

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Kiefer Farms 1

Operator: Synergy Offshore, LLC

Location: NE SW Section 20 T34N R1W

County: Toole **MT;** **Field (or Wildcat):** Kevin-Sunburst

Proposed Project Date: 7/15/2017

I. DESCRIPTION OF ACTION

The plan is to drill a gas well to 3,200' TD/MD in the Duperow formation. Surface casing to be run to 500' and cemented back to surface.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

Montana Bureau of Mines and Geology, GWIC website (Glacier County Wells).

US Fish and Wildlife, Region 6 website

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T34N R1W

Montana Cadastral Website

Surface Ownership and surface use Section 20 T34N R1W

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

No Action Alternative: The well would not be drilled.

Action Alternative: Synergy Offshore, LLC would have permission to drill the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 3 days
Unusually deep drilling (high horsepower rig): No.

Possible H₂S gas production: Yes, H₂S gas production possible from Mississippian Formations.
In/near Class I air quality area: No.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211. AQB review.

Comments: No special concerns – using rig to drill gas well to 3,200' TD. If there aren't any gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

4. WATER QUALITY

Salt/oil based mud: Freshwater and freshwater mud system.
High water table: None anticipated.
Surface drainage leads to live water: No, a pond exists 3/10 of a mile to the northeast, an unnamed ephemeral drainage to West Fork Willow Creek exists about ½ a mile to the southeast.

Water well contamination: No water wells within a ½ mile radius.

Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No.
Groundwater vulnerability area: NA

Mitigation:

- Lined reserve pit
- Adequate surface casing
- Berms/dykes, re-routed drainage
- Closed mud system
- Off-site disposal of solids/**liquids** (in approved facility)

Comments: Steel surface casing will be run and cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland and cultivation.
Stream crossings: None will utilize existing road crossings.
High erosion potential: No, using no cut and small fill of 5.2'.
Loss of soil productivity: No.

Unusually large wellsite (Describe dimensions): No, 200' X 200'.

Damage to improvements: Slight, surface use is a cultivated field.
Conflict with existing land use/values:

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

Access Road: New access of about 1,800' will be built off existing trail. Trail is off Sauby Rd.

Drilling fluids/solids: Any fluids remaining after completion of deepening operations will be removed and disposed of at an approved disposal facility. Any solids will be treated on site.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within a 1 mile radius.

Size of rig/length of drilling time: 3 days.

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other:

7. WILDLIFE/RECREATION

Sage Grouse: NA

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

Proximity to recreation sites: None.

Creation of new access to wildlife habitat: None.

Conflict with game range/refuge management: None.

Threatened or endangered Species: Species identified as threatened or endanger in Glacier County are Grizzly Bear, Canada Lynx and Bull Trout. Potential species are the Meltwater Lednian Stonefly, Western Glacier Stonefly, and Wolverine. Candidate specie is the Whitebark Pine. NH tracker website lists two-hundred and fourteen (214) species of concern. This may be a mistake, the next range to the east (36n-5W) listed three (3) species of concern. They are the Chestnut-collared Longspur, Black-necked Stilt, and McCown's Longspur.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DNRC Trust Lands)
- 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. No concerns.

IV. IMPACTS ON THE HUMAN POPULATION

8. HISTORICAL/CULTURAL/PALEONTOLOGICAL

Proximity to known sites:

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other:

9. SOCIAL/ECONOMIC

Substantial effect on tax base

- Create demand for new governmental services
- Population increase or relocation

Comments: No concerns.

IV. SUMMARY

No long term impacts expected. Some short term impacts will occur, but can be mitigated.

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.

**EA Checklist
Prepared By:**

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Date: 07/06/17