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

**Operator:** Encore Operating, LP
**Well Name/Number:** Pine Unit 23X-11A
**Location:** NE SW Section 11 T11N R57E
**County:** Wibaux, **MT; Field (or Wildcat)** Pine

## Air Quality

(possible concerns)
Long drilling time 15-25 days drilling time
Unusually deep drilling (high horsepower rig) No, triple drilling rig for 8000' TVD
Possible H2S gas production yes
In/near Class I air quality area no
Air quality permit for flaring/venting (if productive) No, water source well..

Mitigation:
__ Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:
Comments: no special concerns.

## Water Quality

(possible concerns)
Salt/oil based mud use freshwater and freshwater mud system on surface.and oil based invert emulsion mud to TD.
High water table no
Surface drainage leads to live water No, closest drainage is an unnamed ephemeral tributary to Cedar Creek, 1/8 of a mile northwest of this location.
Water well contamination no, surface casing is below all known water wells in the area.
Porous/permeable soils no, bentonite soils
Class I stream drainage no

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
X Off-site disposal of solids/liquids (in approved facility)
__ Other:
Comments: 1700' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used on surface hole.

## Soils/Vegetation/Land Use

(possible concerns)
Steam crossings none.
High erosion potential no, small cut, up to 7.4' and moderatel fill, up to 15.4', required.
Loss of soil productivity no, unused portion of drillsite will be reclaimed after well is drilled.

Unusually large wellsite Large, 270'X400' location size required.
Damage to improvements none
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: All of the access will be over existing county roads and trails. Short access of less than 50' will be built off an existing trail. Reserve pit liquids to be recycled or hauled to a commercial disposal. Solids will be allowed to dry, pit liner folded over the top of the solids, spoil dirt to fill pit, top soil spread over pit area, and seeded to land owners specification. No special concerns

**Health Hazards/Noise**

(possible concerns)
Proximity to public facilities/residences None, closest building is 1/4 of a mile to the northwest of this location in section 11.
Possibility of H2S yes
Size of rig/length of drilling time Triple drilling rig 15 to 25 days drilling time

Mitigation:

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

Comments: no special concerns. Proper BOP stack and surface casing should be able to control any problems that occurs.

**Wildlife/recreation**

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified) n/a 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 no

Mitigation:

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

Comments: Private surface. 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: Private surface

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**Social/Economic**

(possible concerns)
__ Substantial effect on tax base
__ Create demand for new governmental services
__ Population increase or relocation
Comments: no concerns

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**Remarks or Special Concerns for this site**

Well is a 8000' vertical Mission Canyon formation test.

**Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected. Some short term impacts will occur. Water source well for the Pine Field injection system.

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 Steven Sasaki
(title:) Chief Field Inspector
Date: March 21, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Wibaux County water wells
(subject discussed)
March 21, 2006
(date)

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