Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Saga Petroleum, LLC
Well Name/Number: Big Coulee 12-1-419
Location: NE NE Section 12 T4N R19E
County: Stillwater , **MT; Field (or Wildcat)** Big Coulee

Air Quality

(possible concerns)
Long drilling time: No, 4 to 5 days drilling time.
Unusually deep drilling (high horsepower rig): No, small single derrick drilling rig to drill to 2163'TD.
Possible H2S gas production: None
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:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:
Comments: No special concerns – using single derrick rig to drill to 2163' TD

Water Quality

(possible concerns)
Salt/oil based mud: No, freshwater and freshwater mud system on surface hole and air/mist on mainhole.
High water table: No
Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral tributary drainage to Big Coulee Creek, about 1/16 of a mile west of this location. Within this drainage are stock ponds.
Water well contamination: No, closest water wells are about 3/8 of a mile to the east and ¾ of a mile to the west of this location. Both water wells are less than 120' in depth. Surface casing will be set at 500'. Drilled with freshwater and freshwater muds. Surface casing will be run and cemented to surface from 500'.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No

Mitigation:
__ Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other:
Comments: 500' of surface casing cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No, crossings.

High erosion potential: No small cut, up to 0.35' and small fill, up to 4.0', required.
Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, 150'X225' location size required.
Damage to improvements: Slight, surface use is cultivated field.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Will use existing county road, Highway 300 and existing county road, Meins Road. About 1/4 of a mile of new access road will be built to access this location. Cuttings will be buried in the earthen pits. Fluids will be allowed to dry in the pit. Pits will be backfilled when dry. No special concern.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest buildings are over 1 mile to the distance from this location.
Possibility of H2S: None
Size of rig/length of drilling time: Single drilling rig/short 4 to 5 days drilling time

Mitigation:
X 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): 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: None identified.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other: _____

Comments: On private surface lands. 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 surface lands. No concerns.

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 2163' TD Morrison 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, 2008

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Stillwater County water wells
(subject discussed)
February 1, 2008
(date)

If location was inspected before permit approval:

Inspection date: _____
Inspector: _____
Others present during inspection:_____