Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Flying J Oil & Gas, Inc.
Well Name/Number: Powers 13N-17H
Location: SW SW Section 17 T36N R53E
County: Sheridan, **MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 30 to 40 days drilling time.
Unusually deep drilling (high horsepower rig): 900 HP Triple Derrick Drilling rig, 7,852' TVD and 12,005' TMD.
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:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:

Comments: No special concerns – using triple derrick drilling rig to drill a 7,852' TVD and 12,005' TMD, single lateral Nisku horizontal well.

Water Quality

(possible concerns)
Salt/oil based mud: Yes, freshwater and freshwater gel polymer mud system on surface hole. Mainhole invert mud system. Freshwater on horizontal lateral.
High water table: No
Surface drainage leads to live water. No, closest drainage is an unnamed ephemeral tributary drainage to Plentywood Creek an ephemeral drainage, about 1/4 of a mile to the northeast of this location.
Water well contamination: No, surface hole will be drilled with freshwater and surface casing set and cemented to surface at 2000'. Closest water well is about 1.25 miles to the northeast from this location.
Porous/permeable soils: No, sandy silty bentonitic soils.
Class I stream drainage: No

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: 2000' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No
High erosion potential: No, small cut, up to 4.8' and small fill, up to 8.5', 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, 265'X360' location size required.
Damage to improvements: Slight, surface use is a cultivated field.
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: Will use existing county roads and existing section line road. Access will be built off of an existing section line road into this location, about 100'. Cuttings will be buried on site in the lined reserve pit. Liquids will be recycled to another location or hauled to saltwater disposal facility. No special concerns

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences are 7/8 of a mile to the north, 1.25 miles to the northeast and 1.5 miles to the southeast of this location. The town of Outlook about 1.5miles to the northeast.
Possibility of H2S: Yes
Size of rig/length of drilling time: Triple drilling rig 30 to 4 days drilling time.
Mitigation:

_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other: _____

Comments: No concerns

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 Land. 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 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

Remarks or Special Concerns for this site

Well is a 7,852' TVD and 12,005' TMD. single lateral Nisku Formation test.

Summary: Evaluation of Impacts and Cumulative effects

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: October 22, 2007

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

DNRC Water Rights website

(Name and Agency)

Sheridan County water wells

(subject discussed)

October 22, 2007

(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____