

From: brianjhedberg@gmail.com on behalf of [Brian Hedberg](#)
To: [Koepsell, Arthur](#)
Cc: [Tracy Canning](#)
Subject: Re: Jenny C 1 form 2A Document # 400261755, Natural Resources Group
Date: Wednesday, May 23, 2012 12:31:30 PM

Arthur,

Sorry for the delay. I met with our COO Duane Bacon on these matters today. Regarding the water depth, there are two wells within 2,000 feet of the proposed location. We are going to contact the owner and find out their water table. He was not sure where the 14ft figure came from. It is our hope that this was an error.

Also, just so we're on the same page, we're not using any mud or fluid to drill the wells. They will be air drilled. Therefore our pit will only contain cuttings, not any mud or fluid.

Duane has spoken with Al Trujillo at the state. Al asked we not drill in December through March, which is no problem. I will follow up with him when I return to the office.

We will amend the location drawing and construction drawing, as well as provide the reference area photos.

I will follow up in a few days when we have the figures on the water. I am out of the office for the next week or so with a new baby. Feel free to contact Tracy Canning (tcanning@nrgcolo.com 303-797-5417). Thank you,

Brian

On Mon, May 21, 2012 at 11:55 AM, Koepsell, Arthur <Arthur.Koepsell@state.co.us> wrote:

Brian,

The COGCC is reviewing the Form 2A (#400261755) for the Natural Resources Group Jenny C 1 location, located in the NWNW Sec 36 T26S R67W Huerfano County, Colorado. The COGCC requests the following changes to the information provided and acknowledgement of conditions of approval prior to passing the Oil and Gas Location Assessment (OGLA).

Sensitive Wildlife Habitat area

The location falls within a Sensitive Wildlife Habitat and rule 306.C requires that the Colorado Parks and Wildlife provide consultation to the COGCC. The CPW has 40 days from today

(5/21/2012) to conduct the consultation. It is likely that they CPW will require a onsite inspection of the location. You may contact Al Trujillo with CPW at Al.Trujillo@state.co.us or [719-227-5232](tel:719-227-5232) to discuss the consultation.

Location Drawing

A review of aerial photos indicate that there is a road and a canal within 400 feet of the propose location. Please provide an updated location drawing showing the two improvements within 400 feet of the location. The four hundred feet should be from the outside of the maximum pad size stated in the Form 2A.

Construction Layout Drawings

The proposed pit should be shown in the cross section view of the pad. Please provide updated drawings including the pit in cross section view.

Depth to Groundwater

The stated depth to water is 14 feet. At this depth to groundwater the location will be considered a sensitive area, the pit will be required to be lined or a closed loop system utilized and cuttings disposed of offsite. If you believe the depth to water is greater than 14 feet please provide the calculations/reasons to support your stated depth.

Land Use

Based on a review of aerial photos available on the COGCC website it appears that the current land use around the location is rangeland. The current and future land uses on the form 2a should be amended to range land.

Reference area and reference photos

Because the location is on range land reference area photos are required.

Conditions of Approval

- Location is in a sensitive area because of shallow groundwater; therefore, either a lined drilling pit or closed loop system is required.
- Location is in a sensitive area due to shallow groundwater; therefore the operator must provide a waste management plan for approval. The plan should include how drilling waste will be disposed of.
- The operator will conduct baseline sampling of (at a minimum) the two (2) closest water wells. At least one of the sampled wells shall be between the operators proposed location and the Huerfano River. The operator may conduct additional groundwater monitoring at their own discretion.

Laboratory analysis at a minimum will include the following: pH (lab) TDS Conductivity (lab, not resistivity) SAR calculation Ca, K, Mg, Na, As, B, Ba, Cd, Cr, Cu, Fe, Mn, Pb, Se (all total recoverable) Br, Cl, F, SO₄, Alkalinity (Total, HCO₃ and CO₃ – all expressed as CaCO₃) benzene toluene ethyl benzene o-xylene m- + p-xylene Dissolved Methane MBAS, DRO, GRO Field parameters including pH, Temperature and Conductivity shall be recorded prior to collecting the sample for laboratory analysis. Field observations such as odor, water color, sediment, bubbles and effervesce shall also be included.

If free gas or a dissolved methane concentration level greater than one (1) milligrams per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and deuterium) shall be performed to determine gas type (biogenic or thermogenic). If the methane concentration increases by more than five (5) mg/l between sampling periods, or increases to more than ten (10) mg/l, the operator shall notify the Director and the owner of the water well immediately. If thermogenic methane concentrations increase between sampling periods, the operator shall submit to the Director an action plan to determine the source of the increase.

The selected sampling locations will be sampled again 1 year, 3 years and 6 years after completion. Post completion sampling of water wells will consist of the same analyte list

as the pre-drilling program. Copies of all test results, field parameters and field observations described above shall be provided to the Director, and the water well owner within three (3) months of collecting the samples. The analytical data and surveyed sample locations shall also be submitted to the Director in an electronic data deliverable format approved by Director.

Participating in the COGA voluntary baseline water quality monitoring program meets the requirements of this COA.

Please feel free to contact me if you have any questions or concerns

Thanks,

Arthur

Arthur W. Koepsell, P.G.

Oil & Gas Location Assessment Specialist

Southern Area

Oil and Gas Location Assessment

Colorado Oil and Gas Conservation Commission

1120 Lincoln St. Suite 801

Denver Colorado 80203

Phone [303\) 894-2100 ext. 5148](tel:3038942100)