

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

**Operator:** Fidelity Exploration and Production Company  
**Well Name/Number:** State 23ER-1680  
**Location:** NE SW Section 16 T8S R40E  
**County:** Big Horn, MT; **Field (or Wildcat)** Wildcat

**Air Quality**

(possible concerns)

Long drilling time no, 2 to 3 days drilling time.

Unusually deep drilling (high horsepower rig) no, 1519' TD

Possible H2S gas production no

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: wells flare methane gas temporarily during initial stages of production. Flaring of commercial quantities of gas is prohibited.

**Water Quality**

(possible concerns)

Salt/oil based mud no, freshwater and freshwater mud system.

High water table no

Surface drainage leads to live water Yes, South Fork Monument Creek drains to the Tongue River, about 2.5 miles to the east of this location.

Water well contamination no

Porous/permeable soils localized

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: will use fresh water, native clay mud. Water/mud re-cycled to next location. Exploration well many not produce until included in development POD.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings no

High erosion potential no

Loss of soil productivity no

Unusually large wellsite no, 80'X80' location size required.

Damage to improvements no

Conflict with existing land use/values no

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: no special concerns for this site. Very small location and pit area. Truck mounted rig does not require much location preparation.

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences None nearby.

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 special concerns

### Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) n/a None identified.

Proximity to recreation sites none in the immediate area

Creation of new access to wildlife habitat no

Conflict with game range/refuge management no

Threatened or endangered Species no

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DSL)

Screening/fencing of pits, drillsite

Other: Montana Trust Lands surface. Trust Lands will do surface EA.

Comments: Tongue River Reservoir is closest public recreation area.

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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: Montana Trust Lands surface. Trust Lands will do surface EA  
Comments:

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**Social/Economic**

(possible concerns)

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

Comments: Exploration test well targeted Monarch, Carney, Wall, King coal beds at 1519'. May not produce until included in an approved Plan of Development, therefore no social or economic impacts are likely—cumulative effects on socio-economics of the region are described in 2003 Statewide EIS.

**Remarks or Special Concerns for this site**

Well is a shallow coal bed methane test. Wells are drilled with a small rig and casing will be set through all coal beds to 1519'. Seven inch casing is cemented to surface and perforated in the zones of interest. Partial de-watering is expected to reduce pressure and release methane gas to the cleat system; this partial de-watering is expected to reduce, but not eliminate water in the coal aquifer. The water quality in the coal bed aquifer wells is variable—this test well will provide water quality data for the tested interval. No gas will be produced and no water discharged. Produced water will be stored in tanks on site. The water will be used for beneficial use at Fidelity's nearby approved projects and/or at the Spring Creek Coal Mine.

**Summary: Evaluation of Impacts and Cumulative effects**

Relatively minor impacts associated with this well, which cannot produce until included in an approved POD. Well is part of ongoing development in and near CX Field and will eventually use existing production facilities and compressors. No impacts are expected which differs significantly from those described in the EIS.

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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: June 21, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center

(Name and Agency)

Water wells in Big Horn County

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(subject discussed)

June 16, 2006

\_\_\_\_\_

(date)

If location was inspected before permit approval:

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

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

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