

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

**Operator:** Citation Oil and Gas Corporation  
**Well Name/Number:** BSU B205H  
**Location:** NW NW Section 5 T31N R20E  
**County:** Blaine, **MT;** **Field (or Wildcat)** Bowes

**Air Quality**

(possible concerns)

Long drilling time: No, 10 to 15 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to 3458' TVD 6185'MD.

Possible H2S gas production: Slight

In/near Class I air quality area: No Class I air quality area.

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

Mitigation:

Air quality permit (AQB review)

Gas plants/pipelines available for sour gas

Special equipment/procedures requirements

Other: \_\_\_\_\_

Comments: No special concerns – using small rig to drill 3458' TVD 6185'MD.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater, freshwater mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Snake Creek, about 3/8 of a mile to the south from this location.

Within this ephemeral drainage are stock ponds.

Water well contamination: No, closest water wells are about 5/8 of a mile to the northeast and 1 mile and further from this location to the west and southwest. Depth of these water wells range from 450' to 100' in depth. Surface casing will be drilled to 1000' with freshwater and steel surface casing set and cemented to surface to protect ground waters.

Porous/permeable soils: No, silty -sandy bentonitic soils

Class I stream drainage: No Class I stream drainages.

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: 1000' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No, crossings anticipated.

High erosion potential: No, small cut, up to 8.5' and small fill, up to 5.9', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, 300'X320' location size required.

Damage to improvements: Slight, surface use CRP field.

Conflict with existing land use/values: Slight, surface use CRP field.

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 off existing paved county road, Secondary Highway #240 and existing county road, New Hope Road.. About 1/4 of a mile of new access will be built across CRP field from the existing county road into this location. Drilling fluids will be allowed to evaporate in the earthen pits. Cuttings will be allowed to dry in the earthen pits. Pits will be backfilled when dry. No special concerns.

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences Closest residences are about 1 mile to the west, 1.5 miles to the southwest and 1 mile to the southeast of this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Small drilling rig/short 10 to 15 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 and operational BOP should mitigate most safety concerns. Distance to nearest residence should mitigate noise concerns. No concerns

### 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: None identified.

Conflict with game range/refuge management: None identified.

Threatened or endangered Species Threatened or endangered species identified in Blaine County are the Pallid Sturgeon and Black Footed Ferret. Candidate species is the Greater Sage Grouse.

Mitigation:

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

Comments: Private surface CRP lands surrounded by cultivate fields. 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: On private CRP lands. No concerns.

**Social/Economic**

(possible concerns)

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

Comments: Well is a development well within an existing oil field, Bowes Sawtooth field. No concerns.

**Remarks or Special Concerns for this site**

Well is a 3458' TVD 6185'MD.Sawtooth Formation horizontal development well in the Bowes Oil Field.

**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: April 27, 2010 \_\_\_\_\_

Other Persons Contacted:

\_\_\_\_\_  
Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

\_\_\_\_\_  
Water wells Blaine County, MT

(subject discussed)

\_\_\_\_\_  
April 27, 2010

(date)

\_\_\_\_\_  
US Fish and Wildlife, Region 6 website

(Name and Agency)

\_\_\_\_\_  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

\_\_\_\_\_  
MONTANA COUNTIES, Blaine County

(subject discussed)

\_\_\_\_\_  
April 27, 2010

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_