

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

Operator: Cardinal Construction, LLC.
Well Name/Number: BMB-KBC No. 1-4
Location: NE SE Section 4T8N R27E
County: Musselshell, MT; **Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time no, 14 to 20 days drilling time.
Unusually deep drilling (high horsepower rig) no, 6600'TVD
Possible H2S gas production slight
in/near Class I air quality area no
Air quality permit for flaring/venting (if productive) N/A if well is a gas well.

Mitigation:

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

Comments: no special concerns – using double rig to drill to 6600' TVD

Water Quality

(possible concerns)
Salt/oil based mud yes, freshwater and freshwater mud system on surface hole and mainhole.
High water table no
Surface drainage leads to live water Yes, closest drainage is Musselshell river which is 1/8 of a mile to the south of this location.
Water well contamination no, deepest well nearby is 120' deep. Surface casing will be set at 300'. Drilled with freshwater and freshwater muds. Surface casing will be run and cemented to surface from 300'.
Porous/permeable soils no, bentonitic sandy soils
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: 300' of surface casing cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)
Stream crossings no, crossing.
High erosion potential No small cut, up to 0.5' and small fill, up to 0.1', required.
Loss of soil productivity no, location will be restored after drilling
Unusually large wellsite no, 280'X260' location size required.
Damage to improvements no

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: Will use existing highway to just northwest of location. About 1/4 of a mile of new access road will be to access this location. Cuttings will be buried in the lined pit. Fluids will be allowed to dry in the pit. No special concern.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences Closest buildings are 3/4 mile to the southeast and 1.5 miles to the north of this location.

Possibility of H2S slight

Size of rig/length of drilling time double drilling rig/short 14 to 20 days drilling time

Mitigation:

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

Comments: no concerns

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) n/a None identified.

Proximity to recreation sites Musselshell River

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: On private land. 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: on private land

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

Well is a 6600' TVD Amsden Formation test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected, some short term impacts will occur.

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 1, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)
Musselshell County water wells

(subject discussed)
February 1, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____