

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Putnam 42X-13

Operator: Morningstar Operating, LLC

State: Montana

Location: NESE T23N R56E Sec. 13

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, 21,270' MD/10,594' TVD.

II. PROJECT DEVELOPMENT

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

10 days from public notification opportunity to protest for hearing:

- Published in the Helena Independent Record on 11/25/2025.
- Published in the Sidney Herald on 11/29/2025.

No written demand for hearing has been filed per ARM 36.22.601 as of 12/8/2025.

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, T23N R56E

Montana Cadastral Website
Surface Ownership and surface use Section 13 T23N 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, 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, 21,270' MD/10,594' 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 2300', Rule 36.22.100.1. Will drill with oil-based invert drilling fluids for the intermediate casing hole. Horizontal hole will be drilled with produced water.

High water table No.

Surface drainage leads to live water: An unnamed ephemeral drainage to south side of well pad. The ephemeral drainage leads to confluence of Lone Tree Creek 3 miles to northeast of location which is also categorized as an ephemeral drainage.

Water well contamination: The closest water well is an abandoned well located about 2100' to the northeast on the east side of CR 336 and is 30' deep. The surface hole will be drilled with freshwater and freshwater mud to 2300' and steel surface casing will be run and cemented to surface to protect groundwater. Larson Merlyn a stockwater well approximately 2700' to northeast is 40' deep with 20' static water level outside of ½ miles radius. Nevins DMC Trust a domestic/stockwater well approximately 2700' to southwest and is 540' deep with static water level of 302' outside of ½ mile radius.

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 2300' 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/grazing land.

Stream crossing: None anticipated.

Erosion potential: Low, cut of up to 4.9' and fill of up to 7.7'.

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

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

Damage to improvements: Slight, to grassland/grazing 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 an approximately 845' proposed access road off County Road 336.

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 1/4 mile radius. The closest occupied structure is approximately 0.44 miles southwest in SWSE Section 13 T23N 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: Whooping Crane, Little Brown Myotis, and Northern Hoary Bat.

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	Name: Allison YoungSwallow	Date: 12/31/2025
Prepared By:	Title: Compliance Technician	