

## CHECKLIST ENVIRONMENTAL ASSESMENT

**Proposed Action:** Approve Drilling Permit (Form 22)

**Project/Well Name:** Ralston 2-22H

**Operator:** Sinclair Oil and Gas Company

**Location:** SE SE Section 22 T27N R53E

**County:** Richland **MT;** **Field (or Wildcat):** Wildcat

**Proposed Project Date:** 10/01/2016

### I. DESCRIPTION OF ACTION

Sinclair Oil and Gas Company plans to drill a single lateral Bakken Formation horizontal hole, 18,849' MD/8,864' TVD.

### II. PROJECT DEVELOPMENT

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

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

US Fish and Wildlife, Region 6 website

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T27N R53E

Montana Cadastral Website

Surface Ownership and surface use Section 22 T33N R57E

Montana Department of Natural Resources MEPA Submittal

#### 2. ALTERNATIVES CONSIDERED

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

Action Alternative: Sinclair Oil and Gas Company would have permission to drill the well.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

#### 3. AIR QUALITY

Long drilling time: No, normal drilling time 30 to 40 days.  
Unusually deep drilling (high horsepower rig): No.

Possible H<sub>2</sub>S gas production: Slight chance of H<sub>2</sub>S gas production in Mississippian formations.  
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 triple derrick rig to drill to 18,987’MD/9,132’TVD. 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: Yes, intermediate casing string hole will be drilled with oil based invert drilling fluids. Bakken lateral will be drilled with brine. Surface casing will be drilled with freshwater and freshwater mud system.

High water table: Slight.  
Surface drainage leads to live water: No, Promise Land Coulee which leads to Charlie Creek, 3/5 of a mile to the east of this location.

Water well contamination: No wells within a 1-mile radius of location. Surface casing will be set to 1,600’ and cemented back to surface.

Porous/permeable soils: Sandy silty soils.  
Class I stream drainage: No Class I stream drainages.  
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 and cemented to surface to protect ground water. (Rule 36.22.1001).

#### 5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Steam crossings: None, only ephemeral drainage will be crossed.

High erosion potential: No, location will require small cut, up to 7.9' and a small fill, up to 5.4', required.

Loss of soil productivity: No, location to be restored after drilling, if plugged. If productive, then the site may be downsized to accommodate only the production equipment.

Unusually large wellsite (Describe dimensions): No, large well site 480'X4350'.

Damage to improvements: None.

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 over existing county road #148. About 174' of new road will be constructed into this location off the existing county road.

Drilling fluids/solids: Drilling fluids will be contained in a 400 bbl tank on location. Drill cuttings will be mixed with fly ash and deposited in the cuttings pit. Invert mud will be recycled. Completion fluids and reserve pit fluids will be trucked to a commercial Class II for disposal. Pit will be backfilled.

## 6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within a 1-mile radius from this location. Fort Peck Reservation is about 3.6 miles to the north from this location.

Possibility of H2S: Slight chance of H2S gas production in Mississippian formations.

Size of rig/length of drilling time: 30 to 40 days.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other:

## 7. WILDLIFE/RECREATION

Sage Grouse: No.

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: Threatened or endangered species in Richland County, MT are listed as: Pallid Sturgeon, Piping Plover, Interior Least Tern, Whooping Crane, Northern Long-eared Bat. The Montana Natural Heritage Program lists seventeen (17) species of concern. They are the Hoary Bat, Sprague's Pipit, Piping Plover, Black-billed Cuckoo, Bobolink, Red-headed Woodpecker, Least Tern, Northern Redbelly Dace, Blue Sucker, Iowa Darter, Shortnose Gar, Sturgeon Chub, Sicklefin Chub, Pearl Dace, Paddlefish, Sauger, and the Pallid Sturgeon.

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.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> John Gizicki	<b>Date:</b> 05/24/18
	<b>Title:</b> Compliance Specialist	