

Montana Board of Oil and Gas Conservation  
Environmental Assessment

Operator: Continental Resources, Inc.  
Well Name/Number: Gagne 1-23  
Location: SE NW Section 23 T25N R49E  
County: McCone, MT; Field (or Wildcat) W/C

**Air Quality**

(possible concerns)

Long drilling time no, 20 to 30 days drilling time.  
Unusually deep drilling (high horsepower rig) no, 7,000' TVD  
Possible H<sub>2</sub>S gas production yes  
in/near Class I air quality area no  
Air quality permit for flaring/venting (if productive) DEQ requirement if well is productive with associated gas and no gas pipeline available.

Mitigation:

Air quality permit (AQB review)  
 Gas plants/pipelines available for sour gas  
 Special equipment/procedures requirements  
 Other: \_\_\_\_\_  
Comments: no special concerns

**Water Quality**

(possible concerns)

Salt/oil based mud yes, freshwater and freshwater mud system on surface hole and saltwater mud system on mainhole.  
High water table no  
Surface drainage leads to live water no, surface slopes to the north and east to an unnamed ephemeral tributary to Alkali Coulee which then drains to Redwater River a live stream.  
Water well contamination no, all water wells shallower than surface casing setting depth. Surface hole will be drilled with freshwater and surface casing set and cemented back to surface from 1500'.  
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: 1500' of surface casing cemented to surface adequate to protect freshwater zones.

**Soils/Vegetation/Land Use**

(possible concerns)

Steam crossings none  
 High erosion potential no, small cut up to 7.8' and small fill, up to 7.8' required.  
 Loss of soil productivity no, location will be restored after drilling  
 Unusually large wellsite no, 260'X240' location size required.  
 Damage to improvements slight  
 Conflict with existing land use/values Slight  
 Mitigation  
   \_\_\_ Avoid improvements (topographic tolerance)  
   \_\_\_ Exception location requested  
   X Stockpile topsoil  
   \_\_\_ Stream Crossing Permit (other agency review)  
   X Reclaim unused part of wellsite if productive  
   \_\_\_ Special construction methods to enhance reclamation  
   \_\_\_ Other \_\_\_\_\_  
 Comments: Using existing roads to within 50' of location. Will have to build 50' of new access into location. No special concerns

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**Health Hazards/Noise**

(possible concerns)  
 Proximity to public facilities/residences buildings 1/16 of a mile to the north of location.  
 Possibility of H2S yes  
 Size of rig/length of drilling time Triple drilling rig/moderate 20 to 30 days drilling time  
 Mitigation:  
   X 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 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 no  
 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 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**

Well is a 7,000' TD vertical Charles Formation test in McCone County

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

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

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: January 5, 2006

**Other Persons Contacted:**

Montana Bureau of Mines and Geology, GWIC website  
(Name and Agency)  
Richland County water wells  
(subject discussed)  
January 5, 2006  
(date)

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