

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT

<b>APPLICATION FOR PERMIT TO DRILL</b>		<b>1. WELL NAME and NUMBER</b> AURORA STATE 1-2-7-19
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>		<b>3. FIELD OR WILDCAT</b> UNDESIGNATED
<b>4. TYPE OF WELL</b> Oil Well      Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> AURORA (DEEP)
<b>6. NAME OF OPERATOR</b> BILL BARRETT CORP		<b>7. OPERATOR PHONE</b> 303 312-8134
<b>8. ADDRESS OF OPERATOR</b> 1099 18th Street Ste 2300, Denver, CO, 80202		<b>9. OPERATOR E-MAIL</b> tfallang@billbarrettcorp.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> STATE	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>	<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>	<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	730 FNL 845 FEL	NENE	2	7.0 S	19.0 E	S
Top of Uppermost Producing Zone	730 FNL 845 FEL	NENE	2	7.0 S	19.0 E	S
At Total Depth	730 FNL 845 FEL	NENE	2	7.0 S	19.0 E	S

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 730	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640
<b>27. ELEVATION - GROUND LEVEL</b> 4960	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completion)</b> 3877	<b>26. PROPOSED DEPTH</b> MD: 9229 TVD: 9229
	<b>28. BOND NUMBER</b> LPM4138148	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 49-1645

Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Cond	26	16	0 - 80	65.0	Unknown	8.7	No Used	0	0.0	0.0
Surf	12.25	9.625	0 - 1870	36.0	J-55 ST&C	8.7	Halliburton Light , Type Unknown	240	3.16	11.0
							Halliburton Premium , Type Unknown	210	1.36	14.8
Prod	7.875	5.5	0 - 9229	17.0	P-110 LT&C	9.5	Unknown	680	2.31	11.0
							Unknown	370	1.42	13.5

**ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

<b>NAME</b> Brady Riley	<b>TITLE</b> Permit Analyst	<b>PHONE</b> 303 312-8115
<b>SIGNATURE</b>	<b>DATE</b> 10/23/2013	<b>EMAIL</b> briley@billbarrettcorp.com
<b>API NUMBER ASSIGNED</b> 43047540650000		<b>APPROVAL</b>

**Received: November 21, 2013**

**BILL BARRETT CORPORATION**  
**DRILLING PLAN**

**Aurora State 1-2-7-19**

NENE, LOT 1, 730' FNL and 845' FEL, Section 2, T7S-R19E, SLB&M (surface hole)

NENE, LOT 1, 730' FNL and 845' FEL, Section 2, T7S-R19E, SLB&M (bottom hole)

Uintah County, Utah

**1 - 2. Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals**

<b><u>Formation</u></b>	<b><u>Depth – MD/TVD</u></b>
Green River	4,785'
Mahogany	5,908'
Lower Green River*	7,025'
Douglas Creek	7,151'
Black Shale	7,783'
Castle Peak	7,861'
Uteland Butte	8,170'
Wasatch*	8,729'
TD	9,229'

\*PROSPECTIVE PAY

The Wasatch and the Lower Green River are primary objectives for oil/gas.

Base of Useable Water = 1,755'

**3. BOP and Pressure Containment Data**

<b><u>Depth Interval</u></b>	<b><u>BOP Equipment</u></b>
0 – 1800'	No pressure control required (may pre-set 9-5/8" with smaller rig)*
1800' – TD	11" 5000# Ram Type BOP 11" 5000# Annular BOP
- Drilling spool to accommodate choke and kill lines; - Ancillary equipment and choke manifold rated at 5,000 psi. All BOP and BOPE tests will be in accordance with the requirements of onshore Order No. 2; - The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all BOP pressure tests. - BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up To operate most efficiently in this manner.	

\*See Appendix A

**4. Casing Program**

<b><u>Hole Size</u></b>	<b><u>SETTING DEPTH</u></b>		<b><u>Casing Size</u></b>	<b><u>Casing Weight</u></b>	<b><u>Casing Grade</u></b>	<b><u>Thread</u></b>	<b><u>Condition</u></b>
	<b><u>(FROM)</u></b>	<b><u>(TO)</u></b>					
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1800'	9 5/8"	36#	J or K 55	ST&C	New
7 7/8"	Surface	TD	5 1/2"	17#	P-110	LT&C	New

**5. Cementing Program**

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead: 240 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 ft <sup>3</sup> /sx) circulated to surface with 75% excess. TOC @ Surface Tail: 210 sx Halliburton Premium Plus cement with additives mixed at 14.8 ppg (yield = 1.36 ft <sup>3</sup> /sx), calculated hole volume with 75% excess. TOC @ 1300'
5 1/2" Production Casing	Lead: 680 sx Tuned Light cement with additives mixed at 11.0 ppg (yield = 2.31 ft <sup>3</sup> /sx). TOC @ 1300' Tail: 370 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 ft <sup>3</sup> /sx). Top of cement to be determined by log and sample evaluation; estimated TOC @ 7283'

**6. Mud Program**

<u>Interval</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss (API filtrate)</u>	<u>Remarks</u>
0' – 1800'	8.3 – 8.7	26 – 36	NC	Air/Mist/Freshwater Spud Mud Fluid System
1800' – 5500'	9.2 - 9.4	26 – 36	NC	Freshwater Spud Mud Fluid System
5500' – TD	9.4 - 9.5	42 – 56	25 cc or less	DAP Polymer Fluid System
Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at well site. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.				

**7. Testing, Logging and Core Programs**

Cores	None anticipated;
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface). FMI & Sonic Scanner to be run at geologist's discretion.

**8. Anticipated Abnormal Pressures or Temperatures**

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 4559 psi\* and maximum anticipated surface pressure equals approximately 2529 psi\*\* (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

\*Max Mud Wt x 0.052 x TD = A (bottom hole pressure)

\*\*Maximum surface pressure = A – (0.22 x TD)

Bill Barrett Corporation  
Drilling Program  
Aurora State 1-2-7-19  
Uintah County, Utah

9. **Auxiliary Equipment**

- a) Upper Kelly cock; lower Kelly cock will be installed while drilling
  - b) Inside BOP or stab-in valve (available on rig floor)
  - c) Safety valve(s) and subs to fit all string connections in use
- Mud monitoring will be visually observed

10. **Location and Type of Water Supply**

Water for the drilling and completion will be from:

43-2505, (t37379): McKinnon Ranch Properties, LC  
43-12345 (F78949): Dale Anderson  
43-10664 (A38472): W. E. Gene Brown  
49-1645 (A35800): RN Industries, Inc.  
49-2336 (t78808): RN Industries, Inc.  
43-8496 (A53617): A-1 Tank Rental  
43-10288 (A65273): Nile Chapman (RNI)  
49-2247 (F76893): Magnum Water Service  
43-8875 (t38762): Four Star Ranch (c/o David Yeman)

11. **Drilling Schedule**

Location Construction: JUNE 2014  
Spud: JUNE 2014  
Duration: 15 days drilling time  
6 days completion time

12. **Appendix A**

9-1/8" casing may be preset with a spudder rig. If this occurs, the following equipment shall be in place and operational during air/gas drilling:

- Properly lubricated and maintained rotating head
- Spark arresters on engines or water cooled exhaust
- Blooie line discharge 100 feet from well bore and securely anchored
- Straight run on blooie line unless otherwise approved
- Deduster equipment
- All cuttings and circulating medium shall be directed into a reserve or blooie pit
- Float valve above bit
- Automatic igniter or continuous pilot light on the blooie line
- Compressors located in the opposite direction from the blooie line on the rig
- Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits



# Bill Barrett Corporation

## AURORA CEMENT VOLUMES

Well Name: Aurora State 1-2-7-19

### Surface Hole Data:

Total Depth:	1,800'
Top of Cement:	0'
OD of Hole:	12.250"
OD of Casing:	9.625"

