

**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> LC Tribal 8H-21-46
<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> ALTAMONT
<b>4. TYPE OF WELL</b> Oil Well      Coalbed Methane Well: NO		<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>
<b>6. NAME OF OPERATOR</b> BILL BARRETT CORP		<b>7. OPERATOR PHONE</b> 303 312-8164
<b>8. ADDRESS OF OPERATOR</b> 1099 18th Street Ste 2300, Denver, CO, 80202		<b>9. OPERATOR E-MAIL</b> BHilgers@billbarrettcorp.com
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> 1420H626108	<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>		<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b> Uintah and Ouray		<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>
<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/>

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1520 FNL 1215 FWL	SWNW	21	4.0 S	6.0 W	U
Top of Uppermost Producing Zone	1631 FNL 1775 FWL	SWNW	21	4.0 S	6.0 W	U
At Total Depth	2200 FNL 800 FEL	SENE	21	4.0 S	6.0 W	U

<b>21. COUNTY</b> UINTAH	<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 800	<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640
<b>27. ELEVATION - GROUND LEVEL</b> 7099	<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completion)</b> 1200	<b>26. PROPOSED DEPTH</b> MD: 8900 TVD: 5920
	<b>28. BOND NUMBER</b> LPM8874725	<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> 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 - 1750	36.0	J-55 ST&C	8.8	Halliburton Light , Type Unknown	230	3.16	11.0
							Halliburton Premium , Type Unknown	210	1.36	14.8
I1	8.75	7	0 - 6222	26.0	P-110 LT&C	9.2	Unknown	270	3.14	14.8
							Unknown	140	1.42	13.5
L1	6.125	4.5	0 - 8900	11.6	P-110 LT&C	9.5	No Used	0	0.0	0.0

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

<b>NAME</b> Venessa Langmacher	<b>TITLE</b> Senior Permit Analyst	<b>PHONE</b> 303 312-8172
<b>SIGNATURE</b>	<b>DATE</b> 05/14/2012	<b>EMAIL</b> vlangmacher@billbarrettcorp.com
<b>API NUMBER ASSIGNED</b> 43047526770000		<b>APPROVAL</b>

**Received: May 16, 2012**

## DRILLING PLAN

BILL BARRETT CORPORATION  
 LC Tribal 8H-21-46  
 SHL: SW NW, 1520' FNL and 1215' FWL, Section 21, T4S-R6W  
 BHL: SE NE, 2200' FNL and 800' FEL, Section 21, T4S-R6W  
 Duchesne Co., UT

Bill Barrett Corporation (BBC) intends to drill a horizontal through the prospective zone within the Uteland Butte.

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

**HORIZONTAL LEG FORMATION TOPS**

<u>Formation</u>	<u>Depth – MD</u>	<u>Depth - TVD</u>
Green River	1,920'	1,920'
Surface casing	1,750'	1,750'
Mahogany	2,605'	2,605'
TGR3	3,700'	3,700'
Douglas Creek	4,510'	4,510'
3 PT Marker	4,885'	4,885'
Black Shale Facies	5,255'	5,255'
Castle Peak	5,495'	5,495'
*Uteland Butte	5,924'	5,822'
CR1A Base	6,050'	5,873'
TD	8,900'	5,920'

\*PROSPECTIVE PAY

The Uteland Butte CR1 is the primary objective for oil/gas.

Base of Useable Water = 3,010'

**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>					
12-1/4"	surface	1,750'	9 5/8"	36.0 ppf	J or K 55	ST&C	New
8 3/4"	surface	6,222'	7"	26.0 ppf	P-110	LT&C	New
6 1/8"	surface	8,900'	4 1/2" Liner with 4-1/2" Tieback for frac	11.6 ppf	P-110	LT&C	New

**5. Cementing Program**

9 5/8" Surface Casing	<i>Lead with approximately 230 sx Halliburton Light Premium cement with additives mixed at 11.0 ppg (yield = 3.16 ft<sup>3</sup>/sx). TOC @ Surface Tail with 210 sx Premium 14.8 ppg (yield = 1.36 ft<sup>3</sup>/sx) calculated hole volume with 75% excess. TOC @ 1,250' Top out cement, if required: 100 sx of Premium cement with additives mixed at 15.8 ppg (yield = 1.17 ft<sup>3</sup>/sk)</i>
7" Intermediate Casing	<i>Lead with approximately 270 sx Tunc Light cement with additives, mixed at 11.0 ppg (yield = 3.14 ft<sup>3</sup>/sx). TOC @ 1,250' Tail with approximately 140 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 ft<sup>3</sup>/sx). TOC @ 4,327'</i>
4 1/2" Liner with 4-1/2" Tieback to surface	<i>The liner will either be cemented with 300 sx 13.5 ppg Econocem from TD to the TOL or uncemented with 14-16 open hole packers.</i>
Note: Top of Tail cement for the intermediate string will be calculated to 100' above the KOP using gauge hole plus 50% excess. Lead to 200' inside of surface casing.	

**6. Mud Program**

<u>Interval</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss (API filtrate)</u>	<u>Remarks</u>
40' – 1,750'	8.4 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
1,750' – 6,222'	8.8 – 9.2	26 – 36	NC	Fresh Water with sweeps
6,222' – TD	9.0 – 9.5	45 – 58	4 – 10	Fresh Water PHPA
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. BOP and Pressure Containment Data**

<u>Depth Intervals</u>	<u>BOP Equipment</u>
0 – 1,750'	No pressure control required
1,750' – TD	11" 5000# Ram Type BOP 11" 5000# Annular BOP
- Drilling spool to accommodate choke and kill lines;	
- Ancillary and choke manifold to be rated @ 5000 psi;	
- Ancillary equipment and choke manifold rated at 5,000#. 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.	

**8. 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
- d) Mud monitoring will be visually observed

**9. 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 with GR as needed to land wellbore;
WL Logging	None in intermediate
Note: FMI and CAL may be run on the lateral portion of the horizontal wellbore at the geologist's discretion.	

