

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Reagan 34-27-22 2H

Operator: Kraken Operating LLC

State: Montana

Location: NWNE Section 3 T25N R57E

County: Richland

Field (or Wildcat): Wildcat

Proposed Project Date: 12/16/2024

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 26,212'MD/10,392'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 7/6/2024.

Published in Sidney Herald on 7/6/2024.

No written demand for hearing has been filed per ARM 36.22.601 as of 7/22/2024.

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

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T25 R57E

Montana Cadastral Website

Surface Ownership and surface use Section 3 T25N R57E

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, 5-10 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, 26,212’MD/10,392’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: 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

High water table: No.

Surface drainage leads to live water: No, in cultivated field. Ephemeral drainage approximately 4000’ East of location. Drains into Missouri River about 7 miles to the north.

Water well contamination: 1 water well within half mile of location categorized as a domestic, stock water, and irrigation located about 1900’ to the northeast in section 34 T26N R57E with 90’ static water level. Well drilled in 1928. The surface hole will be drilled with freshwater and freshwater mud to 2045’ and steel surface casing will be run and cemented to surface to protect groundwater.

Porous/permeable soils: Moderate slow to slowly permeable. Williams Loam is a fine 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 and cemented to surface to protect ground water. (Rule 36.22.1001).

Comments: Surface hole will be drilled with a freshwater mud system to 2045'. Steel surface casing will be run to 2045' and cemented back to surface to protect freshwater zones in adjacent water wells, Rule 36.22.1001. Also, covering Fox Hills aquifer. 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: Cultivated field.

Stream crossings: None anticipated.

High erosion potential: No, largest cut is 4.2' and largest fill is 2.8'.

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

Unusually large wellsite (Describe dimensions): A large well site 516'X 565' required for a four-well pad.

Damage to improvements: Slight to ag land.

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 CR 142. A new access of 533' will be built into location.

Drilling fluids/solids: Kraken 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 a 1/4-mile radius. Closest occupied structure is 3/4 of a mile away to the Northwest in Section 33 T26N R57E. Another occupied structure is located .95 of a mile away to the Southeast in Section 2 T25N R57E.

Possibility of H2S: Possibility in Mississippian formations.

Size of rig/length of drilling time: 5-10 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: Richland County are the Pallid Sturgeon, Sicklefin Chub, Interior Least Tern, Whooping Crane, Piping Plover, and the Northern Long-eared Bat.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DNRC Trust Lands)

Screening/fencing of pits, drillsite

Other:

Comments: Private cultivated field. 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

A. HISTORICAL/CULTURAL/PALEONTOLOGICAL

Proximity to known sites:

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other: The Board of Oil & Gas has no jurisdiction over private surface lands.

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:

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Date: 9/19/2024

Title: Technical Program Coordinator