

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER 16-7D-46 BTR					
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT ALTAMONT					
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME					
6. NAME OF OPERATOR BILL BARRETT CORP						7. OPERATOR PHONE 303 312-8164					
8. ADDRESS OF OPERATOR 1099 18th Street Ste 2300, Denver, CO, 80202						9. OPERATOR E-MAIL BHilgers@billbarrettcorp.com					
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) Fee			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>					
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')					
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')					
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Uintah and Ouray			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>					
20. LOCATION OF WELL		FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN			
LOCATION AT SURFACE		857 FSL 1720 FEL		SW/SE	7	4.0 S	6.0 W	U			
Top of Uppermost Producing Zone		799 FSL 809 FEL		SESE	7	4.0 S	6.0 W	U			
At Total Depth		810 FSL 810 FEL		SESE	7	4.0 S	6.0 W	U			
21. COUNTY DUCHESNE			22. DISTANCE TO NEAREST LEASE LINE (Feet) 810			23. NUMBER OF ACRES IN DRILLING UNIT 640					
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 2279			26. PROPOSED DEPTH MD: 7517 TVD: 7362					
27. ELEVATION - GROUND LEVEL 5797			28. BOND NUMBER LPM4138148			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-180					
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	8.8	No Used		0	0.0	0.0
SURF	12.25	9.625	0 - 1000	36.0	J-55 ST&C	8.8	Halliburton Light , Type Unknown		100	3.16	11.0
							Halliburton Premium , Type Unknown		210	1.36	14.8
PROD	8.75	5.5	0 - 7517	17.0	P-110 LT&C	9.6	Unknown		590	2.31	11.0
							Unknown		920	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 checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP						
NAME Venessa Langmacher			TITLE Senior Permit Analyst			PHONE 303 312-8172					
SIGNATURE			DATE 11/01/2012			EMAIL vlangmacher@billbarrettcorp.com					
API NUMBER ASSIGNED 43013518380000			APPROVAL			 Permit Manager					

BILL BARRETT CORPORATION
DRILLING PLAN

16-7D-46 BTR

SW SE, 857' FSL and 1720' FEL, Section 7, T4S-R6W, USB&M (surface hole)

SE SE, 810' FSL and 810' FEL, Section 7, T4S-R6W, USB&M (bottom hole)

Duchesne County, Utah

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

<u>Formation</u>	<u>Depth – MD</u>	<u>Depth - TVD</u>
Lower Green River*	2,941'	2,827'
Douglas Creek	3,815'	3,662'
Black Shale	4,591'	4,437'
Castle Peak	4,881'	4,727'
Uteland Butte	5,191'	5,037'
Wasatch*	5,426'	5,272'
TD	7,517'	7,362'

*PROSPECTIVE PAY

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

Base of Useable Water = 1,782'

3. BOP and Pressure Containment Data

<u>Depth Intervals</u>	<u>BOP Equipment</u>
0 – 1,000'	No pressure control required
1,000' – 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.	

4. Casing Program

<u>Hole Size</u>	<u>SETTING DEPTH</u>		<u>Casing Size</u>	<u>Casing Weight</u>	<u>Casing Grade</u>	<u>Thread</u>	<u>Condition</u>
	<u>(FROM)</u>	<u>(TO)</u>					
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1,000'	9 5/8"	36#	J or K 55	ST&C	New
8 3/4"	Surface	TD	5 1/2"	17#	P-110	LT&C	New

Bill Barrett Corporation
 Drilling Program
 16-7D-46 BTR
 Duchesne County, Utah

5. Cementing Program

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead: 100 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 ft ³ /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 ³ /sx), calculated hole volume with 75% excess. TOC @ 500'
5 1/2" Production Casing	Lead: 590 sx Tuned Light cement with additives mixed at 11.0 ppg (yield = 2.31 ft ³ /sx). TOC @ 500' Tail: 920 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 ft ³ /sx). Top of cement to be determined by log and sample evaluation; estimated TOC @ 4,091'

6. Mud Program

<u>Interval</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss (API filtrate)</u>	<u>Remarks</u>
0' – 80'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
80' – 1,000'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
1,000' – TD	8.6 – 9.6	42-52	20 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 wellsite. 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	No cores are 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 3675 psi* and maximum anticipated surface pressure equals approximately 2055 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
16-7D-46 BTR
Duchesne 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 trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W water right number 43-180.

11. Drilling Schedule

Location Construction: July 2013
Spud: July 2013
Duration: 15 days drilling time
45 days completion time



Bill Barrett Corporation

LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

Well Name: 16-7D-46 BTR

Surface Hole Data:

Total Depth:	1,000'
Top of Cement:	0'
OD of Hole:	12.250"
OD of Casing:	9.625"

Calculated Data:

Lead Volume:	274.0	ft ³
Lead Fill:	500'	
Tail Volume:	274.0	ft ³
Tail Fill:	500'	

Cement Data:

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

Calculated # of Sacks:

# SK's Lead:	100
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Tail Yield:	1.36	ft ³ /sk
% Excess:	75%	
Top of Tail:	500'	

# SK's Tail:	210
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Production Hole Data:

Total Depth:	7,516'
Top of Cement:	500'
Top of Tail:	4,091'
OD of Hole:	8.750"
OD of Casing:	5.500"

Calculated Data:

Lead Volume:	1360.6	ft ³
Lead Fill:	3,591'	
Tail Volume:	1297.8	ft ³
Tail Fill:	3,425'	

Cement Data:

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

Calculated # of Sacks:

# SK's Lead:	590
# SK's Tail:	920

16-7D-46 BTR Proposed Cementing Program
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<u>Job Recommendation</u>	<u>Surface Casing</u>
Lead Cement - (500' - 0')	
Halliburton Light Premium	Fluid Weight: 11.0 lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield: 3.16 ft ³ /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: 500'
	Volume: 48.80 bbl
	Proposed Sacks: 100 sks
Tail Cement - (TD - 500')	
Premium Cement	Fluid Weight: 14.8 lbm/gal
2.0% Calcium Chloride	Slurry Yield: 1.36 ft ³ /sk
	Total Mixing Fluid: 6.37 Gal/sk
	Top of Fluid: 500'
	Calculated Fill: 500'
	Volume: 48.80 bbl
	Proposed Sacks: 210 sks

<u>Job Recommendation</u>	<u>Production Casing</u>
Lead Cement - (4091' - 500')	
Tuned Light™ System	Fluid Weight: 11.0 lbm/gal
	Slurry Yield: 2.31 ft ³ /sk
	Total Mixing Fluid: 10.65 Gal/sk
	Top of Fluid: 500'
	Calculated Fill: 3,591'
	Volume: 242.31 bbl
	Proposed Sacks: 590 sks
Tail Cement - (7516' - 4091')	
Econocem™ System	Fluid Weight: 13.5 lbm/gal
0.125 lbm/sk Poly-E-Flake	Slurry Yield: 1.42 ft ³ /sk
1.0 lbm/sk Granulite TR 1/4	Total Mixing Fluid: 6.61 Gal/sk
	Top of Fluid: 4,091'
	Calculated Fill: 3,425'
	Volume: 231.14 bbl
	Proposed Sacks: 920 sks

T4S, R6W, U.S.B.&M.

BILL BARRETT CORPORATION

Well location, #16-7D-46 BTR, located as shown in the SW 1/4 SE 1/4 of Section 7, T4S, R6W, U.S.B.&M., Duchesne County, Utah.

BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6097 FEET.

BASIS OF BEARINGS

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

1993 Alum. Cap
0.5' High, Set
Marked Stone,
Fence Corner

N89°31'19"W - 5171.77' (Meas.)

Set
Marked
Stone

5300.08' (Meas.)
N00°05'15"E

500°05'15"W - 2650.04' (Meas.)

S01°07'27"E - 5340.79' (Meas.)

LINE	DIRECTION	LENGTH
L1	S86°09'14"E	913.51'

LEGEND:

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

#16-7D-46 BTR

Elev. Ungraded Ground = 5797'

1720'

810'

Bottom Hole

S89°06'06"E - 5285.12' (Meas.)

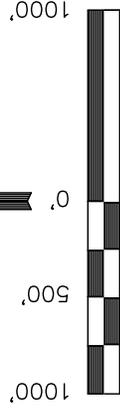
Section Corner
Re-Established by
Bearing Trees

Section Corner
Re-Established
by Single
Proportion
Method (Not
Set on Ground)

Section Corner
Re-Established by
Single Proportion
Method (Not Set on
Ground)

NAD 83 (TARGET BOTTOM HOLE)		NAD 83 (SURFACE LOCATION)	
LATITUDE = 40°08'32.04"	(40.142233)	LATITUDE = 40°08'32.62"	(40.142394)
LONGITUDE = 110°35'56.11"	(110.598919)	LONGITUDE = 110°36'07.85"	(110.602181)
NAD 27 (TARGET BOTTOM HOLE)		NAD 27 (SURFACE LOCATION)	
LATITUDE = 40°08'32.19"	(40.142275)	LATITUDE = 40°08'32.77"	(40.142436)
LONGITUDE = 110°35'53.55"	(110.598208)	LONGITUDE = 110°36'05.28"	(110.601467)

SW Cor. Sec. 18
Set Marked
Stone



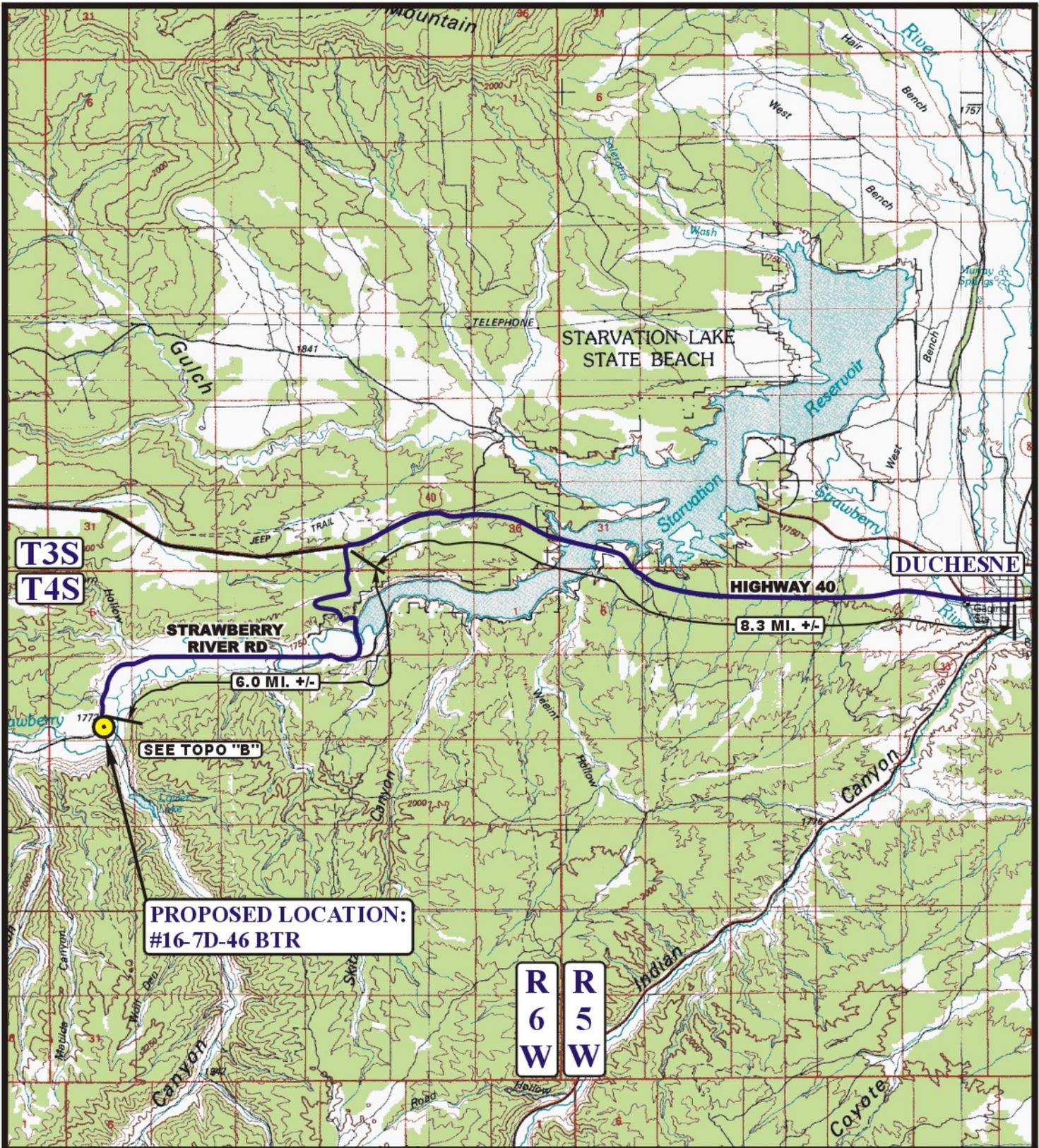
S C A L E
C E R T I F I C A T E

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

DEED LAND SURVEYOR
KAY ROBERTA
REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH
08-20-11

