

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

Operator: Powder River Gas, LLC
Well Name/Number: Williams 3-9-0648 PAWNEE
Location: NE NW Section 9 T6S R48E
County: Powder River, MT; **Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time no, 2 to 3 days drilling time.
Unusually deep drilling (high horsepower rig) no, 580' TD
Possible H₂S gas production no
In/near Class I air quality area no
Air quality permit for flaring/venting (if productive) no

Mitigation:

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

Comments: wells flaring methane gas temporarily during initial stages of production. Flaring of commercial quantities of gas is prohibited.

Water Quality

(possible concerns)

Salt/oil based mud no, freshwater and freshwater mud system.
High water table no
Surface drainage leads to live water No, nearest drainage is unnamed ephemeral tributary of Fifteen Mile Creek which about 1/8 mile to the west.
Water well contamination no, well will be drilled with freshwater and casing cemented to surface. Would assume operator will sign a water well mitigation agreements with nearby water well owners to protect their water wells. Water wells in the area are about 300' and shallower.
Porous/permeable soils localized
Class I stream drainage no

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: will use fresh water, native clay mud. Water/mud will be allowed to evaporate and dry in the pit on location and buried on site. Exploration well many not produce until included in development POD.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings no
High erosion potential no
Loss of soil productivity no
Unusually large wellsite no, 150'X150' location size required.
Damage to improvements no
Conflict with existing land use/values no

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: no special concerns for this site. Small location and pit area.
Truck mounted rig does not require much location preparation.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences yes, residence 3/4 mile to the of this location.
Possibility of H2S none
Size of rig/length of drilling time Small drilling rig/short 2 to 3 days drilling time

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other: _____

Comments: no special concerns

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) n/a None identified.
Proximity to recreation sites Custer National Forest boundary is about 1/2 mile to the southwest of this location.
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: _____

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: location on fee surface

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: Exploration test well targeted Pawnee coal bed at 550'. May not produce until included in an approved Plan of Development, therefore no social or economic impacts are likely—cumulative effects on socio-economics of the region are described in 2003 Statewide EIS.

Remarks or Special Concerns for this site

Well is a shallow coal bed methane test. Wells are drilled with a small rig and casing set through the coal bed. Seven inch casing is cemented surface. The seven inch casing will be perforated in the coal. Partial de-watering is expected to reduce pressure and release methane gas to the cleat system; this partial de-watering is expected to reduce, but not eliminate water in the coal aquifer. The water quality in the coal bed aquifer wells is variable—this test well will provide water quality data for the tested interval.

Summary: Evaluation of Impacts and Cumulative effects

Relatively minor impacts associated with this well, which cannot produce until included in an approved POD. No impacts are expected which differs significantly from those described in the EIS.

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 6, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center

(Name and Agency)

Water wells in Powder River County

(subject discussed)

January 6, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____