

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: EPYON Oil, Inc.
Well Name/Number: Bubba 3558 41-24H
Location: SW SW 24 T35N R58E
County: Sheridan, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 20-30 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick rig 15,831' MD/8,162' TVD Bakken Formation horizontal well test.

Possible H2S gas production: Slight chance H2S gas production from Mississippian Formations.

In/near Class I air quality area: No Class I air quality area nearby.

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: If there is an existing pipeline for associated gas/H2S gas in the area and gas can be gathered or if no gathering system nearby associated gas/H2S gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate casing string hole, oil based invert drilling fluids (80/20 or 70/30) Horizontal lateral will be drilled with oil based invert drilling fluids (80/20 or 70/30) . Surface casing will be drilled with freshwater and freshwater mud system, rule 36.22.1001.

High water table: Possible high water table in this area.

Surface drainage leads to live water: No, closest live water are pothole ponds, about 1/2 of a mile to the southwest and 3/8 of a mile to the northwest from this location.

Water well contamination: No, closest water wells in the area are about 1/2 of a mile to the southeast, about 5/8 of a mile to the southeast and about 3/4 of a mile to the southeast from this location. Depth of these wells range from 80' to 180'. These water wells are shallower than the surface casing setting depth of 1300' in this well. There are also a number of shallow monitoring wells surrounding this area. Surface casing hole will be drilled with freshwater and freshwater drilling fluids, rule 36.22.1001. Steel surface casing will be run and cemented to surface from 1300'.

Porous/permeable soils: Yes, sandy silty soils.

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

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: Lined cuttings pit with cuttings to be solidified with flyash or

lime.

Comments: 1300' surface casing well below freshwater zones in adjacent water wells, rule 36.22.1001. Also, covering the Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems. Rule 36.22.1014.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None anticipated.

High erosion potential: No, location will require a small cut of up to 6.4' and moderate fill, up to 10.7', required.

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

Unusually large wellsite: No, a large well site 430'X320', for a single wellsite.

Damage to improvements: Slight, surface use is cultivated land.

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 Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28)

Comments: Will use existing county road, Stateline Road. About 5559' of upgraded existing two track road will be built into this location from the existing county road. Cuttings will be buried in the lined cuttings pit. Oil base invert drilling fluids will be recycled. Completion fluids will be removed and hauled to commercial Class II Disposal. The cuttings will be solidified in the pit and will be covered with subsoil. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 1.25 miles to the southeast from this location. Town of Westby, Montana is about 7.25 miles to the north northeast and the town of Plentywood, Montana is about 22.1 miles to the west from this location.

Possibility of H2S: Slight chance of H2S from Mississippian Formations.

Size of rig/length of drilling time: Triple drilling rig 20 to 30 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 (3,000pigs annular and double ram) should mitigate any problems, rule 36.22.1014. Sufficient distance between location and buildings noise should not be a problem.

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: Species identified as threatened or endangered are the Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. MTFWP Natural Heritage Tracker website indicates ten(10) species of concern, they are the Arctic Shrew, Baird's Sparrow, Le Conte's

Sparrow, Nelson's Sparrow, Sprague's Pipit, Piping Plover, Black Tern, Sedge Wren, Bobolink and Whooping Crane.

Mitigation:

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

Comments: Private surface cultivated land. There maybe 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.

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: Surface location is private cultivated land. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- Substantial effect on tax base
- Create demand for new governmental services
- Population increase or relocation

Comments: Wildcat Bakken Formation horizontal well. No concerns.

Remarks or Special Concerns for this site

Drill a 15,831' MD/8,162' TVD Formation horizontal well test. No concerns.

Summary: Evaluation of Impacts and Cumulative effects

Some short term impacts expected, no long term impacts anticipated.

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): /s/Steven Sasaki

(title:) Chief Field Inspector _____

Date: December 9, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, Groundwater Information Center GWIC
website _____

(Name and Agency)

Sheridan County water wells

(subject discussed)

December 9, 2012 _____

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

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

(subject discussed)

December 9, 2012 _____

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T35N R58E

(subject discussed)

December 9, 2012 _____

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____