

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

Operator: Central Montana Resources, LLC
Well Name/Number: Snowmane No. 5
Location: NE NE Section 9 T13N R29E
County: Petroleum, MT; Field (or Wildcat) W/C

Air Quality

(possible concerns)

Long drilling time: No, 5 to 10 days drilling time.

Unusually deep drilling (high horsepower rig): No, single or double drilling rig to drill a vertical hole to 4200' Heath Formation Test.

Possible H2S gas production: Slight.

In/near Class I air quality area: No class I air quality area.

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 a single or double rig to drill to a vertical hole to 4200' Heath Formation Test.

Water Quality

(possible concerns)

Salt/oil based mud: No, surface hole will be drilled with freshwater and freshwater KCL mud system (1% KCL). Mainhole will be drilled with freshwater and freshwater KCL drilling mud (1% KCL).

High water table: No high water table in the area of review.

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Anderson Coulee, about 1/8 of a mile to the southeast from this location.

Water well contamination: No, no water wells within 1 mile and further in any direction from this location. This well will set 8 5/8" surface casing to 800' and cement to surface. Well will be drill with freshwater KCL mud (1% KCL).

Porous/permeable soils: No, silty 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: 800' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used on surface hole.

Freshwater KCl mud system (1% KCL) to be used from surface to TD. Freshwater drilled cuttings and mud solids will land farmed on site with landowner approval. No concerns.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings require.

High erosion potential: No, moderate cut, up to 10.8' and small fill, up to 9.7', 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, 300'X250' location size required.

Damage to improvements: Slight, surface use appears to be a cultivated field.

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: Access will be from existing county road and well access road to Snowmane #4. Short road to be built from Snowmane #4 to access into this location, about 2679'. Freshwater drilling fluids will be recycled utilizing a closed loop mud system. Freshwater drilled cuttings and mud solids will be land farmed on site. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Residence, none within 1 mile in any direction from this location.

Possibility of H2S: Slight.

Size of rig/length of drilling time: Small drilling rig/short 5 to 10 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: _____

Comments: Operational BOP and adequate surface casing should mitigate any problems. 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: Threatened or endangered species identified are the Pallid Sturgeon and the Black Footed Ferret. Species of concern are the Greater Sage Grouse and Sprague's Pipit.

Mitigation:

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

Comments: Private cultivated surface lands. No live water nearby. 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 cultivated surface lands. No concerns.

Social/Economic

(possible concerns)

- Substantial effect on tax base
- Create demand for new governmental services
- Population increase or relocation

Comments: Well is a wildcat, until production is established no social or economic impact can be assessed.

Remarks or Special Concerns for this site

Well is a wildcat vertical hole to 4200' Heath Formation Test.

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: June 23, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology GWIC website

(Name and Agency)

Petroleum County water wells

(subject discussed)

June 23, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Petroleum County

(subject discussed)

June 23, 2011

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T13N R29E

(subject discussed)

June 23, 2011

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____