

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

**Operator:** Citation Oil and Gas Corporation  
**Well Name/Number:** BSU C712H  
**Location:** SE SW Section 12T31N R19E  
**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, small single derrick drilling rig to drill a horizontal single lateral Sawtooth Formation well to 3574' TVD 6300'TMD.

Possible H<sub>2</sub>S gas production: Slight

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.

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 3574' TVD 6300' MD.

**Water Quality**

(possible concerns)

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

High water table: No

Surface drainage leads to live water: Yes, closest drainage is unnamed ephemeral tributary drainage to Snake Creek, about 1/2 of a mile north of this location, which is a tributary to the Milk River. With in Snake Creek are stock ponds.

Water well contamination: No, closest water wells are about 3/4 of a mile to the southeast of this location. 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

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)

Steam crossings: None, no crossings.

High erosion potential: No, small cut, up to 5.8' and small fill, up to 7.2', 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'X300' location size required.  
Damage to improvements: Slight, surface use cultivated field.  
Conflict with existing land use/values: Slight, surface use cultivated 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 \_\_\_\_\_

Comments: Access will be off existing county paved road, #240 and existing oil field road. About 1/4 of a mile of access will be built across cultivated fields 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 3/4 of a mile to the southeast and 3/4 of a mile to the north 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: No concerns

### Wildlife/recreation

(possible concerns)

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

Proximity to recreation sites: No, none identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: None identified.

Mitigation:

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

Comments: Private 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: On private land in cultivated field.

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### 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.

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### Remarks or Special Concerns for this site

Well is a 3574' TVD 6300'TMD Sawtooth Formation horizontal development well.

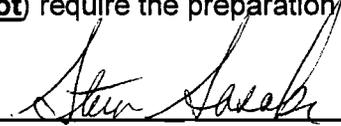
### Summary: Evaluation of Impacts and Cumulative effects

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

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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): Steven Sasaki 

(title:) Chief Field Inspector

Date: May 22, 2008

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Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Water wells Blaine County, MT

(subject discussed)

May 22, 2008

(date)

If location was inspected before permit approval:

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

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

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