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

SCALE	1" = 1000'	DATE SURVEYED:	07-19-11	DATE DRAWN:	08-10-11
PARTY	C.R. A.W. K.O.	REFERENCES	G.L.O. PLAT		
WEATHER	WARM	FILE	BILL BARRETT CORPORATION		



**PROPOSED LOCATION:
#16-7D-46 BTR**

SEE TOPO "B"

6.0 MI. +/-

8.3 MI. +/-

**R
6
W** **R
5
W**

LEGEND:

PROPOSED LOCATION



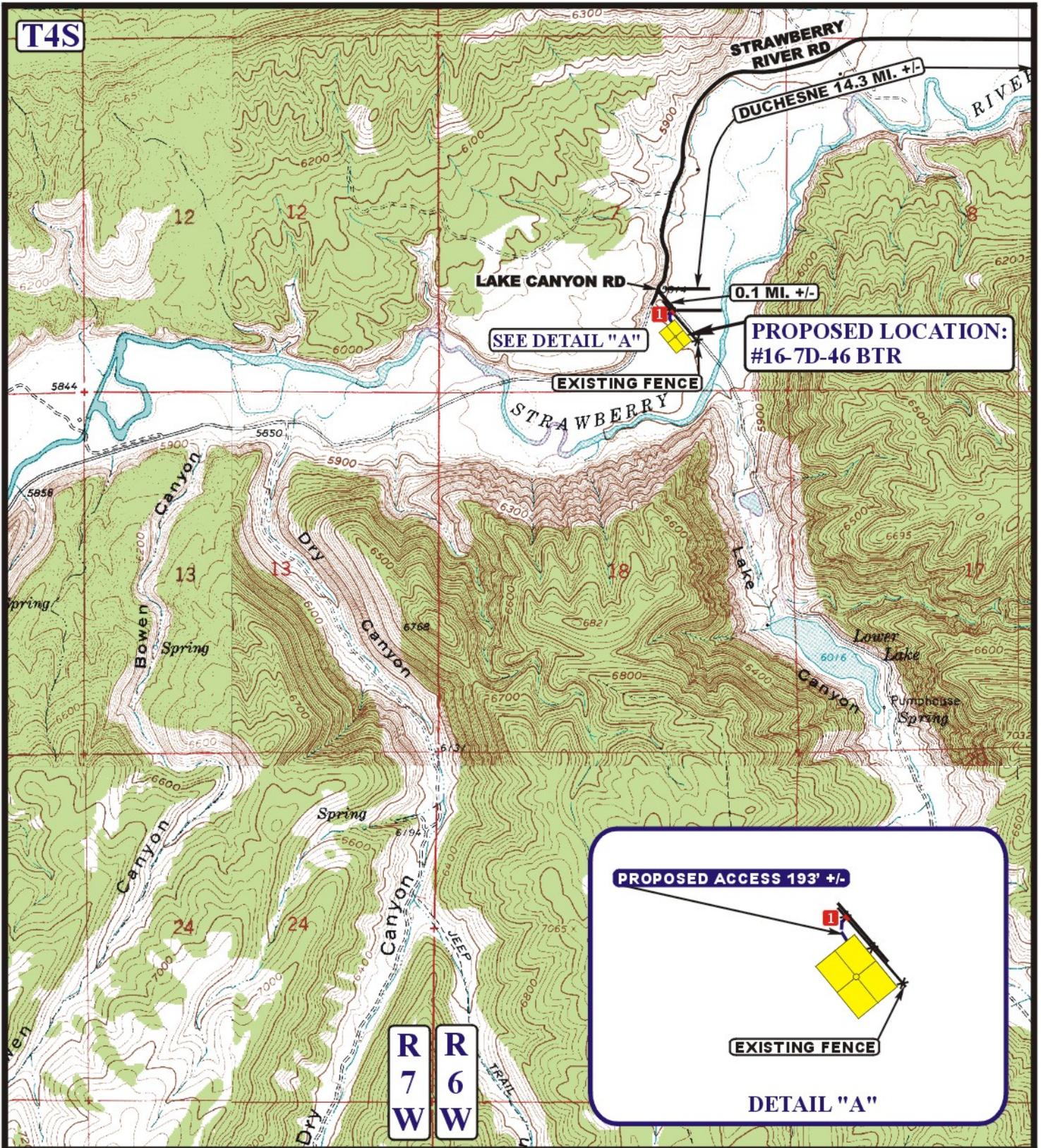
BILL BARRETT CORPORATION

**#16-7D-46 BTR
SECTION 7, T4S, R6W, U.S.B.&M.
857' FSL 1720' FEL**



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

ACCESS ROAD MAP	07 22 11 MONTH DAY YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.I. REVISED: 00-00-00	



LEGEND:

- EXISTING ROAD
- PROPOSED ACCESS ROAD
- EXISTING FENCE
- INSTALL CATTLE GUARD

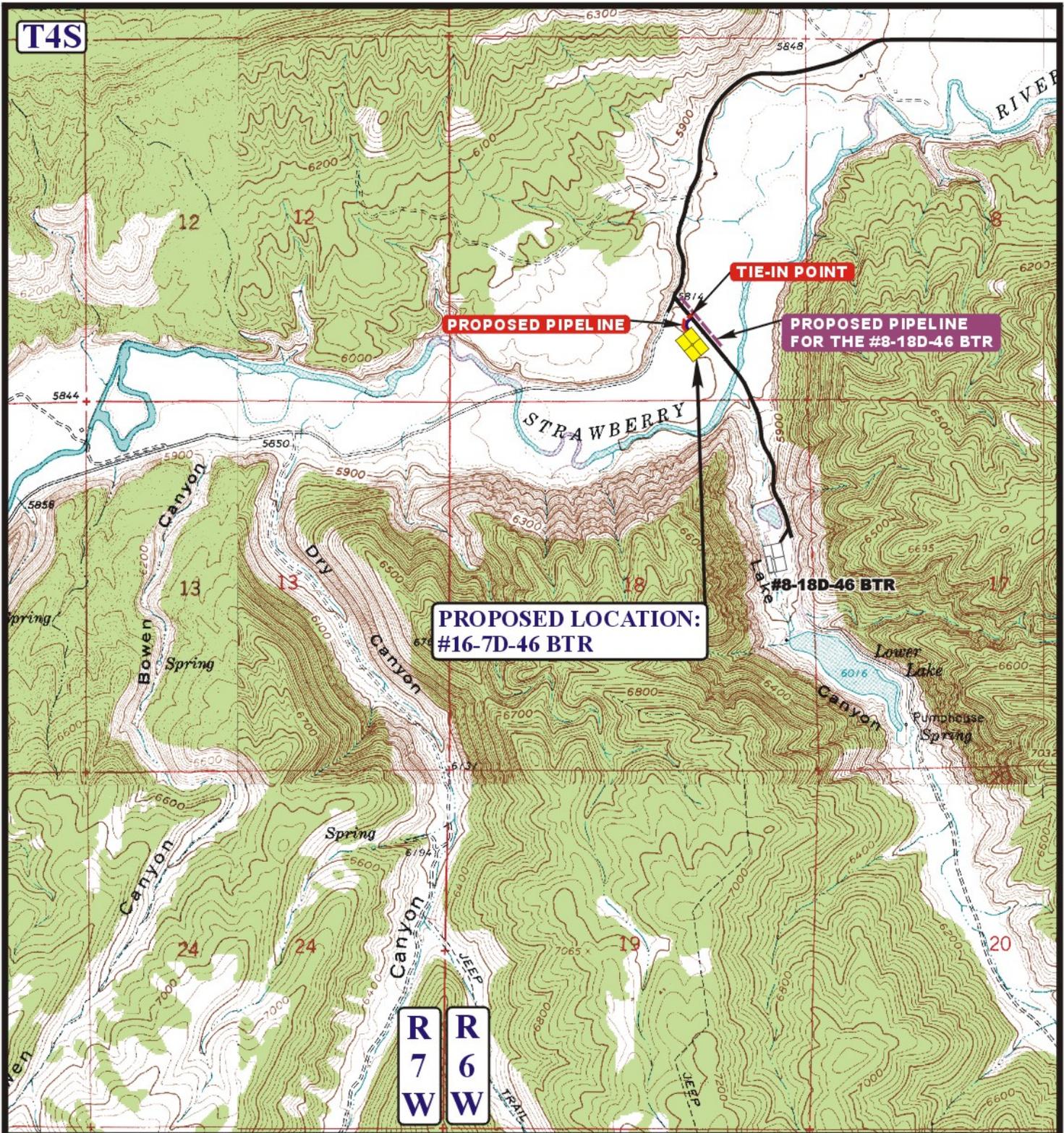
BILL BARRETT CORPORATION

#16-7D-46 BTR
 SECTION 7, T4S, R6W, U.S.B.&M.
 857' FSL 1720' FEL

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



ACCESS ROAD MAP	07	22	11	B TOPO
	MONTH	DAY	YEAR	
SCALE: 1" = 2000'	DRAWN BY: C.I.		REVISED: 01-11-12	



APPROXIMATE TOTAL PIPELINE DISTANCE = 300' +/-

LEGEND:

-  PROPOSED ACCESS ROAD
-  EXISTING PIPELINE
-  PROPOSED PIPELINE
-  PROPOSED PIPELINE (SERVICING OTHER WELLS)

BILL BARRETT CORPORATION

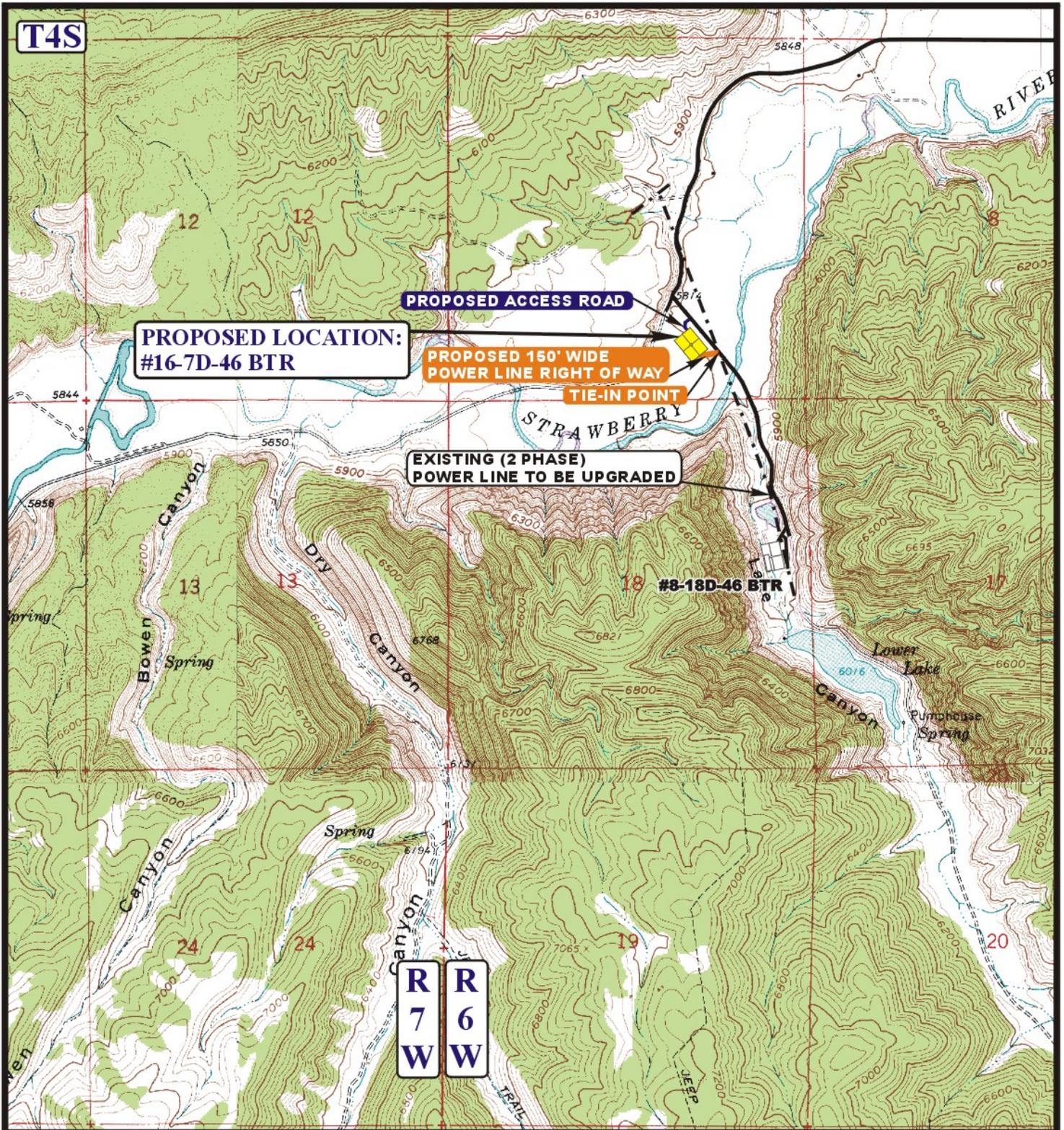
#16-7D-46 BTR
SECTION 7, T4S, R6W, U.S.B.&M.
857' FSL 1720' FEL

