Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Petro Hunt, LLC
Well Name/Number: Crusch 28-58-12D-1-1H
Location: SE SE Section 12 T28N R58E
County: Roosevelt **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: 35-40 days drilling time for a horizontal Bakken Formation test.
Unusually deep drilling (high horsepower rig): No, triple drilling rig to drill a 19,835'MD/10,285'TVD.
Possible H2S gas production: Slight
In/near Class I air quality area: No, Class I air quality area.
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, adequate surface casing, 2000' to be set and cemented back to surface with proper BOP stack should mitigate any concerns. Triple rig to drill a 19,835'MD/10,285'TVD.

Water Quality

(possible concerns)
Salt/oil based mud: Use freshwater and freshwater mud system on surface hole. Oil based invert mud to drill to intermediate casing point. Brine water drilling the horizontal lateral to TD.
High water table: No high water table anticipated.
Surface drainage leads to live water: No, unnamed ephemeral drainages to the east and south of this location. The east drainage is about 1/8 of a mile to the east and the south drainage is about 1/8 of a mile from this location. These drainages are tributaries to Shotgun Creek, 4.5 miles to the south from this location. No fluids will be discharged off this location.
Water well contamination: No, closest water well is about ¾ of a mile to the southwest from this location and is 205' in depth. All other water wells are 1 mile and further from this location. Surface casing hole will be drilled with freshwater and casing will be cemented to surface from 2000'.
Porous/permeable soils: No, sandy silty clay soils.
Class I stream drainage: No Class I stream drainages.

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 on surface hole. Solids will be allowed to dry, pit liner folded over the top of the solids, spoil dirt to fill pit, top soil spread over pit area, and seeded to land owners specification.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None, crossing only ephemeral drainages.
High erosion potential: No, moderate cut, up to 14.2' and moderate fill, up to 16.8', 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: Large wellsite, 350'X440' location size.
Damage to improvements: Slight, surface use is cultivated land adjacent to grassland.
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
_X_ Other: Requires DEQ General Permit for Storm Water Discharge Associated with Construction Activity, under ARM 17.30.1102(28).

Comments: Access will be over existing county gravel road and existing private driveway. An access road will be built into this location of about 9430'. The town of Bainville, Montana is about 4 miles to the southwest from this location. No special concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Residences about 1.125 miles southwest from this wellsite. Town of Bainville about 4 miles to the southwest from this location.
Possibility of H2S: Slight
Size of rig/length of drilling time: Triple drilling rig 35 to 40 days drilling time.

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

Comments: Nearest residence further than 1 mile away from this wellsite. Proper BOP stack and surface casing should be able to control any problems that occur. 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: Listed threatened or endangered species are Pallid Sturgeon, Interior Least Tern, Whooping Crane and Piping Plover in Roosevelt County.

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

Comments: Private cultivated surface lands. No live water nearby. 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 cultivated surface 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 19,835'MD/10,285'TVD Bakken horizontal formation test

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected from the drilling of this well. 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: August 31, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Roosevelt County water wells
(subject discussed)
August 30, 2010
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County, Montana
(subject discussed)
August 30, 2010

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