

Montana Board of Oil and Gas Conservation Environmental Assessment

Operator: Oasis Petroleum North America LLC
Well Name/Number: Freesia Federal 2658 13-11H
Location: NW NE Section 11 T26N R58E
County: Richland, MT; Field (or Wildcat) Wildcat

Air Quality

(possible concerns)

Long drilling time: No, 30-40 days drilling time.

Unusually deep drilling (high horsepower rig): Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 20,949' MD/10,284' TVD.

Possible H₂S gas production: Yes, slight H₂S possible 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 are existing pipelines for natural gas in the area then associated gas must be tied into system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: Yes will drill with oil based invert drilling fluids for the intermediate casing hole.

Horizontal hole will be drilled with saltwater. Surface casing hole will be drilled with freshwater and freshwater mud system, Rule 36.22.1001.

High water table: No high water table anticipated at this surface location.

Surface drainage leads to live water: No, closest drainage is unnamed ephemeral tributary drainage to the Missouri River, about ¼ of a mile to the southeast from this location. The Missouri River is about 7/8 of a mile to the northeast from this location.

Water well contamination: No, closest water wells are about ¾ of a mile to the northwest, about ¾ to the north northwest and about 1 mile to the northeast from this location. Depth of these water wells range from 90' to 680'. This proposed oil well will be drilled with freshwater and freshwater mud to 1,811' and steel surface casing will be run and cemented to surface to protect groundwater, rule 36.22.1001.

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

Class I stream drainage: Closest Class I stream drainage is the Missouri River, about 7/8 of a mile to the northeast from this location.

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: 1,811' surface casing will be drilled with freshwater, steel casing will be run to 1,811' and cemented back to surface, to protect freshwater zones in adjacent water wells, Rule 36.22.1001. Also,

covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems, (5,000 psig annular and double ram), Rule 36.22.1014.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings anticipated. Crossing only ephemeral drainages over existing county roads.

High erosion potential: Possible high erosion potential on moderate cut and fill slopes, location will require a moderate cut of up to 12.6' and a moderate fill of up to 14.4', required.

Loss of soil productivity: No, location to be restored after drilling, if nonproductive. If productive unused portion of this drillsite will be reclaimed.

Unusually large wellsite: Yes, a large well site 530' X 340' for a single wellsite, Freesia Federal 2658 13-11H.

Damage to improvements: Slight surface use appears to grasslands.

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: Access will be over existing county road, #147. New access road will be built into this location, about 305' into this location from the county road. Oil based invert drilling fluids will be recycled. Completion fluids will hauled to a commercial Class II disposal. Cuttings and solids will be buried/solidified on site in the lined reserve pit. The pit will be allowed to dry and the pit backfilled. No concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Nearest residences are about ¾ of a mile to the northwest and about 2.75 mile to the southeast from this location. The Town of Bainville, MT about 8.1 miles to the north northwest from this location.

Possibility of H2S: Yes, slight from Mississippian Formations.

Size of rig/length of drilling time: Triple drilling rig 30 to 40 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, Rule 36.22.1001, with working BOP stack should mitigate any problems, (5,000 psig annular and double ram), Rule 36.22.1014.

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 Pallid Sturgeon, Interior Least Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. NH tracker website indicates the following thirteen (13) species of concern are as follows: Great Blue Heron, Piping Plover, Whooping Crane, Least Tern, Northern Redbelly Dace, Blue Sucker, Iowa Darter, Short Nosed Gar, Sturgeon Chub, Sicklefin Chub, Paddlefish, Sauger and Pallid Sturgeon. NH tracker website lists one (1) potential species of concern: Hayden's Shrew.

Mitigation:

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

Comments: Private surface 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: Private surface 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 well. No concerns

Remarks or Special Concerns for this site

A wildcat exploratory single lateral horizontal Bakken Formation test, 20,949' MD/10,284' TVD.

Summary: Evaluation of Impacts and Cumulative effects

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.

Prepared by (BOGC): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: December 2, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Richland County water wells
(subject discussed)
December 2, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Richland County, Montana
(subject discussed)

December 2, 2012
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3, Location T26N R58E
(subject discussed)

December 2, 2012
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection: _____