

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Pac Man 36-12-2H

Operator: MorningStar Operating, LLC

State: Montana

Location: NWNW T26N R52E Sec. 36

County: Richland

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, 25,015' MD/9,016' 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 12/16/2025.
- Published in the Sidney Herald on 12/13/2025.

No written demand for hearing has been filed per ARM 36.22.601 as of 12/26/2025.

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, T26N R52E

Montana Cadastral Website
Surface Ownership and surface use Section 36 T26N R52E

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, 25,015' MD/9,016' 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 1100', 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: There is an unnamed ephemeral drainage approximately 600' northwest of location.

Water well contamination: There are six wells within a ½ mile of the location. The first is a domestic well approximately 1503' northwest with a total depth of 600' and static water level of 233'. Next is a stockwater well approximately 1576' northwest with a total depth of 90' and static water level of 4'. Next is a stockwater well approximately 2333' northwest with a total depth of 75' and static water level of 15'. Next is a domestic and stockwater well approximately 2453' west with a total depth of 36' and a static water level of 18'. Next is a stockwater well approximately 2484' west with a total depth of 121' and static water level of 20'. Last is a stockwater well approximately 2507' northwest with a total depth of 113' and static water level of 20'. The surface hole will be drilled with freshwater and freshwater mud to 1100' and steel surface casing will be run and cemented back to the surface to protect groundwater.

Porous/permeable soils: No, silty 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 1100' 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: Grazing land/grassland.

Stream crossing: None anticipated.

Erosion potential: Low, cut of up to 9.3' and fill of up to 2'.

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

Unusually large wellsite (Describe dimensions): A well site of 435'X 400' required for a two-well pad.

Damage to improvements: Slight, to grazing land/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 +/- 81' proposed access road from County Road 143.

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

Comments:

D. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: There are no occupied structures within a ¼ mile radius. The closest occupied structure is approximately 0.53 miles west in SWSE Section 26 T26N R52E.

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: Loggerhead Shrike, Brewer's Sparrow, Little Brown Myotis, Silver-silver haired Bat, Northern Hoary Bat, and Iowa Darter.

Mitigation:

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

Comments: Grassland/grazing land. 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: Allison YoungSwallow
Title: Compliance Technician

Date: 1/16/2026