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



TOPOGRAPHIC MAP **07 22 11**
 MONTH DAY YEAR
 SCALE: 1" = 1000' DRAWN BY: C.I. REVISED: 01-11-12





APPROXIMATE TOTAL POWER LINE DISTANCE = 301' +/-

LEGEND:

-  PROPOSED ACCESS ROAD
-  EXISTING POWER LINE
-  PROPOSED POWER LINE

BILL BARRETT CORPORATION

#16-7D-46 BTR
SECTION 7, T4S, R6W, U.S.B.&M.
857' FSL 1720' FEL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
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TOPOGRAPHIC
MAP

07 22 11
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.I. REVISED: 01-11-12

D
TOPO



SITE DETAILS: 16-7D-46 BTR
Blacktail Ridge

Site Latitude: 40° 8' 32.770 N
Site Longitude: 110° 36' 5.281 W

COMPANY DETAILS: BILL BARRETT CORP

Calculation Method: Minimum Curvature
Error System: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

Positional Uncertainty: 0.0
Convergence: 0.58
Local North: True

WELL DETAILS: 16-7D-46 BTR

Ground Level: 5797.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	660189.37	2251192.47	40° 8' 32.770 N	110° 36' 5.281 W	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
16-7D-46 BTR 3PT MKR	4062.0	-58.6	911.1	40° 8' 32.190 N	110° 35' 53.549 W	Rectangle (Sides: L200.0 W200.0)
16-7D-46 BTR PBHL	7362.0	-58.6	911.1	40° 8' 32.190 N	110° 35' 53.549 W	Rectangle (Sides: L200.0 W200.0)

SECTION DETAILS

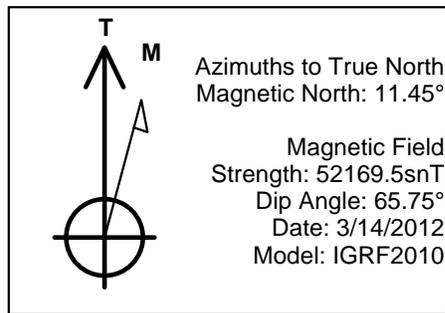
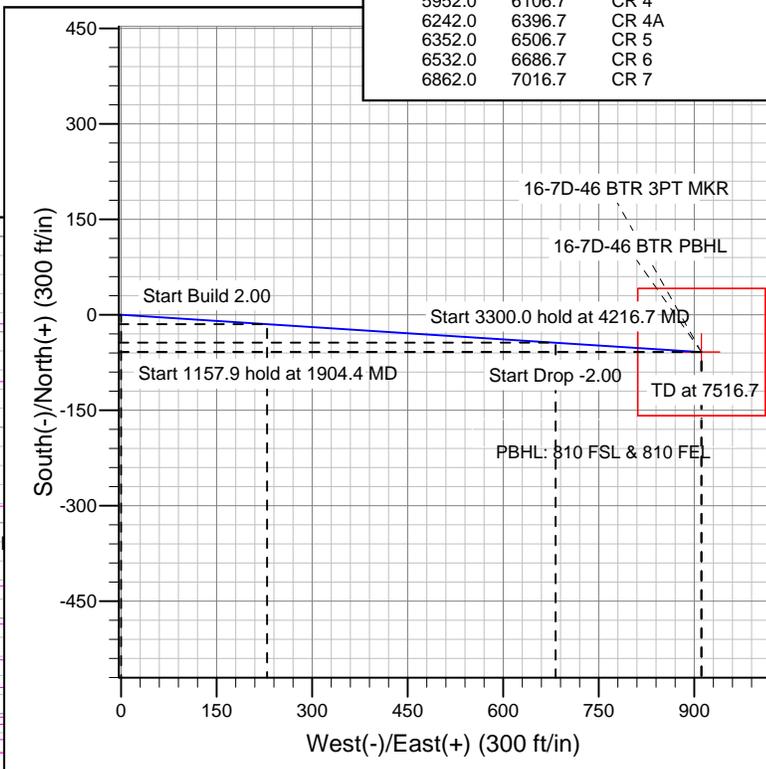
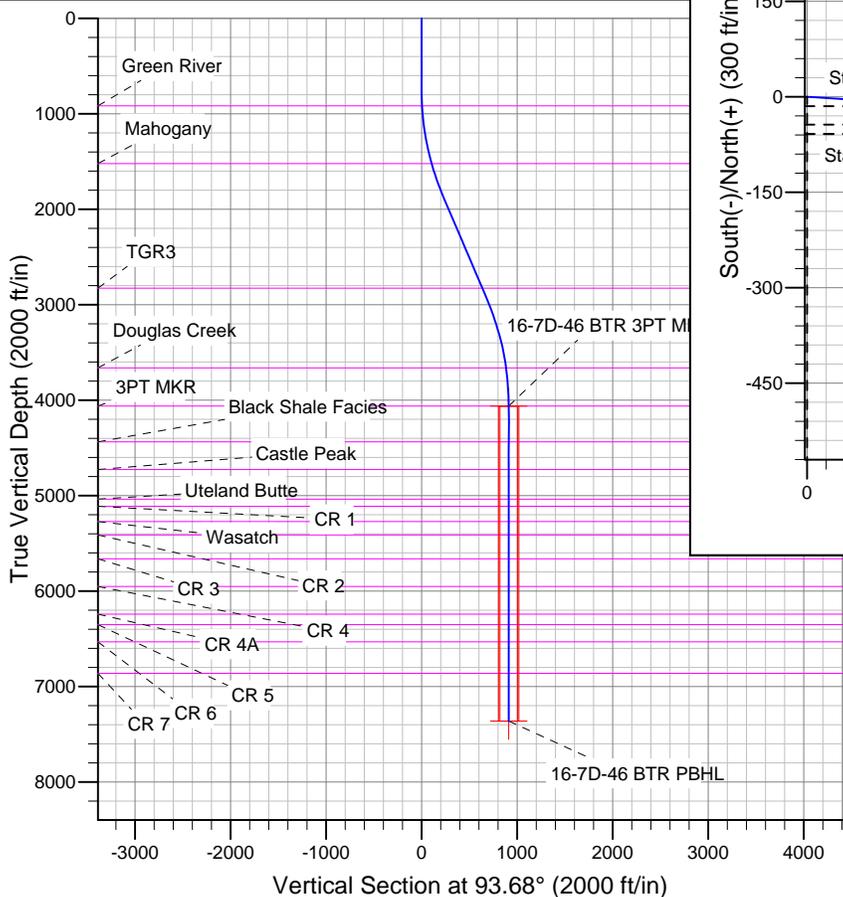
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1904.4	23.09	93.68	1873.4	-14.7	229.0	2.00	93.68	229.5	
4	3062.3	23.09	93.68	2938.6	-43.9	682.1	0.00	0.00	683.5	
5	4216.7	0.00	0.00	4062.0	-58.6	911.1	2.00	180.00	913.0	16-7D-46 BTR 3PT MKR
6	7516.7	0.00	0.00	7362.0	-58.6	911.1	0.00	0.00	913.0	16-7D-46 BTR PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
917.0	917.1	Green River
1522.0	1531.7	Mahogany
2827.0	2941.0	TGR3
3662.0	3815.4	Douglas Creek
4062.0	4216.7	3PT MKR
4437.0	4591.7	Black Shale Facies
4727.0	4881.7	Castle Peak
5037.0	5191.7	Uteland Butte
5112.0	5266.7	CR 1
5272.0	5426.7	Wasatch
5412.0	5566.7	CR 2
5662.0	5816.7	CR 3
5952.0	6106.7	CR 4
6242.0	6396.7	CR 4A
6352.0	6506.7	CR 5
6532.0	6686.7	CR 6
6862.0	7016.7	CR 7

CASING DETAILS

No casing data is available



BILL BARRETT CORP

DUCHESNE COUNTY, UT (NAD 27)

16-7D-46 BTR

16-7D-46 BTR

16-7D-46 BTR

Plan: Design #1

Standard Planning Report

13 April, 2012

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well 16-7D-46 BTR
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 5813.0ft (Original Well Elev)
Project:	DUCHESNE COUNTY, UT (NAD 27)	MD Reference:	KB @ 5813.0ft (Original Well Elev)
Site:	16-7D-46 BTR	North Reference:	True
Well:	16-7D-46 BTR	Survey Calculation Method:	Minimum Curvature
Wellbore:	16-7D-46 BTR		
Design:	Design #1		

Project	DUCHESNE COUNTY, UT (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	16-7D-46 BTR				
Site Position:		Northing:	660,189.37 ft	Latitude:	40° 8' 32.770 N
From:	Lat/Long	Easting:	2,251,192.47 ft	Longitude:	110° 36' 5.281 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.58 °

Well	16-7D-46 BTR					
Well Position	+N/-S	0.0 ft	Northing:	660,189.37 ft	Latitude:	40° 8' 32.770 N
	+E/-W	0.0 ft	Easting:	2,251,192.47 ft	Longitude:	110° 36' 5.281 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,797.0 ft

Wellbore	16-7D-46 BTR				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/14/2012	11.45	65.75	52,169

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	93.68

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,904.4	23.09	93.68	1,873.4	-14.7	229.0	2.00	2.00	0.00	93.68	
3,062.3	23.09	93.68	2,938.6	-43.9	682.1	0.00	0.00	0.00	0.00	
4,216.7	0.00	0.00	4,062.0	-58.6	911.1	2.00	-2.00	0.00	180.00	16-7D-46 BTR 3PT M
7,516.7	0.00	0.00	7,362.0	-58.6	911.1	0.00	0.00	0.00	0.00	16-7D-46 BTR PBHL

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well 16-7D-46 BTR
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 5813.0ft (Original Well Elev)
Project:	DUCHESNE COUNTY, UT (NAD 27)	MD Reference:	KB @ 5813.0ft (Original Well Elev)
Site:	16-7D-46 BTR	North Reference:	True
Well:	16-7D-46 BTR	Survey Calculation Method:	Minimum Curvature
Wellbore:	16-7D-46 BTR		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	1.00	93.68	800.0	0.0	0.4	0.4	2.00	2.00	0.00
900.0	3.00	93.68	899.9	-0.3	3.9	3.9	2.00	2.00	0.00
917.1	3.34	93.68	917.0	-0.3	4.9	4.9	2.00	2.00	0.00
Green River									
1,000.0	5.00	93.68	999.7	-0.7	10.9	10.9	2.00	2.00	0.00
1,100.0	7.00	93.68	1,099.1	-1.4	21.3	21.4	2.00	2.00	0.00
1,200.0	9.00	93.68	1,198.2	-2.3	35.2	35.3	2.00	2.00	0.00
1,300.0	11.00	93.68	1,296.6	-3.4	52.5	52.6	2.00	2.00	0.00
1,400.0	13.00	93.68	1,394.4	-4.7	73.3	73.4	2.00	2.00	0.00
1,500.0	15.00	93.68	1,491.5	-6.3	97.4	97.6	2.00	2.00	0.00
1,531.7	15.63	93.68	1,522.0	-6.8	105.8	106.0	2.00	2.00	0.00
Mahogany									
1,600.0	17.00	93.68	1,587.6	-8.0	124.9	125.2	2.00	2.00	0.00
1,700.0	19.00	93.68	1,682.7	-10.0	155.8	156.1	2.00	2.00	0.00
1,800.0	21.00	93.68	1,776.6	-12.2	189.9	190.3	2.00	2.00	0.00
1,900.0	23.00	93.68	1,869.4	-14.6	227.3	227.7	2.00	2.00	0.00
1,904.4	23.09	93.68	1,873.4	-14.7	229.0	229.5	2.00	2.00	0.00
2,000.0	23.09	93.68	1,961.4	-17.1	266.4	266.9	0.00	0.00	0.00
2,100.0	23.09	93.68	2,053.3	-19.7	305.5	306.2	0.00	0.00	0.00
2,200.0	23.09	93.68	2,145.3	-22.2	344.7	345.4	0.00	0.00	0.00
2,300.0	23.09	93.68	2,237.3	-24.7	383.8	384.6	0.00	0.00	0.00
2,400.0	23.09	93.68	2,329.3	-27.2	422.9	423.8	0.00	0.00	0.00
2,500.0	23.09	93.68	2,421.3	-29.7	462.1	463.0	0.00	0.00	0.00
2,600.0	23.09	93.68	2,513.3	-32.2	501.2	502.2	0.00	0.00	0.00
2,700.0	23.09	93.68	2,605.3	-34.8	540.3	541.4	0.00	0.00	0.00
2,800.0	23.09	93.68	2,697.3	-37.3	579.5	580.7	0.00	0.00	0.00
2,900.0	23.09	93.68	2,789.3	-39.8	618.6	619.9	0.00	0.00	0.00
2,941.0	23.09	93.68	2,827.0	-40.8	634.6	636.0	0.00	0.00	0.00
TGR3									
3,000.0	23.09	93.68	2,881.3	-42.3	657.7	659.1	0.00	0.00	0.00
3,062.3	23.09	93.68	2,938.6	-43.9	682.1	683.5	0.00	0.00	0.00
3,100.0	22.33	93.68	2,973.3	-44.8	696.6	698.1	2.00	-2.00	0.00
3,200.0	20.33	93.68	3,066.5	-47.2	732.9	734.5	2.00	-2.00	0.00
3,300.0	18.33	93.68	3,160.8	-49.3	766.0	767.6	2.00	-2.00	0.00
3,400.0	16.33	93.68	3,256.3	-51.2	795.7	797.4	2.00	-2.00	0.00
3,500.0	14.33	93.68	3,352.7	-52.9	822.1	823.8	2.00	-2.00	0.00
3,600.0	12.33	93.68	3,450.0	-54.4	845.1	846.9	2.00	-2.00	0.00
3,700.0	10.33	93.68	3,548.1	-55.6	864.7	866.5	2.00	-2.00	0.00
3,800.0	8.33	93.68	3,646.7	-56.7	880.9	882.7	2.00	-2.00	0.00
3,815.4	8.03	93.68	3,662.0	-56.8	883.1	884.9	2.00	-2.00	0.00
Douglas Creek									
3,900.0	6.33	93.68	3,745.9	-57.5	893.6	895.5	2.00	-2.00	0.00
4,000.0	4.33	93.68	3,845.5	-58.1	902.9	904.8	2.00	-2.00	0.00
4,100.0	2.33	93.68	3,945.3	-58.5	908.7	910.6	2.00	-2.00	0.00
4,200.0	0.33	93.68	4,045.3	-58.6	911.1	912.9	2.00	-2.00	0.00

