

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

Operator Enerplus Resources (USA) Corporation
Well Name/Number: Stockade-Calesto 33-3-HSU
Location: NE NW Section 33 T25N R54E
County: Richland, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 30-35 days drilling time.
Unusually deep drilling (high horsepower rig): Triple derrick rig 1000 HP, Bakken Formation single lateral horizontal well TVD 9,724' / MD 16,073'.
Possible H2S gas production: Slight chance.
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: Existing pipeline for gas in the area. _____

Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate casing string hole will be drilled with oil based invert drilling fluids. Horizontal lateral will be drilled with brine water. Surface casing hole to be drilled with freshwater and freshwater mud system.
High water table: No high water table anticipated.
Surface drainage leads to live water: Yes, nearest drainage is an unnamed ephemeral tributary drainage to Middle Charlie Creek about 1/8 of a mile to the south and Middle Charlie Creek is about 1/4 of a mile to the southwest from this location. Within Middle Charlie Creek are ponds.
Water well contamination: No, closest water wells are about 1/2 of a mile to the south, 5/8 of a mile to the southeast, 5/8 of a mile to the south, and 3/4 of a mile to the northeast from this location. All water wells close by are shallower than 1520'. Surface hole will be drilled with freshwater and surface casing will be cemented back to surface from 1 520'.
Porous/permeable soils: No, silty sandy clay soils.
Class I stream drainage: No, Class I stream drainages.

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: 1520'+/- surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to mitigate any problems.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None

High erosion potential: No, location has a moderate cut of 17.2' and a small fill of 9.3', required.

Loss of soil productivity: None, location to be restored, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large well site 440'X310'.

Damage to improvements: Slight

Conflict with existing land use/values: Slight, surface use is hay field.

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: Access will be over existing county road, #137. A short access road of 262' will be built from the county road into this location. Oil based muds will be recycled. Completion fluids will be hauled to a Class II commercial disposal. Cuttings will be disposed of in a lined reserve pit. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is 1/8 of a mile to the northeast, 1/2 of a mile to the south and 1 mile to the east of this location.

Possibility of H2S: Slight chance of H2S.

Size of rig/length of drilling time: Triple drilling rig 30 to 35 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: _____

Comments: 1520+ is adequate surface casing cemented to surface with working BOP stack should 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: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered species listed in Richland County by USFW service are the Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane.

Candidate species are the Greater Sage Grouse and Sprague's Pipit. NH tracker website lists no species of concern for this Township and Range.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DSL)

Screening/fencing of pits, drillsite

Other: _____

Comments: Private surface hay land. 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 hay land. No concerns.

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: Well is in an existing spacing unit for Bakken Formation oil well. This is the second well in this spacing unit. Board Order number 19-2011. No concerns.

Remarks or Special Concerns for this site

Bakken Formation single lateral horizontal TVD 9,724' / MD 16,073'. No concerns.

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: May 5, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center website

(Name and Agency)

Richland County water wells

(subject discussed)

May 5, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Richland County

(subject discussed)

May 5, 2011 _____

(date)

Montana Natural Heritage Program Website

(Name and Agency)

Heritage State Rank= S1, S2, S3 in T25N R54E

(subject discussed)

May 5, 2011 _____

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____