

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

Operator: Citation Oil and Gas Corporation
Well Name/Number: BSU B 208H
Location: NW NW section 8T31N 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 3540' /TVD 6284'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 3409' TVD 6262'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 Snake Creek, about 1/4 of a mile northwest of this location, which is a tributary to the Milk River, to the northeast of this location.

Water well contamination: No, closest water wells are about 1 mile or further 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 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 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 2.4' and small fill, up to 7.5', 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, 300'X320' 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, #240 and utilizing an existing well access road.. About 1.25 miles of access will be built off the well access 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 3/4 of a mile to the northeast and 1 mile to the west northwest from this location. All other residences are further than 1 mile 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. 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 3540' TVD 6284'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 26, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Water wells Blaine County, MT

(subject discussed)
April 26, 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 26, 2010

(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____