Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Slawson Exploration Company, Inc.
Well Name/Number: Dag1-8H
Location: SW SW Section 8 T21N R59E
County: Richland**, MT; Field (or Wildcat)** Wildcat (Bakken Horizontal)

Air Quality

(possible concerns)
Long drilling time: No, 25-35 days drilling time.
Unusually deep drilling (high horsepower rig): Triple derrick rig to drill a single lateral horizontal Bakken well test, 14,522'MD/10,193'TVD.
Possible H2S gas production: Slight chance H2S gas production from the Mississippian Formations.
In/near Class I air quality area: No Class I air quality area in the area of review.
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)
_X Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: If there are existing pipelines for natural gas in the area then gas must be tied into system or if no gathering system nearby associated gas can be flared under Board Rule 36.22.1220. This is a single lateral, 14,522'MD/10,193'TVD, Bakken Formation horizontal well.

Water Quality

(possible concerns)
Salt/oil based mud: Yes intermediate string casing hole will be drilled with oil based invert drilling fluids. Brine water will be utilized to drill the horizontal lateral. Surface casing hole will be drilled with freshwater and freshwater mud.
High water table: Possible high water table in the area of review.
Surface drainage leads to live water: Yes, closest drainages are unnamed ephemeral tributary drainage to the Yellowstone River, about ¼ of a mile to the northeast and an irrigation ditch about ¾ of a mile to the west from this location.
Water well contamination: No, closest nearby water wells are about ½ of a mile to the northeast, about 5/8 of a mile to the north, about 5/8 of a mile to the south southwest, about ¾ of a mile to the northwest, southwest, about ¾ of a mile to the northwest, about ¾ of a mile to the southwest and about 7/8 of a mile to the north and from this location, all other water wells are 1 mile and further away from this location. Depth of these wells range from 12' to 1278'. Operator's permit states surface casing to be set at 1550'. This surface casing amount appears to be deep enough to ensure that the Base of the Fox Hills formation is covered. Surface hole will be drilled with freshwater and surface casing will be cemented to surface from 1550'.
Porous/permeable soils: No, silty sand clay soils.
Class I stream drainage: Yes, Class I stream drainage is the Yellowstone River.

Mitigation:
__ Lined reserve pit
X_ Adequate surface casing
__ Berms/dykes, re-routed drainage
X_ Closed mud system
X_ Off-site disposal of solids/liquids (in approved facility)
X_ Other: Cuttings will be trucked to an authorized disposal facility or to an offsite lined pit.

Comments: 1550' surface casing to be set to protect freshwater zones and to cover the Fox Hills aquifer. Adequate surface casing and operational BOP equipment should prevent any problems.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None no stream crossings anticipated.
High erosion potential: No, location does not have a high erosion potential, location will require moderate cut, up to 10.7' and small fill, up to 8.2', required.
Loss of soil productivity: None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, a very large well site 550'X405', designed to accommodate 2 wells, DAG #1-8H and Barong Federal #1-17-20H.
Damage to improvements: Slight, surface use is irrigated crop land.
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, #350. An access road will be built into location off the existing county road, #350, about 702' new road will be built into this location. Cuttings will trucked to an authorized disposal site. Oil based invert drilling fluids will be recycled. Completion fluids will be hauled to a Class II disposal. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Closest residences are about 5/8 of a mile to the north and about 1.125 miles to the north from this location.
Possibility of H2S: Slight chance H2S from Mississippian Formations.
Size of rig/length of drilling time: Triple drilling rig 25 to 35 days drilling time.

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

Comments: Adequate surface casing cemented to surface with working BOP stack should mitigate any problems. Distance is sufficient to mitigate noise problems.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): Little Missouri National Grasslands, about 6.5 miles to the east from this location.
Proximity to recreation sites: Little Missouri National Grasslands, about 6.5 miles to the east from this location.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: No
Threatened or endangered Species: Threatened or endangered species listed in Richland county by USFW service are Pallid Sturgeon, Piping Plover, Interior Lease Tern and Whooping Crane. Candidate species

are the Greater Sage Grouse and the Sprague's Pipit. NH tracker website lists the following as "Species of Concern": nine (9) are listed as follows: Hoary Bat, Meadow Jumping Mouse, Great Blue Heron, Veery, Evening Grosbeck, Whooping Crane, Loggerheaded Shrike, Least Tern and Spiny Softshell Turtle. NH Tracker Website lists the following as "Potential Species of Concern": Five (5) are listed as follows: Hayden's Shrew, Chimney Swift, Eastern Screech-owl, Tennessee Warbler and Plumbeous Viero.

Mitigation:

__ Avoidance (topographic tolerance/exception)

__ Other agency review (DFWP, federal agencies, DSL)

__ Screening/fencing of pits, drillsite

__ Other:_____

Comments: Surface irrigated private land. 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: Surface is irrigated private land. 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: Wildcat well. No concerns._____

Remarks or Special Concerns for this site

A single lateral Bakken horizontal well test, 14,522'MD/10,193'TVD.

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): /s/Steven Sasaki_____

(title:) Chief Field Inspector_____

Date: May 22, 2012

Other Persons Contacted:

_____

_____

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website._____

(subject discussed)

Water wells in Richland County_____

(date)

May 3, 2012

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

(subject discussed)

May 3, 2012_____

(date)

Montana Natural Heritage Program Website (FWP)

(Name and Agency)

Heritage State Rank= S1, S2, S3, T21N R59E

(subject discussed)

May 3, 2012_____

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _____

Others present during inspection: _____