this well site. 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 state surface lands. State of Montana Trust Lands and Minerals will do surface EA.

IV. IMPACTS ON THE HUMAN POPULATION

A. HISTORICAL/CULTURAL/PALEONTOLOGICAL

Proximity to known sites:

Mitigation:

- Avoidance (topographic tolerance, location exception)
- Other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other: State of Montana Trust Lands is the surface owner. There may be possible historical/cultural/paleontological sites that may be impacted by this wellsite. We ask the operator to consult with the surface owner as to desires to preserve these sites or not, if they are found during construction of the well site. State of Montana Trust Lands and Minerals will do surface EA.

B. 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: Allison YoungSwallow Title: Compliance Technician	Date: 12/2/2025
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