

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)
Project/Well Name: Fee #1
Operator: Columbia Petroleum, Ltd
Location: NE NE Section 12 15N 28E
County: Petroleum MT; **Field (or Wildcat):** Cat Creek West Dome
Proposed Project Date: 7/16/2019

I. DESCRIPTION OF ACTION

Single derrick rig 2,200' MD/TVD re-entry Morrison formation test.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

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

US Fish and Wildlife, Region 6 website
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Petroleum County

Montana Natural Heritage Program Website (FWP)
Heritage State Rank= S1, S2, S3, T15N R28E

Montana Cadastral Website
Surface Ownership and surface use Section 12 T15N R28E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

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

Action Alternative: Columbia Petroleum, Ltd would have permission to drill the well

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 2 to 3 days drilling time. Re-entering a plugged well.

Unusually deep drilling (high horsepower rig): No, small single derrick drilling rig, to clean out plugs to 2,200' TD Morrison Formation test

Possible H₂S gas production: No H₂S anticipated.

In/near Class I air quality area: No Class I air quality area in area of review.

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 single derrick drilling rig to clean out plugs to 2,200' TD Morrison Formation test. Surface casing is set to 116'. 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: Freshwater system and polymer to be used.

High water table: No.

Surface drainage leads to live water: No, Cat Creek is located about ¼ of a mile to the east.

Water well contamination: No, GWIC lists a 201' stockwater well 4/5 of a mile to the south west, and a 240' domestic water well 3/5 of a mile to the south.

Porous/permeable soils: No, clay soils.

Class I stream drainage: No.

Groundwater vulnerability area: No.

Mitigation:

Lined cuttings 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 is cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossings: None anticipated.

High erosion potential: No, using existing location, no location to build.

Unusually large wellsite (Describe dimensions): No, this is a well re-entry, no location to build.

Damage to improvements: Very little, surface use is grassland, no location to be built.

Conflict with existing land use/values: Very little, surface use is grassland.

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 Cat Creek Rd.

Drilling fluids/solids: No pits. This is a well re-entry, drilling through cement plugs.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: Closest residence is 3/5 of a mile to the south.

Possibility of H2S: None anticipated.

Size of rig/length of drilling time: small single derrick drilling rig to clean out plugs to 2,200' TD

Morrison Formation test.

Mitigation:

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

7. WILDLIFE/RECREATION

Sage Grouse: Core area, letter received June 25, 2019.

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 listed as threatened or endangered in Petroleum County are: Pallid Sturgeon, and Red Knot. The Montana Natural Heritage Program site lists six (6) species of concern in Petroleum County, T15N-R28E: Black tailed Prairie Dog, Ferruginous Hawk, Greater Sage-Grouse, Pinyon Jay, Long-billed Curlew, and Brewer's Sparrow.

Mitigation:

- Avoidance (topographic tolerance/exception)

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

Screening/fencing of pits, drillsite

Other:

Comments: Subject to Sage Grouse stipulations. 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: None.

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: 07/17/19