**10. Anticipated Abnormal Pressures or Temperatures**

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 2924 psi\* and maximum anticipated surface pressure equals approximately 1622 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)

**11. 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.

**12. Drilling Schedule**

Location Construction: November 2012  
Spud: November 2012  
Duration: 25 days drilling time  
25 days completion time

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

# BILL BARRETT CORPORATION

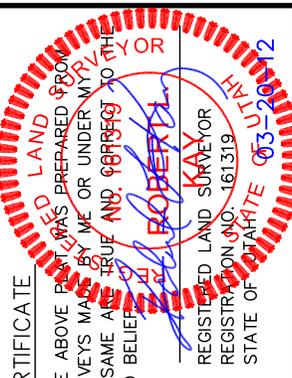
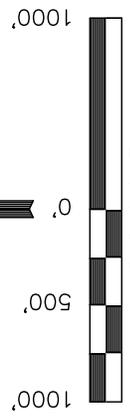
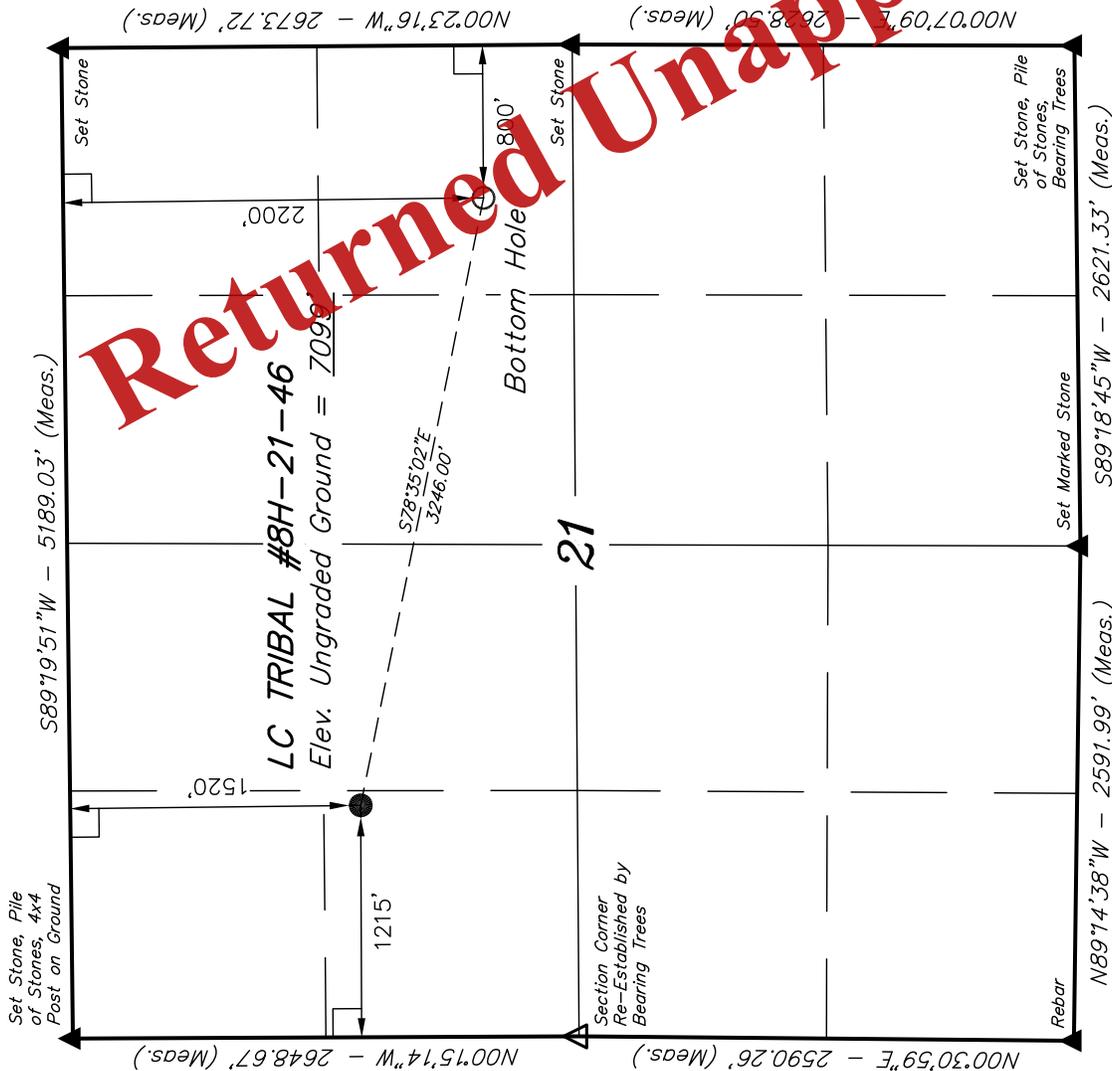
Well location, LC TRIBAL #8H-21-46, located as shown in the SW 1/4 NW 1/4 of Section 21, T4S, R6W, U.S.B.&M., Duchesne County, Utah.

## 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 ON CAP AS BEING 6097 FEET.

## BASIS OF BEARINGS

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



CERTIFICATE  
 THIS IS TO CERTIFY THAT THE ABOVE POINT 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.  
 ROBERT KAY  
 REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH  
 LICENSE NO. 03-20112

REVISION: 03-14-12 T.B.

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	11-23-11	01-18-12
PARTY	REFERENCES	
C.A. T.B.	G.L.O. PLAT	
WEATHER	FILE	
COLD	BILL BARRETT CORPORATION	

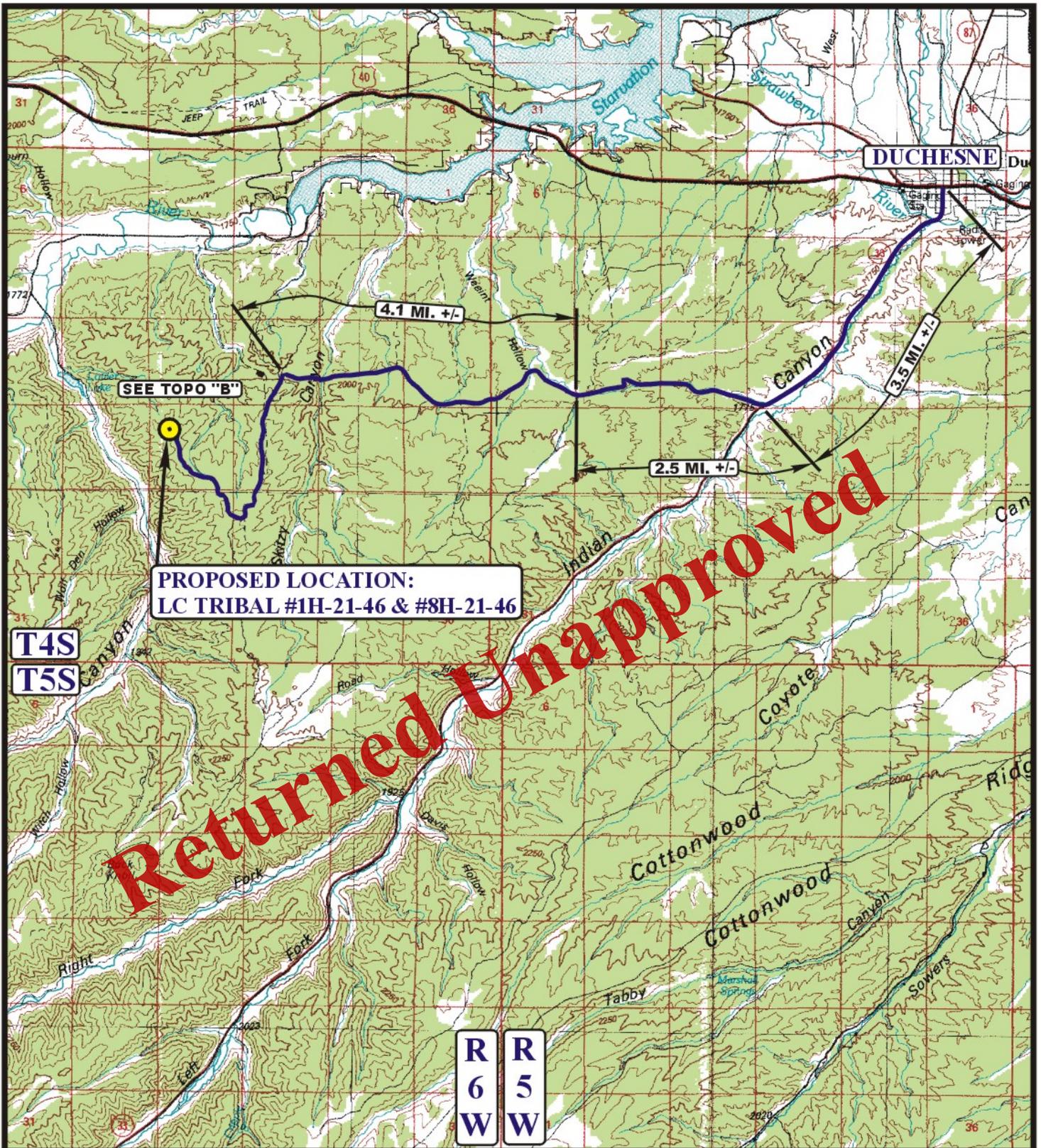
UTAH ENGINEERING & LAND SURVEYING	85 SOUTH 200 EAST - VERNAL, UTAH 84078	(435) 789-1017
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SECTION CORNERS LOCATED	NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
▲ = SECTION CORNERS LOCATED	LATITUDE = 40°07'11.47" (40.119853)	LATITUDE = 40°07'17.74" (40.121594)
△ = SECTION CORNERS RE-ESTABLISHED.	LONGITUDE = 110°33'40.81" (110.561336)	LONGITUDE = 110°34'21.78" (110.572717)
(Not Set on Ground)	LATITUDE = 40°07'11.62" (40.119894)	LATITUDE = 40°07'17.89" (40.121636)
	LONGITUDE = 110°33'38.25" (110.560625)	LONGITUDE = 110°34'19.22" (110.572006)