### Calculated Data:

Lead Volume:	712.5	ft <sup>3</sup>
Lead Fill:	1,300'	
Tail Volume:	274.0	ft <sup>3</sup>
Tail Fill:	500'	

### Cement Data:

Lead Yield:	3.16	ft <sup>3</sup> /sk
% Excess:	75%	
Top of Lead:	0'	

### Calculated # of Sacks:

# SK's Lead:	240
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Tail Yield:	1.36	ft <sup>3</sup> /sk
% Excess:	75%	
Top of Tail:	1,300'	

# SK's Tail:	210
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### Production Hole Data:

Total Depth:	9,229'
Top of Cement:	1,300'
Top of Tail:	7,283'
OD of Hole:	7.875"
OD of Casing:	5.500"

### Calculated Data:

Lead Volume:	1554.9	ft <sup>3</sup>
Lead Fill:	5,983'	
Tail Volume:	505.8	ft <sup>3</sup>
Tail Fill:	1,946'	

### Cement Data:

Lead Yield:	2.31	ft <sup>3</sup> /sk
Tail Yield:	1.42	ft <sup>3</sup> /sk
% Excess:	50%	

### Calculated # of Sacks:

# SK's Lead:	680
# SK's Tail:	370

**Aurora State 1-2-7-19 Proposed Cementing Program**

<u>Job Recommendation</u>	<u>Surface Casing</u>
<b>Lead Cement - (1300' - 0')</b>	
Halliburton Light Premium	Fluid Weight: 11.0 lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield: 3.16 ft <sup>3</sup> /sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid: 19.48 Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid: 0'
2.0% Bentonite	Calculated Fill: 1,300'
	Volume: 126.89 bbl
	<b>Proposed Sacks: 240 sks</b>
<b>Tail Cement - (TD - 1300')</b>	
Premium Cement	Fluid Weight: 14.8 lbm/gal
2.0% Calcium Chloride	Slurry Yield: 2.36 ft <sup>3</sup> /sk
	Total Mixing Fluid: 6.37 Gal/sk
	Top of Fluid: 1,300'
	Calculated Fill: 500'
	Volume: 48.80 bbl
	<b>Proposed Sacks: 210 sks</b>

<u>Job Recommendation</u>	<u>Production Casing</u>
<b>Lead Cement - (7283' - 1300')</b>	
Tuned Light™ System	Fluid Weight: 11.0 lbm/gal
	Slurry Yield: 2.31 ft <sup>3</sup> /sk
	Total Mixing Fluid: 10.65 Gal/sk
	Top of Fluid: 1,300'
	Calculated Fill: 5,983'
	Volume: 276.91 bbl
	<b>Proposed Sacks: 680 sks</b>
<b>Tail Cement - (9229' - 7283')</b>	
Econocem™ System	Fluid Weight: 13.5 lbm/gal
0.125 lbm/sk Poly-E-Flake	Slurry Yield: 1.42 ft <sup>3</sup> /sk
1.0 lbm/sk Granulite TR 1/4	Total Mixing Fluid: 6.61 Gal/sk
	Top of Fluid: 7,283'
	Calculated Fill: 1,946'
	Volume: 90.08 bbl
	<b>Proposed Sacks: 370 sks</b>

## PRESSURE CONTROL EQUIPMENT – Schematic Attached

A. Type: **Eleven (11) Inch Double Gate Hydraulic BOP with Eleven (11) Inch Annular Preventer.** The blow out preventer will be equipped as follows:

1. One (1) blind ram (above).
2. One (1) pipe ram (below).
3. Drilling spool with two (2) side outlets (choke side 3-inch minimum, kill side 2-inch minimum).
4. 3-inch diameter choke line.
5. Two (2) choke line valves (3-inch minimum).
6. Kill line (2-inch minimum).
7. Two (2) chokes with one (1) remotely controlled from the rig floor.
8. Two (2) kill line valves, and a check valve (2-inch minimum).
9. Upper and lower kelly cock valves with handles available.
10. Safety valve(s) & subs to fit all drill string connections in use.
11. Inside BOP or float sub available.
12. Pressure gauge on choke manifold.
13. Fill-up line above the uppermost preventer.

B. **Pressure Rating:** 5,000 psi

C. **Testing Procedure:**

### Annular Preventer

At a minimum, the Annular Preventer will be pressure tested to 50% of the rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition, the Annular Preventer will be functionally operated at least weekly.

### Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be

maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### **D. Choke Manifold Equipment:**

All choke lines will be straight lines unless turns use tee blocks or are targeted with running tees, and will be anchored to prevent whip and vibration.

#### **E. Accumulator:**

The accumulator will have sufficient capacity to open the hydraulically-controlled choke line valve (if so equipped), close all rams plus the annular preventer, and retain a minimum of 200 psi above precharge on the closing manifold without the use of closing unit pumps. The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir will be maintained at the manufacturer's recommendations.

The BOP system will have two (2) independent power sources to close the preventers. Nitrogen bottles (3 minimum) will be one (1) of these independent power sources and will maintain a charge equal to the manufacturer's specifications.

The accumulator precharge pressure test will be conducted prior to connecting the closing unit to the BOP stack and at least once every six (6) months thereafter. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum limits specified in the *Onshore Oil & Gas Order Number 2*.

A manual locking device (i.e. hand wheels) or automatic locking device will be installed on all systems of 2M or greater. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve will be maintained in the open position and will be closed only when the power source for the accumulator is inoperative.

Remote controls shall be readily accessible to the driller. Remote controls for all 3M or greater systems will be capable of closing all preventers. Remote controls for 5M or greater systems will be capable of both opening and closing all preventers. Master controls will be at the accumulator and will be capable of opening and closing all preventers and the choke line valve (if so equipped).

**F. Miscellaneous Information:**

The Blow-Out Preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*. The hydraulic BOP closing unit will be located at least twenty-five (25) feet from the well head but readily accessible to the driller. Exact locations and configurations of the hydraulic BOP closing unit will depend upon the particular rig contracted to drill this hole.

A flare line will be installed after the choke manifold, extending 125 feet (minimum) from the center of the drill hole to a separate flare pit.

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**Returned Unapproved**

T7S, R19E, S.L.B.&M.

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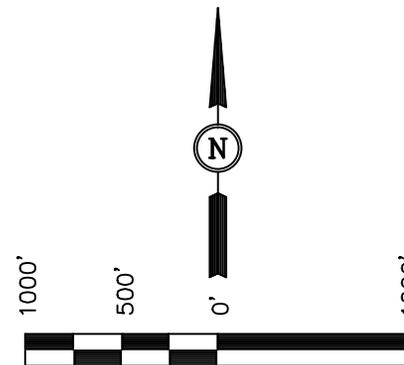
Well location, AURORA STATE #1-2-7-19, located as shown in LOT 1 of Section 2, T7S, R19E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK (38EAM) LOCATED IN THE SW 1/4 OF SECTION 9, T7S, R20E, S.L.B.&M. TAKEN FROM THE PELICAN LAKE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 4942 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