Bill Barrett Corp

Planning Report

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Company:	BILL BARRETT CORP	TVD Reference:	KB @ 5813.0ft (Original Well Elev)
Project:	DUCHESNE COUNTY, UT (NAD 27)	MD Reference:	KB @ 5813.0ft (Original Well Elev)
Site:	16-7D-46 BTR	North Reference:	True
Well:	16-7D-46 BTR	Survey Calculation Method:	Minimum Curvature
Wellbore:	16-7D-46 BTR		
Design:	Design #1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,216.7	0.00	0.00	4,062.0	-58.6	911.1	913.0	2.00	-2.00	0.00	
3PT MKR										
4,300.0	0.00	0.00	4,145.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,245.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,345.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,591.7	0.00	0.00	4,437.0	-58.6	911.1	913.0	0.00	0.00	0.00	
Black Shale Facies										
4,600.0	0.00	0.00	4,445.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,545.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,645.3	-58.6	911.1	913.0	0.00	0.00	0.00	
4,881.7	0.00	0.00	4,727.0	-58.6	911.1	913.0	0.00	0.00	0.00	
Castle Peak										
4,900.0	0.00	0.00	4,745.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,000.0	0.00	0.00	4,845.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	4,945.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,191.7	0.00	0.00	5,037.0	-58.6	911.1	913.0	0.00	0.00	0.00	
Uteland Butte										
5,200.0	0.00	0.00	5,045.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,266.7	0.00	0.00	5,112.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 1										
5,300.0	0.00	0.00	5,145.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,245.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,426.7	0.00	0.00	5,272.0	-58.6	911.1	913.0	0.00	0.00	0.00	
Wasatch										
5,500.0	0.00	0.00	5,345.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,566.7	0.00	0.00	5,412.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 2										
5,600.0	0.00	0.00	5,445.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,545.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,645.3	-58.6	911.1	913.0	0.00	0.00	0.00	
5,816.7	0.00	0.00	5,662.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 3										
5,900.0	0.00	0.00	5,745.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,845.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,100.0	0.00	0.00	5,945.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,106.7	0.00	0.00	5,952.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 4										
6,200.0	0.00	0.00	6,045.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,145.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,396.7	0.00	0.00	6,242.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 4A										
6,400.0	0.00	0.00	6,245.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,345.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,506.7	0.00	0.00	6,352.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 5										
6,600.0	0.00	0.00	6,445.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,686.7	0.00	0.00	6,532.0	-58.6	911.1	913.0	0.00	0.00	0.00	
CR 6										
6,700.0	0.00	0.00	6,545.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,645.3	-58.6	911.1	913.0	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,745.3	-58.6	911.1	913.0	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,845.3	-58.6	911.1	913.0	0.00	0.00	0.00	

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Project:	DUCHESNE COUNTY, UT (NAD 27)	MD Reference:	KB @ 5813.0ft (Original Well Elev)
Site:	16-7D-46 BTR	North Reference:	True
Well:	16-7D-46 BTR	Survey Calculation Method:	Minimum Curvature
Wellbore:	16-7D-46 BTR		
Design:	Design #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,016.7	0.00	0.00	6,862.0	-58.6	911.1	913.0	0.00	0.00	0.00
CR 7									
7,100.0	0.00	0.00	6,945.3	-58.6	911.1	913.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,045.3	-58.6	911.1	913.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,145.3	-58.6	911.1	913.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,245.3	-58.6	911.1	913.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,345.3	-58.6	911.1	913.0	0.00	0.00	0.00
7,516.7	0.00	0.00	7,362.0	-58.6	911.1	913.0	0.00	0.00	0.00

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
917.1	917.0	Green River		0.00	
1,531.7	1,522.0	Mahogany		0.00	
2,941.0	2,827.0	TGR3		0.00	
3,815.4	3,662.0	Douglas Creek		0.00	
4,216.7	4,062.0	3PT MKR		0.00	
4,591.7	4,437.0	Black Shale Facies		0.00	
4,881.7	4,727.0	Castle Peak		0.00	
5,191.7	5,037.0	Uteland Butte		0.00	
5,266.7	5,112.0	CR 1		0.00	
5,426.7	5,272.0	Wasatch		0.00	
5,566.7	5,412.0	CR 2		0.00	
5,816.7	5,662.0	CR 3		0.00	
6,106.7	5,952.0	CR 4		0.00	
6,396.7	6,242.0	CR 4A		0.00	
6,506.7	6,352.0	CR 5		0.00	
6,686.7	6,532.0	CR 6		0.00	
7,016.7	6,862.0	CR 7		0.00	

SURFACE USE PLAN

BILL BARRETT CORPORATION

16-7D-46 BTR Well Pad

SW SE, 857' FSL and 1720' FEL, Section 7, T4S-R6W, USB&M (surface hole)

SE SE, 810' FSL and 810' FEL, Section 7, T4S-R6W, USB&M (bottom hole)

Duchesne County, Utah

The onsite inspection for this pad occurred on January 10, 2012. This is a new pad with one proposed well. Plat changes and site specific stipulations requested at the onsite are reflected within this APD and summarized below.

- Closed Loop System Required
- No archeological monitor proposed
- Fence pad to exclude from the pasture area
- Covert Green paint color
- Gravel surface road and pad
- Re-route irrigation ditch around pad (crossing pad from west to east, near pit corner C)

The excavation contractor would be provided with an approved copy of the surface use plan of operations before initiating construction.

1. Existing Roads:

- a. The proposed well site is located approximately 14.4 miles southwest of Duchesne, Utah. Maps and directions reflecting the route to the proposed well site are included (see Topographic maps A and B).
- b. The existing State Highway 40 would be utilized for 8.3 miles to the existing Strawberry River Road that would be utilized for 6.0 miles to the existing Lake Canyon Road that would be utilized for 0.1 miles and provides access to the planned new access road.
- c. Project roads would require routine year-round maintenance to provide year-round access. Maintenance would include inspections, reduction of ruts and holes, maintenance to keep water off the road, replacement of surfacing materials, and clearing of sediment blocking ditches and culverts. Should snow removal become necessary, roads would be cleared with a motor grader and snow would be stored along the down gradient side to prohibit runoff onto the road. Aggregate would be used as necessary to maintain a solid running surface and minimize dust generation.
- d. Vehicle operators would obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions. Travel would be limited to the existing access roads and proposed access road.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

- e. The use of roads under State and Duchesne County Road Department maintenance are necessary to access the project area with no improvements proposed. No encroachment or pipeline crossing permit are required
- f. All existing roads would be maintained and kept in good repair during all phases of operation.

2. Planned Access Road:

- a. Approximately 193 feet of new access road trending south is planned from the existing Lake Canyon Road (see Topographic Map B).
- b. The planned access road would be constructed to a 30-foot ROW width with an 18-foot travel surface. See section 12.d. below for disturbance estimates.
- c. New road construction and improvements of existing roads would typically require the use of motor graders, crawler tractors, 10-yard end dump trucks, and water trucks. The standard methodology for building new roads involves the use of a crawler tractor or track hoe to windrow the vegetation to one side of the road corridor, remove topsoil to the opposing side of the corridor, and rough-in the roadway. This is followed by a grader or bulldozer to establish barrow ditches and crown the road surface. Where culverts are required, a track hoe or backhoe would trench the road and install the culverts. Some hand labor would be required when installing and armoring culverts. Road base or gravel in some instances would be necessary and would be hauled in and a grader used to smooth the running surface.
- d. The proposed road would be constructed to facilitate drainage, control erosion and minimize visual impacts by following natural contours where practical. No unnecessary side-casting of material would occur on steep slopes.
- e. A maximum grade of 10% would be maintained throughout the project with minimum cuts and fills, as necessary, to access the well.
- f. Excess rock from construction of the pad may be used for surfacing of the access road if necessary. Any additional aggregate necessary would be obtained from private or State of Utah lands in conformance with applicable regulations. Aggregate would be of sufficient size, type, and amount to allow all weather access and alleviate dust.
- g. Where topsoil removal is necessary, it would be windrowed (i.e. stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and re-spread over the disturbed area after construction and backfilling are completed. Vegetation removed from the disturbed area would also be re-spread to provide protection, nutrient recycling, and a seed source for reclamation.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

- h. Turnouts are not proposed.
- i. No culverts or low-water crossings are anticipated. Adequate drainage structures, where necessary, would be incorporated into the remainder of the road to prevent soil erosion and accommodate all-weather traffic.
- j. One cattleguard is proposed as shown on Map B. No gates are anticipated at this time.
- k. Surface disturbance and vehicular travel would be limited to the approved location access road. Adequate signs would be posted, as necessary, to warn the public of project related traffic.
- l. All access roads and surface disturbing activities would conform to the appropriate standard, **no higher than necessary**, to accommodate their intended function adequately as outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition – Revised 2007.
- m. The operator would be responsible for all maintenance needs of the new access road.

3. Location of Existing Wells (see One-Mile Radius Map):

- a. Following is a list of wells with surface hole locations within a one-mile radius of the proposed pad:
 - i. water wells none
 - ii. injection wells none
 - iii. disposal wells none
 - iv. drilling wells two
 - v. temp shut-in wells none
 - vi. producing wells two
 - vii. abandoned wells one

4. Location of Production Facilities

- a. Surface facilities would consist of a wellhead, separator, gas meter, combustor, (1) 500 gal methanol tank, (1) 500 glycol tank, (3) 500 bbl oil tanks, (1) 500 bbl water tank, (1) 500 bbl test tank, (1) 1000 gal propane tank, a pumping unit or Roto-flex unit or ESP or gas lift unit, electrical or with a natural gas or diesel fired motor, solar panels, solar chemical and methanol pumps and one trace pump. See attached proposed facility diagram.
- b. Most wells would be fitted with a pump jack or Roto-flex unit or ESP or gas lift to assist liquid production. The prime mover for pump jacks or Roto-flex units would be small (100 horsepower or less), electric motor or natural gas or diesel fired internal combustion engines. If a gas lift is installed, it would be set on a

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

10 ft x 25 ft pad and the prime mover would be a natural gas-fired internal combustion engine rated at 200 horsepower or less or an electric compressor of similar horsepower powered by electricity.

