

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

**Operator:** Citation Oil and Gas Corporation  
**Well Name/Number:** BSU B303H  
**Location:** SW NE section 3T31N 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, single derrick drilling rig to drill to 3645' TVD 6255'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 3645' TVD 6255'MD.

**Water Quality**

(possible concerns)

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

High water table: No, no high water table.

Surface drainage leads to live water: Yes, closest drainage is unnamed ephemeral tributary drainage to Black Coulee, about 1/16 of a mile to the west from this location.

Stock pond within this unnamed ephemeral drainage about 1/2 of a mile to the northwest from this location.

Water well contamination: No, closest water wells are further than 1 mile in any direction from 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 to drill this surface hole, mainhole and horizontal lateral.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No, stream crossing anticipated.

High erosion potential: No, small cut, up to 4.6' and small fill, up to 9.1', 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, a large wellsite, 320'X300' location size required.

Damage to improvements: Slight, surface use cultivated fields.

Conflict with existing land use/values: Slight, surface use cultivated fields.

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 road, Lloyd Road and utilizing an existing road approach. About 3/8 of a mile of new access road will be built 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.

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 1 mile to the southwest, 1.25 miles to the south and 1.25 miles to the southeast from 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 cemented to surface and operational BOP should mitigate any 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: Threatened or endangered species listed 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 cultivated surface lands. None of these species inhabit the area of review. 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 cultivated surface lands.

### 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 Unit. No concerns.

### Remarks or Special Concerns for this site

Well is a 3645' TVD 6255' MD Sawtooth Formation horizontal development well.

### 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: \_\_\_\_\_