SCALE  
CERTIFICATE

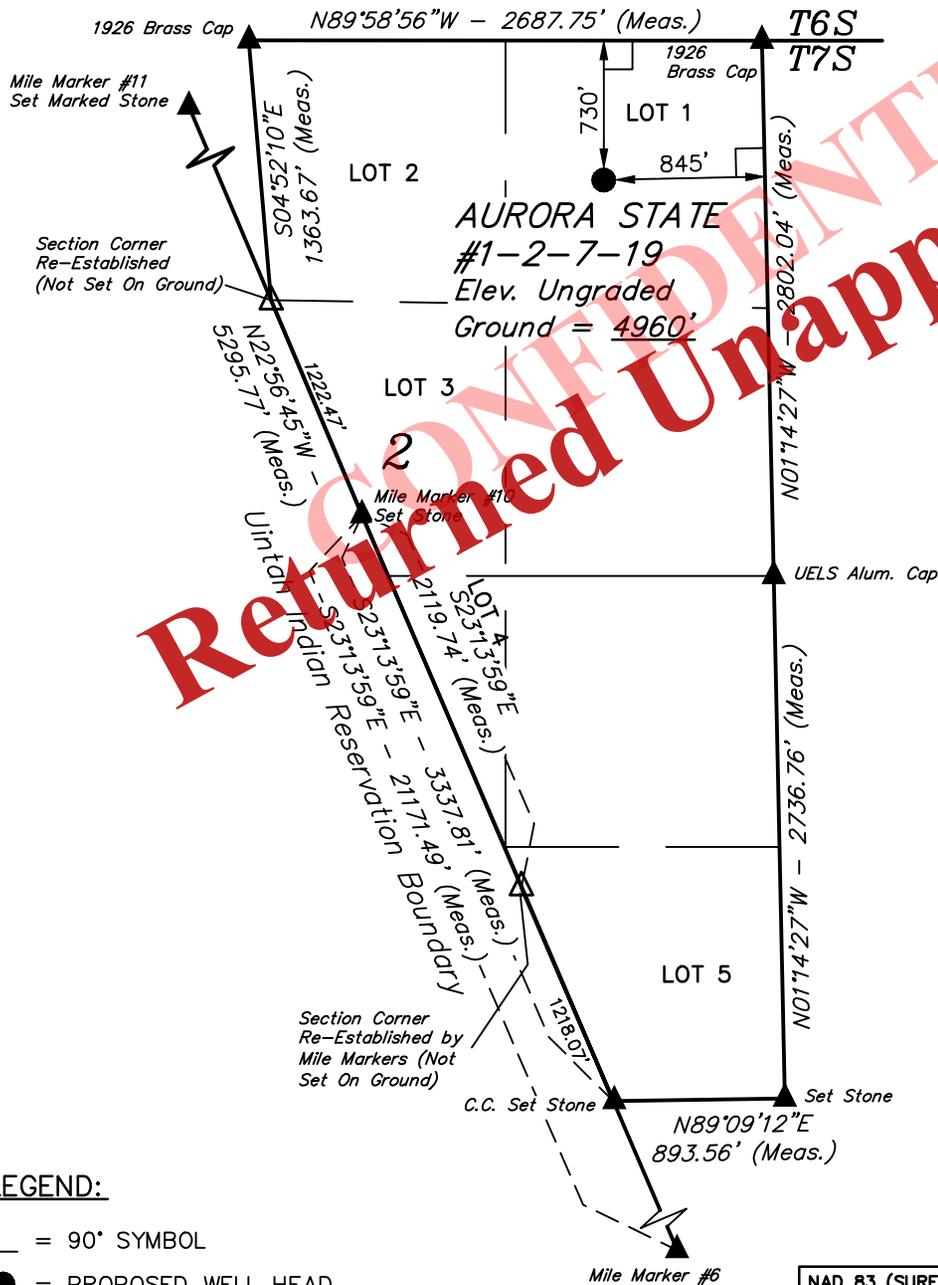
THIS IS TO CERTIFY THAT THE ABOVE PART WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

REV: 10-15-13 J.J.

UINTAH ENGINEERING & LAND SURVEYING  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 08-22-13	DATE DRAWN: 08-28-13
PARTY C.R. V.S. K.O.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE BILL BARRETT CORPORATION	



LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE-ESTABLISHED.(Not Set on Ground.)

NAD 83 (SURFACE LOCATION)	
LATITUDE = 40°14'43.33" (40.245369)	
LONGITUDE = 109°44'38.78" (109.744106)	
NAD 27 (SURFACE LOCATION)	
LATITUDE = 40°14'43.46" (40.245406)	
LONGITUDE = 109°44'36.26" (109.743406)	

Received: October 23, 2013

# BILL BARRETT CORPORATION

## AURORA STATE #1-2-7-19

LOCATED IN UINTAH COUNTY, UTAH

SECTION 2, T7S, R19E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: EASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: WESTERLY



- Since 1964 -

**UELS**

Uintah Engineering & Land Surveying

85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

LOCATION PHOTOS

09  
MONTH

13  
DAY

13  
YEAR

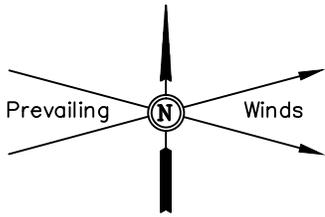
PHOTO

TAKEN BY: C.R.

DRAWN BY: S.O.

REVISED: 10-03-13

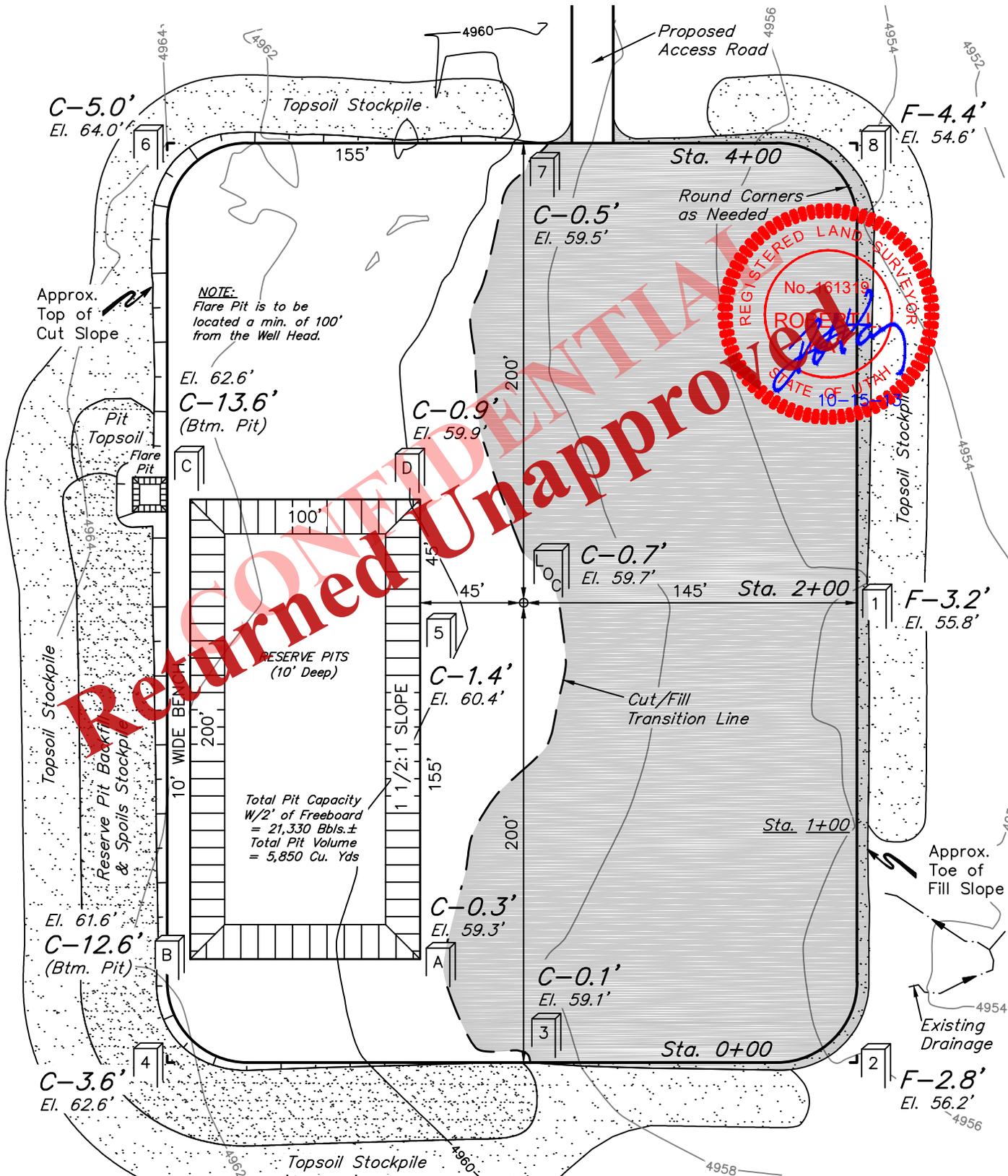
Received: October 23, 2013



**BILL BARRETT CORPORATION**  
 LOCATION LAYOUT FOR  
 AURORA STATE #1-2-7-19  
 SECTION 2, T7S, R19E, S.L.B.&M.  
 730' FNL 845' FEL

**FIGURE #1**

SCALE: 1" = 60'  
 DATE: 08-28-13  
 DRAWN BY: K.O.  
 REV: 10-15-13 J.J.



