

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

Proposed Action: Approve Drilling Permit (Form 22)
Operator: Synergy Offshore LLC
Well Name/Number: Koepke Farms 1
Location: NW SE Section 7 T35N R4W
County: Glacier, MT; **Field (or Wildcat)** (Wildcat)

Air Quality

(possible concerns)

Long drilling time: 5 to 10 days drilling time.
Unusually deep drilling (high horsepower rig): No, using a single or double derrick drilling rig to drill to 4,900' for a Duperow Formation test.
Possible H2S gas production: Yes, H2S gas production possible.
In/near Class I air quality area: No, nearest class I air quality area is the Blackfeet Reservation 9 miles to the west.
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: Using a single or double derrick drilling rig to drill to 4,900' in the Duperow Formation.

Water Quality

(possible concerns)

Salt/oil based mud: Use freshwater and freshwater mud system.
High water table: None anticipated.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral drainage, about 1/5 of a mile to the south.
Water well contamination: No, closest water well is 3/10 of a mile to the southeast from this location. Depth of this stockwater well is 205'. Surface casing hole set 700'.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: Class I stream drainage is Cut Bank Creek, about 3.6 miles to the south 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: 700' of surface casing cemented to surface.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None will utilize existing road crossings.
High erosion potential: No, small cut up to .02' and small fill 2.0' 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, 200'X200' location required.

Damage to improvements: Slight, surface use is 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 _____

Comments: Using existing county road, Berger Road and existing trail, a short new road will be built into location. Drilling fluids and completion fluids will be disposed of at an approved disposal facility. Any remaining water based cuttings will be tilled and pits closed on site.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are several about 1.4 miles to the west from this location. The town of Cutback, MT is located about 12 miles to the southwest from this location. Blackfeet reservation is located about 9 miles west of location.

Possibility of H2S: Yes possible H2S.

Size of rig/length of drilling time: Single or double derrick drilling rig 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: No concerns, proper BOP stack and surface casing should be able to control any problems that occur.

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 endanger in Glacier County are Grizzly Bear, Canada Lynx and Bull Trout. Candidate species are the Meltwater Lednian Stonefly, Sprague's Pipit, and Whitebark Pine. NH tracker website lists seven (7) species of concern. They are the Hoary Bat, Golden Eagle, Ferruginous Hawk, Chestnut-collared Longspur, Loggerhead Shrike, Long-billed Curlew, and McCown's Longspur.

Mitigation:

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

Comments: Private cultivated surface lands. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

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. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

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

Comments: Well is a Wildcat.

Remarks or Special Concerns for this site

Well is a 4,900'TVD into the Duperow Formation

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\ John Gizicki

(title:) Compliance Specialist

Date: October 14, 2015

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Glacier County water wells
(subject discussed)
October 14, 2015
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Glacier County
(subject discussed)
October 14, 2015
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3 T35N R4W
(subject discussed)
October 14, 2015
(date)

Montana Cadastral Website
(Name and Agency)
Surface Ownership and surface use Section 7 T35N R4W
(subject discussed)
October 14, 2015
(date)

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