- c. The tank battery would be surrounded by a secondary containment berm of sufficient capacity to contain 1.1 times the entire capacity of the largest single tank and sufficient freeboard to contain precipitation. All loading lines and valves would be placed inside the berm surrounding the tank battery or would utilize catchment basins to contain spills. All liquid hydrocarbon production and measurement shall conform to the provisions of 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4 for the measurement of oil.
- d. Gas meter run(s) would be constructed and located on lease within 500 feet of the wellheads. Meter runs would be housed and/or fenced. As practicably feasible, meters would be equipped with remote telemetry monitoring systems. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- e. A combustor may be installed at this location for control of associated condensate tank emissions. A combustor ranges from 24 inches to 48 inches wide and is approximately 27 ft tall. Combustor placement would be on existing disturbance.
- f. Approximately 300 feet of pipeline corridor (see Topographic Map C) containing up to three lines (one gas pipeline up to 8 inch in diameter, one water line up to 4 inch in diameter and one residue line up to 4 inch in diameter) is proposed trending north to the proposed pipeline corridor for the 8-18D-46 BTR. Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the proposed pipeline servicing nearby BBC wells. The pipeline crosses entirely Ute Tribe surface.
- g. The new segment of gas pipeline would be surface laid within a 30 foot wide pipeline corridor adjacent to the proposed access road. See 12.d below for disturbance estimates.
- h. Construction of the ROW would temporarily utilize the 30 foot disturbed width for the road for a total disturbed width of 60 foot for the road and pipeline corridors. The use of the proposed well site and access roads would facilitate the staging of the pipeline construction.
- i. Pipeline construction methods and practices would be planned and conducted by BBC with the objective of enhancing reclamation and fostering the re-establishment of the native plant community.
- j. All permanent above-ground structures would be painted a flat, non-reflective color, such as Covert Green, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation.

Bill Barrett Corporation
 Surface Use Plan
 16-7D-46 BTR
 Duchesne County, UT

Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.

- k. Site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 would be adhered to. Any modifications to proposed facilities would be reflected in the site security diagram submitted.
- l. The site would require periodic maintenance to ensure that drainages are kept open and free of debris, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

5. Location and Type of Water Supply:

- a. Water for the drilling and completion would be trucked from any of the following locations:

Water Right No. and Application or Change No.	Applicant	Allocation	Date	Point of Diversion	Source
43-180	Duchesne City Water Service District	5 cfs	8/13/2004	Knight Diversion Dam	Duchesne River
43-1202, Change a13837	Myton City	5.49 cfr and 3967 acre feet	3/21/1986	Knight Diversion Dam	Duchesne River
43-10444, Appln A57477	Duchesne County Upper Country Water	2 cfs	1994	Ditch at Source	Cow Canyon Spring
43-10446, Appln F57432	Duchesne County Upper Country Water	1.58 cfs	1994	Ditch at Source	Cow Canyon Spring
43-1273, Appln A17462	J.J.N.P. Company	7 cfs	1946	Strawberry River	Strawberry River
43-1273, Appln t36590	J.J.N.P. Company	4 cfs	6/03/2010	Strawberry River	Strawberry River
43-2505, Appln t37379	McKinnon Ranch Properties, LC	1.3 cfs	4/28/2011	Pumped from Sec, 17, T4SR6W	Water Canyon Lake
43-12415, Change A17215a	Peatross Ranch, LLC	1.89 cfs	09/2011	Dugout Pond	Strawberry River

- b. No new water well is proposed with this application.
- c. Should additional water sources be pursued they would be properly permitted through the State of Utah – Division of Water Rights.

Bill Barrett Corporation
 Surface Use Plan
 16-7D-46 BTR
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- d. Water use would vary in accordance with the formations to be drilled but would be up to approximately 5.41 acre feet for drilling and completion operations.

6. Source of Construction Material:

- a. The use of materials would conform to 43 CFR 3610.2-3.
- b. No construction materials would be removed from the lease or EDA area.
- c. If any additional gravel is required, it would be obtained from a local supplier having a permitted source of materials within the general area.

7. Methods of Handling Waste Disposal:

- a. All wastes associated with this application would be contained and disposed of utilizing approved facilities.
- b. There will be no reserve pit.
- c. To deter livestock from entering the cuttings area, the three sides exterior to the location would be fenced before drilling starts. Following the conclusion of drilling and completion activities, the fourth side would also be fenced.
- e. Drill cuttings would be contained in the cuttings storage area.
- f. Produced fluids from the well other than water would be decanted into steel test tank(s) until such time as construction of production facilities is completed. Any oil that may be accumulated would be transferred to a permanent production tank. Produced water may be used in further drilling and completion activities, evaporated in the pit, or would be hauled to one of the state-approved disposal facilities below:

Disposal Facilities
1. RNI Industries, Inc. – Pleasant Valley Disposal Pits, Sec. 25, 26, 35 & 36, T4S-R3W
2. Pro Water LLC – Blue Bench 13-1 Disposal Well (43-013-30971) NENE, Sec. 13, T3S-R5W
3. RN Industries, Inc. – Bluebell Disposal Ponds, Sec. 2, 4 & 9, T2S-R2W
4. Water Disposal, Inc. – Harmston 1-32-A1 Disposal Well (43-013-30224), UTR #00707, Sec. 32, T1S-R1W
5. Unified Water Pits – Sec. 31, T2S-R4W
6. Iowa Tank Line Pits – 8500 BLM Fence Road, Pleasant Valley
7. Western Water Solutions – Sand Pass Ranch, Sections 9 and 10, T4S-R1W, permit #WD-01-2011

- g. Any salts and/or chemicals, which are an integral part of the drilling system, would be disposed of in the same manner as the drilling fluid.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

- h. Any spills of oil, condensate, produced or frac water, drilling fluids, or other potentially deleterious substances would be recovered and either returned to its origin or disposed of at an approved disposal site, most likely in Duchesne, Utah.
- i. Chemicals on the EPA's Consolidated List of Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) may be used or stored in quantities over reportable quantities. In the course of drilling, BBC could potentially store and use diesel fuel, sand (silica), hydrochloric acid, and CO₂ gas, all described as hazardous substances in 40 CFR Part 302, Section 302.4, in quantities exceeding 10,000 pounds. In addition, natural gas condensate and crude oil and methanol may be stored or used in reportable quantities. Small quantities of retail products (paint/spray paints, solvents {e.g., WD-40}, and lubrication oil) containing non-reportable volumes of hazardous substances may be stored and used on site at any time. No extremely hazardous substances, as defined in 40 CFR 355, would be used, produced, stored, transported or disposed of in association with the drilling, testing or completion of the wells.
- j. Portable toilets and trash containers would be located onsite during drilling and completion operations. A commercial supplier would install and maintain portable toilets and equipment and would be responsible for removing sanitary waste. Sanitary waste facilities (i.e. toilet holding tanks) would be regularly pumped and their contents disposed of at approved sewage disposal facilities in Duchesne, and/or Uintah Counties, in accordance with applicable rules and regulations regarding sewage treatment and disposal. Accumulated trash and nonflammable waste materials would be hauled to an approved landfill once a week or as often as necessary. All debris and waste materials not contained in the trash containers would be cleaned up, removed from the construction ROW, well pad, or worker housing location, and disposed of at an approved landfill. Trash would be cleaned up everyday.
- k. Sanitary waste equipment and trash bins would be removed from the Project Area upon completion of access road or pipeline construction; following drilling and completion operations at an individual well pad; when worker housing is no longer needed; or as required.
- l. A flare pit may be constructed a minimum of 110' from the wellhead(s) and may be used during completion work. In the event a flare pit proves to be unworkable, a temporary flare stack or open top tank would be installed. BBC would flow back as much fluid and gas as possible into pressurized vessels, separating the fluids from the gas. In some instances, due to the completion fluids utilized within the Project Area, it is not feasible to direct the flow stream from the wellbore through pressurized vessels. In such instances BBC proposes to direct the flow to the open top tanks until flow through the pressurized vessels is feasible. At which point the fluid would either be returned to the reserve pit or placed into a tank(s). The gas would be directed to the flare pit, flare stack (each with a constant source of ignition), or may be directed into the sales pipeline.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

- m. Hydrocarbons would be removed from the reserve pit would as soon as practical. In the event immediate removal is not practical, the reserve pit would be flagged overhead or covered with wire or plastic mesh to protect migrating birds.

8. Ancillary Facilities:

- a. Garbage containers and portable toilets would be located on the well pad.
- b. On well pads where active drilling and completion is occurring, temporary housing would be provided on location for the well pad supervisor, geologist, tool pusher, and others that are required to be on location at all times. The well pad could include up to five single wide mobile homes or fifth wheel campers/trailers.
- c. A surface powerline corridor 301 feet in length is proposed for installation by third-party installer within a 150 foot wide powerline corridor. See 12.d below for disturbance estimates.

9. Well Site Layout:

- a. The well would be properly identified in accordance with 43 CFR 3162.6.
- b. The pad layout, cross section diagrams and rig layout are enclosed (see Figures 1 and 2).
- c. The pad and road designs are consistent with industry specifications.
- d. The pad has been staked at its maximum size of 400 feet x 305 feet. See section 12.d below for disturbance estimates.
- e. Within the approved well pad location, a crawler tractor would strip whatever topsoil is present and stockpile it along the edge of the well pad for use during reclamation. Vegetation would be distributed along the sides of the well pad.
- f. Use of erosion control measures, including proper grading to minimize slopes, diversion terraces and ditches, mulching, terracing, riprap, fiber matting, temporary sediment traps, and broad-based drainage dips or low water crossings would be employed by BBC as necessary and appropriate to minimize erosion and surface runoff during well pad construction and operation. Cut and fill slopes would be constructed such that stability would be maintained for the life of the activity.
- g. All cut and fill slopes would be such that stability can be maintained for the life of the activity.
- h. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

- i. Water application may be implemented if necessary to minimize the amount of fugitive dust.
- j. All surface disturbing activities would be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

10. Plan for Restoration of the Surface:

- a. A site specific reclamation plan would be submitted, if requested, within 90 days of location construction to the surface managing agency.
- b. Site reclamation would be accomplished for portions of the well pad not required for the continued operation of the well on this pad within six months of completion, weather permitting.
- c. The operator would control noxious weeds along access road use authorizations and well site by spraying or mechanical removal, according to the Utah Noxious Weed Act and as set forth in the approved surface damage agreements.
- d. Rat and mouse holes would be filled and compacted from bottom to top immediately upon release of the drilling rig from location. Upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. The reserve pit would be allowed to dry prior to the commencement of backfilling work. No attempts would be made to backfill the reserve pit until it is free of standing water. Once dry, the liner would be torn and perforated before backfilling.
- e. The portion of the location not needed for production facilities/operations would be recontoured to the approximate natural contours. Areas not used for production purposes would be backfilled and blended into the surrounding terrain, reseeded and erosion control measures installed. Mulching, erosion control measures and fertilization may be required to achieve acceptable stabilization. Back slopes and fore slopes would be reduced as practical and scarified with the contour. The reserved topsoil would be evenly distributed over the slopes and scarified along the contour. Slopes would be seeded with the Ute Tribe specified seed mix.
- f. Topsoil salvaged from the drill site and stored for more than one year would be placed at the location indicated on the well site layout drawing and graded to a depth optimum to maintain topsoil viability, seeded with the Ute Tribe prescribed seed mixture and covered with mulch for protection from wind and water erosion and to discourage the invasion of weeds.

Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

11. Surface and Mineral Ownership:

- a. Surface ownership – Ute Indian Tribe - 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.
- b. Mineral Ownership – Fee

12. Other Information:

- a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report has been submitted under separate cover to the appropriate agencies by Montgomery as report 11-281 dated 09/24/2011.
- b. BBC would require that their personnel, contractors, and subcontractors to comply with Federal regulations intended to protect archeological and cultural resources.
- c. Project personnel and contractors would be educated on and subject to the following requirements:
 - No dogs or firearms within the Project Area.
 - No littering within the Project Area.
 - Smoking within the Project Area would only be allowed in off-operator active locations or in specifically designated smoking areas. All cigarette butts would be placed in appropriate containers and not thrown on the ground or out windows of vehicles; personnel and contractors would abide by all fire restriction orders.
 - Campfires or uncontained fires of any kind would be prohibited.
 - Portable generators used in the Project Area would have spark arrestors.
- d. Disturbance estimates:

Approximate Acreage Disturbances

Well Pad		3.268	acres
Access	193 feet	0.132	acres
Pipeline	300 feet	0.206	acres
Powerline	301 feet	1.036	acres

Total 4.642 acres

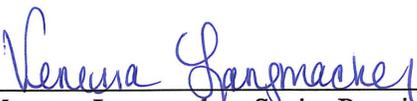
Bill Barrett Corporation
Surface Use Plan
16-7D-46 BTR
Duchesne County, UT

OPERATOR CERTIFICATION

Certification:

I hereby certify that I, or someone under my direction supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein would be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application and that bond coverage is provided under Bill Barrett Corporations federal nationwide bond. These statements are subject to the provisions of 18 U.S.C. 1001 for the filings of false statements.

