

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

**Operator:** Continental Resources, Inc.  
**Well Name/Number:** Audrey 1-31H  
**Location:** NW NE Section 31 T24N R56E  
**County:** Richland, MT; **Field (or Wildcat)** W/C (Bakken Horizontal)

**Air Quality**

(possible concerns)

Long drilling time: No, 30 to 40 days drilling time.

Unusually deep drilling (high horsepower rig): No, single lateral horizontal, 19,009'MD/10,306'TVD.

Possible H2S gas production: Slight

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: No special concerns – using triple rig to drill to 19,009'MD/10,306'TVD.

**Water Quality**

(possible concerns)

Salt/oil based mud: Yes, oil based mud system on mainhole and horizontal lateral with brine water. Freshwater and freshwater mud system on surface hole.

High water table: No

Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral tributary drainage to East Charlie Creek, about ¼ mile to the northwest from this location. Within this unnamed ephemeral drainage is a stock pond, about 2 miles to the northwest.

Water well contamination: No, all water wells shallower than surface casing setting depth of 1790'. Closest water well is 5/8 of a mile to the southwest, ¾ of a mile to the southeast and ¾ of a mile to the north of this location. All water wells less than 351' in depth. This well will have surface hole drilled with freshwater and/or freshwater mud system. Steel surface casing will be set to 1790' and cemented to surface to protect freshwater sands.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: Mo

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: 1790' of surface casing cemented to surface adequate to protect

freshwater zones.

### Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings.

High erosion potential: No, small, up to 7.9' cut and small fill, up to 9.8', 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, large wellsite, 500'X270' location size required.

Damage to improvements: No, surface use 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: 91' of new road into location will be built off existing county road, 131. Oil based drilling fluids will be recycled. Cuttings will be disposed of in the lined reserve pit. Reserve pit fluids will be disposed of at a commercial disposal. Pit will be allowed to dry and backfilled with subsoil to solidify pit area. No special concerns.

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Buildings ¾ of a mile to the southeast of location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple drilling rig/moderate 30 to 40 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): None identified.

Proximity to recreation sites: None identified.

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.

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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: On private 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 single lateral horizontal, 19,009'MD/10,306'TVD Bakken Formation test in Richland County.

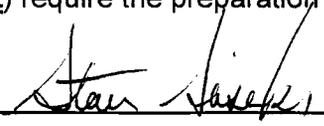
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### Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected, some short term impacts are expected.

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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: December 4, 2007

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Other Persons Contacted:  
\_\_\_\_\_

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Richland County water wells

(subject discussed)

December 4, 2007

(date)

If location was inspected before permit approval:

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

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

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