

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: XTO Energy, Inc.

Well Name/Number: Beagle 12X-17

Location: SW NW Section 17 T23N R59E

County: Richland, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 30-35 days drilling time.

Unusually deep drilling (high horsepower rig): A triple derrick rig to drill a single lateral Bakken Formation Horizontal Lateral, 19,899' MD/10,451' TVD.

Possible H₂S gas production: Slight chance of H₂S.

In/near Class I air quality area: No, not in a Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:

Air quality permit (AQB review)

Gas plants/pipelines available for sour gas

Special equipment/procedures requirements

Other: _____

Comments: Existing pipeline for H₂S gas and sweet gas in the area.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate casing string hole will be drilled with oil based invert drilling fluids. Horizontal lateral will be drilled with produced brine water. Surface casing hole will be drilled with freshwater and freshwater drilling fluids.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainages are unnamed ephemeral tributary drainages, about 1/4 of a mile to the southeast and unnamed ephemeral drainage to the south, about 1/2 of a mile and drain towards the Yellowstone Main Canal, an irrigation project.

Water well contamination: None, surface hole will be drilled with freshwater and freshwater drilling fluids to 2100', steel surface casing will be run and cemented to surface from 2100' to protect any ground and surface waters. Closest water wells are about 3/8 of a mile to the south southeast, about 1/2 of a mile to the south, about 1/2 of a mile to the east, about 5/8 of a mile to the west, about 5/8 of a mile to the east, about 5/8 of a mile to the northeast, about 3/4 of a mile to the northeast and about 3/4 of a mile to the southwest from this location. Depth of these stock and domestic water well range from 16' to 1385'. Surface casing hole will be drilled with freshwater and a freshwater drilling fluids. Surface casing will be set well below the depth of these water wells to 2100' and cement to surface. No concerns.

Porous/permeable soils: No, sandy silty clay soils at the wellsite.

Class I stream drainage: No, Class I stream drainage.

Mitigation:

Lined reserve pit

Adequate surface casing

- Berms/dykes, re-routed drainage
- Closed mud system
- Off-site disposal of liquids (in approved facility)
- Other: _____

Comments: 2100' of surface casing is enough surface casing to cover Base Fox Hills Formation. Surface hole will be drilled with freshwater and freshwater drilling fluids to 2100'. Steel surface casing will be run to 2100' and cemented to surface. Oil based invert drilling fluids will be recycled. Drill cuttings will be disposed in the lined pit. After the well has been completed, completions fluids will go to a commercial Class II disposal. Lined pit will be closed with subsoil clays. No concerns.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None, anticipated.

High erosion potential: No, high erosion potential, moderate cut, 11.3' and small fill, up to 7.4', required.

Loss of soil productivity: None, location to be restored after drilling well, if well is nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: Yes, well site is very large, 550'X350'.

Damage to improvements: Private CRP/grass surface lands.

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
- Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county road, Highway 350 existing well access road. A short access road will be constructed into this location, about 545'. Oil based drilling fluids will be recycled. Completion fluids will be hauled to a Class II commercial disposal. Drill cuttings will be buried in the lined reserve pit. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about ¾ of a mile to the northeast and 1.25 miles to the southeast from this location. The town of Sidney, Montana is about 2.25 miles to the southeast from this location. A cemetery is located about 1 mile to the southeast from this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple derrick drilling rig, 30 to 35 days drilling time.

Mitigation:

- Proper BOP equipment
- Topographic sound barriers

- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other: _____

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No, no game range/refuge in the area.

Threatened or endangered Species: Threatened or endangered species identified by USFWS in Richland County are the Pallid Sturgeon, Whooping Crane, Interior Lease Tern and Piping Plover. Candidate species are the Sprague's Pipit and the Greater Sage Grouse. NH tracker website lists six (6) species of concern in this Township and Range: Townsend's Big-eared Bat, Black-tailed Prairie Dog, Hoary Bat, Whooping Crane, Bald Eagle and Spiny Softshell turtle.

Mitigation:

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

Comments: Private CRP/grass surface lands. There maybe 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.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified.

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DSL, federal agencies)
- Other: _____

Comments: Private CRP/grass surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- Substantial effect on tax base
- Create demand for new governmental services
- Population increase or relocation

Comments: Horizontal Bakken Formation oil well in a 1280 acre spacing unit. No concerns.

Remarks or Special Concerns for this site

A single lateral Bakken Formation horizontal well test drilled to 19,899' MD/10,451' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

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.

Prepared by (BOGC): /s/ Steven Sasaki

(title): Chief Field Inspector

Date: December 10, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Richland County water wells

(subject discussed)

December 10, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

December 10, 2011

(date)

Montana Natural Heritage Program Website

(Name and Agency)

Heritage State Rank= S1, S2, S3 in T23N R59E

(subject discussed)

December 10, 2011

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____