

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

Operator: Lyco Energy Corporation
Well Name/Number: Brutus-Rachael 8-14-H
Location: SE SW Section 8T24 R57E
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, Bakken horizontal MD 16,434'
Possible H2S gas production slight
In/near Class I air quality area No
Air quality permit for flaring/venting (if productive) Yes, if productive. DEQ air quality permit required.

Mitigation:

- Air quality permit (AQB review)
- Gas plants/pipelines available for sour gas
- Special equipment/procedures requirements
- Other: _____

Comments: Existing pipeline for gas in the area.

Water Quality

(possible concerns)

Salt/oil based mud yes to long string salt based and oil based drilling fluids. Horizontal section to be drilled with oil based drilling fluids. 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 North Fork Lone Tree Creek an ephemeral drainage about 1/4 mile to the south of this location.
Water well contamination No, all water wells close by are shallower than 1900'.
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: 1900'+/- surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems in and around freshwater slough.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings None
High erosion potential No, location has a moderate cut of up to 12.4' and a moderate fill of up to 10.6'.

required. _____

Loss of soil productivity None, location to be restored after drilling well.

Unusually large wellsite No, large well site 450'X310'

Damage to improvements No, location to be restored after drilling. If nonproductive. If productive unused portion of drillsite will be reclaimed.

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 highways and county road, #338. About ¼ of a mile of new road access will be built. Cutting will be buried in the lined reserve pit. Pit fluids will either be recycled or hauled to a commercial disposal. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences closest residence is 1¼ of a miles to the northeast 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. Distance sufficient to mitigate noise.

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

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

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

Summary: Evaluation of Impacts and Cumulative effects

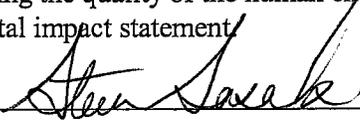
TVD 10,371' MD 16,434' Bakken Formation horizontal well

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 31, 2006



Other Persons Contacted:

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website, Richland County water wells

(subject discussed)

January 31, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____