Elev. Ungraded Ground At Loc. Stake = 4959.7'  
 FINISHED GRADE ELEV. AT LOC. STAKE = 4959.0'

UINTAH ENGINEERING & LAND SURVEYING  
 85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

**Received: October 23, 2013**

**BILL BARRETT CORPORATION**

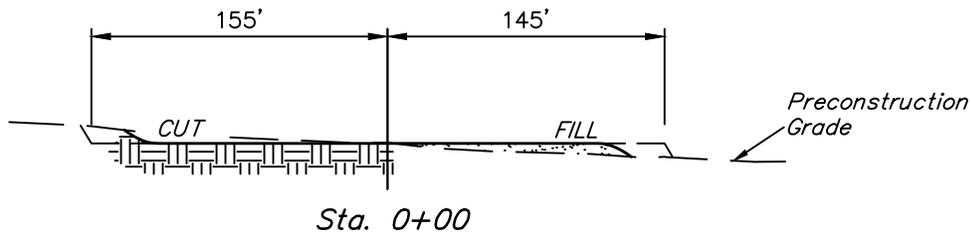
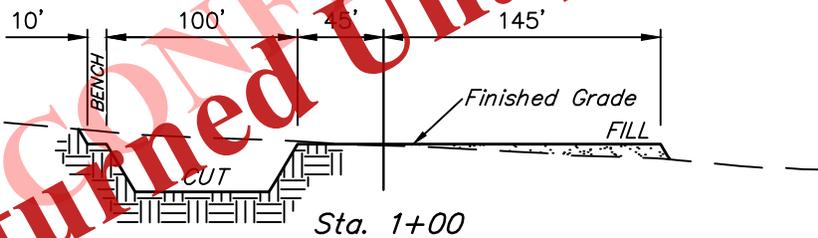
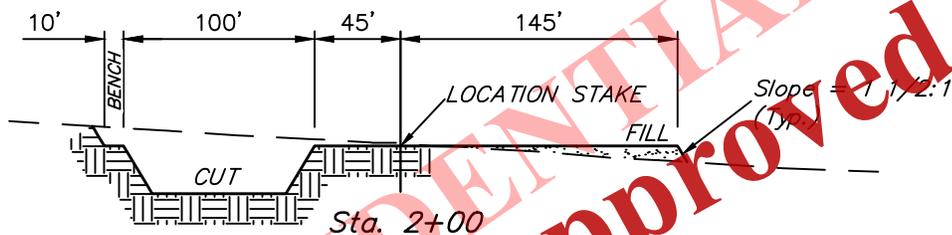
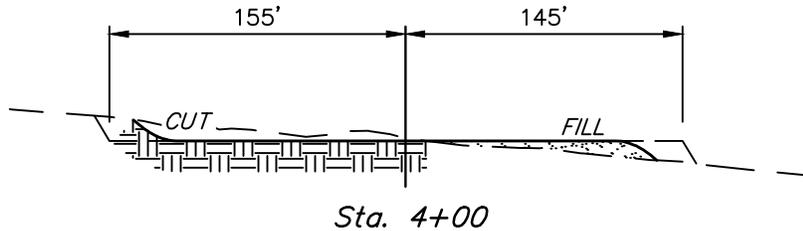
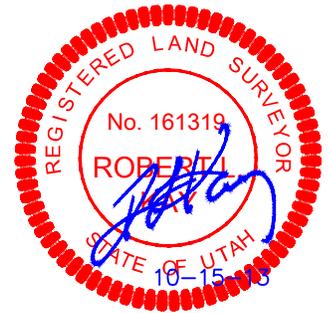
**TYPICAL CROSS SECTIONS FOR**

**AURORA STATE #1-2-7-19  
SECTION 2, T7S, R19E, S.L.B.&M.  
730' FNL 845' FEL**

**FIGURE #2**

1" = 40'  
X-Section Scale  
1" = 100'

DATE: 08-28-13  
DRAWN BY: K.O.  
REV: 10-15-13 J.J.



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**NOTE:**

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE ACREAGE

WELL SITE DISTURBANCE = ± 5.289 ACRES  
ACCESS ROAD DISTURBANCE = ± 1.677 ACRES  
PIPELINE DISTURBANCE = ± 1.661 ACRES  
TOTAL = ± 8.627 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,320 Cu. Yds.  
Remaining Location = 8,860 Cu. Yds.  
TOTAL CUT = 11,180 CU. YDS.  
FILL = 5,930 CU. YDS.

EXCESS MATERIAL = 5,250 Cu. Yds.  
Topsoil & Pit Backfill (1/2 Pit Vol.) = 5,250 Cu. Yds.  
EXCESS UNBALANCE (After Interim Rehabilitation) = 0 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