### LEGEND:

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



Returned Unapproved

**LEGEND:**

PROPOSED LOCATION

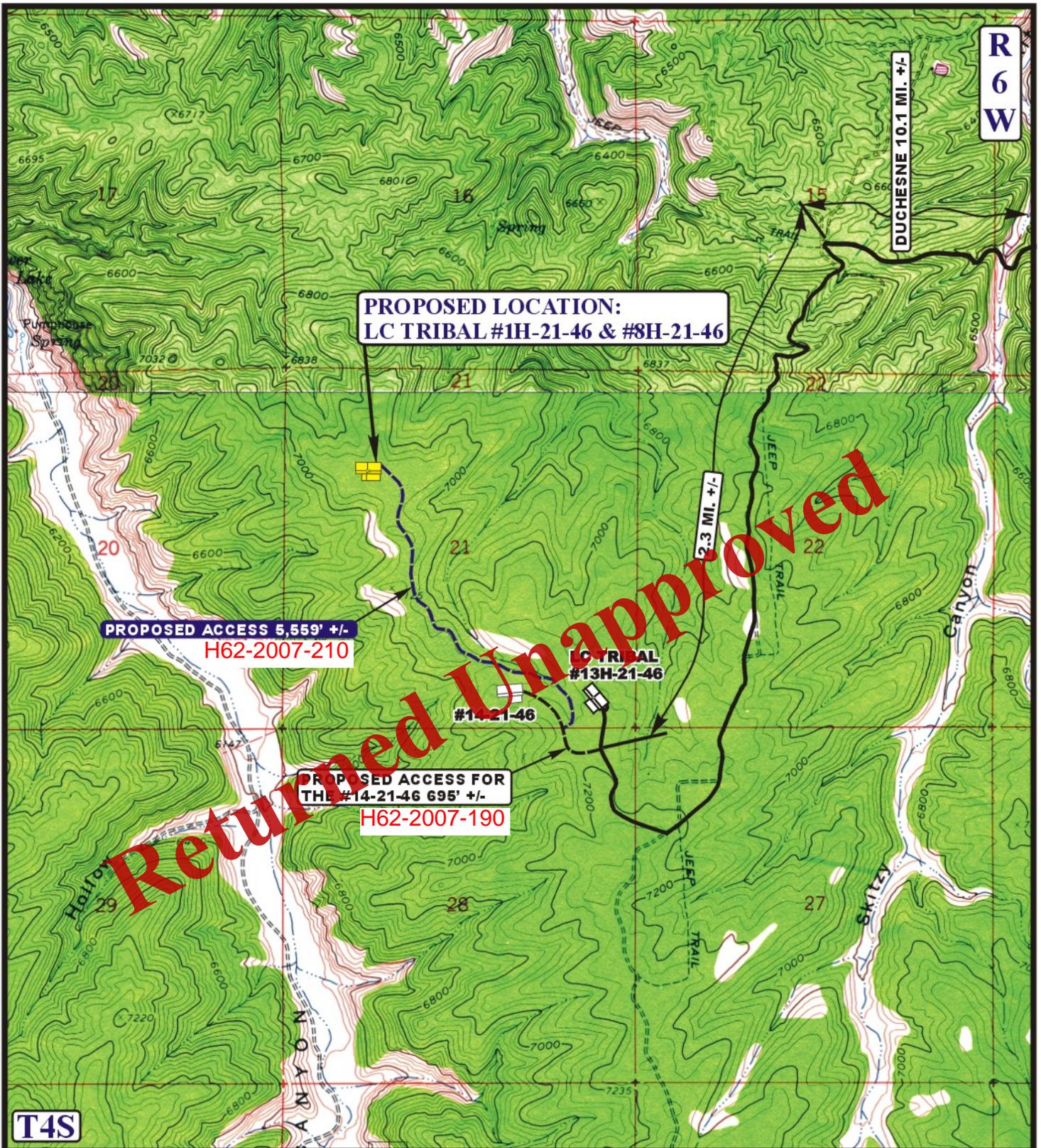


**BILL BARRETT CORPORATION**

LC TRIBAL #1H-21-46 & #8H-21-46  
SECTION 21, T4S, R6W, U.S.B.&M.  
SW 1/4 NW 1/4

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

<b>ACCESS ROAD MAP</b>	<b>04 23 07</b> MONTH DAY YEAR	<b>A TOPO</b>
SCALE: 1:100,000	DRAWN BY: A.A. REV: 03-21-12 C.I.	



