

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

**Operator:** Petro Hunt, LLC  
**Well Name/Number:** Nissley Farms 18-54-11B-3-1  
**Location:** SW NW Section 11 T18N R54E  
**County:** Dawson, **MT;** **Field (or Wildcat)** W/C

**Air Quality**

(possible concerns)

Long drilling time: 25-35 days drilling time for a vertical Red River Formation test.  
Unusually deep drilling (high horsepower rig): No, large triple drilling rig for 11,250' TD vertical Red River Formation Test.

Possible H2S gas production: Yes possible.

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

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, adequate surface casing, 2000' to be set and cemented back to surface with proper BOP stack should mitigate any concerns. Triple rig to drill to 11,250' TD vertical Red River Formation Test.

**Water Quality**

(possible concerns)

Salt/oil based mud: Use freshwater and freshwater mud system on surface hole. Invert oil based mud for mainhole from the base of surface casing to TD.

High water table: No high water table expected.

Surface drainage leads to live water: No, nearest drainage is an unnamed ephemeral tributary drainage to Morgan Creek an ephemeral drainage, about 1/8 of a mile to the west of this location. There should not be any discharge of fluids off this location.

Water well contamination: No, closest water well nearby is about 5/8 of a mile to the southwest from this well location. Depth of these stock water wells are 20' or less.

Surface hole will be drilled with freshwater and steel surface casing set and cemented from 2000' to protect surface waters and the Fox Hill aquifer.

Porous/permeable soils: No, sandy 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: It was determined from test pits that this location has significant gravel underlying it. The recommended mitigation measure would be to utilize a closed mud system with offsite disposal of cuttings and solids. 2000' of surface

casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used on surface hole.

### Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings anticipated, only ephemeral drainages.

High erosion potential: Yes, small cut, up to 8.6' and moderate fill, up to 20.0', 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: Large, 420'X350' location size required.

Damage to improvements: Slight, surface use is grasslands adjacent to cultivated fields.

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 #521 and will utilize 2 track farm trail. Will upgrade and build 1615' of access road off the county road. Pits will be lined. Oil based invert drilling fluid will be recycled. Completion fluids will be hauled to a permitted commercial disposal. Solids will be allowed to dry in the lined reserve pit and then backfilled. No special concerns

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 5/8 of a mile to the southwest and about 3/4 of a mile to the northeast from this wellsite.

Possibility of H2S: Yes possible.

Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: \_\_\_\_\_

Comments: No concerns. Proper BOP stack and adequate surface casing should be able to control any problems that occur. Distance to nearest residence and H2S contingency and/or evacuation plan sufficient to mitigate any concerns for H2S.

### 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 by USFWS are the Pallid Sturgeon, Interior Lease Tern and the Whooping Crane.  
Species of concern is the Greater Sage Grouse.

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: Private 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.

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### Remarks or Special Concerns for this site

Well is a vertical 11,250' Red River Formation Test.

### Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected. Some short term impacts will occur.

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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: May 28, 2010

Other Persons Contacted:

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Montana Bureau of Mines and Geology, GWIC website

\_\_\_\_\_  
(Name and Agency)

Dawson County water wells

\_\_\_\_\_  
(subject discussed)

May 28, 2010

\_\_\_\_\_  
(date)

US Fish and Wildlife, Region 6 website

\_\_\_\_\_  
(Name and Agency)

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

\_\_\_\_\_  
(subject discussed)

May 28, 2010

\_\_\_\_\_  
(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_