

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

Operator: Highline Exploration, Inc.
Well Name/Number: L. Davenport 61-12
Location: NW SE Section 12T1S R31E
County: Big Horn, **MT;** **Field (or Wildcat)** Toluca

Air Quality

(possible concerns)

Long drilling time: No, 2 to 3 days drilling time.

Unusually deep drilling (high horsepower rig): No, 990' TD

Possible H₂S gas production: None anticipated.

In/near Class I air quality area: No, Class I air quality area, Nearest Class I air quality area would be on the Crow Indian Reservation. Reservation boundary is about 5.5 miles to the south from this location.

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: Gas gathering line and compressor plant available to handle sweet

gas.

Comments: No special concerns – using single rig to drill to 990' TD.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater/freshwater mud or air to drill surface hole, Rule 36.22.1001. Air to drill from under surface casing to total depth.

High water table: No high water table anticipated.

Surface drainage leads to live water: Yes, closest drainage is an unnamed ephemeral tributary to Williams Coulee an ephemeral drainage also, about 1/16 of a mile southwest from this location. Within this unnamed tributary, there are stock ponds.

Water well contamination: No, water wells within 1 mile radius from this location, but there are some shallow monitoring wells, about 1.325 miles to the southwest from this location. Surface casing will be set at 150'. Drilled surface hole with freshwater or air, Rule 36.22.1001. Surface casing will be run and cemented to surface from 150', Rule 36.22.1001.

Porous/permeable soils: No, silty sandy bentonitic 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, Rule 36.22.1001.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No, stream crossings anticipated.

High erosion potential: No, cut or fill need. Small single self leveling rig will be used.

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, 100'X100' location size required. Will be using a self leveling rig, so very little dirt work is required.

Damage to improvements: No, surface use is grassland.

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: Will use existing county freeway frontage road and existing ranch trail. About 1/2 of a mile of new access road will be built from the existing lease road, into this location. Cutting will be buried in the earthen pits. Pits will be backfilled when dry. No special concern.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No buildings or residences within a 1 mile radius from this location. Town of Hardin is about 11 miles to the southeast from this location.

Possibility of H2S: None anticipated.

Size of rig/length of drilling time: Single drilling rig 2 to 3 days drilling time

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: Will use a diverter and knife valve instead of a BOP. Due to formation being a low pressure and a low volume gas zone.

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: Threatened or endangered species is the Black-footed Ferret. Candidate species are the Greater Sage Grouse and the Sprague's Pipit. NH Tracker website lists two (2) species of concern. They are as follows, Black-tailed Prairie Dog and Greater Sage Grouse.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DSL)
- Screening/fencing of pits, drillsite
- Other: _____

Comments: Private surface lands. There maybe species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

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 surface lands. There maybe possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

- Substantial effect on tax base
- Create demand for new governmental services
- Population increase or relocation

Comments: Development well within an established gas field, Toluca Gas Field.
No concerns.

Remarks or Special Concerns for this site

Well is a 990' Frontier (Belle Fourche) Formation test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact 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): /s/Steven Sasaki
(title): Chief Field Inspector

Date: September 28, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Big Horn County water wells

(subject discussed)

September 28, 2012

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Big Horn County

(subject discussed)

September 28, 2012

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T1S R31E

(subject discussed)

September 28, 2012

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____