**LEGEND:**

- PROPOSED ACCESS ROAD
- EXISTING ROAD

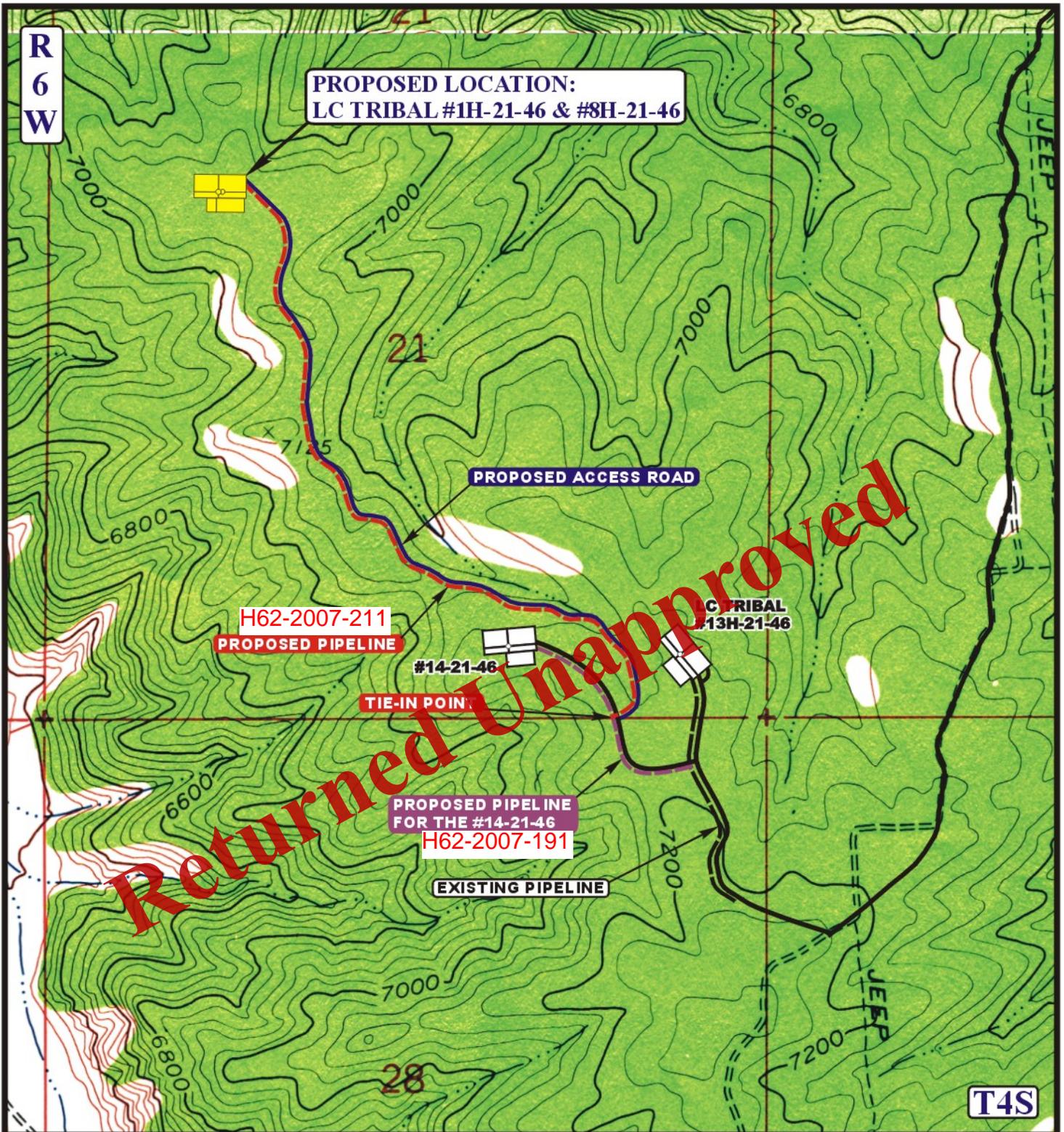
**BILL BARRETT CORPORATION**

LC TRIBAL #1H-21-46 & #8H-21-46  
 SECTION 21, T4S, R6W, U.S.B.&M.  
 SW 1/4 NW 1/4

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



<b>ACCESS ROAD MAP</b>	<b>04 23 07</b> MONTH DAY YEAR	<b>B TOPO</b>
SCALE: 1" = 2000'	DRAWN BY: A.A. REV: 03-21-12 C.I.	



**APPROXIMATE TOTAL PIPELINE DISTANCE = 5,515' +/-**

**LEGEND:**

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

**BILL BARRETT CORPORATION**

**LC TRIBAL #1H-21-46 & #8H-21-46  
SECTION 21, T4S, R6W, U.S.B.&M.  
SW 1/4 NW 1/4**

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



**TOPOGRAPHIC MAP** 04 23 07  
MONTH DAY YEAR  
SCALE: 1" = 1000' DRAWN BY: A.A. REV: 03-21-12 C.I.

**C**  
**TOPO**

**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: 0.59  
Local North: True

**WELL DETAILS:** 8H-21-46 LC Tribal

Ground Level: 7099.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	652697.34	2259506.86	40° 7' 17.890 N	110° 34' 19.222 W	

**WELLBORE TARGET DETAILS (LAT/LONG)**

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
8H-21-46 LC Tribal PBHL	5920.0	-634.3	3182.8	40° 7' 11.618 N	110° 33' 38.250 W	Rectangle (Sides: L200.0 W200.0)

