

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

Operator: Sinclair Oil Corporation
Well Name/Number: Ralston 1-20H
Location: SE SE Section 20 T27N R53E
County: Richland, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

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

Unusually deep drilling (high horsepower rig): Triple derrick rig 900 HP to drill a single lateral Bakken Formation horizontal well, 13,137' MD/8,627' TVD.

Possible H2S gas production: Possibly, slight amount.

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: _____

Water Quality

(possible concerns)

Salt/oil based mud: Yes to long string hole with oil based drilling fluids. Horizontal lateral to be drilled with saltwater. Surface casing hole to be drilled with freshwater and freshwater mud.

High water table: Yes, possible.

Surface drainage leads to live water: Yes, West Charley Creek, about 1/8 of a mile to the north of this location.

Water well contamination: No, water wells within 1 mile of this location. Surface casing will be set to 1,500' and cemented back to surface to protect freshwater zones.

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: 1,500' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None

High erosion potential: No, location will require small cut, up to 1.3' and a small fill, up to 3.3', 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: Large well site 300'X450'.

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 #316. About 5340' of upgraded and new road will be constructed into this location off the existing county road #316. Drill cuttings will be disposed of in the lined reserve pit. Invert mud will be recycled. Completion fluids will be trucked to a commercial Class II for disposal. Pit will be backfilled after remaining fluids have evaporated. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: None, no residence within 1 mile of location in any direction.

Cemetery about 1 mile to the south southeast of this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Triple drilling rig 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: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Noise should not be a problems, sufficient distance from residence to rig should mitigate this.

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: Private surface lands. 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: Private surface lands. No concerns.

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 formation single lateral horizontal well, 13,137' MD/8,627' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No, long term impacts expected, some short term impacts will occur, but can be mitigated in a short time.

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: June 2, 2008

Other Persons Contacted:

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

(Name and Agency)

Water wells in Richland County

(subject discussed)

June 2, 2008

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____