

Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Sands Oil Company
Well Name/Number: Nichols 4-23
Location: SW NE Section 23T3N R61E
County: Fallon, MT; Field (or Wildcat) Gas Light

Air Quality

(possible concerns)

Long drilling time no, 3 to 4 days drilling time.
Unusually deep drilling (high horsepower rig) no, 1975' TD
Possible H2S gas production None expect
n/near Class I air quality area no
Air quality permit for flaring/venting (if productive) n/a

Mitigation:

- Air quality permit (AQB review)
- Gas plants/pipelines available for sour gas
- Special equipment/procedures requirements
- Other: _____

Comments: no special concerns – using small sized rig to drill to 1975'

Water Quality

(possible concerns)

Salt/oil based mud no, freshwater and freshwater gel polymer mud system.
High water table no
Surface drainage leads to live water No. nearest drainage is an unnamed tributary ephemeral drainage to Soda Creek, 1/8 mile to the north of this location.
Water well contamination no, closest water well is 1/4 mile to the northeast of this location. Well is only 20' deep. This well will drill surface hole to 200', set surface casing and cement to surface.
Porous/permeable soils no, bentonite soils
Class I stream drainage no

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: 200' 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)

Stream crossings no
High erosion potential no, small cut, up to 0.5' at the stake and no fill, 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, 150'X150' location size required.

Damage to improvements no.

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: Drilling fluids will be allowed to evaporate in the unlined pit. Cuttings and solids will be buried in the unlined pits. Access will use existing county roads. Approximately 1980' of new access will be built into this location. No special concerns

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences Northwest about 1/2 of a mile is a residence .

Possibility of H2S None

Size of rig/length of drilling time Small drilling rig/short 3 to 4 days drilling time

Mitigation:

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) n/a

Proximity to recreation sites no

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: _____ on private land

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 1975' Eagle 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: February 27, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Fallon County water wells

(subject discussed)

February 27, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____