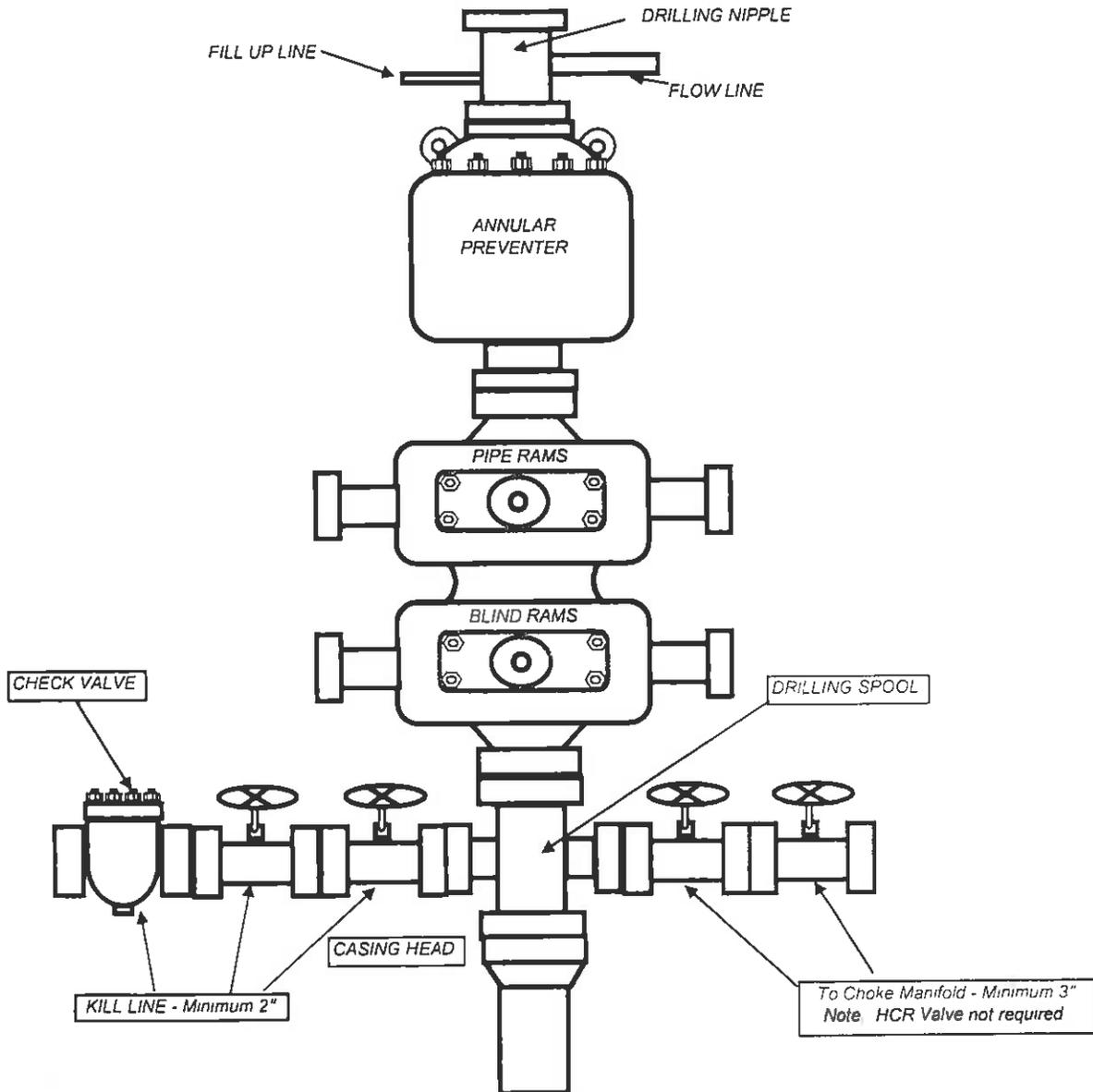
Executed this 15th day of May 2012
Name: Venessa Langmacher
Position Title: Senior Permit Analyst
Address: 1099 18th Street, Suite 2300, Denver, CO 80202
Telephone: 303-312-8172
E-mail: vlangmacher@billbarrettcorp.com
Field Representative Kary Eldredge / Bill Barrett Corporation
Address: 1820 W. Highway 40, Roosevelt, UT 84066
Telephone: 435-725-3515 (office); 435-724-6789 (mobile)
E-mail: keldredge@billbarrettcorp.com



Venessa Langmacher, Senior Permit Analyst

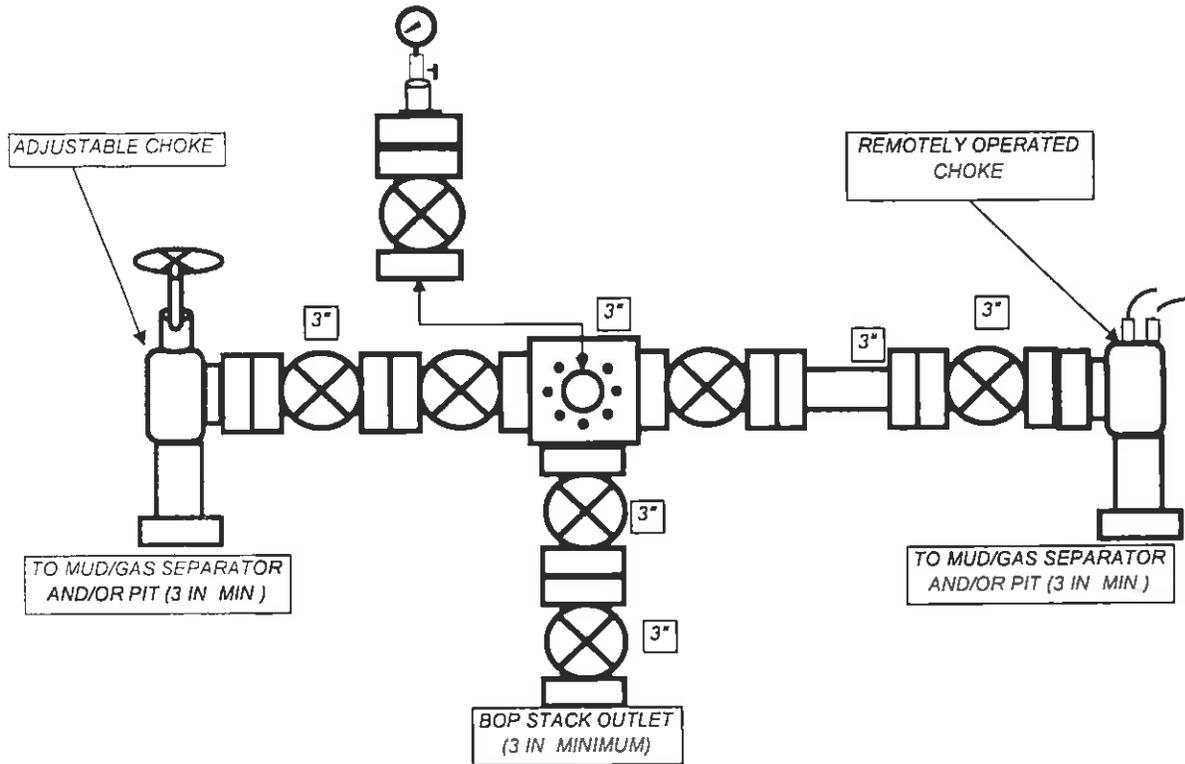
BILL BARRETT CORPORATION

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



BILL BARRETT CORPORATION

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





May 15, 2012

Ms. Diana Mason – Petroleum Technician
State of Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Directional Drilling R649-3-11
Blacktail Ridge Area #16-7D-46 BTR Well
Surface: 857' FSL & 1720' FEL, SWSE, 7-T4S-R6W, USM
Bottom Hole: 810' FSL & 810' FEL, SESE, 7-T4S-R6W, USM
Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill the above referenced well, we hereby submit this letter in accordance with Oil & Gas Conservation Rules R649-2, R649-3, R649-10 and R649-11, pertaining to the Location and Siting of Wells.

- The proposed location is within our Blacktail Ridge Area.
- BBC is permitting this well as a directional well in order to minimize surface disturbance. By locating the well at the surface location and directionally drilling from this location, BBC will be able to utilize the existing road and pipelines in the area.
- The well will be drilled under an Exploration and Development Agreement between the Ute Indian Tribe and Ute Distribution Corporation. Ute Energy, LLC owns a right to participate in this well.
- BBC certifies that it is the working interest owner of all lands within 460 feet of the proposed well location, and together with Ute Energy, LLC, we own 100% of the working interest in these lands.

Based on the information provided, BBC requests that the permit be granted pursuant to R649-3-11. Should you have any questions or need further information, please contact me at 303-312-8544.

Sincerely,

A handwritten signature in blue ink that reads 'Vanessa Langmackey'.

David Watts DW
Landman

1099 18TH STREET
SUITE 2300
DENVER, CO 80202
P 303.293.9100
F 303.291.0420

BILL BARRETT CORPORATION

LOCATION LAYOUT FOR

#16-7D-46 BTR
SECTION 7, T4S, R6W, U.S.B.&M.
857' FSL 1720' FEL

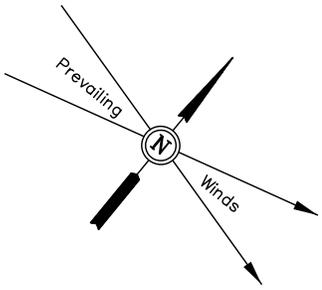
FIGURE #1

SCALE: 1" = 60'

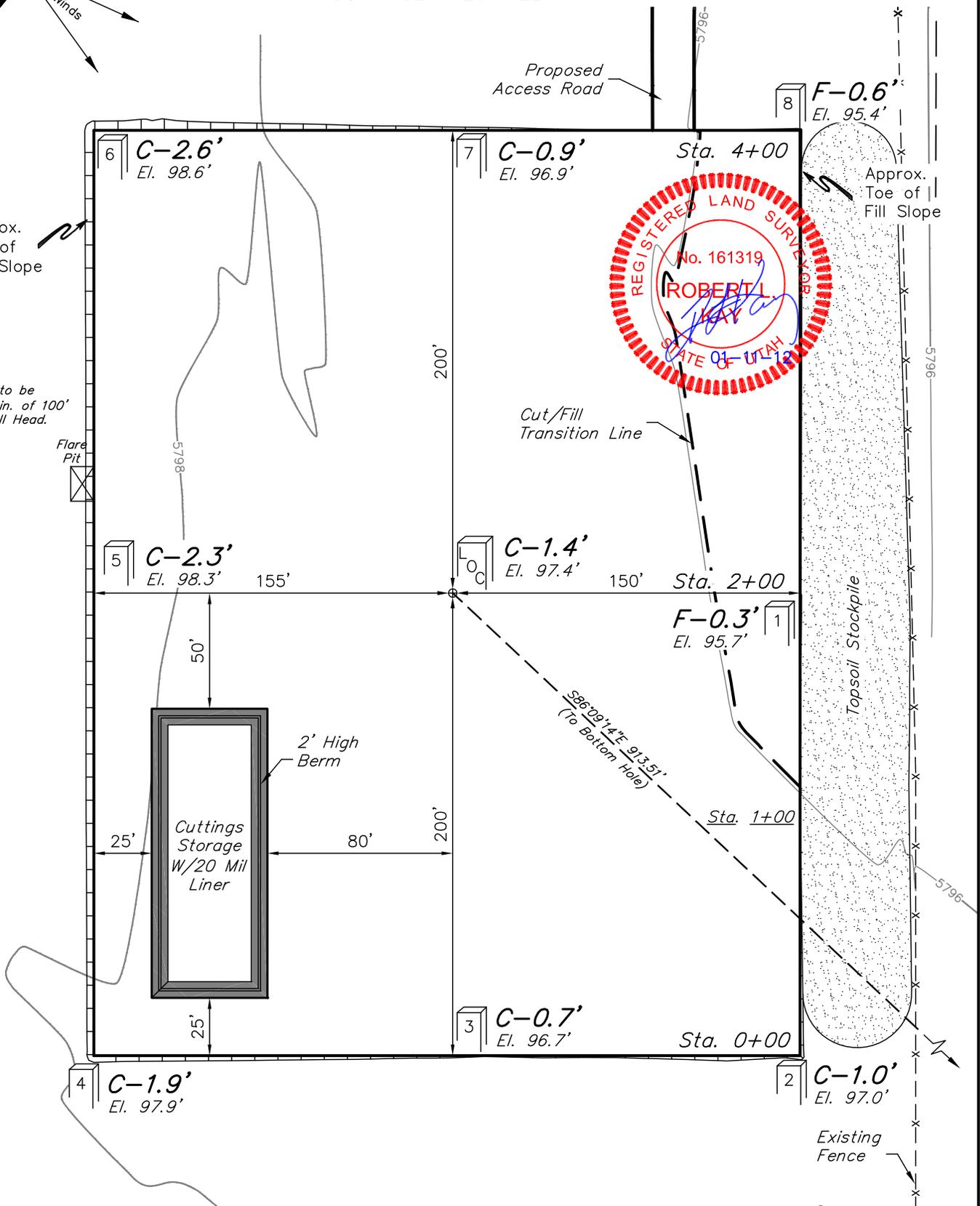
DATE: 08-10-11

DRAWN BY: K.O.

REVISED: 01-11-12 B.L.B.



NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.



Elev. Ungraded Ground At Loc. Stake = **5797.4'**
FINISHED GRADE ELEV. AT LOC. STAKE = **5796.0'**

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

RECEIVED: November 01, 2012

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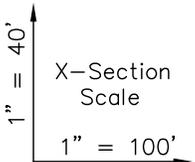
TYPICAL CROSS SECTIONS FOR

#16-7D-46 BTR

SECTION 7, T4S, R6W, U.S.B.&M.

