

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

**Operator:** Slawson Exploration Company, Inc.  
**Well Name/Number:** Hercules 1-2H  
**Location:** NE NE Section 2 T23N R53E  
**County:** Richland, MT; **Field (or Wildcat)** Wildcat

**Air Quality**

(possible concerns)

Long drilling time No, 50-60 days drilling time.  
Unusually deep drilling (high horsepower rig) Triple derrick rig 900 HP  
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: 3 laterals, TVD 9,596' MD 14,050, TVD 9,6-6 MD 15411', TVD 9,646' MD 14,132'

**Water Quality**

(possible concerns)

Salt/oil based mud yes to long string salt based and oil based drilling fluids. Brine water for horizontal legs. Surface casing hole to be drilled with freshwater and freshwater mud.  
High water table No  
Surface drainage leads to live water No, closest drainage is an unnamed ephemeral tributary drainage to Carda Coulee. About 1/4 of a mile to the south of this location.  
Water well contamination No, nearby wells are all less than 200' in depth. Surface hole will be drilled with freshwater and surface casing will be cemented to surface.  
Porous/permeable soils No, gumbo 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: 1250' surface casing is short, needs 1451' of surface casing to protect freshwater zones and to cover the Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems in and around freshwater slough.

**Soils/Vegetation/Land Use**

(possible concerns)

Steam crossings None  
High erosion potential No, location will require small cut of 7.3' and small fill, up to 8.5', required.  
Loss of soil productivity None, location to be restored after drilling well, if nonproductive. If productive

unused portion of drillsite will be reclaimed.

Unusually large wellsite No, large well site 430' X300'

Damage to improvements Slight

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 road, #317. A short access road will be built into location off the existing trail, about 300'. Cuttings will be buried in the lined reserve pit. Drilling fluids will be recycled. Pit will be allowed to dry before being backfilled. No 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 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: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Distance sufficient to mitigate noise problems.

### 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: Private surface location.

**Social/Economic**

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: No concerns

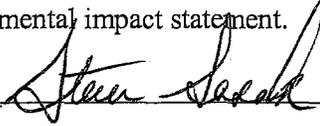
**Remarks or Special Concerns for this site**

3 legged Bakken horizontal well. Leg 1 TVD 9596', 14,050' MD Leg 2 TVD 9606', 15,411MD Leg 3 TVD 9646' 14,132' MD

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

No 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: May 19, 2006

Other Persons Contacted:

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website.

(subject discussed)

Water wells in Richland County

(date)

May 19, 2006

If location was inspected before permit approval:

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

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

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