

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Sleeping Buffalo 2-1

Operator: Wesco Operating, Inc.

Location: T32N, R32E, Sec 1 SWSE

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

Proposed Project Date: 4/15/2018

I. DESCRIPTION OF ACTION

Wesco Operating, Inc. plans to re-enter and deepen the Sleeping Buffalo 2-1 vertical gas well on private land with an objective formation being the Deadwood. The proposed total depth is 6,839' TVD/MD. The surface casing is set to 1,400. The location is in general sage grouse habitat and requires sage grouse approval. Sage grouse program analysis has been received.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

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

US Fish and Wildlife, Region 6 website

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

Montana Natural Heritage Program Website (FWP)

Heritage State Rank= S1, S2, S3, T32N R32E

Montana Cadastral Website

Surface Ownership and surface use Section 1 T32N R32E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

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

Action Alternative: Wesco Operating, Inc. would have permission to re-enter the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: Not anticipated
Unusually deep drilling (high horsepower rig): No.

Possible H₂S gas production: Yes, possible H₂S gas, slight chance from Mississippian Formations.
In/near Class I air quality area: No Class I air quality area in the 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 small rig to re-enter well to 6,839' TVD/MD. 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: No. A freshwater system will be used throughout drilling process.
High water table: No high-water table at this well location.
Surface drainage leads to live water: No. Whitewater Creek is located about 1.5 miles to the east and the Milk River is located about 4/5 of a mile to the south.

Water well contamination: No water wells in ½ mile radius.

Porous/permeable soils: Slightly, sandy loam.
Class I stream drainage: No class I streams in the area.
Groundwater vulnerability area: Yes.

Mitigation:

- Lined reserve pit: 12 mil HDPE.
- Adequate surface casing
- Berms/dykes, re-routed drainage
- Closed mud system
- Off-site disposal of **solids/liquids** (in approved facility)

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

5. SOILS/VEGETATION/LAND USE

Vegetation: Area is grassland.

Steam crossings: No stream crossings anticipated.
High erosion potential: No cut and fill anticipated.
Loss of soil productivity: No, location will be restored after drilling if nonproductive.

Unusually large wellsite (Describe dimensions): No, 240' X 200' location.

Damage to improvements: Slight, surface use for grazing.

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: Milk River Rd and existing lease road.

Drilling fluids/solids: Cuttings and fluids will be captured in flat tanks for future disposal at a commercial disposal facility.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residents within a ½ mile radius.

Possibility of H2S: Yes possible H2S gas, slight chance from Mississippian Formations.

Size of rig/length of drilling time: Small rig, 5 -10 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: In general habitat and requires sage grouse approval from the Sage Grouse Habitat Conservation Program. Program received 8-30-2017.

Proximity to sensitive wildlife areas (DFWP identified): Cree Crossing Wildlife Management Area is located ½ a mile to the south. Milk River – Sleeping Buffalo Wildlife Management Area is located about 2.5 miles to the Southeast.

Proximity to recreation sites: The Nelson Reservoir is about 1.7 miles to the south, Hewitt Lake and the Hewitt Lake National Wildlife Refuge is located about 3.6 miles to the southwest.

Creation of new access to wildlife habitat: No.

Conflict with game range/refuge management: No.

Threatened or endangered Species: Species listed as endangered or threatened in Phillips County are the Pallid Sturgeon, Piping Plover, Black-footed Ferret, Whooping Crane, Interior Least Tern, and the Red

Knot. The Montana Natural Heritage Program website lists sixteen (16) species of concern: Black-tailed Prairie Dog, Hoary Bat, Little Brown Myotis, Baird's Sparrow, Great Blue Heron, Burrowing Owl, Greater Sage-Grouse, Piping Plover, Caspian Tern, Red-headed Woodpecker, Long-billed Curlew, Common Tern, Northern Redbelly Dace, Iowa Darter, Northern Pearl Dace, and Sauger.

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 L, 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
Signature:	Date: 03/21/18	