

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

**Operator:** Continental Resources, Inc.  
**Well Name/Number:** Karen 1-10H  
**Location:** NW NW Section 10 T23N R54E  
**County:** Richland, MT; **Field (or Wildcat)** W/C (Bakken Horizontal)

**Air Quality**

(possible concerns)

Long drilling time no, 50 to 60 days drilling time.  
Unusually deep drilling (high horsepower rig) no, 15,682' MD Leg #1 14,333' MD Leg #2, Leg #3 13,923' MD  
Possible H<sub>2</sub>S 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 rule 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 triplereg rig to drill to 15,582', 14,333', and 13,923' MD – 3 laterals

**Water Quality**

(possible concerns)

Salt/oil based mud yes, freshwater and freshwater mud system on surface hole and oil based saltwater mud system on mainhole and saltwater for horizontal laterals.  
High water table no  
Surface drainage leads to live water no, nearest ephemeral drainage is Carda Coulee about 3/8 of a mile to the west of this location.  
Water well contamination no, all water wells shallow less than 236' in depth. Surface hole will be drilled with freshwater muds. Surface casing will be set at 1700' and cemented to surface.  
Porous/permeable soils no, bentonite 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: 1700' of surface casing cemented to surface adequate to protect freshwater zones.

**Soils/Vegetation/Land Use**

(possible concerns)

Steam crossings none  
High erosion potential no, moderate cut, up to 10.1' and small fill, up to 4.7', required.  
Loss of soil productivity no, location will be restored after drilling if unproductive. If productive, unused portion of this drilling location will be restored.  
Unusually large wellsite no, 500'X270' location size required.  
Damage to improvements slight, surface use cultivated land.  
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 trails. About 325' of new access road will be built into this location. Cuttings will be buried in the lined reserve pit. Reserve pit fluids will either be recycled or hauled to a commercial disposal. No special concerns.

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences no residences within 1 mile of this location  
Possibility of H2S slight  
Size of rig/length of drilling time Triple drilling rig/short 50 to 60 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) n/a Fox Lake State Game Management Area 3 miles to the south of this location..  
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 no

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DSL)
- Screening/fencing of pits, drillsite
- Other: \_\_\_\_\_

Comments: 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 land

**Social/Economic**

(possible concerns)  
 Substantial effect on tax base  
 Create demand for new governmental services  
 Population increase or relocation  
Comments: no concerns

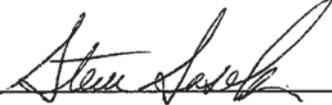
**Remarks or Special Concerns for this site**

Bakken horizontal well 15,582, 14,333, and 13,923 'MD 3 legged horizontal well. No special concerns.

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

No significant 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): Steven Sasaki   
(title): Chief Field Inspector  
Date: April 4, 2006

**Other Persons Contacted:**

Montana Bureau of Mines and Geology, GWIC website  
\_\_\_\_\_  
(Name and Agency)  
Water wells in Richland County  
\_\_\_\_\_  
(subject discussed)  
April 4, 2006  
\_\_\_\_\_  
(date)

If location was inspected before permit approval:

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

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

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