

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

Operator: Enerplus Resources (USA) Corporation
Well Name/Number: Olive-Volden 27-2-H
Location NW NE Section 27 T24N R56E
County: Richland, MT; **Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time No, 40-50 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: Existing pipeline for gas in the area.

Water Quality

(possible concerns)

Salt/oil based mud yes, salt based and/or oil based drilling fluids to be used to drill the main hole.
Surface casing hole to be drilled with freshwater and freshwater mud.
High water table No
Surface drainage leads to live water No, closest ephemeral tributary drainage to Three Buttes Creek ephemeral drainage 1/4 mile to the east and northeast of this location.
Water well contamination None, all wells close by shallower than 1925'. Surface hole will be drilled with freshwater and freshwater mud.
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: 1925' is short, need about 1944' of surface casing to cover 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, moderate cut, up to 26.0' and moderate fill up to 11.4', required.
Loss of soil productivity None, location to be restored after drilling well, if nonproductive. If productive unused portion of wellsite will be reclaimed.

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

Damage to improvements No, location to be restored after drilling. If productive unused portion of wellsite 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 county roads, #134. About 359' of new access is proposed to be built to access this location from the county road.. Oil based muds will be recycled and cuttings will be buried in a lined pit. Any excess fluid left in the reserve pit will be hauled to a commercial

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences residences 1 mile to the west and south of this location.

Possibility of H2S Slight

Size of rig/length of drilling time Triple drilling rig 40 to 50 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.

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

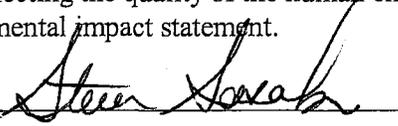
Remarks or Special Concerns for this site

Second horizontal Bakken formation well in this spacing unit.

Summary: Evaluation of Impacts and Cumulative effects

Horizontal Bakken formation well TVD 10,352' MD 19,927'. No long term impacts expected. Some short term impacts will occur. Existing horizontal Bakken well in the W/2 of this section., second well in this spacing unit.

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:

Montana Bureau of Mines and Geology GWIC website

(Name and Agency)

Richland County waterwells

(subject discussed)

May 19, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____