857' FSL 1720' FEL

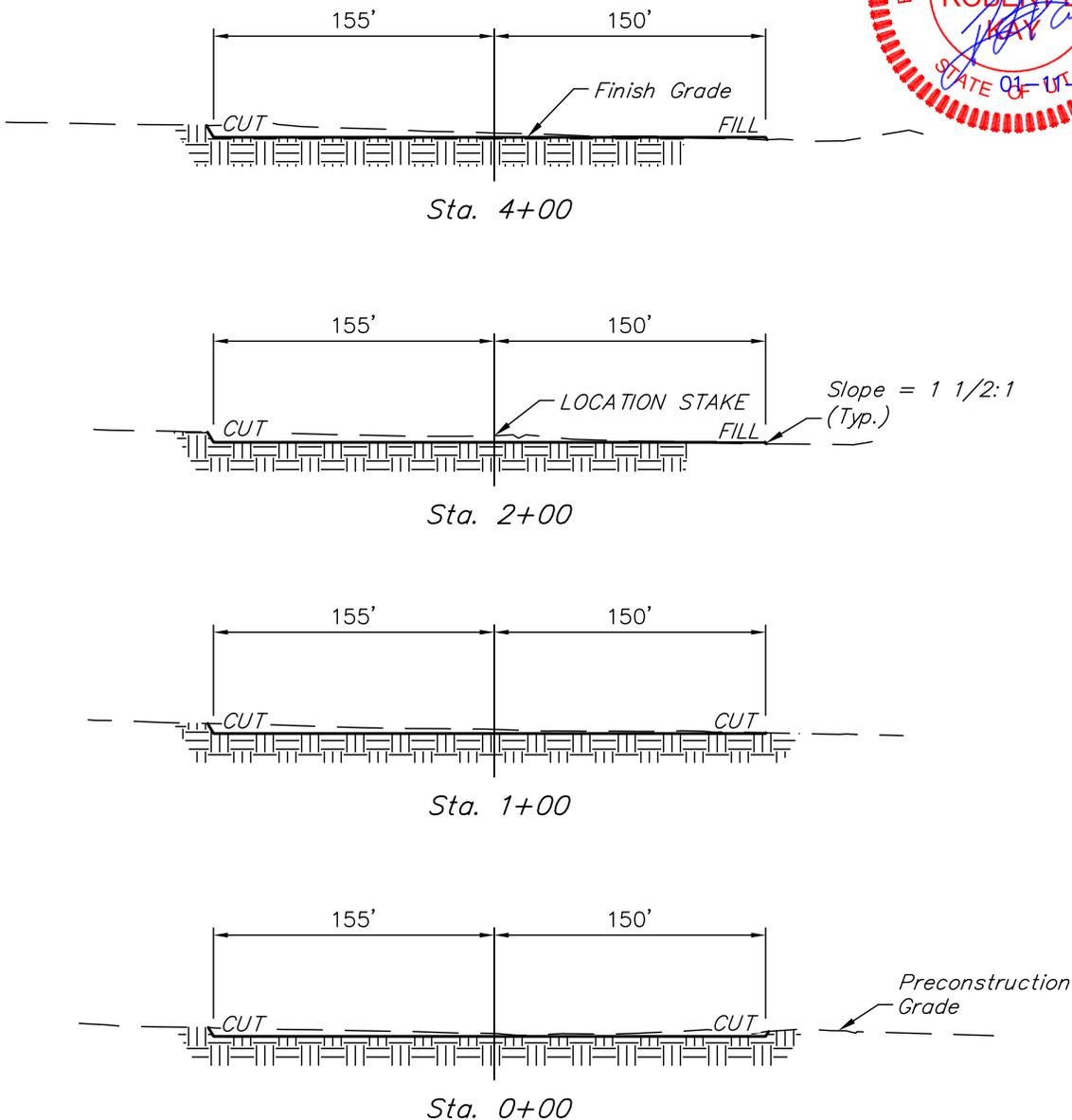
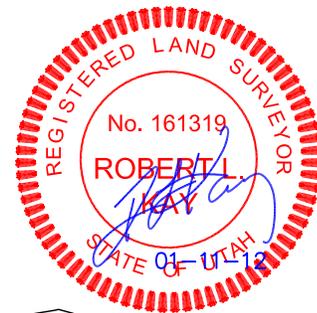
FIGURE #2



DATE: 08-10-11

DRAWN BY: K.O.

REVISED: 01-11-12 B.L.B.



NOTE:

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

APPROXIMATE ACREAGES

WELL SITE DISTURBANCE	= ± 3.268 ACRES
ACCESS ROAD DISTURBANCE	= ± 0.116 ACRES
PIPELINE DISTURBANCE	= ± 0.190 ACRES
TOTAL	= ± 3.574 ACRES

* NOTE: FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(12") Topsoil Stripping	= 4,620 Cu. Yds.
Remaining Location	= 1,570 Cu. Yds.
TOTAL CUT	= 6,190 CU.YDS.
FILL	= 1,570 CU.YDS.

EXCESS MATERIAL	= 4,620 Cu. Yds.
Topsoil	= 4,620 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	= 0 Cu. Yds.

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85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

BILL BARRETT CORPORATION

TYPICAL RIG LAYOUT FOR

#16-7D-46 BTR

SECTION 7, T4S, R6W, U.S.B.&M.

857' FSL 1720' FEL

FIGURE #3

SCALE: 1" = 60'

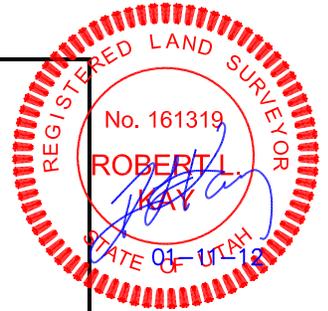
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DRAWN BY: K.O.

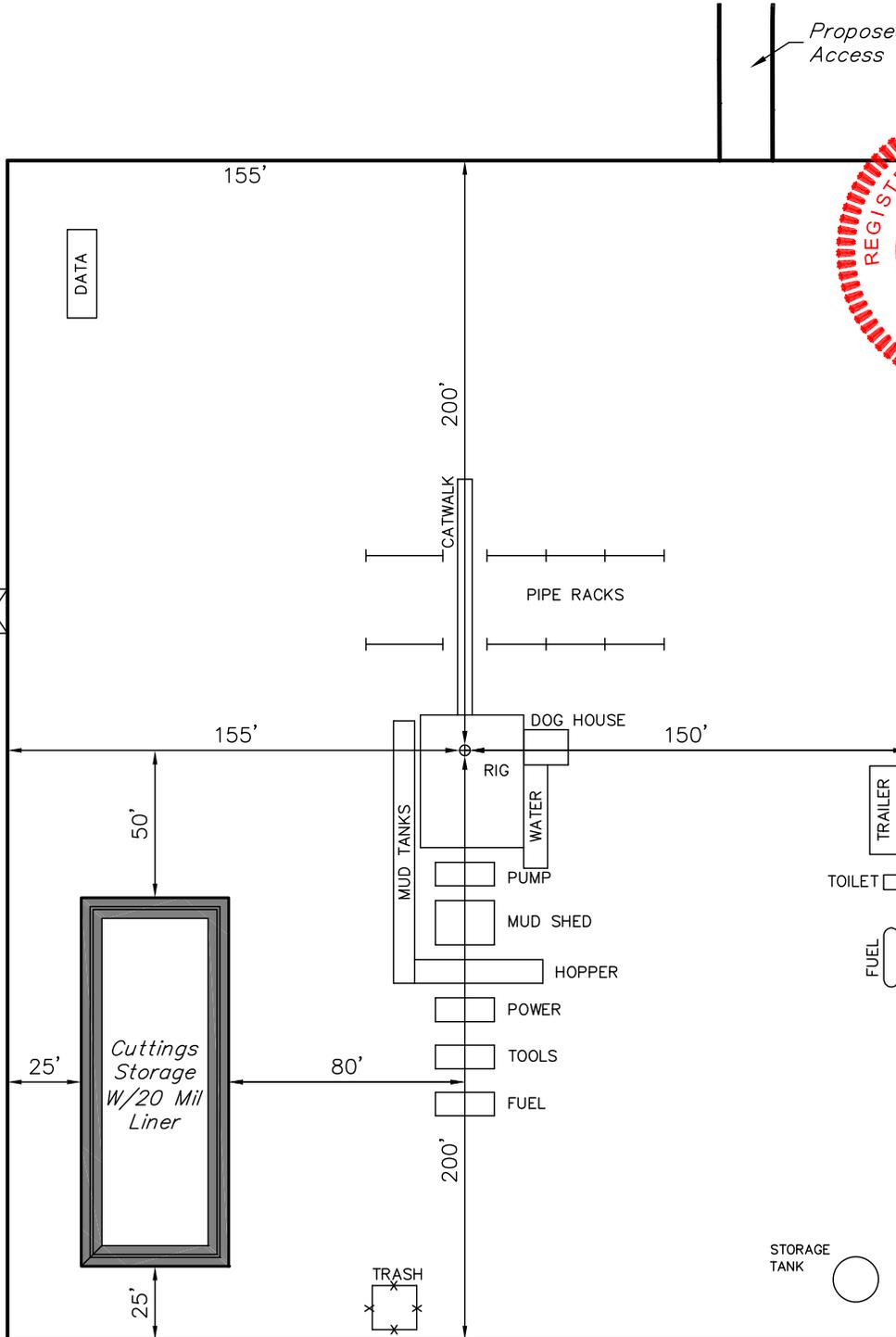
REVISED: 01-11-12 B.L.B.



Proposed Access Road



NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.



BILL BARRETT CORPORATION

INTERIM RECLAMATION PLAN FOR

#16-7D-46 BTR

SECTION 7, T4S, R6W, U.S.B.&M.

857' FSL 1720' FEL

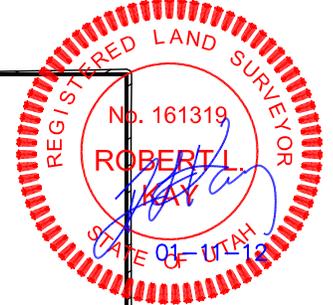
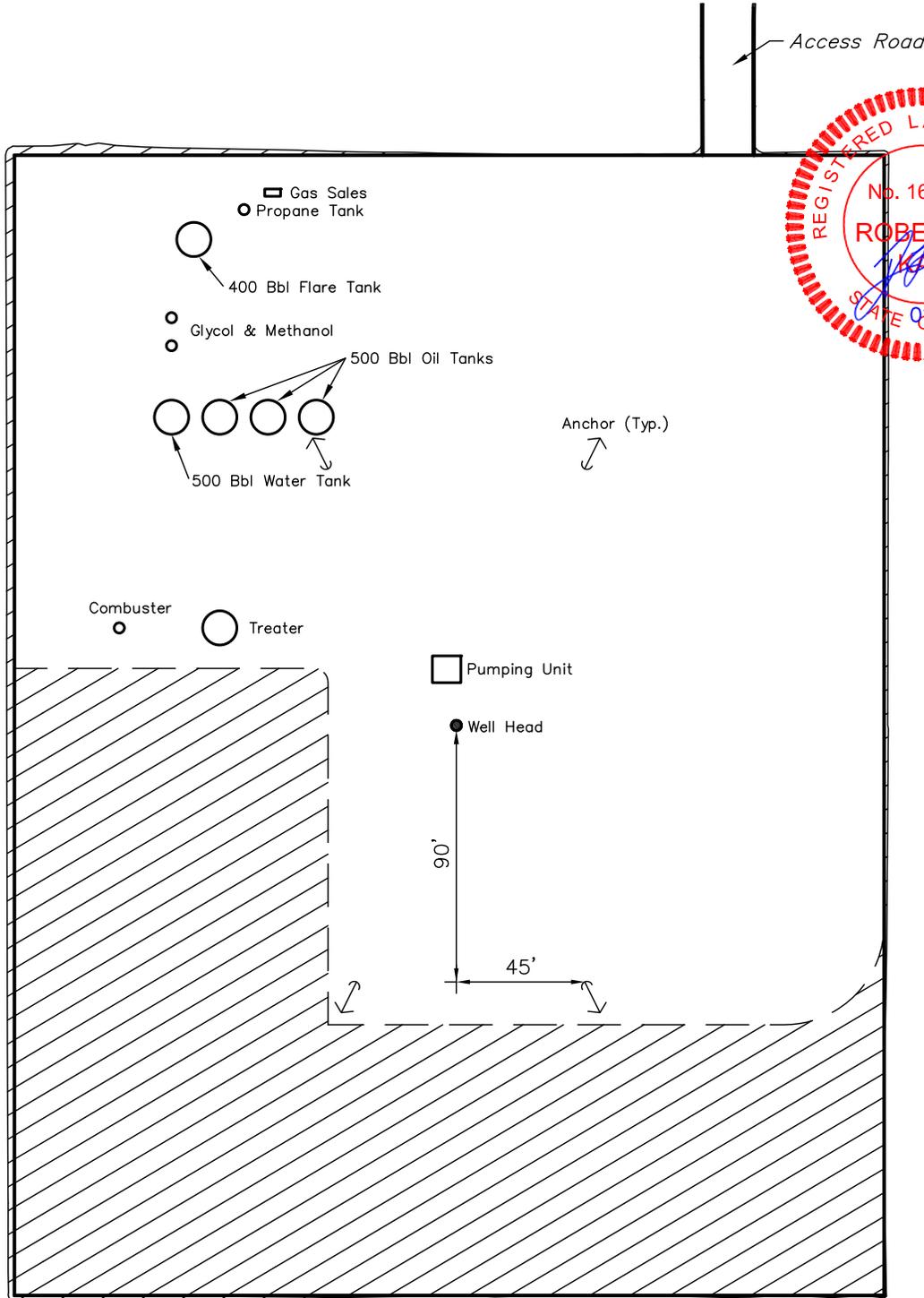
FIGURE #4

SCALE: 1" = 60'

DATE: 08-10-11

DRAWN BY: K.O.

