

Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Devon Energy Production Company, LP
Well Name/Number: Boyce-DIR 23-16
Location: SE SE Section 23 T30N R15E
County: Hill, MT; Field (or Wildcat) Tiger Ridge

Air Quality

(possible concerns)

Long drilling time no, 4 to 5 days drilling time
Unusually deep drilling (high horsepower rig) no, 2500' TVD 2750' TMD
Possible H2S gas production no
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: no special concerns – using small rig to drill to 2500' TVD 2750'

TMD

Water Quality

(possible concerns)

Salt/oil based mud no, freshwater and freshwater mud system.
High water table no
Surface drainage leads to live water No, closest drainage is 1/8 mile to the east of this location, an unnamed ephemeral tributary drainage to Beaver Creek. About 5 miles to the northeast this tributary joins Beaver Creek.
Water well contamination no, closest water well is over 1 mile away.
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: 150' 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 none
High erosion potential no, moderately large cut, up to 31' and moderate fill, up to 16', 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, 250'X250' location size required.

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: Access will be over existing county roads and existing trails. About 1 ¼ mile of two track trail will be up graded if necessary to access this location. Cuttings will be disposed of in the unlined earthen pits. Drilling fluids will be trucked to nearby stock pond and disposed of with surface owner approval. Pit will be allowed to dry then backfilled. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences buildings 1 mile to the northeast and 1 mile north of this location

Possibility of H2S none

Size of rig/length of drilling time Small drilling rig/short 4 to 5 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 None identified.

Proximity to recreation sites Beaver Creek County Park about 3 miles to the east of this location.

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: Development well within an existing gas field, Tiger Ridge gas field. No concerns

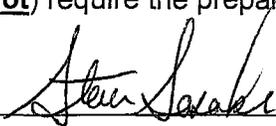
Remarks or Special Concerns for this site

Well is a 2500'TVD 2750' TMD Eagle Formation test. This wellsite uses the same drilling pad as the Boyce-DIR 23-15 well.

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: May 22, 2006

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC
website

(Name and Agency)

Hill County water wells

(subject discussed)

May 23, 2006

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____