

CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Reddig 11-21

Operator: Hell Creek Crude

Location: NW NW Section 21 T30N R45E

County: Valley MT; **Field (or Wildcat):** Lustre

Proposed Project Date: 04/01/2024

I. DESCRIPTION OF ACTION

Hell Creek Crude plans to drill a vertical well to 5,849' MD / TVD to test the Ratcliffe Formation with the secondary objective being the Mission Canyon 6,059' MD / TVD.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS, OR INDIVIDUALS CONTACTED

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

US Fish and Wildlife, Region 6 website

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T30N R45E

Montana Cadastral Website

Surface Ownership and surface use Section 21 T30N R45E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

No Action Alternative: The proposed well would not be drilled.

Action Alternative: Hell Creek Crude would have permission to drill the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 3-6 days drilling time.

Unusually deep drilling (high horsepower rig): No, triple drilling rig to drill well.

Possible H₂S gas production: None anticipated.

In/near Class I air quality area: Yes, within boundary of the Fort Peck Indian Reservation.

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 well to 5,849' MD / TVD to test the Ratcliffe Formation. If there are no gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

4. WATER QUALITY

Salt/oil based mud: Use freshwater and freshwater mud system for surface hole. Water based KCl mud to be used on main hole.

High water table: No high-water table anticipated at this location.

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral drainage about 1/2 of a mile to the east.

Water well contamination: No water wells within a 1/2 mile radius. Surface casing to be set to 1,000' and cemented back to surface to protect groundwater.

Porous/permeable soils: No, sandy clay.

Class I stream drainage: No.

Groundwater vulnerability area: 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)

Comments: Steel surface casing will be run to 1,000' and cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Cultivation.

Stream crossings: None.

High erosion potential: No, a small cut of 2.4' and a small fill of 0.9' required.

Loss of soil productivity: None, location to be restored after drilling well, if well is nonproductive.

Unusually large wellsite (Describe dimensions): No, 400' X 400'.

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

Access Road: Access will be off Oswego N RD and an existing road. A new access of 501' will be built into location from existing road.

Drilling fluids/solids: Hell Creek Crude will be utilizing a closed loop system and will be processing the cuttings through DCT Energy Service's centrifuge and Poly tanks. The cuttings will be flock/processed before they are hauled to Wisco/Omni Environmental for disposal. Drilling fluids will also be processed back to clean KCL fluid and sent to Wisco/Omni for disposal as well.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within 1/4-mile radius.

Possibility of H2S: None anticipated.

In/near Class I air quality area: Yes, within boundary of the Fort Peck Indian Reservation.

Size of rig/length of drilling time: 3-6 days drilling time.

Mitigation:

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

7. WILDLIFE/RECREATION

Sage Grouse: General habitat. Program analysis received.

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 endangered in Valley County are the Pallid Sturgeon, Whooping Crane, Piping Plover, Red Knot, Northern Myotis, Black-footed Ferret, Grizzly Bear, Yellow-billed Cuckoo, and the Monarch Butterfly. MTFWP Natural Heritage Tracker website lists seven (7) species of concern. They are the Sprague's Pipit, Chestnut-collared Longspur, Baird's Sparrow, Bobolink, Loggerhead Shrike, Long-billed Curlew, and the Thick-billed Longspur.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DNRC Trust Lands, **Sage Grouse Habitat Conservation Program**)

Screening/fencing of pits, drillsite

Other:

Comments: Private cultivated field. 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: None.

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other: The Board of Oil & Gas has no jurisdiction over private surface lands.

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:**

Name: John Gizicki
Title: Chief Field Inspector

Date: 04/09/24