**SECTION DETAILS**

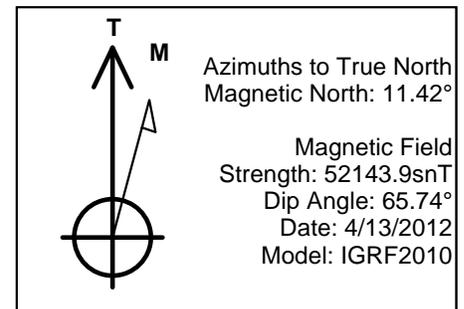
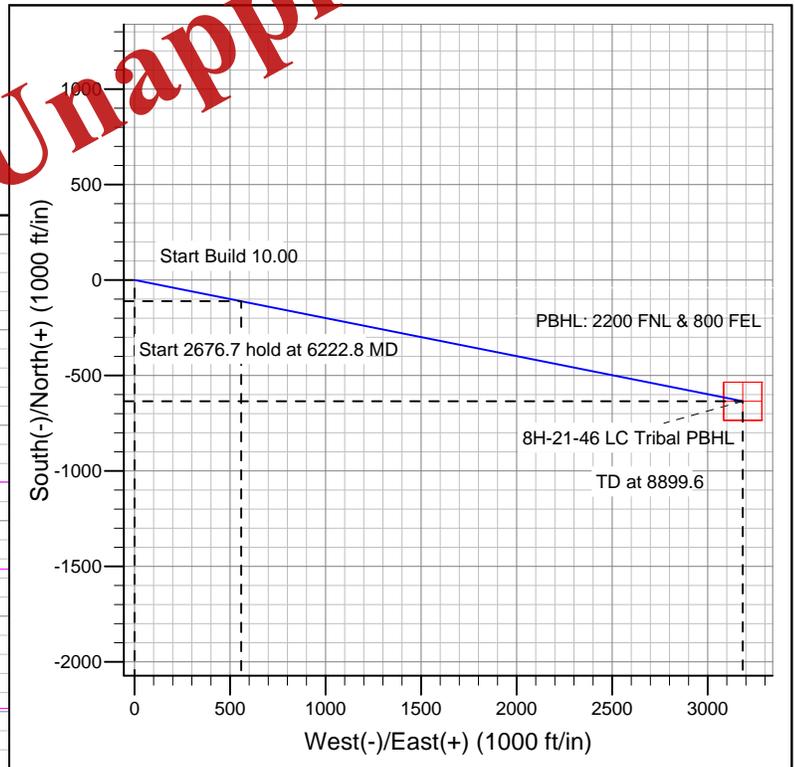
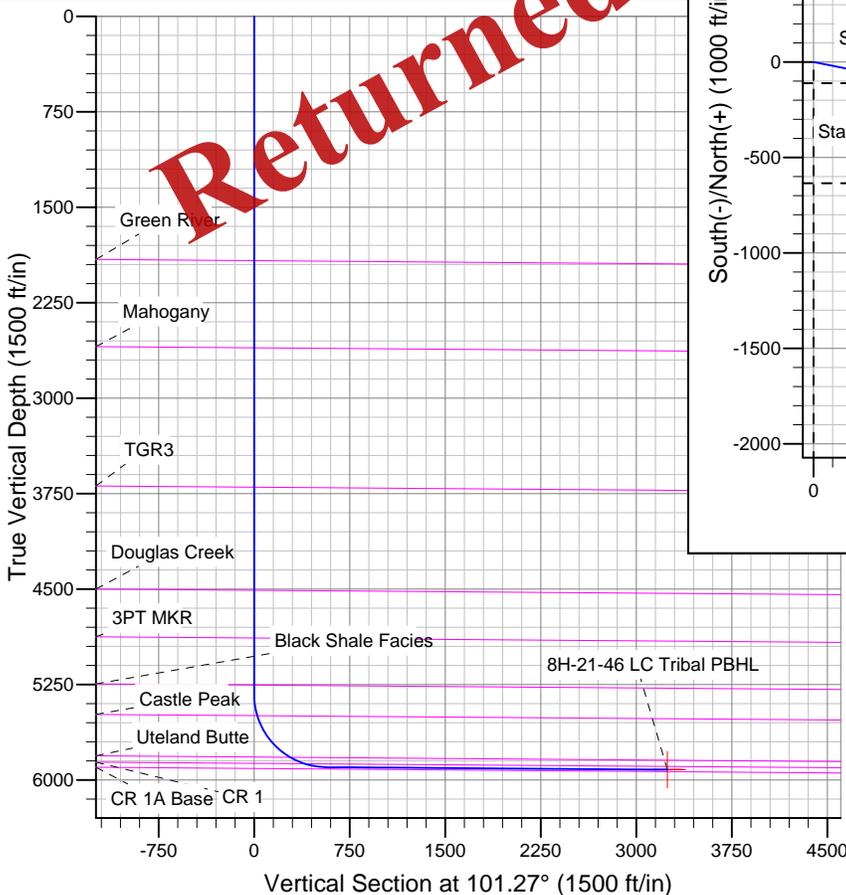
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5327.1	0.00	0.00	5327.1	0.0	0.0	0.00	0.00	0.0	
3	6222.8	89.57	101.27	5900.0	-111.2	557.7	10.00	101.27	568.7	
4	8899.6	89.57	101.27	5920.0	-634.3	3182.8	0.00	0.00	3245.4	
5	8899.6	0.00	0.00	5920.0	-634.3	3182.8	0.00	180.00	3245.4	8H-21-46 LC Tribal PBHL

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
1920.0	1920.0	CR 1A Base
2605.0	2605.0	Green River
3700.0	3700.0	Mahogany
4510.0	4510.0	TGR3
4885.0	4885.0	Douglas Creek
5250.0	5250.0	3PT MKR
5497.7	5497.7	Black Shale Facies
5822.1	5924.8	Castle Peak
5873.0	6050.3	Uteland Butte
		CR 1

**CASING DETAILS**

No casing data is available



# **BILL BARRETT CORP**

**DUCHESNE COUNTY, UT (NAD 27)**

**8H-21-46 LC Tribal**

**8H-21-46 LC Tribal**

**8H-21-46 LC Tribal**

**Plan: Design #1**

## **Standard Planning Report**

**13 April, 2012**

**Returned Unapproved**

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 8H-21-46 LC Tribal
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Site:</b>	8H-21-46 LC Tribal	<b>North Reference:</b>	True
<b>Well:</b>	8H-21-46 LC Tribal	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	8H-21-46 LC Tribal		
<b>Design:</b>	Design #1		

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

<b>Site</b> 8H-21-46 LC Tribal			
<b>Site Position:</b>		<b>Northing:</b>	652,697.35 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,259,506.86 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 7' 17.890 N
		<b>Longitude:</b>	110° 34' 19.222 W
		<b>Grid Convergence:</b>	0.59 °

<b>Well</b> 8H-21-46 LC Tribal			
<b>Well Position</b>	+N/-S	0.0 ft	<b>Northing:</b> 652,697.34 ft
	+E/-W	0.0 ft	<b>Easting:</b> 2,259,506.86 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b> ft
			<b>Latitude:</b> 40° 7' 17.890 N
			<b>Longitude:</b> 110° 34' 19.222 W
			<b>Ground Level:</b> 7,099.0 ft

<b>Wellbore</b> 8H-21-46 LC Tribal					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/13/2012	11.42	65.74	52,144

<b>Design</b> Design #1				
<b>Audit Notes:</b>				
<b>Version:</b>	Present	PLAN	<b>Tie On Depth:</b> 0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	101.27

<b>Plan Sections</b>										
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	
5,327.1	0.00	0.00	5,327.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,222.8	89.57	101.27	5,900.0	-111.2	557.7	10.00	10.00	0.00	101.27	
8,899.6	89.57	101.27	5,920.0	-634.3	3,182.8	0.00	0.00	0.00	0.00	
8,899.6	0.00	0.00	5,920.0	-634.3	3,182.8	0.00	0.00	0.00	180.00	8H-21-46 LC Tribal PI

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 8H-21-46 LC Tribal
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Site:</b>	8H-21-46 LC Tribal	<b>North Reference:</b>	True
<b>Well:</b>	8H-21-46 LC Tribal	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	8H-21-46 LC Tribal		
<b>Design:</b>	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
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Green River</b>									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,605.0	0.00	0.00	2,605.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Mahogany</b>									
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>TGR3</b>									
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,510.0	0.00	0.00	4,510.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Douglas Creek</b>									
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00

