STATE OF COLORADO

Bill Ritter, Jr., Governor
Martha E. Rudolph, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department
of Public Health
and Environment

June 24, 2010

Mr. David Neslin, Director COGCC
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

Re: Colorado Department of Public Health and Environment (CDPHE) Consultation Recommendations for the Bill Barrett Corporation Kaufman Well Pad 4 and the associated production pad located in Garfield County in the NWNW of Section 30, Township 6S 91W: Request for a variance from COGCC Rule 317B.

Dear Mr. Neslin:

This letter describes CDPHE's decision to recommend conditional approval for a Rule 317B variance request made by Bill Barrett Corporation (BBC). The variance request is to locate a portion (approximately 15% of the disturbed land) of the Kaufman well pad 4 within the 317B internal buffer zone of a classified water supply segment (e.g. Gibson Gulch, which is included in the surface water supply area for the Town of Silt's drinking water supply). As evident in COGCC Rule 317B, the internal buffer zone represents the most protective zone and is designed to essentially exclude oil and gas operations unless the operator can demonstrate that measures will be employed to provide substantially equivalent protection of the drinking water quality. CDPHE believes that consultation with Bill Barrett Corporations has resulted in a commitment by the company to alter its plans such that equivalent protection of public drinking water supplies will be achieved, provided certain conditions are met.

CDPHE's evaluation of this matter and our recommendation is based on:

- A consultation conference occurring between CDPHE and BBC on Thursday, May 20, 2010, during which there was discussion of Bill Barrett's plans, possible restrictions on the well pad location, and proposed best management practices (BMPs);

- A subsequent site visit that occurred on June 11, 2010 with COGCC , BBC and CDPHE staff where we viewed the location and its proximity to the 317B protection zones and discussed proposed best management practices and how best to relocate the production pad (tank battery) to the west of the access road and outside of the 317B internal buffer zone. This relocation moves all but approximately 15 % of the well pad and all related

equipment outside of the internal buffer zone. Importantly, it also provides additional protection by establishing a barrier, in the form of an access road, between the classified water supply segment and the production pad;

- A meeting held with the Town of Silt Public Works Director and Utility Operator on June 11, 2010 to discuss the Kaufman 4 well pad application and BMPs that were proposed to provide substantially equivalent protection for the Town's surface water supply area. During this meeting, CDPHE learned that Town officials had previously discussed this project with BBC and requested quarterly sampling from Divide Creek downgradient of the Kaufman well pad and understands that BBC agreed to this condition; and

- The correspondence received from BBC on June 17, 2010 documenting the relocation of the production pad and access road in amended well plat drawings and the additional BMPs to be utilized on this well pad to provide substantially equivalent protection of the drinking water quality in the surface water supply area.

- A full review of application materials and the onsite visit leading CDPHE to believe that the proposed well pad cannot be relocated entirely outside the internal buffer zone due to topographic restrictions. As such, the location of approximately 15% of surface disturbance is necessary for BBC to access its mineral rights.

Specifically CDPHE is recommending approval of the Form 2A Oil and Gas Location Assessment for the Kaufman well pad 4, provided that the following conditions are included in the COGCC permit:

- The amendment to the existing Form 2A well plats and associated drawing titled "Pad Offset Footages" showing the 317B buffer zones, provided by BBC (See attachment A). Of specific importance is the relocation of the production well pad from the internal buffer zone to the intermediate buffer zone and the relocation of the access road (an "exempt linear feature", pursuant to Rule 317b) from the intermediate buffer zone to the internal buffer zone (east side of the production pad) to serve as a spill protection barrier. With this revision of the well plat, CDPHE is recommending conditional approval provided that no more than approximately fifteen percent (15%) of the Kaufman 4 well pad will be located within the 317B internal buffer zone; and the pad is sloped away to the protect water feature.

    - The following best management practices which are derived from a combination of those found in COGCC Rule 317B, CDPHE Consultation Guidance document on the web at http://www.cdphe.state.co.us/oeis/oil_gas/Guidance.pdf and those provided by Bill Barrett Corporation (See Attachment B):

      Minimum Protections as Stated in Rule 317B

      1. Pitless drilling systems;
      2. Flowback and stimulation fluids contained within tanks that are placed on a well pad in a area with downgradient perimeter berming;

3. Berms or other containment devices shall be constructed in compliance with 603.e.(12) around crude oil, condensate, and produced water storage tanks; and
4. When sufficient water exists in the Classified Water supply Segment, collection of baseline surface water data consisting of a pre-drilling surface water sample collected immediately downgradient of the oil and gas location and follow-up surface water data consisting of a sample collected at the same location three (3) months after the conclusion of any drilling activities and operations or completion. The sample parameters shall include;
    - pH;
    - Alkalinity;
    - Specific conductance;
    - Major cations/anions (chloride, fluoride, sulfate, sodium);
    - Total dissolved solids;
    - BTEX/DRO;
    - TPH;
    - PAH's (including benzo(a)pyrene; and
    - Metals (arsenic, barium, calcium, chromium, iron, magnesium, selenium).

