Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Bayswater Exploration & Production, LLC
Well Name/Number: Kirchner 2-9
Location: NW NE Section 9 T2N R20E
County: Stillwater, **MT; Field (or Wildcat)** Rapelje

Air Quality

(possible concerns)
Long drilling time: No, 3 to 4 days drilling time.
Unusually deep drilling (high horsepower rig): No small single derrick drilling rig, 2800' TD.
Possible H2S gas production: None
In/near Class I air quality area: No
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 small rig to drill to 2800' TD.

Water Quality

(possible concerns)
Salt/oil based mud: No, freshwater or freshwater mud system and/or air/mist.
High water table: No
Surface drainage leads to live water: No, closest drainage is Cedar Creek, an ephemeral tributary drainage to Lake Baisn, typically a dry lake bed, about 1/16 of a mile to the south of this location.
Water well contamination: No, closest water well is is about 3/8 of a mile to the south from this location, well is only 150' in depth. Surface casing will be drilled to 460' with air/freshwater and if productive 4 ½" production casing will be cemented to surface.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No

Mitigation:
__ 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: 460' of surface casing cemented to surface adequate to protect freshwater zones. Also, air and/or fresh water mud systems to be used. 4 ½" production casing will be cemented.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No, crossings.
High erosion potential: No, no cut and no fill required. Will be using small self leveling drilling rig.
Loss of soil productivity: No, location will be restored after drilling in nonproductive and if productive unused portion of the drillsite will be reclaimed.
Unusually large wellsite: No, 100'X100' location size required.
Damage to improvements: Slight, surface use is 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
__ Other _____

Comments: Surface access will be over existing county roads, Rapelje Road, #309 and existing two track road. A short access road will be built off an existing two track road. Cuttings will be buried in the earthen pit. Fluids will be allowed to evaporate. Pit will be backfilled when dry. No special concerns

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Yes, 3/4 mile to the west southwest, 1.5 miles to the southwest, 1 mile to the northeast and the town of Rapelje is 2.25 miles to the northwest of this wellsite, It appears to be a cemetery, Rapelje Cemetery I, about ¾ of a mile to the west of this location.
Possibility of H2S: None
Size of rig/length of drilling time: Small drilling rig/short 3 to 4 days drilling time

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

Comments: Operational BOP will be required.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): Halfbreed Lake National Wildlife Refuge Boundary, about 5.25 miles to the east of this location.
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: None identified.

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

__ Other:_____
Comments: Private surface lands. 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 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.

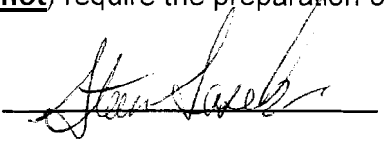
Remarks or Special Concerns for this site

Well is a 2800' Big Elk Formation test

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected. Some short term surface impacts will occur, but will be mitigated in time.

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): Steven Sasaki 
(title:) Chief Field Inspector
Date: December 17, 2007

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC **website**

(Name and Agency)
Water wells in Stillwater County

(subject discussed)
December 17, 2007
(date)

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