

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

**Operator:** Fidelity Exploration and Production Company  
**Well Name/Number:** Fee No. 1459  
**Location:** NW NW Section 29T32N R34E  
**County:** Phillips, MT; **Field (or Wildcat)** Bowdoin Dome

**Air Quality**

(possible concerns)

Long drilling time: No, 2 to 3 days drilling time.

Unusually deep drilling (high horsepower rig): No, 1800' TD, small single derrick drilling rig.

Possible H<sub>2</sub>S gas production: No, none expected.

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: Gas gathering lines and compressors exist within the Bowdoin Gas Field.

Comments: No special concerns – using small rig to drill to 1800'TD.

**Water Quality**

(possible concerns)

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

High water table: No

Surface drainage leads to live water: No, surface drainage does not lead to live water, closest live water is the Milk River, about ¾ of a mile to the north of this location.

Water well contamination: No, all water wells nearby shallower than 150'. Closest water well is ¾ of a mile to the north and southwest from this location. Surface hole will be drilled to 150' with freshwater and freshwater muds. Steel surface casing will be set and cemented to surface. If productive production casing will be set and cemented back to surface.

Porous/permeable soils: No, 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: 150' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used. Production casing will be cemented to surface.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No, stream crossing.

High erosion potential: No, small cut, up to 0.6' and no fill, 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, 120'X190' location size required.

Damage to improvements: Slight, surface use is cultivated fields.

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 \_\_\_\_\_

Comments: Access will be over existing county roads and existing well access roads. A short access road will be built into this location, about 1/4 of a mile. Cuttings and mud solids will be buried in the unlined drilling pits. Fluids will either be hauled to a nearby stock pond, with surface owner approval or allowed to dry in the unlined pits. Pits will be backfilled after being allowed to dry. No special concerns

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Residences and buildings about 1 mile to the southwest of this location.

Possibility of H2S: None

Size of rig/length of drilling time: Small drilling rig/short 2 to 3 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) Hewitt Lake National Wildlife Refuge about 12.5 miles to the northwest of this location.

Proximity to recreation sites Nelson State recreational area about 8 miles to the west, Sleeping Buffalo resort about 9 miles to the west, and Nelson Reservoir about 9 miles to the west, Cole Ponds State Fishing area about 6.5 miles to the northwest of this location.

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: No concerns distance is far enough away and won't create a disturbance.

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### 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: No concerns private land.

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### Social/Economic

(possible concerns)

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

Comments: No concerns, development well in an existing gas field, Bowdoin Gas Field.

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### Remarks or Special Concerns for this site

Well is a 1800' Mowry Formation test.

### Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur, but will mitigate in time.

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: June 18, 2008

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center

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(Name and Agency)  
Water wells in Phillips County

\_\_\_\_\_  
(subject discussed)

June 18, 2008

\_\_\_\_\_  
(date)

If location was inspected before permit approval:

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

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

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