REVISED: 01-11-12 B.L.B.



 INTERIM RECLAMATION

APPROXIMATE ACREAGES
UN-RECLAIMED = ± 1.808 ACRES

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

RECEIVED: November 01, 2012

BOPE REVIEW BILL BARRETT CORP 16-7D-46 BTR 43013518380000

Well Name	BILL BARRETT CORP 16-7D-46 BTR 43013518380000			
String	Cond	Surf	Prod	
Casing Size(")	16.000	9.625	5.500	
Setting Depth (TVD)	80	1000	7362	
Previous Shoe Setting Depth (TVD)	0	80	1000	
Max Mud Weight (ppg)	8.8	8.8	9.6	
BOPE Proposed (psi)	0	0	5000	
Casing Internal Yield (psi)	1000	3520	10640	
Operators Max Anticipated Pressure (psi)	3675		9.6	

Calculations	Cond String	16.000	"
Max BHP (psi)	.052*Setting Depth*MW=	37	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	27	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	19	NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	19	NO
Required Casing/BOPE Test Pressure=		0	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

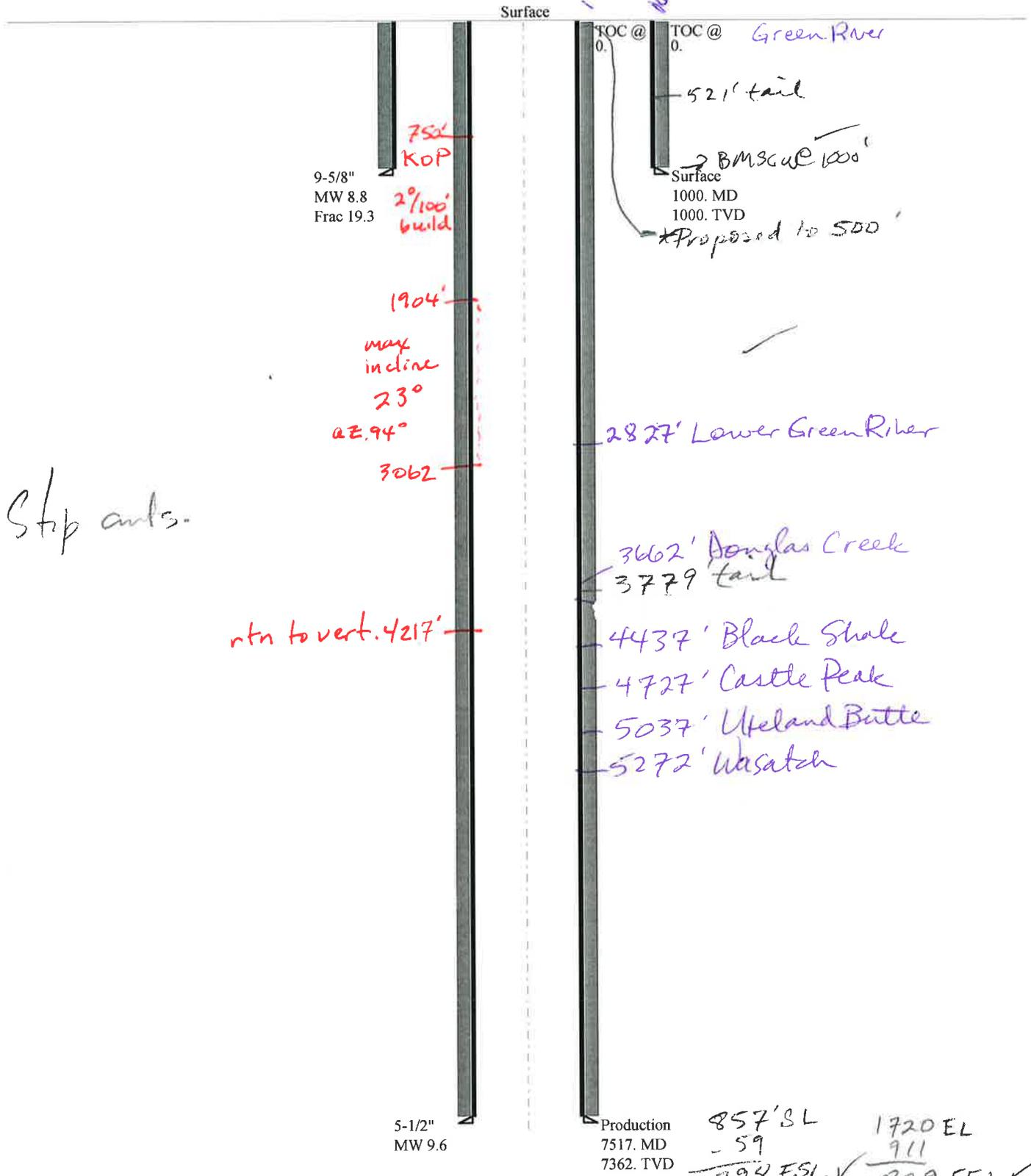
Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	458	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	338	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	238	NO OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	256	NO OK
Required Casing/BOPE Test Pressure=		1000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		80	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	5.500	"
Max BHP (psi)	.052*Setting Depth*MW=	3675	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2792	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2055	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	2275	NO OK
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1000	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43013518380000 16-7D-46 BTR

Casing Schematic



857' SL 1720 EL
 - 59 911

 798 FSL ✓ 809 FEL ✓ OK
 SE SE Sec 7-4S-6W

Well name:	43013518380000 16-7D-46 BTR		
Operator:	BILL BARRETT CORP		
String type:	Surface	Project ID:	43-013-51838
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

Mud weight: 8.800 ppg
 Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 880 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP: 1,000 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor: 1.125

Burst:

Design factor: 1.00

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.70 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on air weight.
 Neutral point: 869 ft

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 88 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: Surface

Completion type is subs

Directional well information:

Kick-off point: 750 ft
 Departure at shoe: 11 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 5 °

Re subsequent strings:

Next setting depth: 7,362 ft
 Next mud weight: 9.600 ppg
 Next setting BHP: 3,672 psi
 Fracture mud wt: 19,250 ppg
 Fracture depth: 1,000 ft
 Injection pressure: 1,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	1000	9.625	36.00	J-55	ST&C	1000	1000	8.796	8691
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	457	1974	4.321	1000	3520	3.52	36	394	10.95 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: February 25, 2013
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1000 ft, a mud weight of 8.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Well name:	43013518380000 16-7D-46 BTR		
Operator:	BILL BARRETT CORP		
String type:	Production	Project ID:	43-013-51838
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

Mud weight: 9.600 ppg
 Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 2,052 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP: 3,672 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor: 1.125

Burst:

Design factor: 1.00

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.60 (B)

Tension is based on air weight.
 Neutral point: 6,445 ft

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 177 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft

Cement top: Surface

Completion type is subs

Directional well information:

Kick-off point: 750 ft
 Departure at shoe: 913 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	7517	5.5	17.00	P-110	LT&C	7362	7517	4.767	49513
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	3672	7480	2.037	3672	10640	2.90	125.2	445	3.56 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: February 25, 2013
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 7362 ft, a mud weight of 9.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

**Application for Permit to Drill
Statement of Basis
Utah Division of Oil, Gas and Mining**

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
7074	43013518380000	LOCKED	OW	I	No
Operator	BILL BARRETT CORP		Surface Owner-APD		
Well Name	16-7D-46 BTR		Unit		
Field	ALTAMONT		Type of Work	DRILL	
Location	SWSE 7 4S 6W U 857 FSL 1720 FEL GPS Coord (UTM) 533865E 4443667N				

Geologic Statement of Basis

Bill Barrett proposes to set 80 ' of conductor and 1,000' of surface casing at this location both will be cemented to surface. Conductor and surface casing holes will be drilled with a fresh water mud system. The base of the moderately saline water is at approximately 1,000 feet in this area. This location lies on alluvium derived from the Green River Formation. Good aquifers can be found in the Green River Formation and associated alluvium. A search of Division of Water Rights records indicates 7 water wells within a 10,000 foot radius of the proposed location. These wells range from 30' to 600' in depth. Depth is not listed for 4 wells. Listed uses are irrigation, stock watering and domestic. The proposed casing and cement program should adequately protect ground water in this area.

Brad Hill
APD Evaluator

12/24/2012
Date / Time

Surface Statement of Basis

The surface rights at the proposed location are owned by the Ute Tribe. The operator is responsible for obtaining all necessary surface permits and rights-of-way.

Brad Hill
Onsite Evaluator

12/24/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Surface	None

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/1/2012

API NO. ASSIGNED: 43013518380000

WELL NAME: 16-7D-46 BTR

OPERATOR: BILL BARRETT CORP (N2165)

PHONE NUMBER: 303 312-8172

CONTACT: Venessa Langmacher

PROPOSED LOCATION: SWSE 07 040S 060W

Permit Tech Review:

SURFACE: 0857 FSL 1720 FEL

Engineering Review:

BOTTOM: 0810 FSL 0810 FEL

Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.14266

LONGITUDE: -110.60244

UTM SURF EASTINGS: 533865.00

NORTHINGS: 4443667.00

FIELD NAME: ALTAMONT

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE - LPM4138148
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 43-180
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 139-84
- Effective Date: 12/31/2008
- Siting: 4 Prod LGRRV-WSTC Wells
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 4 - Federal Approval - dmason
 5 - Statement of Basis - bhill
 12 - Cement Volume (3) - hmacdonald
 15 - Directional - dmason
 25 - Surface Casing - hmacdonald



GARY R. HERBERT
Governor

GREGORY S. BELL
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

Permit To Drill

Well Name: 16-7D-46 BTR
API Well Number: 43013518380000
Lease Number: Fee
Surface Owner: INDIAN
Approval Date: 3/26/2013

Issued to:

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

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-84. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Cement volume for the 5 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 500' MD as indicated in the submitted drilling plan.

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
 - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

Approved by:

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
1. TYPE OF WELL Oil Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
2. NAME OF OPERATOR: BILL BARRETT CORP	7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202	8. WELL NAME and NUMBER: 16-7D-46 BTR
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0857 FSL 1720 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWSE Section: 07 Township: 04.0S Range: 06.0W Meridian: U	9. API NUMBER: 43013518380000
PHONE NUMBER: 303 312-8134 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
COUNTY: DUCHESNE	STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 6/1/2015	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input checked="" type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

BBC hereby requests a one year extension of the subject APD.

Approved by the
January 22, 2015
Oil, Gas and Mining

Date: _____
By:

NAME (PLEASE PRINT) Venessa Langmacher	PHONE NUMBER 303 312-8172	TITLE Senior Permit Analyst
SIGNATURE N/A	DATE 1/21/2015	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43013518380000

API: 43013518380000

Well Name: 16-7D-46 BTR

Location: 0857 FSL 1720 FEL QTR SWSE SEC 07 TWP 040S RNG 060W MER U

Company Permit Issued to: BILL BARRETT CORP

Date Original Permit Issued: 3/26/2013

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No

- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No

- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No

- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No

- Has the approved source of water for drilling changed? Yes No

- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No

- Is bonding still in place, which covers this proposed well? Yes No

Signature: Venessa Langmacher

Date: 1/21/2015

Title: Senior Permit Analyst Representing: BILL BARRETT CORP



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 31, 2016

Bill Barrett
1099 18th Street, Suite 2300
Denver, CO 80202

Re: APD Rescinded – 16-7D-46 BTR, Sec. 7, T. 4S, R. 6W
Duchesne County, Utah API No. 43-013-51838

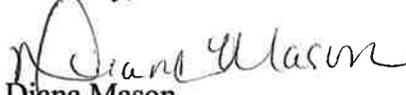
Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on March 26, 2013. On February 20, 2014 and January 22, 2015 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 31, 2016.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,


Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Vernal