Returned Unapproved

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 8H-21-46 LC Tribal
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Site:</b>	8H-21-46 LC Tribal	<b>North Reference:</b>	True
<b>Well:</b>	8H-21-46 LC Tribal	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	8H-21-46 LC Tribal		
<b>Design:</b>	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)
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,885.0	0.00	0.00	4,885.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>3PT MKR</b>									
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,255.0	0.00	0.00	5,255.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Black Shale Facies</b>									
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,327.1	0.00	0.00	5,327.1	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	7.29	101.27	5,399.8	-0.9	4.5	4.6	10.00	10.00	0.00
5,497.7	17.06	101.27	5,495.2	-4.9	24.7	25.2	10.00	10.00	0.00
<b>Castle Peak</b>									
5,500.0	17.29	101.27	5,497.4	-5.1	23.4	23.9	10.00	10.00	0.00
5,600.0	27.29	101.27	5,589.8	-12.5	23.8	63.8	10.00	10.00	0.00
5,700.0	37.29	101.27	5,674.2	-22.9	114.9	117.1	10.00	10.00	0.00
5,800.0	47.29	101.27	5,748.1	-36.0	180.8	184.3	10.00	10.00	0.00
5,900.0	57.29	101.27	5,809.2	-51.5	258.3	263.3	10.00	10.00	0.00
5,924.8	59.77	101.27	5,827.1	-55.6	279.0	284.5	10.00	10.00	0.00
<b>Uteland Butte</b>									
6,000.0	67.29	101.27	5,855.6	-68.8	345.0	351.8	10.00	10.00	0.00
6,050.3	72.32	101.27	5,873.0	-78.0	391.2	398.9	10.00	10.00	0.00
<b>CR 1</b>									
6,100.0	77.29	101.27	5,886.0	-87.3	438.3	446.9	10.00	10.00	0.00
6,200.0	87.29	101.27	5,899.4	-106.7	535.3	545.9	10.00	10.00	0.00
6,224.8	89.57	101.27	5,900.0	-111.2	557.7	568.7	10.00	10.00	0.00
6,300.0	89.57	101.27	5,900.6	-126.2	633.4	645.9	0.00	0.00	0.00
6,400.0	89.57	101.27	5,901.4	-145.8	731.5	745.9	0.00	0.00	0.00
6,500.0	89.57	101.27	5,902.1	-165.3	829.5	845.8	0.00	0.00	0.00
6,600.0	89.57	101.27	5,902.9	-184.9	927.6	945.8	0.00	0.00	0.00
6,700.0	89.57	101.27	5,903.6	-204.4	1,025.7	1,045.8	0.00	0.00	0.00
6,800.0	89.57	101.27	5,904.3	-224.0	1,123.7	1,145.8	0.00	0.00	0.00
6,900.0	89.57	101.27	5,905.1	-243.5	1,221.8	1,245.8	0.00	0.00	0.00
7,000.0	89.57	101.27	5,905.8	-263.1	1,319.9	1,345.8	0.00	0.00	0.00
7,100.0	89.57	101.27	5,906.6	-282.6	1,417.9	1,445.8	0.00	0.00	0.00
7,200.0	89.57	101.27	5,907.3	-302.1	1,516.0	1,545.8	0.00	0.00	0.00
7,300.0	89.57	101.27	5,908.1	-321.7	1,614.1	1,645.8	0.00	0.00	0.00
7,400.0	89.57	101.27	5,908.8	-341.2	1,712.2	1,745.8	0.00	0.00	0.00
7,500.0	89.57	101.27	5,909.6	-360.8	1,810.2	1,845.8	0.00	0.00	0.00
7,600.0	89.57	101.27	5,910.3	-380.3	1,908.3	1,945.8	0.00	0.00	0.00
7,700.0	89.57	101.27	5,911.1	-399.9	2,006.4	2,045.8	0.00	0.00	0.00
7,800.0	89.57	101.27	5,911.8	-419.4	2,104.4	2,145.8	0.00	0.00	0.00
7,900.0	89.57	101.27	5,912.5	-439.0	2,202.5	2,245.8	0.00	0.00	0.00
8,000.0	89.57	101.27	5,913.3	-458.5	2,300.6	2,345.8	0.00	0.00	0.00
8,100.0	89.57	101.27	5,914.0	-478.0	2,398.6	2,445.8	0.00	0.00	0.00
8,200.0	89.57	101.27	5,914.8	-497.6	2,496.7	2,545.8	0.00	0.00	0.00
8,300.0	89.57	101.27	5,915.5	-517.1	2,594.8	2,645.8	0.00	0.00	0.00
8,400.0	89.57	101.27	5,916.3	-536.7	2,692.8	2,745.8	0.00	0.00	0.00
8,500.0	89.57	101.27	5,917.0	-556.2	2,790.9	2,845.8	0.00	0.00	0.00
8,600.0	89.57	101.27	5,917.8	-575.8	2,889.0	2,945.8	0.00	0.00	0.00
8,700.0	89.57	101.27	5,918.5	-595.3	2,987.0	3,045.8	0.00	0.00	0.00

Returned Unapproved

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 8H-21-46 LC Tribal
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7115.0ft (Original Well Elev)
<b>Site:</b>	8H-21-46 LC Tribal	<b>North Reference:</b>	True
<b>Well:</b>	8H-21-46 LC Tribal	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	8H-21-46 LC Tribal		
<b>Design:</b>	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)
8,800.0	89.57	101.27	5,919.3	-614.9	3,085.1	3,145.8	0.00	0.00	0.00
8,899.6	0.00	0.00	5,920.0	-634.3	3,182.8	3,245.4	89.96	-89.96	0.00

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction	
1,920.0	1,920.0	Green River		0.43	101.27	
2,605.0	2,605.0	Mahogany		0.43	101.27	
3,700.0	3,700.0	TGR3		0.43	101.27	
4,510.0	4,510.0	Douglas Creek		0.43	101.27	
4,885.0	4,885.0	3PT MKR		0.43	101.27	
5,255.0	5,255.0	Black Shale Facies		0.43	101.27	
5,497.7	5,495.0	Castle Peak		0.43	101.27	
5,924.8	5,820.0	Uteland Butte		0.43	101.27	
6,050.3	5,870.0	CR 1		0.43	101.27	
	5,910.0	CR 1A Base		0.43	101.27	

Returned Unapproved

**SURFACE USE PLAN**

BILL BARRETT CORPORATION

*LC Tribal 1H-21-46 & 8H-21-46 Multi Well Pad*

<i>LC Tribal 1H-21-46 (formerly 5-21-46 DLB)</i>	<i>LC Tribal 8H-21-46</i>
1520' FNL & 1199' FWL, SW NW Sec 21, T4S-R6W (Surface) 800' FNL & 800' FEL, NE NE Sec 21, T4S-R6W (Btm hole)	1520' FNL & 1215' FWL, SW NW Sec 21, T4S-R6W (Surface) 2200' FNL & 800' FEL, SE NE Sec 21, T4S-R6W (Btm hole)

**Tribal concurrences were approved for this wellpad and access road under ROW H62-2007-210 and an approved APD was issued for the 5-21-46 DLB on March 16, 2011. BBC has submitted a sundry notice to change the 5-21-46 DLB to be a horizontal well and change the name to the LC Tribal 1H-21-46. We are now proposing an additional horizontal well to be drilled from this pad, the LC Tribal 8H-21-46. No additional disturbance is being requested beyond what the current ROW allows and the BIA has approved a Categorical Exclusion for this additional well.**

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 13.65 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. A portion of the existing Bill Barrett Corporation maintained 7-21-46 would be utilized for access to the proposed location with no improvements anticipated.
- 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.
- 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 permits 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 5559 feet of existing/approved access road (ROW H62-2007-210) trending northwest is planned from the existing/approved 14-21-46 well site access road (ROW H62-2007-190) (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 tamping 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.
- h. Turnouts are not proposed.

