

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

Operator: EOG Resources, Inc.
Well Name/Number: Flatwillow 1-31H
Location: SW SE Section 31 T12N R28E
County: Petroleum, MT; Field (or Wildcat) W/C

Air Quality

(possible concerns)

Long drilling time: No, 40 to 60 days drilling time.

Unusually deep drilling (high horsepower rig): Yes, 11,000' TD Pre-Cambrian Formation pilot hole and 10,800'MD/5900'TVD Bakken Formation horizontal.

Possible H₂S gas production: Yes, possible.

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: No special concerns – using a triple drilling rig to drill to 11,000'TD pilot and plugging back to drill a 10,800'MD/5900'TVD Bakken Formation horizontal.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater, freshwater mud system.

High water table: No

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Howard Coulee also an ephemeral drainage, about 1/16 of a mile to the northeast and south of this location. Closest live water are a stock pond about 1mile to the southeast of this proposed location.

Water well contamination: No, all water wells shallower than the proposed surface casing setting depth of 1500'. Surface hole will be drilled with freshwater and freshwater muds. Steel 9 5/8" surface casing will be run and cemented to surface from 1500'.

Porous/permeable soils: No, sandy clay soils.

Class I stream drainage: 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)
- Other: _____

Comments: 1500' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used. Reserve pit will be lined with a 12 mil liner.

Soils/Vegetation/Land Use

(possible concerns)

Steam crossings: None, only ephemeral drainages will be crossed.

High erosion potential: No, small cut, up to 6.5' and moderate fill, up to 11.0', required.

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

Unusually large wellsite: No, a large wellsite of 400'X300' location size required.

Damage to improvements: No, 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

Other _____

Comments: Access will be from existing county roads. Approximately, 23,033' of new access will be built into this location off of an existing county road. Drilling fluids will be trucked to a disposal or allowed to dry in the pits Drill cutting will be disposed of in the lined reserve pit, after being allowed to dry. Lined reserve pit will be backfilled when dry. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No residences within 1 mile of this location.

Possibility of H2S: Yes

Size of rig/length of drilling time: Large triple derrick drilling rig/long 40 to 60 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: _____

Comments: Proper BOP equipment and H2S safety alarms and contingency planning needs to be in place.

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: None identified.

Mitigation:

Avoidance (topographic tolerance/exception)

Other agency review (DFWP, federal agencies, DSL)

Screening/fencing of pits, drillsite

Other: _____

Comments: Private surface lands. No concerns.

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: On private surface lands.

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments: No concerns.

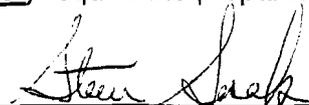
Remarks or Special Concerns for this site

Well is a 11,000' TD Pre-Cambrian Formation pilot hole and 10,800'MD/5900'TVD Bakken Formation horizontal.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur with the drilling of this well.

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): Steven Sasaki 

(title): Chief Field Inspector

Date: June 9, 2008

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)

Petroleum County water wells
(subject discussed)

June 9, 2008
(date)

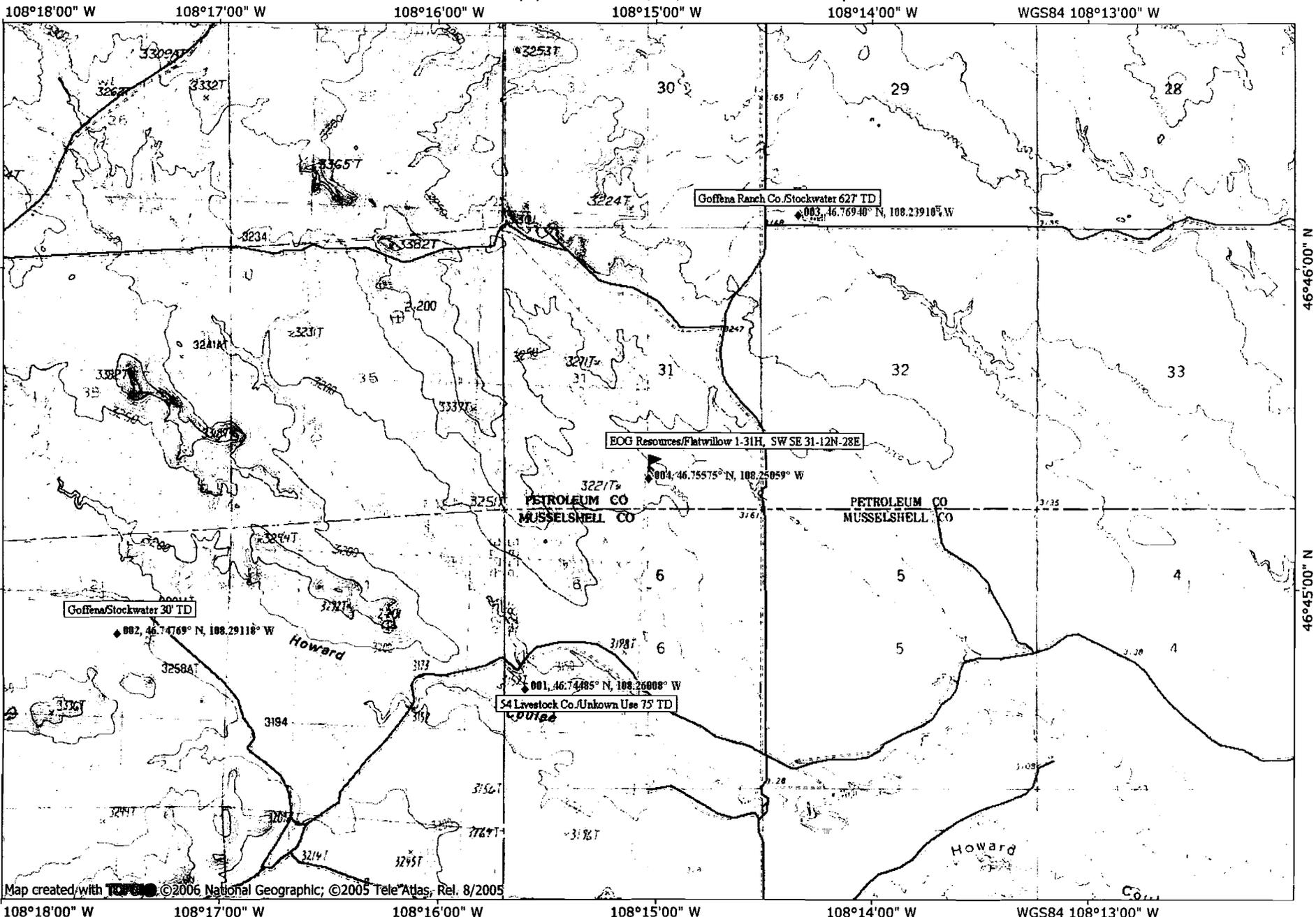
If location was inspected before permit approval:

Inspection date: _____

Inspector: _ _____

Others present during inspection: _____

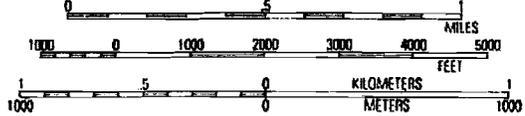
TOPO! map printed on 06/09/08 from "Untitled.tpo"



Map created with TOPO! ©2006 National Geographic; ©2005 TeleAtlas, Rel. 8/2005

108°18'00" W 108°17'00" W 108°16'00" W 108°15'00" W 108°14'00" W WGS84 108°13'00" W

NATIONAL GEOGRAPHIC



TN MN 12 1/2° 06/09/08