Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Wind River Hydrocarbons
Well Name/Number: Cornwell 1-14
Location: SW NE Section 14T30N R38E
County: Valley **, MT; Field (or Wildcat)** W/C

Air Quality

(possible concerns)
Long drilling time: No, 10 to 15 days drilling.
Unusually deep drilling (high horsepower rig): No, 5425' TD, vertical Nisku Formation test.
Possible H2S gas production: Yes, H2S gas possible.
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 – using a double derrick drilling rig to drill to 5425' TD.

Water Quality

(possible concerns)
Salt/oil based mud: Yes, mainhole out from under surface casing will be drilled with a salt saturated mud system. Surface hole will be drilled with freshwater and freshwater mud system.
High water table: No high water table anticipated.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary to the Spring Creek, about 1/8 of a mile to the northwest from this location.
Water well contamination: None, closest wells are about 5/8 of a mile to the southwest, ¾ of a mile to the southeast and ¾ of a mile to the northeast from this location. Operator's indicates there is a well about 1/8 of a mile to the northwest in section 14, but GWIC website does not list a well at that location. Depth of these water wells are 50' or less in depth. All other wells are 1 mile and further from this well location. This well will drill surface hole to 750' with freshwater and set 750' of steel surface casing cemented to surface to protect shallow ground water.
Porous/permeable soils: No, silty sandy bentonitic 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: 750' of surface casing cemented to surface adequate to protect freshwater zones.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None anticipated.
High erosion potential: No, small cut, up to 1.0' and small fill, up to 6.0', 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, 240'X220' location size required.
Damage to improvements: Slight surface use is grassland adjacent to a cultivated field.
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
__ Other _____

Comments: Access will be over existing county road, Cornwell Road and existing two track farm trails. A short new access will be built off an existing two track trail into this location. Cuttings will be buried in the lined reserve pit. Salt saturated drilling fluids will be hauled to a commercial Class II disposal. Reserve pit and completion fluids will be hauled to a Class II disposal. Pit will be allowed to dry and backfilled with subsoils and clays. No special concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences are about ½ of a mile to the north and 5 /8 of a mile to the southwest from this location.
Possibility of H2S: Yes possible.
Size of rig/length of drilling time: Double derrick drilling rig. Drill time short 10 to 15 days drilling time. Completion rig drill out of 7" intermediate casing string estimated 3 days.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
_X_ Other: H2S safety company to be hired.

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Comments: Residences are far enough away from the location. 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 in Valley County are the Pallid Sturgeon, Interior Least Tern, Piping Plover, Black Footed Ferret and Whooping Crane. Candidate species are the Greater Sage Grouse and the Sprague's Pipit. NH Tracker website lists 8 species of concern. They are as follows: Baird's Sparrow, Grasshopper Sparrow, Sprague's Pipit, Ferruginous Hawk, Chestnut-collar Longspur, Greater Sage Grouse, Long-billed Curlew and McCowan's Longspur.

Mitigation:

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

Comments: Private surface grassland, adjacent to cultivated fields. Location outside the Greater Sage Grouse Core Area. No live water nearby. Sparrows, Longspurs, Curlews and Pipit are migratory and generally gone from area by late August/early September. 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: Private surface grassland, adjacent to cultivated fields. No concerns.

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Social/Economic

(possible concerns)

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

Comments: No concerns

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Remarks or Special Concerns for this site

Well is a 5425' Nisku formation test.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur.

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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 15, 2011

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Valley County water wells
(subject discussed)
August 15, 2011
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES
MONTANA COUNTIES, Valley County
(subject discussed)

August 15, 2011
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T30N R38E
(subject discussed)

August 15, 2011
(date)

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