- i. A culvert will be installed at the pipeline tie-in on the main road to help control erosion in that area. No 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. No gates or cattle guards 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 none
    - v. temp shut-in wells none
    - vi. producing wells two
    - vii. abandoned wells two
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 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 5515 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 existing/approved (H62-2007-211) trending southeast to the existing/approved pipeline corridor for the 14-21-46 (ROW H62-2007-191). Pipelines would be constructed of steel, polyethylene or fiberglass and would connect to the 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 Olive Black, to match the standard environmental colors. All facilities would be painted the designated color at the time of installation.

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	4/13/2004	Knight Diversion Dam	Duchesne River
43-1202, Change a13837	Myton City	5.49 cfs 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, Appl. 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.

- 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. The reserve pit would be constructed so as not to leak, break or allow any discharge.
- c. The reserve would be lined with 12 mil (minimum) thickness polyethylene nylon reinforced liner material. The liner(s) would overlay straw, dirt and/or bentonite if rock is encountered during excavation. The liner would overlap the pit walls and be covered with dirt and/or rocks to hold them in place. No trash, scrap pipe, or other materials that could puncture the liner would be discarded in the pit. A minimum of two feet of free board would be maintained between the maximum fluid level and the top of the reserve pit at all times.

To deter livestock from entering the pit, 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 pit and buried on-site for a period not to exceed six months, weather permitting
- 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

<b>Disposal Facilities</b>
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.
- 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 CO<sub>2</sub> 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.

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- 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.
- m. Hydrocarbons would be removed from the reserve pit 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 powerline corridor is not being applied for at this time.

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 375 feet x 270 feet with an inboard reserve pit size of 200 feet x 80 feet x 8 feet deep. 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. Fill from pit excavation would be stockpiled along the edge of the pit and the adjacent edge of the well pad.

- g. 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.
  - h. All cut and fill slopes would be such that stability can be maintained for the life of the activity.
  - i. Diversion ditches would be constructed, if necessary, around the well site to prevent surface waters from entering the well site area.
  - j. Water application may be implemented if necessary to minimize the amount of fugitive dust.
  - k. 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 reserve pit and that 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.

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 – Ute Indian Tribe - 988 South 7500 East; Ft. Duchesne, Utah 84026; 435-725-4982.

12. Other Information:

- a. Montgomery Archeological Consultants has conducted a Class III archeological survey. A copy of the report is on file with the Bureau of Land Management by Montgomery as report 07-105 dated 04/27/2007.
- 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.

No additional disturbance will be required for the wellpad, access road and pipeline tribal ROW

Bill Barrett Corporation  
Surface Use Plan  
LC Tribal 1H-21-46 & 8H-21-46  
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.

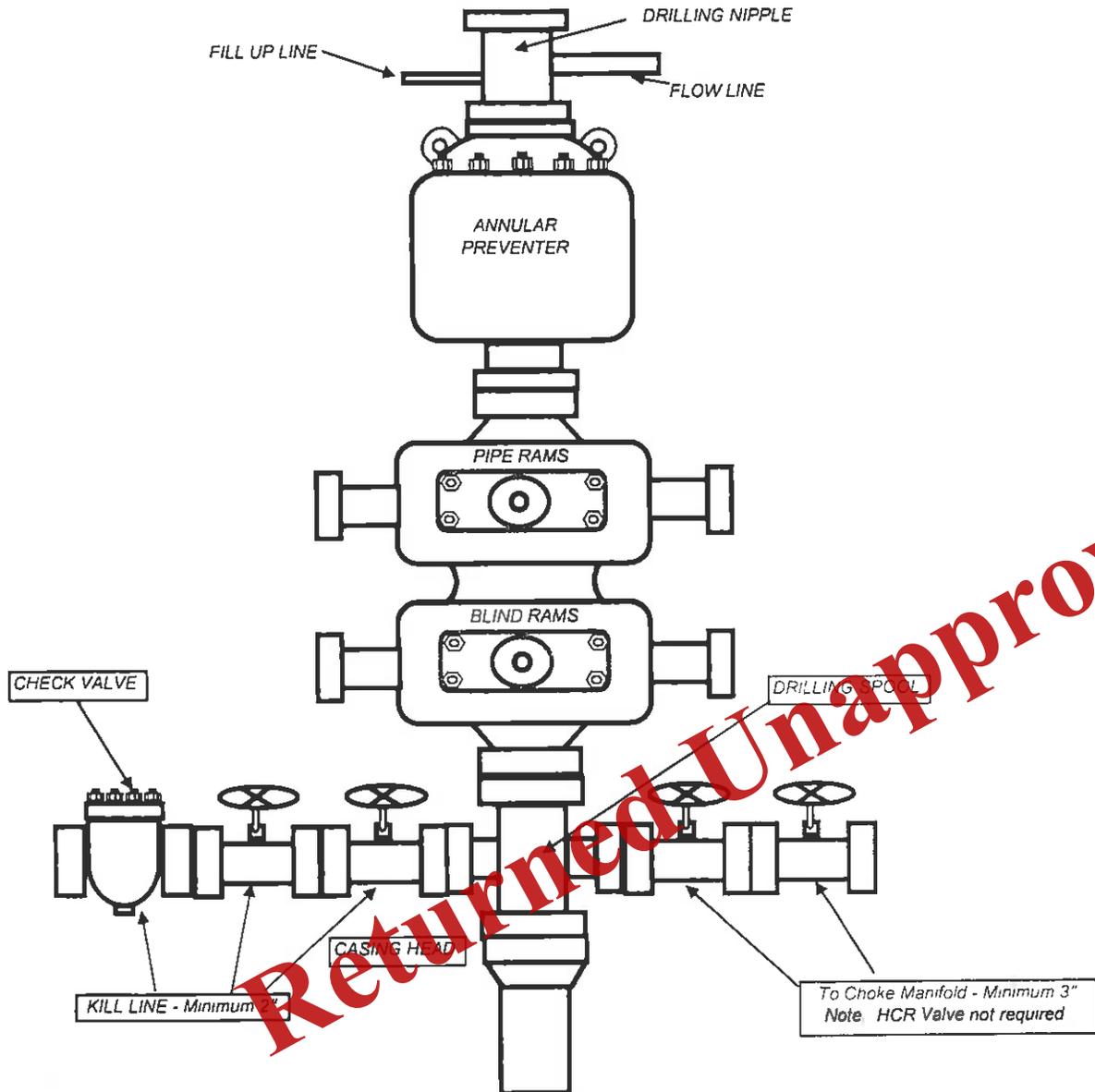
Executed this 14<sup>th</sup> day of May 2012  
Name: Venessa Langmacher  
Position Title: Senior Permit Analyst  
Address: 1099 18<sup>th</sup> Street, Suite 2300 Denver, CO 80202  
Telephone: 303-312-8172  
E-mail: vlangmacher@billbarrettcorp.com  
Field Representative: Kary Eldredge / Bill Barrett Corporation  
Address: 1820 W Highway 40, Roosevelt, UT 84066  
Telephone: 435-724-3515 (office); 435-724-6789 (mobile)  
E-mail: keidredge@billbarrettcorp.com

