

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

**Operator:** Nance Petroleum Corporation  
**Well Name/Number:** Johnson 15-5H  
**Location:** SW SE Section 5 T23N R58E  
**County:** Richland, MT; **Field (or Wildcat)** Brorson

**Air Quality**

(possible concerns)

Long drilling time No, 30-40 days drilling time.  
Unusually deep drilling (high horsepower rig) Triple derrick rig 900 HP  
Possible H<sub>2</sub>S gas production Yes  
In/near Class I air quality area No  
Air quality permit for flaring/venting (if productive) No

Mitigation:

Air quality permit (AQB review)  
 Gas plants/pipelines available for sour gas  
 Special equipment/procedures requirements  
 Other: \_\_\_\_\_  
Comments: Existing pipeline for H<sub>2</sub>S in the area.

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**Water Quality**

(possible concerns)

Salt/oil based mud yes to long string salt based and oil based drilling fluids. Surface casing hole, freshwater, and freshwater mud system to be used.  
High water table No  
Surface drainage leads to live water No, closest ephemeral drainage is Brorson Creek ¼ to ½ mile to the east of location  
Water well contamination No problem anticipated.  
Porous/permeable soils No, gumbo 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: 2050' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings None  
High erosion potential No, location relatively flat.  
Loss of soil productivity None, location to be restored after drilling well.  
Unusually large wellsite No, large well site 400' X 320'  
Damage to improvements No, location to be restored after drilling.

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: \_\_\_\_\_

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### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences Brorson School is ¼ mile east of location. Residence ½ mile to the northeast of location.

Possibility of H2S slight

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 with working BOP stack should mitigate any problems. Bakken formation completions do not have H2S associated with it.

### Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) n/a 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 No

Mitigation:

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

Comments: no concerns, existing access off county road.

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### 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

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**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**

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**Summary: Evaluation of Impacts and Cumulative effects**

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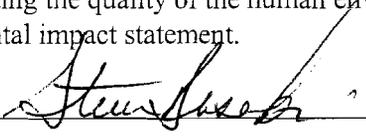
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I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Steven Sasaki   
(title:) Chief Field Inspector  
Date: September 23, 2004

Other Persons Contacted:

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(Name and Agency)

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(subject discussed)

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(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_  
Inspector: \_\_\_\_\_  
Others present during inspection: \_\_\_\_\_