

CHECKLIST ENVIRONMENTAL ASSESMENT

Proposed Action: Approve Drilling Permit (Form 22)

Project/Well Name: Buck Elk #1

Operator: St. Croix Operating, Inc

Location: NW NW Section 36 32N-48E

County: Roosevelt **MT; Field (or Wildcat):** Wildcat

Proposed Project Date: 12/20/2017

I. DESCRIPTION OF ACTION

St. Croix Operating, Inc plans to drill a 7,800' TVD/MD vertical oil test well with an objective formation being the Nisku. Surface casing to be run to 900' and cemented back to surface.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED

Montana Bureau of Mines and Geology, GWIC website (Roosevelt County Wells).

US Fish and Wildlife, Region 6 website
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA
COUNTIES, Roosevelt County

Montana Natural Heritage Program Website (FWP)
Heritage State Rank= S1, S2, S3, T32N R48E

Montana Cadastral Website
Surface Ownership and surface use Section 36 T32N R48E

Montana Department of Natural Resources MEPA Submittal

2. ALTERNATIVES CONSIDERED

No Action Alternative: The proposed well would not be drilled.

Action Alternative: St. Croix Operating, Inc would have permission to drill the well.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

3. AIR QUALITY

Long drilling time: No, 7-10 days.

Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig.

Possible H₂S gas production: Possible in the Mississippian formations.

In/near Class I air quality area: Yes, within boundary of Fort Peck Indian Reservation.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211. AQB review.

Comments: No special concerns – using rig to drill to 7,800' TVD/MD. If there are no gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

4. WATER QUALITY

Salt/oil based mud: Freshwater mud system to be used on surface casing (Rule 36.22.1001). The main hole will be drilled with saltwater based mud.

High water table: No.

Surface drainage leads to live water: No, nearest drainage is an unnamed ephemeral drainage 1/10 of a mile to the south.

Water well contamination: Nearest water well is 2/5 of a mile to the south. The depth of this stockwater well is 180'.

Porous/permeable soils: No, sandy clay.

Class I stream drainage: No.

Groundwater vulnerability area: No.

Mitigation:

Lined reserve pit

Adequate surface casing

Berms/dykes, re-routed drainage

Closed mud system

Off-site disposal of **solids**/liquids (in approved facility)

Comments: Steel surface casing will be run and cemented to surface to protect ground water. (Rule 36.22.1001).

5. SOILS/VEGETATION/LAND USE

Vegetation: Grassland.

Stream crossings: None anticipated.

High erosion potential: No, Medium cut of 13.9' and small fill of 7.7' required.

Loss of soil productivity: No, location will be restored after drilling if unproductive.

Unusually large wellsite (Describe dimensions): No, 240' X 200'.

Damage to improvements: Slight, surface use appears to be mix of cultivated and grass lands.

Conflict with existing land use/values: Slight.

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

Access Road: Access will be off Highway 13. A new road of 937' will be built onto location.

Drilling fluids/solids: All cuttings will be solidified and hauled to Gibson's solid waste pit in ND. After drilling is completed, and if the well is completed as a producer, location will be downsized to accommodate production equipment. The rest of the disturbed area will be returned to original contours, re-sloped, and re-seeded.

6. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: No residences within a 1 mile radius.

Possibility of H2S: Possible in Mississippian formations.

Size of rig/length of drilling time: drip derrick, 7-10 days.

Mitigation:

Proper BOP equipment

Topographic sound barriers

H2S contingency and/or evacuation plan

Special equipment/procedures requirements

Other:

7. WILDLIFE/RECREATION

Sage Grouse: No

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: None.

Conflict with game range/refuge management: None.

Threatened or endangered Species: Species listed as threatened or endangered in Roosevelt County are: Pallid Sturgeon, Piping Plover, Interior Least Tern, Whooping Crane, Red Knot, Northern Long-eared Bat. The Montana Natural Heritage Program lists one (1) species of concern: Iowa Darter.

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DNRC Trust Lands)
- Screening/fencing of pits, drillsite
- Other:

Comments: Private cultivated 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 is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands. No concerns.

IV. IMPACTS ON THE HUMAN POPULATION

8. HISTORICAL/CULTURAL/PALEONTOLOGICAL

Proximity to known sites:

Mitigation

- avoidance (topographic tolerance, location exception)
- other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other:

9. SOCIAL/ECONOMIC

Substantial effect on tax base

- Create demand for new governmental services
- Population increase or relocation

Comments: No concerns.

IV. SUMMARY

No long term impacts expected. Some short term impacts will occur, but can be mitigated. 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.

EA Checklist Prepared By:	Name: John Gizicki Title: Compliance Specialist	Date: 11/7/17
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