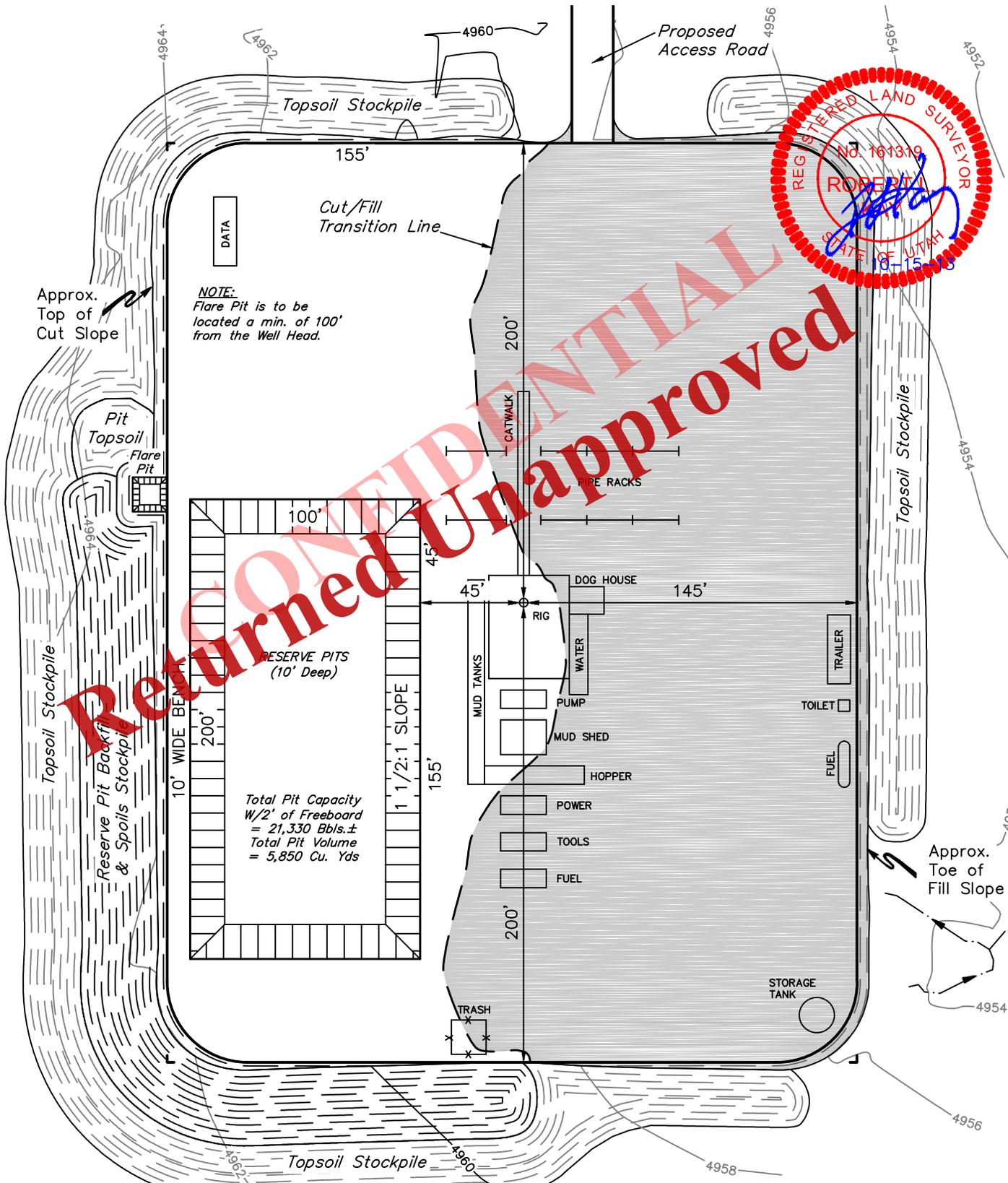
**BILL BARRETT CORPORATION**

**TYPICAL RIG LAYOUT FOR**

**AURORA STATE #1-2-7-19  
SECTION 2, T7S, R19E, S.L.B.&M.  
730' FNL 845' FEL**

**FIGURE #3**

SCALE: 1" = 60'  
DATE: 08-28-13  
DRAWN BY: K.O.  
REV: 10-15-13 J.J.



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Total Pit Capacity  
W/2' of Freeboard  
= 21,330 Bbls.±  
Total Pit Volume  
= 5,850 Cu. Yds

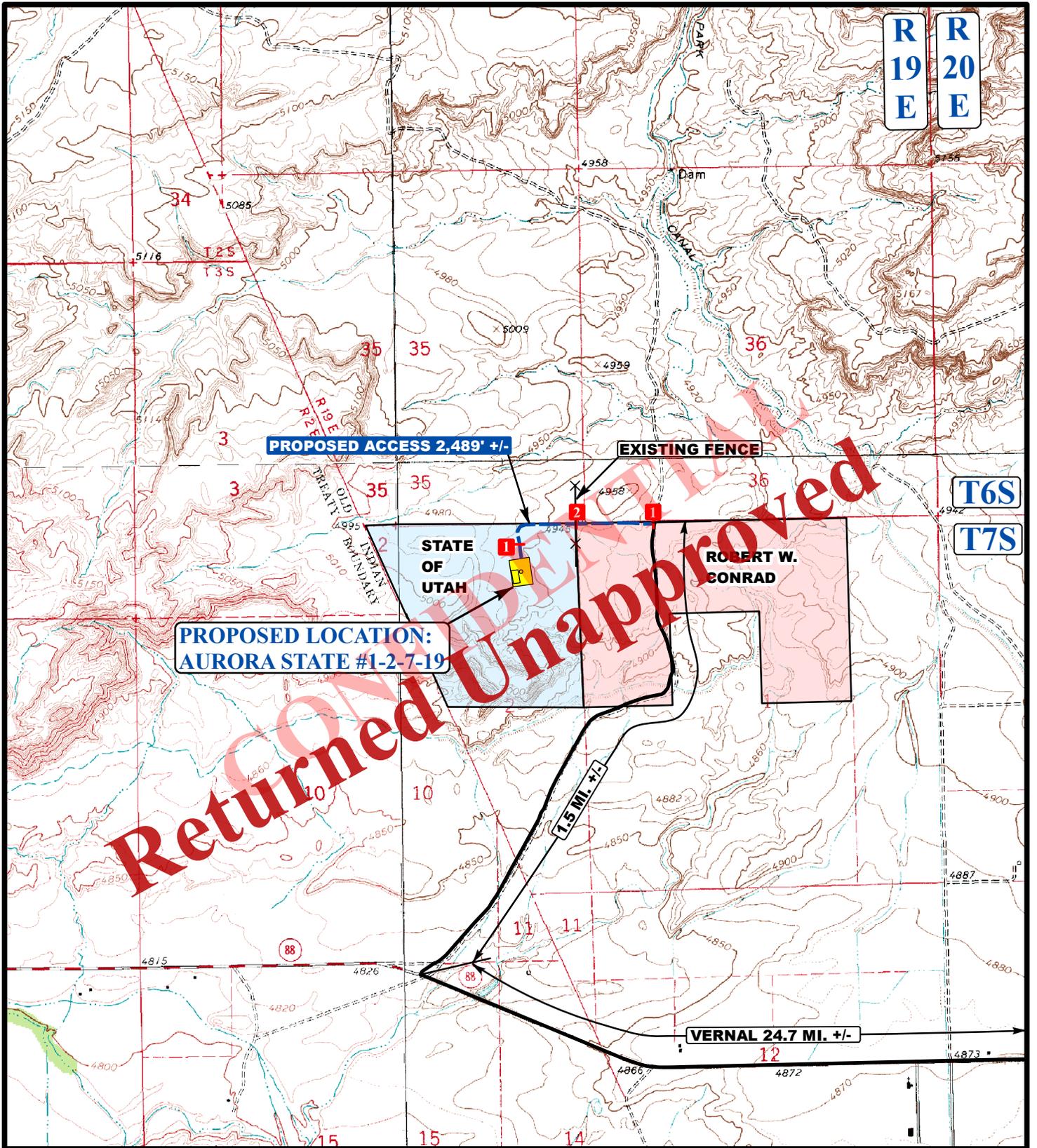
BILL BARRETT CORPORATION  
AURORA STATE #1-2-7-19  
SECTION 2, T7S, R19E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 7.0 MILES TO JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN RIGHT AND PROCEED IN A NORTHWESTERLY, THEN WESTERLY, THEN NORTHWESTERLY DIRECTION APPROXIMATELY 3.7 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 1.5 MILES TO THE BEGINNING OF THE PROPOSED ACCESS TO THE WEST; FOLLOW ROAD FLAGS IN A WESTERLY, THEN SOUTHERLY DIRECTION APPROXIMATELY 2,489' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 26.7 MILES.

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**PROPOSED LOCATION:  
AURORA STATE #1-2-7-19**

