

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Thorpe 1

Operator: Sands Oil Company

Location: Section 2, 36N-3W SE NW

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

Proposed Project Date: January 15, 2018.

I. DESCRIPTION OF ACTION

Sands Oil Company plans to re-enter this plugged well and perf and evaluate prospective zones from the Nisku to Madison. 3,475' TD. If no zones are found productive, the well will be perforated in the Madison and evaluated for a possible water disposal well.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

Montana Bureau of Mines and Geology, GWIC website (Toole 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, T36N R3W

Montana Cadastral Website

Surface Ownership and surface use Section 2 T36N R3W

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

No Action Alternative: The well would not be re-entered.

Action Alternative: Sands Oil Company would have permission to re-enter the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No.

Unusually deep drilling (high horsepower rig): No.

Possible 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 small rig to re-enter to 3,475' TD. 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: Plan is to use freshwater, maybe air.

High water table: No.

Surface drainage leads to live water: No, A stock pond exists 1/5 of a mile to the south. Closes drainage is an unnamed ephemeral drainage 1/10 of a mile to the north.

Water well contamination: No. No water wells within 1/2 mile radius.

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 is in place to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossings: None anticipated.

High erosion potential: No.

Loss of soil productivity: Slight if productive.

Unusually large wellsite (Describe dimensions): No, using existing location.

Damage to improvements: Slight.

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 is off Loop Rd and existing trail.

Drilling fluids/solids: A small unlined pit will be utilized to contain cement cuttings. Cement cuttings will be buried in pit.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: Nearest residence is just over ½ a mile to the south. The town of Sunburst is about 3 miles to the east.

Possibility of H2S: Possible in the Mississippian formations.

Size of rig/length of drilling time: Small rig, 2-3 days drilling time.

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other: No BOP to be used. Cased hole. Zones that are exposed are tight.

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 listed as endangered or threatened in Toole County are: The Grizzly Bear, Red Knot, and Whitebark Pine. The Montana Natural Heritage Program website lists nine

(9) species of concern: the Hoary Bat, Little Brown Myotis, Golden Eagle, Burrowing Owl, Ferruginous Hawk, Chestnut-collared Longspur, Loggerhead Shrike, McCown's Longspur, and Brewer's Sparrow.

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:	Name: John Gizicki Title: Compliance Specialist	Date: 09/05/18
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