Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Hanna Oil & Gas Company.
Well Name/Number: Offerdal 1-2
Location: NE NE, Lot 1 Section 2 T27N R1E
County: Pondera **MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 3 to 4 days drilling time.
Unusually deep drilling (high horsepower rig): No, single derrick drilling rig, to drill to 2250' TD.
Possible H2S gas production: Slight
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 small rig to drill to 2250' TD.

Water Quality

(possible concerns)
Salt/oil based mud: No, air, air mist, and/or freshwater drilling mud system.
High water table: No
Surface drainage leads to live water: No, closest drainage is an ephemeral drainage, Pondera Coulee, about ¼ of a mile to the west and south of this location.
Water well contamination: No, closest water wells are about 3/8 of a mile to the west and about ½ mile to the west northwest from this location. This well will be drilled with freshwater, freshwater mud and/or air mist. 300' of steel surface casing will be set and cemented to surface to protect surface waters. It appears that the water wells lie within the surface gravels in Pondera Coulee. The location of this proposed permitted well should be in Cretaceous shale below the topsoil.
Porous/permeable soils: No, silty 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: 300' of surface casing will be set and cemented to surface adequate to protect freshwater zones. Also, air mist/freshwater gel mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No, stream crossings.
High erosion potential: No, location will require a small cut, up to 2.6' and a small fill, up to 0.5', 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, small location, 200'X200' location size required.
Damage to improvements: Slight, surface use is cultivated fields.
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: Access will utilize existing county roads, Midway Road and existing two track trail. About 1000' of new access off existing two track section line road will have to be constructed into this location. Drill cuttings will be buried in the existing earthen pit. Drilling fluids will be allowed to evaporate. No special concerns

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residence/ buildings about 3/8 of a mile to the west, ½ of a mile to the west northwest and ½ of a mile south of this location.
Possibility of H2S: Slight
Size of rig/length of drilling time: Small drilling rig/short 3 to 4 days drilling time.

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

Comments: No concerns. Distance from well to residences is sufficient to mitigate noise concerns and 300' of surface casing with an operation BOP will mitigate any problems.

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: None identified
Conflict with game range/refuge management: None identified
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: No concerns. Private surface.

Historical/Cultural/Paleontological

(possible concerns)
Proximity to known sites: None identified, private surface
Mitigation
__ avoidance (topographic tolerance, location exception)
_X_ other agency review (SHPO, DSL, federal agencies)
__ Other: _____
Comments: Private surface. 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 vertical, 2250' Madison Formation test. .

Summary: Evaluation of Impacts and Cumulative effects

No, significant impacts expected, some short term impacts are expected, but should be able to mitigate these short term impacts.

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: May 2, 2008

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Pondera County water wells
(subject discussed)
May 2, 2008
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____