

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Delores 4-9-16 13H

Operator: Kraken Operating LLC

State: Montana

Location: SESE Section 31 T25N R59E

County: Richland

Field (or Wildcat): Wildcat

Proposed Project Date: 10/2/2025

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 23,115'/10,417'TVD.

II. PROJECT DEVELOPMENT

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

10 day from public notification opportunity to protest for hearing:

Published in Helena Independent Record on 8/9/2025.

Published in The Roundup on 8/13/2025.

No written demand for hearing has been filed per ARM 36.22.601 as of 8/25/2025.

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, T25N R59E

Montana Cadastral Website
Surface Ownership and surface use Section 31 T25N R59E

Montana Department of Natural Resources MEPA Submittal

USDA Soil Survey Website.

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 Hwy 201 and travel on 341' of new access road.

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, 23,115'/10,417'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: Surface casing hole will be drilled with freshwater and freshwater mud system, 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: Ephemeral drainage to Second Hay Creek which is ½ mile to the West.

Water well contamination: 10 water wells within ½ mile of location. See attached list.

Porous/permeable soils: No, Sandy Silty Clay Loam soils.

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: Surface hole will be drilled with a freshwater mud system to 1820'. Steel surface casing will be run to 1820' 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: Grasslands.

Stream crossings: None anticipated.

High erosion potential: Possible, cut 22.5' and fill of 7.7'.

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

Unusually large wellsite (Describe dimensions): Odd 5 sided wellpad 243' x 700' x 562' x 213' x 583' for 3 well pad.

Damage to improvements: Slight, grasslands.

Conflict with existing land use/values: No.

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 West from Hwy 201 with new access road of 374' traveling north from Hwy 201.

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 a 1/4-mile radius. United State Department of Energy substation approximately 100' east of wellpad. Closest occupied structure is approximately 1700' from location to the southwest in Section 4 T24N R59E. Next closest structure is approximately 2,190' to southwest of location in Section 4 T24N R59E. Next occupied structure is 2,220' to west of location east in section 31 T25N R59E. The town of Fairview, MT is 5 miles to the east of location. The town of Sidney, MT is 10 miles south of location.

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 within a 5-mile radius of location found on MNHP website: Iowa Darter, Northern Redbelly Dace, Chestnut-collared Longspur, Bobolink, Loggerhead Shrike, and Whooping Crane.

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 may be 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:**

Name: Ben Davis
Title: Technical Program Coordinator

Date: 9/18/2025

Water wells within 1/2 mile of Delores Well pad location

GWIC ID	Site Name	Proposed Use of Well	Depth	Static Water Level
289792	Sundheim, Chad	Domestic	380'	175'
37351	Sundheim Ole	Domestic	308'	165'
37350	Sundheim James	Domestic/Stockwater	91'	24'
223367	Trust Prewitt	Domestic	200'	76'
312227	Prewitt Land and Livestock	Domestic	290'	64.5'
312232	Prewitt Land and Livestock	Domestic	380'	188.7'
334260	Prewitt, Rowdie	Domestic	130'	52'
186925	Sundheim Gnell	Domestic	63'	21.3'
37353	Sundheim Orion/Golden Valley Ranch	Stockwater	36'	12'
294665	Sundheim, Orion	Stockwater	150'	40'