

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

Operator: Encore Energy Partners Operating LLC
Well Name/Number: Elk Basin Unit 384
Location: SW SW Section 35 T9 S R23E
County: Carbon, **MT;** **Field (or Wildcat)** Elk Basin Field

Air Quality

(possible concerns)

Long drilling time: No, 20 to 25 days drilling time.

Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig to drill a directional Madison Formation well to 5,435'MD/5400' TVD.

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 triple rig to drill to a directional Madison Formation well to 5,435'MD/5400' TVD.

Water Quality

(possible concerns)

Salt/oil based mud: No, only freshwater and freshwater mud system from surface to total depth.

High water table: No high water table anticipated.

Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral tributary drainages to Silver Tip Creek, adjacent to the location to the south.

Water well contamination: No, closest water wells are 1 mile and further from this location in any direction. Surface hole and mainhole will be drilled with freshwater and freshwater fluid system. Surface casing will be set and cemented from 300' to surface.

Porous/permeable soils: No, rocky 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: 300' of surface casing cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: No, moderate cut, up to 10.0' and small fill, up to 5.5' 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, 250'X155' location size required.

Damage to improvements: Slight, surface use is an oil 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: Will use existing county roads and well access roads and trails. A short access will be built into this location off the existing well access road. Freshwater drilling fluids will be evaporated in the lined pit. Cuttings and mud solids will be buried in the lined pit. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: None within 1 mile from this location. Only oil field infrastructure.

Possibility of H2S: Slight

Size of rig/length of drilling time: Double or small triple derrick drilling rig/short 20 to 25 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: _____

Comments: Adequate surface casing and operational BOP should mitigate all 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: Species identified as threatened or endangered are the Canada Lynx, Black-Footed Ferret and Grizzly Bear. Candidate species are the Greater Sage Grouse, Sprague's Pipit and Wolverine. Proposed species is the Mountain Plover. NH tracker site lists Golden Eagle, Pinyon Jay, Greater Sage Grouse, Loggerhead Shrike and Brewer's Sparrow as "Species of Concern".

Mitigation:

Avoidance (topographic tolerance/exception)
 Other agency review (DFWP, federal agencies, DSL)
 Screening/fencing of pits, drillsite
 Other: _____
Comments: Private surface 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: On private surface lands. No concerns.

Social/Economic

(possible concerns)
 Substantial effect on tax base
 Create demand for new governmental services
 Population increase or relocation
Comments: Existing oil field, Elk Basin Field. No concerns

Remarks or Special Concerns for this site

Well is a directional Madison Formation well, to be drilled to 5,435' MD/5400' TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact 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 12, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Carbon County water wells

(subject discussed)

May 12, 2011

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Carbon County

(subject discussed)

May 12, 2011

(date)

Montana Natural Heritage Program Website

(Name and Agency)

Heritage State Rank= S1, S2, S3 T9S R23E

(subject discussed)

May 12, 2011

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____