**PROPOSED ACCESS 2,489' +/-**

**EXISTING FENCE**

**VERNAL 24.7 MI. +/-**

**1.5 MI. +/-**

**LEGEND:**

- EXISTING ROADS
- PROPOSED ACCESS ROAD
- EXISTING FENCE

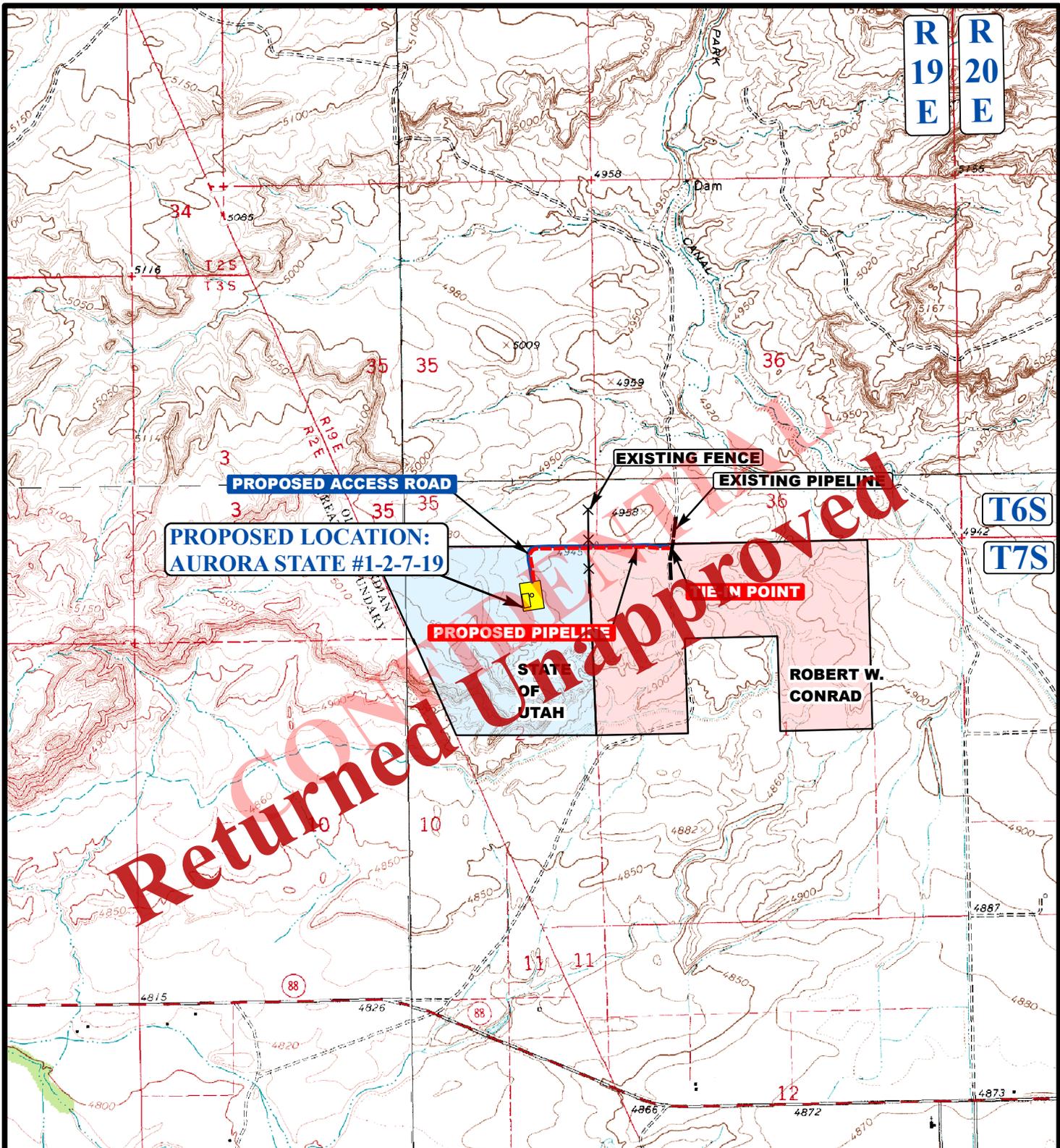
**1** 18" CMP REQUIRED **2** INSTALL CATTLEGUARD

**U&L S** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**BILL BARRETT CORPORATION**

**AURORA STATE #1-2-7-19  
SECTION 2, T7S, R19E, S.L.B.&M.  
730' FNL 845' FEL**

**ACCESS ROAD MAP** **09** **13** **13**  
MONTH DAY YEAR  
SCALE: 1"=2000' DRAWN BY: S.O. REVISED: 10-03-13 **B**  
TOPO



