

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

**Operator:** Continental Resources, Inc.  
**Well Name/Number:** Big Sky 3-35H  
**Location:** SW SE Section 35 T25N R55E  
**County:** Richland, MT; **Field (or Wildcat)** WC

**Air Quality**

(possible concerns)

Long drilling time: No, 25 to 35 days drilling time.  
Unusually deep drilling (high horsepower rig): No, 10,141'TVD/19,567'MD single lateral horizontal Bakken formation development well.

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: Single lateral Bakken Formation horizontal development well, 10,141'TVD/19,567'MD. No special concerns.

**Water Quality**

(possible concerns)

Salt/oil based mud: Yes oil based invert mud system on intermediate casing string hole and saltwater for horizontal lateral. Freshwater and freshwater mud system on surface hole.

High water table: None anticipated

Surface drainage leads to live water: Yes, unnamed ephemeral tributary drainage to East Charlie Creek, about 1/8 of a mile to the southwest and 1/4 mile to the northeast of this location.

Water well contamination: No, closest water well is 58' in depth and is about 1/2 mile to the north northeast from this well location. Surface hole will be drilled with freshwater and freshwater muds. Surface casing will be cemented to surface from a depth of 1700'.

Porous/permeable soils: No, silty sandy clay 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: 1700' of surface casing cemented to surface adequate to protect freshwater zones. 7" production string will be cemented back above the Dakota formation.

**Soils/Vegetation/Land Use**

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No, small cut, up to 9.8' and small fill, up to 5.1', 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: Yes, 500'X270' location size required.

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

Conflict with existing land use/values: Slight, surface use is 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 use existing paved highway 201. New constructed road, about 70' into location from highway 201. Oil based invert drilling fluids will be recycled. Cuttings will be disposed of in the lined reserve pit. Reserve pit fluids will be disposed of at a licensed Class II Disposal. Pit will be allowed to dry and backfilled with subsoil to solidify pit area. No special concerns

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Yes, residences about 3/8 of a mile to the south and 1.25 miles to the west from this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: \_\_\_\_\_

Comments: Operational BOP and adequate surface casing should mitigate any problems or concerns. No concerns.

### Wildlife/recreation

(possible concerns)

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

Proximity to recreation sites: None identified, cultivated fields.

Creation of new access to wildlife habitat: No, cultivated fields.

Conflict with game range/refuge management: No, cultivated fields.

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Lease Tern, Whooping Crane and Piping Plover.

Candidate specie 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 live water nearby. NH tracker website indicates no species of concern in this area. No concerns

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**Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites: None identified. Private cultivated surface lands.

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DSL, federal agencies)
- Other: \_\_\_\_\_

Comments: Private cultivated surface lands. No concerns.

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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

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**Remarks or Special Concerns for this site**

Well is a 10,141'TVD/19,567'MD single lateral horizontal Bakken formation development well. Third well in this spacing unit

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

No long term impacts expected. Some short term surface 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): /s/Steven Sasaki \_\_\_\_\_

(title:) Chief Field Inspector  
Date: October 26, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website  
(Name and Agency)  
Richland County water wells  
(subject discussed)  
October 26, 2010  
(date)

US Fish and Wildlife, Region 6 website  
(Name and Agency)  
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES  
MONTANA COUNTIES, Richland County  
(subject discussed)  
October 26, 2010  
(date)

Montana Natural Heritage Program Website  
(Name and Agency)  
Heritage State Rank= S1, S2, S3  
(subject discussed)  
October 26, 2010  
(date)

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