    Current applicable EPA- approved analytical methods must be used and analyses must be performed by laboratories that maintain state or nationally accredited programs.

5. Notification of potentially impacted Public Water Systems within fifteen (15) stream miles downstream of the DCPS operation prior to the commencement of new surface disturbing activities at the site;
6. An emergency spill response program that includes employee training, safety and maintenance provisions and current contact information for downstream Public Water System(s) location within fifteen (15) stream miles of the DCPS Operation, as well as the ability to notify any such downstream Public Water System(s) with an intake(s) within fifteen (15) stream miles downstream of the DCPS operations. In the event of a spill or release, the operator shall immediately implement the emergency response procedures in the above-described emergency response program. If a spill or release impacts or threatens to impact a Public Water System, the operator shall notify the affected or potentially affected Public water system(s) immediately following discovery of the release and the spill or release shall be reported to the Commission in accordance with Rule 906.b.(3) and to the Environmental Release /Incident Report hotline (1-877-518-5608) in accordance with 906.b.(4);

BMPs to ensure substanially equivalent protection of public health, welfare, safety and the environment (as Proposed by BBC and agreed to by CDPHE)

1. Location of a BBC spill response trailer at the Kaufman well pad during all drilling and completion operations to facilitate a timely response to any spills that may occur;

2. Staging of appropriate heavy equipment (e.g., a backhoe) at the Kaufman well pad during drilling and completion operations so that any emergency diversions or pits to contain spills can be built quickly;
3. Training on spill response and reporting for all personnel working at the Kaufman well pad location during drilling and completion operations with documentation of this training maintained in BBC's Silt office.
4. A minimum of weekly spill prevention meetings identifying staff responsibilities to provide a quick and effective response to a spill with appropriate documentation being retained in BBC's Silt office;
5. Daily inspections of DCPS equipment for leaks and equipment problems with appropriate documentation retained in BBC's Silt office;
6. The use of qualified containment devices for all appropriate chemicals/hazardous materials;
7. Provision by BBC of increased testing frequency (at least every thirty (30) days) of blowout prevention equipment (BOPE) during drilling operations;
8. Use of a rig floor safety valve with connections suitable for use with each size and tool joint or coupling being used on the job;
9. Construction of the well pad so as to ensure a slope toward the southwest corner of the pad to contain any spills that may occur;
10. Gravel surfacing of the well pad and access road;
11. Construction of a berm around the perimeter of the well pad to contain any spills that may occur. The berm will be matted, inspected at regular intervals (at least every 14 days) and maintained in good condition;
12. Application of stormwater BMPs including construction of a diversion ditch at the base of the fill slopes on the west, north, and east sides of the well pad. This diversion ditch must be sloped so that all water enters a detention basin, currently proposed to be constructed near the northwest corner of the pad. Additional stormwater BMPs to be implemented at this location, as necessary, to insure compliance with CDPHE and COGCC requirements;
13. Equipping of all tanks on the production pad with electronic level monitoring that will immediately shut in all wells on the pad if the tanks are in danger of overfilling;
14. Installation of electronic level monitoring within the containment ring around the tanks that will shut in all of the wells on the pad to prevent a tank release from overflowing the containment device;
15. Increased size of the steel containment ring used by BBC around tank batteries to 48 inches to provide additional containment and lining of the tank battery with a synthetic liner that is keyed into the top of the containment ring;
16. Pursuant to a request by the he Town of Silt, collection of surface water samples from a location on Divide Creek, that is downgradient of all operations on a quarterly basis. This is in addition to surface water sampling required in Rule 317B that will occur on Gibson Gulch.

If you have questions regarding this recommendation or discussion would be helpful, please contact me at (303) 692-3662.

Sincerely,

Kent Kuster
Oil and Gas Consultation Coordinator

ec: Jeff Lawrence, Director Consumer Protection Division, CDPHE
Kate Fay, Energy Manager, CDPHE
Scot Donato, Environmental Health and Safety Manager, BBC
Doug Dennison, Environmental-Government Affairs Liaison, BBC
Judy Jordan, Oil and Gas Liaison, Garfield County
Gerry Pace, Public Works Director, Town of Silt