**APPROXIMATE TOTAL PIPELINE DISTANCE = 2,466' +/-**

**LEGEND:**

- EXISTING ROADS
- PROPOSED ACCESS ROAD
- PROPOSED PIPELINE
- EXISTING PIPELINE
- EXISTING FENCE

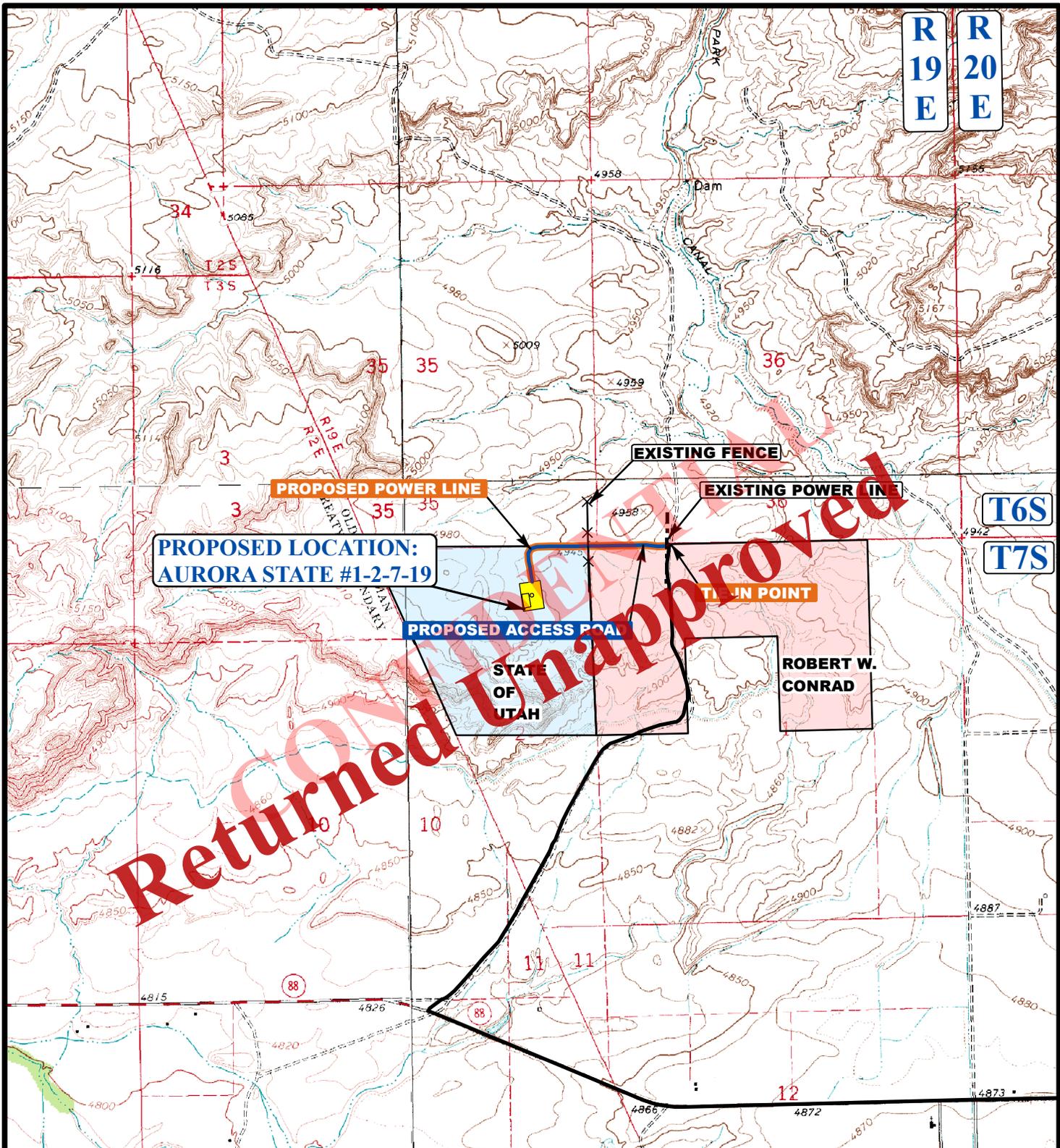
**BILL BARRETT CORPORATION**

**AURORA STATE #1-2-7-19  
SECTION 2, T7S, R19E, S.L.B.&M.  
730' FNL 845' FEL**

**UELS** **Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813



**TOPOGRAPHIC MAP** **09 13 13**  
MONTH DAY YEAR  
SCALE: 1"=2000' DRAWN BY: S.O. REVISED: 10-03-13 **C TOPO**



APPROXIMATE TOTAL POWER LINE DISTANCE = 2,565' +/-

**LEGEND:**

- PROPOSED ACCESS ROAD
- - - - - EXISTING POWER LINE
- PROPOSED POWER LINE
- x x x x x EXISTING FENCE



**Utah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813



**BILL BARRETT CORPORATION**

**AURORA STATE #1-2-7-19**  
**SECTION 2, T7S, R19E, S.L.B.&M.**  
**730' FNL 845' FEL**

**TOPOGRAPHIC**  
**MAP**

<b>09</b>	<b>13</b>	<b>13</b>
MONTH	DAY	YEAR

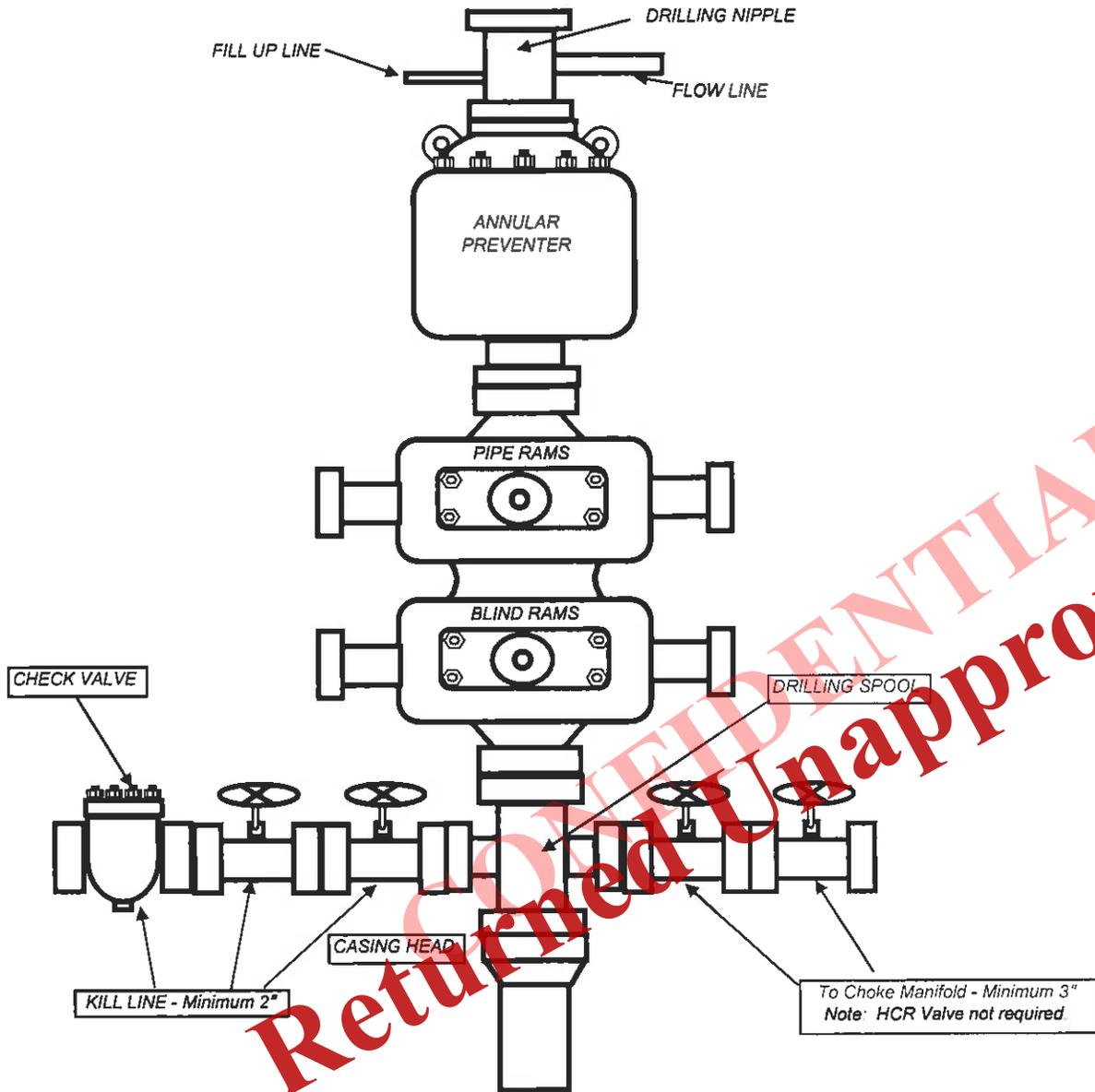
SCALE: 1"=2000' DRAWN BY: S.O. REVISED: 10-03-13



