

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

**Operator:** Saga Petroleum, LLC  
**Well Name/Number:** Big Coulee 30-12-520  
**Location:** NW SW Section 30 T5N R20E  
**County:** Golden Valley, 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 2072' TD.

Possible H<sub>2</sub>S 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:

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 2072' 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 1/32 of a mile northeast of this location.

Water well contamination: No, closest water wells are about 3/8 of a mile to the southwest of this location. Water well is 702' 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'. If productive 4 1/2" casing will be cemented to surface.

Porous/permeable soils: No, sandy clay 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: 500' of surface casing cemented to surface adequate to protect freshwater zones.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No, crossings.

High erosion potential: No, some cut across location and moderate fill, up to 17.5', 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 grassland.

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 county road, Highway 300 and existing county road, West Coulee Road. About 3/8 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 about 3/8 of a mile to the southwest and northwest 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:

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 Montana State Trust Lands. Trust Lands will do surface EA.

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**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 Montana State Trust Lands. Trust Lands will do surface EA.

**Social/Economic**

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: No concerns

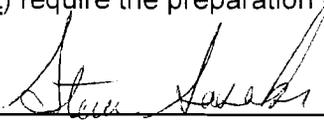
**Remarks or Special Concerns for this site**

Well is a 2072' 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: \_\_\_\_\_