

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

Operator: Continental Resources, Inc.
Well Name/Number: Foxx 1-6H
Location: (NW NE) Lot 2 Section 6 T29N R59E
County: Roosevelt, **MT**; **Field (or Wildcat)** W/C (Bakken Horizontal)

Air Quality

(possible concerns)

Long drilling time: No, 25 to 35 days drilling time.

Unusually deep drilling (high horsepower rig): No, triple derrick rig to drill a single lateral horizontal Bakken Formation test, 20,441'MD/10,438'TVD.

Possible H2S gas production: Slight chance H2S gas from Mississippian Formations.

In/near Class I air quality area: No Class I air quality area nearby.

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 triple rig to drill a single lateral horizontal Bakken Formation test, 20,441'MD/10,438'TVD. If there is an existing pipeline for gas in the area, then associated gas can be gathered or if no gathering system nearby gas can be flared under Board Rule 36.22.1220.

Water Quality

(possible concerns)

Salt/oil based mud: Yes to intermediate casing string hole to be drilled with oil based invert drilling fluids(oil/water ration 70/30 to 80/20). Horizontal lateral will be drilled with brine water. Surface casing hole will use freshwater and freshwater mud system (Rule 36.22.1001).

High water table: None anticipated.

Surface drainage leads to live water: No, nearest drainage is an unnamed ephemeral tributary to Sand Creek, about 3/8 of a mile northeast from this location. Within this unnamed ephemeral drainage, there are stock ponds.

Water well contamination: None anticipated, closest water wells are about 3/8 of a mile to the northwest, 5/8 of a mile to the north northeast and about 1 mile to the southeast from this location. Depth of these stock water and wells range from 30 to 210'.. Surface hole will be drilled with freshwater and freshwater mud system, Rule 36.22.1001.

Surface casing will be set at 2110' and steel casing set and cemented to surface from 2210'.

Porous/permeable soils: No, silty-sandy clay soils.

Class I stream drainage: No Class I stream drainages in the area of review.

Mitigation:

Lined reserve pit

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system
 Off-site disposal liquids (in approved facility)
 Other: Lined cuttings pit (16 mil pit liner) will be used since this is a closed loop mud system to be employed.

Comments: Require 2210' of surface casing be set to cover the base of the Fox Hills and cemented to surface adequate to protect freshwater zones, Rule 36.22.1001.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: No stream crossings required.

High erosion potential: No high erosion potential. This location will require a small cut, up to 4.7' and a small fill, up to 4.4'.

Loss of soil productivity: No, location will be restored after drilling if unproductive. If productive, unused portion of this drilling location will be restored.

Unusually large wellsite: A large wellsite, 400'X450' required for a single well pad.

Damage to improvements: Slight

Conflict with existing land use/values: Slight, surface use appears to be grazing land.

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 road, #327 and over existing unnamed roads. About 4683' of new access road will be built into this location off the existing road. Cuttings will be buried in the lined cuttings pit. Oil based drilling fluids will be recycled. Completion fluids will be hauled to a commercial SWD disposal. The lined cuttings pit will be allowed to dry and then closed by filling and mixing with clay subsoils. Minimum of 4' of cover over the top of the cuttings. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: No residences within a 1 mile radius around this location. the northwest from this location. The town of Bainville, Montana is about 12.5 miles to the southwest from this location.

Possibility of H2S: Slight chance from Mississippian Formations.

Size of rig/length of drilling time: Triple drilling rig/short 25 to 35 days drilling time.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other: Standard H2S safety equipment for the drilling of this well, rule 36.22.1014.

Comments: Adequate surface casing cemented to surface with an operational BOP stack (annular and double ram rated for 5,000 psig) should mitigate any problems, Rule 36.22.1014.

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 new access to wildlife habitat.

Conflict with game range/refuge management: No

Threatened or endangered Species: Species identified as threatened or endangered are the Pallid Sturgeon, Interior Least Tern, Whooping Crane and Piping Plover.

Candidate specie is the Sprague's Pipit. NH tracker website indicates one (1) species of concern, the Whooping Crane.

Mitigation:

 Avoidance (topographic tolerance/exception)

Other agency review (DFWP, **federal agencies USFW**, DSL)

 Screening/fencing of pits, drillsite

Other: USFW Conservation Easement.

Comments: Private grazing surface lands. There may be 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 are discovered at this location.

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 grazing surface lands. There may be 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.

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

No, special concerns for drilling this single lateral horizontal Bakken Formation test, 20,441' MD/10,438'TVD.

Summary: Evaluation of Impacts and Cumulative effects

No significant 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): /s/Steven Sasaki
(title:) Chief Field Inspector
Date: April 27, 2013

Other Persons Contacted:
Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)

Water wells in Roosevelt County
(subject discussed)
April 27, 2013
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Roosevelt County
(subject discussed)
April 27, 2013
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3 T29N R59E
(subject discussed)
April 27, 2013
(date)

Montana Cadastral Website
(Name and Agency)
Surface Ownership and surface use Section 6 T29N R59E
(subject discussed)
April 27, 2013
(date)

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