**Received: October 23, 2013**

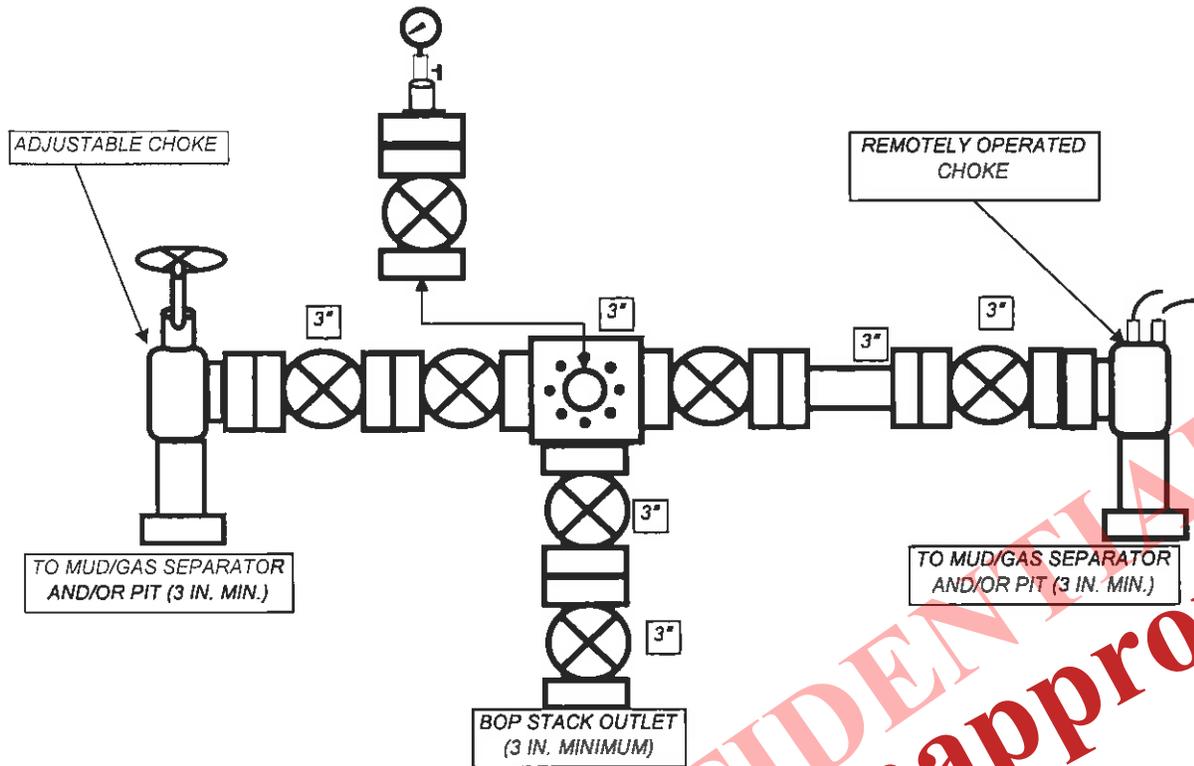
# BILL BARRETT CORPORATION

## TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



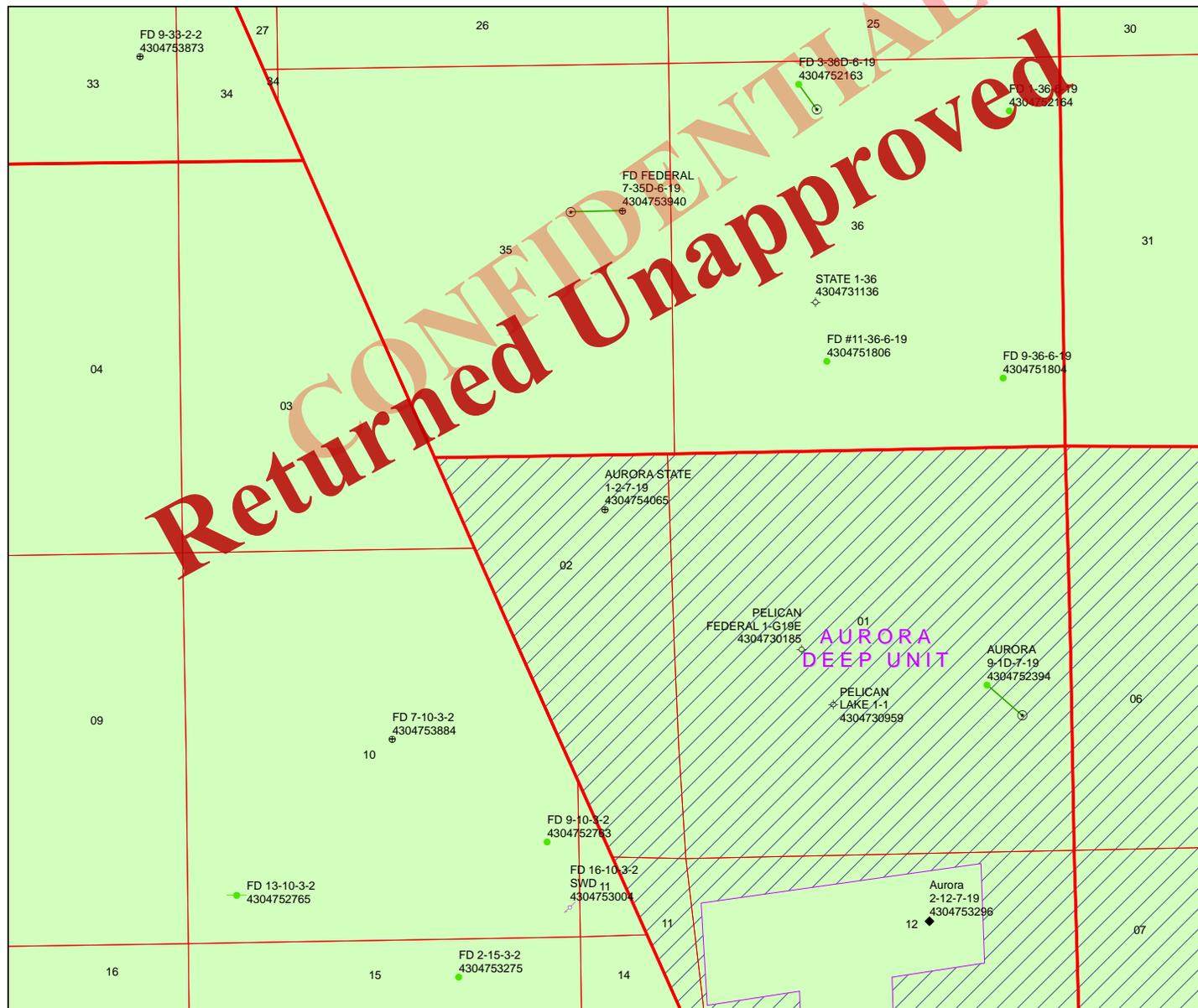
# BILL BARRETT CORPORATION

## TYPICAL 5,000 p.s.i. CHOKE MANIFOLD



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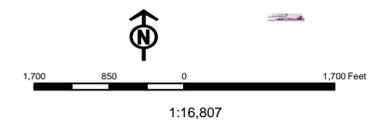
CONFIDENTIAL  
Returned Unapproved



**API Number: 4304754065**  
**Well Name: AURORA STATE 1-2-7-19**  
 Township: T07.0S Range: R19.0E Section: 02 Meridian: S  
 Operator: BILL BARRETT CORP

Map Prepared: 10/24/2013  
 Map Produced by Diana Mason

Wells Query	Units
◆ APD - Approved Permit	□ ACTIVE
⊙ DRL - Spudded (Drilling Commenced)	□ EXPLORATORY
⊙ GW - Gas Injection	□ GAS STORAGE
⊙ GS - Gas Storage	□ NF PP OIL
⊙ LOC - New Location	□ NF SECONDARY
⊙ OPS - Operation Suspended	□ PI OIL
⊙ PA - Plugged Abandoned	□ PP GAS
⊙ PGW - Producing Gas Well	□ PP GEOTHERML
⊙ POW - Producing Oil Well	□ PP OIL
⊙ SGW - Shut-in Gas Well	□ SECONDARY
⊙ SOW - Shut-in Oil Well	□ TERMINATED
⊙ TA - Temp. Abandoned	
⊙ TW - Test Well	
⊙ WDW - Water Disposal	
⊙ WW - Water Injection Well	
⊙ WSW - Water Supply Well	



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
440 West 200 South, Suite 500  
Salt Lake City, UT 84101

IN REPLY REFER TO:  
3160  
(UT-922)

October 28, 2013

Memorandum

To: Assistant Field Office Manager Minerals,  
Vernal Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 Plan of Development Aurora (Deep) Unit,  
Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2013 within the Aurora (Deep) Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
Proposed PZ (GREEN RIVER-UTASATCH)		
43-047-54065	AURORA STATE 1-2-7-19	Sec 02 T07S R19E 0730 FNL 0845 FEL

This office has no objection to permitting the well at this time.

Michael Coulthard

Digitally signed by Michael Coulthard  
DN: cn=Michael Coulthard, o=Bureau of Land  
Management, ou=Division of Minerals,  
email=mcoulthae@blm.gov, c=US  
Date: 2013.10.28 10:10:23 -0600

bcc: File - Aurora Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:10-28-13

Received: October 29, 2013



Diana Mason <dianawhitney@utah.gov>

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## Aurora State 1-2-7-19

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Jeff Conley <jconley@utah.gov>

Wed, Nov 20, 2013 at 3:56 PM

To: briley@billbarrettcorp.com, Diana Mason <dianawhitney@utah.gov>, Bradley Hill <bradhill@utah.gov>

Cc: Jim Davis <jimdavis1@utah.gov>

Hello,

The following well has been approved by SITLA including arch and paleo with the recommendation that if bedrock is impacted during excavation work, paleo monitoring will be required:

(4304754065) Aurora State 1-2-7-19

Thank you,

Jeff Conley  
SITLA Resource Specialist  
[jconley@utah.gov](mailto:jconley@utah.gov)  
801-538-5157

**CONFIDENTIAL**  
**Returned Unapproved**

**Received: November 20, 2013**



GARY R. HERBERT  
*Governor*

SPENCER J. COX  
*Lieutenant Governor*

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

### Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

March 12, 2014

BILL BARRETT CORP  
1099 18th Street Ste 2300  
Denver, CO 80202

Re: Application for Permit to Drill - UINTAH County, Utah

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the AURORA STATE 1-2-7-19 well, API 43047540650000 that was submitted October 23, 2013 is being returned unapproved. If you plan on drilling this well in the future, you must first submit a new application.

Should you have any questions regarding this matter, please call me at (801) 538-5312.

Sincerely,

Diana Mason  
Environmental Scientist

Enclosure

cc: Bureau of Land Management, Vernal, Utah



