

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Proposed Action: Approve Drilling Permit (Form 22)

Operator: Weil Oil, LLC

Well Name/Number: Weil #2

Location: NE NE Section 10 T33N R9E

County: Hill, MT; **Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 10-15 days drilling time.

Unusually deep drilling (high horsepower rig): Double derrick rig 600 HP to drill to 5400' TD for Red River/Souris River Formation test.

Possible H₂S gas production: Yes, low concentration.

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.

Mitigation:

Air quality permit (AQB review)

Gas plants/pipelines available for sour gas

Special equipment/procedures requirements

Other: _____

Comments: Small single derrick drilling rig, 600 HP and will not be on any location longer than 15 days.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater drilling fluids for the surface hole and main hole.

High water table: None anticipated.

Surface drainage leads to live water: No, closest surface drainage is an unnamed ephemeral drainage to O'Brian Coulee 1/10 of a mile to the west from this location.

Water well contamination: No, Closest water well is 9/10 of a mile to the northwest. Depth of this stock water well is 80'. Surface hole will be drilled with freshwater and steel casing set to 300' and cemented back to surface. To protect shallow ground waters.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: No, Class I stream drainages.

Mitigation:

Lined reserve pit

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system

Off-site disposal of solids/liquids (in approved facility)

Other: _____

Comments: 300' surface casing well ensure shallow ground water aquifers are isolated. Adequate surface casing and BOP equipment to prevent problems.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None anticipated.

High erosion potential: No, a small cut, up to 1.5' and moderate fill, up to 14.0', required.

Loss of soil productivity: None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, small well site 375'X350'
Damage to improvements: Slight, surface use is a grazing.
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
- Other _____

Comments: Existing access off Rudyard Road. A short access from an existing access trail into location will be constructed. Cuttings and pit contents will be allowed to dry and will be buried in the reserve pit.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 3/10 of a mile to the southeast, 4/5 of a mile to the northwest, and 1 mile to the northwest from this location..

Possibility of H2S: Yes, low concentrations.

Size of rig/length of drilling time: Double derrick drilling rig 20 to 15 days drilling time.

Mitigation:

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

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Only threatened and endangered species listed are the Black-footed Ferret and candidate species are the Greater Sage-Grouse and Sprague's Pipit.

The Montana Natural Heritage Program website lists one (1) species of concern: the Plains Hog-nosed Snake.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DSL)
- Screening/fencing of pits, drillsite
- Other: _____

Comments: No concerns. Private cultivated surface lands, with no live water nearby.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified.

Mitigation

- avoidance (topographic tolerance, location exception)

___ other agency review (SHPO, DSL, federal agencies)

___ Other: _____

Comments: Private cultivated surface lands. No concerns.

Social/Economic

(possible concerns)

___ Substantial effect on tax base

___ Create demand for new governmental services

___ Population increase or relocation

Comments: No concerns. _____

Remarks or Special Concerns for this site

Nisku Formation test 5400' TD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected with the drilling of this well, some short term impacts are expected.

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.

Prepared by (BOGC): John Gizicki _____

(title:) Compliance Specialist _____

Date: September 25, 2015

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website _____

(Name and Agency)

Water wells in Hill County _____

(subject discussed)

September 25, 2015 _____

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA

COUNTIES, Hill County

(subject discussed)

September 25, 2015 _____

(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T33N R9E
(subject discussed)

September 25, 2015
(date)

Montana Cadastral Website
(Name and Agency)
Surface Ownership and surface use Section 10 T33N R9E
(subject discussed)

September 25, 2015
(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____