Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Nance Petroleum Corporation
Well Name/Number: Anvik 4-18H
Location: NW NW Lot 1 Section 18 T22N 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 rig 900 HP
Possible H2S gas production slight
In/near Class I air quality area No
Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
X Air quality permit (AQB review)
X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:
Comments: Existing pipeline for H2S gas or sweet gas in the area.

Water Quality

(possible concerns)
Salt/oil based mud yes to long string salt based and oil based drilling fluids. Horizontal hole will be drilled with saltwater. Surface casing hole, freshwater, and freshwater mud system to be used.
High water table No
Surface drainage leads to live water No, closest drainage is a tributary ephemeral drainage to North Fork Fox Creek just west about an 1/8 of a mile from this location
Water well contamination No problem anticipated all water wells less than 350' closest water well is about 3/8 of a mile to the southeast of this location.
Porous/permeable soils No, gumbo soils
Class I stream drainage No, Class I stream drainages.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other:
Comments: 1800' 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)
Steam crossings None
High erosion potential No, location will require a moderate cut of up to 15.6' and a small fill of up to 5.4', required.
Loss of soil productivity None, location to be restored after drilling well, if nonproductive. 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
_X Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Access will be over existing highway 200 and existing county gravel roads. About 1/8 of a mile of access road will be built into this location off the county gravel road. Cuttings will be buried in the lined reserve pit. Pit fluids will be hauled to a commercial disposal for injection. Pit will be allowed to dry and mixed off with clay and subsoil to solidify. Addition clean cover will cover the solidified material.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences _Residences 1/2 of a mile to the neast and 5/8 of a mile to the southeast of this location._____
Possibility of H2S _slight__
Size of rig/length of drilling time Triple drilling rig 30 to 40 days drilling time.

Mitigation:
_X Proper BOP equipment
__ Topographic sound barriers
_X 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 generally 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.

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: _No concerns. Second well in the spacing unit._____

Remarks or Special Concerns for this site

_To lateral Bakken horizontal well 14,044'MD and 10,215' 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):___Steven Sasaki_____

(title:)___Chief Field Inspector_____

Date:____April 4, 2006_____

Other Persons Contacted:

_____

__Montana Bureau of Mines and Geology, GWIC website_____

(Name and Agency)

__Richland County water wells_____

(subject discussed)

___April 4, 2006_____

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection:_____