

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

Operator: URSA Resources Group, LLC
Well Name/Number: Prewitt 26-35 #1H
Location: NW NE Section 25 T25N R57E
County: Richland, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 25-35 days drilling time.
Unusually deep drilling (high horsepower rig): A triple derrick rig to drill a single lateral Bakken Formation Horizontal Lateral, 19,442' MD/10,401' TVD.
Possible H2S gas production: Slight chance H2S gas production.
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. Saltwater will be used to drill the horizontal lateral. Surface casing hole will be drilled with freshwater and freshwater mud.
High water table: No high water table anticipated.
Surface drainage leads to live water: No, closest drainage is First Hay Creek, an ephemeral tributary drainage to the Yellowstone River, about 1/8 of a mile to the southwest from this location. The Yellowstone River is about drainage about 8 miles to the east southeast from this location.
Water well contamination: None, surface hole will be drilled with freshwater and freshwater drilling fluids to 2,300', steel surface casing will be run and cemented to surface from 2,300' to protect any ground and surface waters. Closest water wells are about 1/2 of a mile to the northwest, 5/8 of a mile to the northeast, 3/4 of a mile to the northwest and 7/8 of a mile to the southwest from this location. All other wells are 1 mile or further from this location. Depth of these domestic, irrigation and stock water wells are from 35' and 200'.
Porous/permeable soils: No, sandy clay soils.
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: 2,300' of surface casing is not enough surface casing to cover Base Fox Hills Formation. Recommend surface hole to be drilled with freshwater and freshwater drilling muds to 2,300'. Steel surface casing will be run to 2,300' and cemented to surface. Oil based invert drilling fluids will be recycled. Drill cuttings will be disposed of in the lined pit. After the well has been completed,

completions fluids will be disposed of into a commercial Class II disposal. A freshwater pit will be constructed on the northwest end of the wellsite for freshwater storage for the hydraulic fracture stimulation planned for the completion. This pit will be restored after the hydraulic fracture stimulation has been completed.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No high erosion potential, moderate cut, 16.2' and small fill, up to 7.8', 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: No, large well site 450'X400'.

Damage to improvements: Slight, surface use is cultivated land (Dry land alfalfa).

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, #347. A new access road will be built into this location, about 1866'. 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 1/2 of a mile to the south, 5/8 of a mile to the northeast and about 1 5/8 of a mile to the southeast from this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple derrick drilling rig, 25 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 Greater Sage Grouse and Sprague's Pipit. NH tracker website lists the following as

“Species of Concern” is the Whooping Crane.

Mitigation:

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

Comments: NH tracker website indicates the only threatened or endangered birds/mammals species in this area is the Whooping Crane. The Whooping Crane inhabits wet land areas. This surface location is private cultivated surface lands. No concerns.

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 cultivated surface away from live water. No concerns.

Social/Economic

(possible concerns)

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

Comments: Horizontal Bakken Formation wildcat oil well. No concerns.

Remarks or Special Concerns for this site

Single lateral Bakken Formation horizontal wildcat well 19,442’MD/10,401’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: June 3, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)

Richland County water wells

(subject discussed)

June 2, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

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

June 2, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T24N R58E

(subject discussed)

June 2, 2011

(date)

If location was inspected before permit approval:

Inspection date: June 3, 2011

Inspector: Ron Prevost