

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

Operator: Chaparral Energy, LLC
Well Name/Number: Peterson 1-18H
Location: NE NW Section 18 T25 R56E
County: Richland, MT; Field (or Wildcat) Wildcat(Bakken Horizontal)

Air Quality

(possible concerns)

Long drilling time No, 40-50 days drilling time.
Unusually deep drilling (high horsepower rig) Triple derrick rig 900 HP, Bakken horizontal No. 1 TVD 10,180' MD 14,600' No.2 TVD 10,160' MD 14,900'
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 legs will be drilled with brine water. Surface casing hole to be drilled with freshwater and freshwater mud.
High water table No
Surface drainage leads to live water No, nearest ephemeral drainage is Hardscrabble Creek, next to the east edge of this well location.
Water well contamination No, all water wells close by are shallower than 2500'. Surface hole will be drilled with freshwater and freshwater mud. Surface casing will be set to 2500' and cemented back 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: 2500' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent any.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings None

High erosion potential No, location has a small cut of up to 3.8' and a small fill of up to 4.5', 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 400'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 using existing county roads. A short access road will be built from the county road into location about 123'. Cuttings will be buried in the lined reserve pit. Pit fluids will be recycled to the next location or hauled to a commercial disposal.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences closest residence is 3/4 of a mile to the southeast 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: 2500 is 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

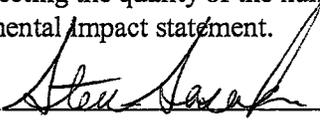
Remarks or Special Concerns for this site

TVD 10,180' MD 14,900' 2 legged Bakken Formation horizontal well

Summary: Evaluation of Impacts and Cumulative effects

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

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: February 2, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center website

(Name and Agency)

Richland County water wells

(subject discussed)

February 2, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____