

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

Operator: Anschutz Exploration Corporation
Well Name/Number: Pine Ridge 1-26
Location: SW NE Section 26 T36N R13W
County: Glacier, **MT;** **Field (or Wildcat)** W/C

Air Quality

(possible concerns)

Long drilling time: 30 to 50 days drilling time.

Unusually deep drilling (high horsepower rig): Yes, triple derrick drilling rig for a 11,150' TD vertical hole. Formation at total depth is the Potlatch.

Possible H2S gas production: Yes H2S possible.

In/near Class I air quality area: Yes, Class I air quality area, Blackfeet Reservation.

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: Triple derrick drilling rig to drill a vertical hole to 11,150' TD.

Water Quality

(possible concerns)

Salt/oil based mud: Yes, will use an oil based invert drilling fluids from under surface casing to total depth. Freshwater and freshwater mud system will be used on drilling surface hole.

High water table: No high water table anticipated.

Surface drainage leads to live water: Closest surface drainages are unnamed ephemeral tributary drainages to the Middle Fork Milk River, about ¼ of a mile to the north and ½ of a mile to the south southeast from this location.

Water well contamination: No, closest spring is about 3/8 of a mile to the northwest from this location. No water wells within 1 mile from this location.

Porous/permeable soils: Yes, sandy silty soils.

Class I stream drainage: Closest Class I stream drainage is the Middle Fork Milk River, about 1.25 miles to the south and about 2 miles to the east from this location.

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: 1150' of surface casing cemented to surface adequate to protect freshwater. Also, fresh water mud systems to be used on surface hole.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated, crossing ephemeral drainages only.

High erosion potential: No, moderate cut, up to 13.2' and moderate fill required up to 14.5', 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, large, 400'X400' 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: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28)

Comments: Using existing county roads, Duck Lake Road. Access off existing Duck Lake Road, approximately 3,165' of new road will be constructed into this location. Oil based drill cuttings will be solidified and buried in a separate lined reserve pit.

Freshwater drilling fluids and cuttings will be allowed to dry in the pit. Oil based drilling fluids will be recycled back to the drilling fluid company. Oil based drill cuttings will be solidified and buried in a separate lined pit from the water based cuttings. Pits will be backfilled when dry. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: There are no residences within 2 mile radius of this wellsite. Public camp ground about 3 miles to the northwest from this well location at Duck Lake.

Possibility of H2S: Yes possible H2S.

Size of rig/length of drilling time: Triple derrick drilling rig to drill for about 30 to 50 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: _____

Comments: No concerns, proper BOP stack and surface casing should be able to control any problems that occurs. General wind directions are from the north and west.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None, identified

Proximity to recreation sites: Glacier National Park is about 13.5 miles to the west from this location. Duck Lake is about 2.5 miles to the northwest from this location.

Creation of new access to wildlife habitat: No, private grasslands.

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endanger in Glacier County are Grizzly Bear, Gray Wolf, Canada Lynx and Bull Trout.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DSL)

Screening/fencing of pits, drillsite

Other: _____

Comments: Private grassland. Drilling of this well should not impact any of species listed above. No live water closeby. Other mammals are mobile and should not be impacted by the drilling of this well. 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 grassland. No concerns.

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: Rank wildcat well. Social and economic impacts are unknown at this time.

Remarks or Special Concerns for this site

Well is a vertical Devonian Potlatch Formation test hole to 11,150' TD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts 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): \s\Steven Sasaki
(title:) Chief Field Inspector

Date: September 20, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Glacier County water wells

(subject discussed)

August 17, 2010

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Glacier County

(subject discussed)

August 17, 2010

(date)

If location was inspected before permit approval:

Inspection date: August 23, 2010

Inspector: Mr. Klotz

Others present during inspection: None