

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

Operator: Nance Petroleum Corporation
Well Name/Number: Vaira No. 2-35X
Location: NW NE Section 35 T25 R54E
County: Richland, MT; Field (or Wildcat) Spring Lake

Air Quality

(possible concerns)

Long drilling time No, 30-40 days drilling time.
Unusually deep drilling (high horsepower rig) Triple derrick rig 900 HP, Bakken horizontal TVD11,850'
Possible H2S gas production yes
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: Existing pipeline for gas in the area.

Water Quality

(possible concerns)

Salt/oil based mud yes to long string salt based drilling fluids. Surface casing hole to be drilled with freshwater and freshwater mud.
High water table No
Surface drainage leads to live water No, nearest drainage is an unnamed ephemeral tributary drainage to Elm Coulee ephemeral drainage, on the southeast edge of this location.
Water well contamination No, all water wells close by are shallower than 100'. Surface hole will be drilled with freshwater. Surface casing will be set to 1550' and cemented to surface.

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: 1550'+/- surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems in and around freshwater slough.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings None
High erosion potential No, location has a moderate cut of 18.4' and a moderate fill of 15.5', required.

Loss of soil productivity None, location to be restored after drilling well, if well is a dryhole. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite No, large well site 400'X320'
Damage to improvements 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: Cuttings will be disposed of in a lined pit. Drilling fluids will be hauled to a commercial Class II disposal site. Pit will be allowed to dry and then backfilled with subsoil. Access will be over existing county roads #201 and B55 or B16, existing section line road and a short access road of about 755' will be built into this location.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences closest residence is ¼ of a mile to the northeast, ½ of a mile to the northwest of this location.

Possibility of H2S yes

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: 1550+ is adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Distance sufficient to mitigate noise.

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

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

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

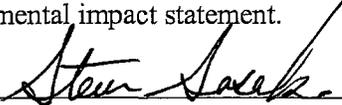
Comments: Development well in an existing oil field, Spring Lake Field. No concerns

Remarks or Special Concerns for this site

Summary: Evaluation of Impacts and Cumulative effects

TVD 11,850' TVD Red River well. Second producing well in this spacing unit. No long term impacts expected. Some short term impacts will occur.

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: May 22, 2006

Other Persons Contacted:

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website, Richland County water wells

(subject discussed)

May 22, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____