*Venessa Langmacher*  
\_\_\_\_\_  
Venessa Langmacher, Senior Permit Analyst

**Returned Unapproved**

# BILL BARRETT CORPORATION

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







May 14, 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: Horizontal Drilling  
LC Tribal # 8H-21-46  
Section 21, T4S-R6W, U.S.B.&M.  
Duchesne County, Utah**

**Surface Hole Location: 1520' FNL & 1215' FWL, SWNW, 21-T4S-R6W, USB&M  
Bottom Hole Location: 2200' FNL & 800' FEL, SENE, 21-T4S-R6W, USB&M**

Dear Ms. Mason:

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill ("APD") regarding the above-referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Order 139-87 pertaining to a 640 acre spacing unit for a horizontal or vertical well.

- Tribal Exploration and Development Agreement #14-20-H62-5500, which includes all of the subject Section 21 and other lands, allows for the drilling of the #8H-21-46 well.
- BBC has drilled the 7-21-46 DLB Well and earned BIA Lease #14-20-H62-6108 covering 640 acres being further described in the Exploration and Development Agreement.
- The LC Tribal #8H-21-46 will be perforated no less than 660 feet from the Section 21 Tribal Lease boundary, in accordance with UDOGM Order #139-87.

Based on the information provided, BBC requests that the permit be granted pursuant to Order #139-87. If you should have any questions or need further information, please contact me at 303-312-8544.

Sincerely,

BILL BARRETT CORPORATION

A handwritten signature in blue ink that reads 'Venusia Gangmacker' with a small 'for' written below it.

David Watts  
Landman

1099 18<sup>TH</sup> STREET  
SUITE 2300  
DENVER, CO 80202  
P 303.293.9100

Received: May 14, 2012

BILL BARRETT CORPORATION

LOCATION LAYOUT FOR

LC TRIBAL #1H-21-46 & #8H-21-46

SECTION 21, T4S, R6W, U.S.B.&M.

SW 1/4 NW 1/4

FIGURE #1

SCALE: 1" = 60'

DATE: 04-20-07

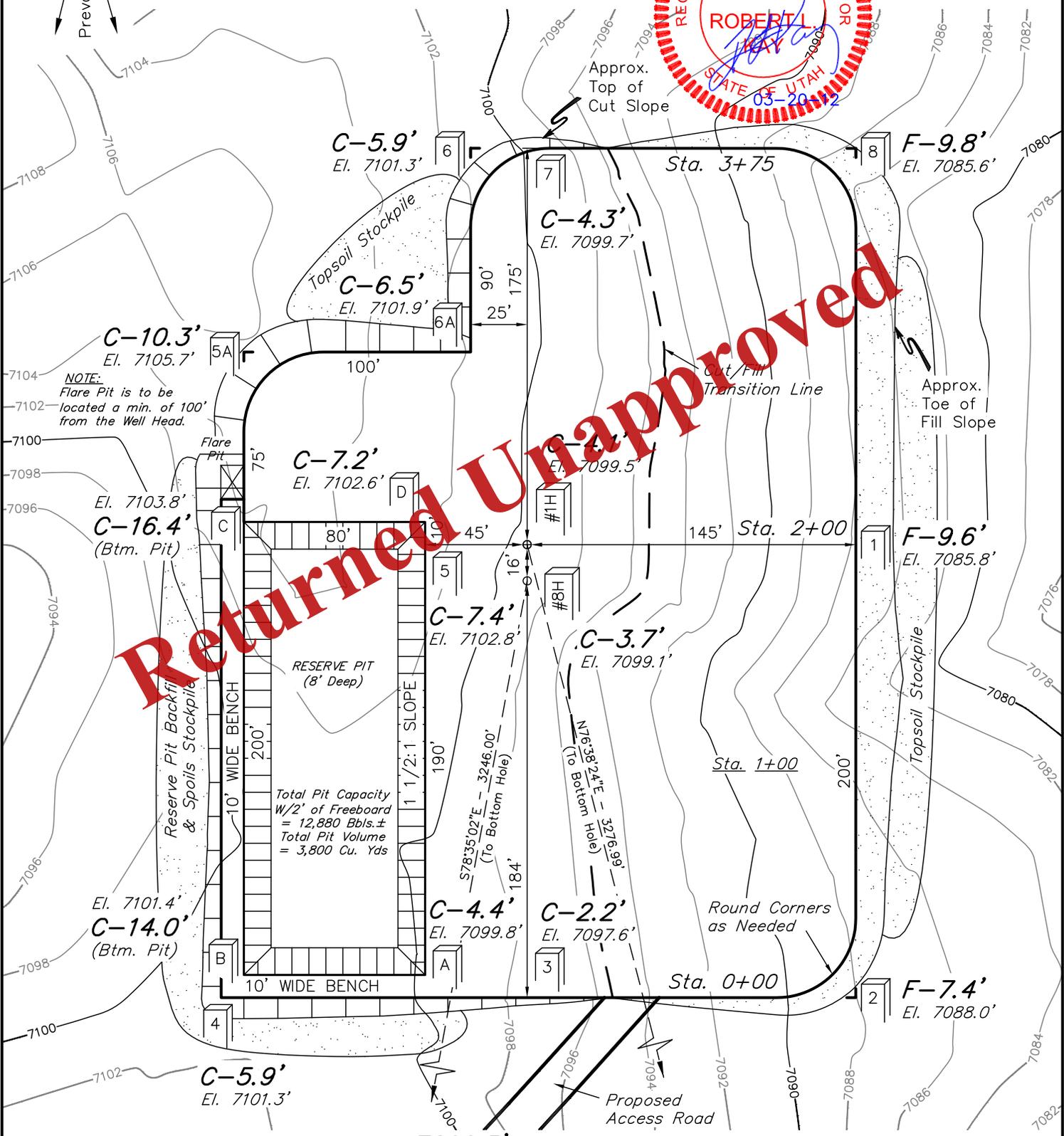
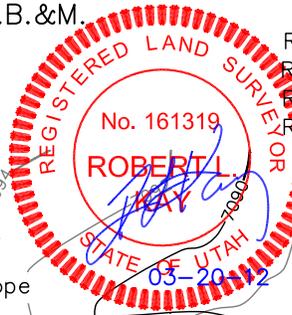
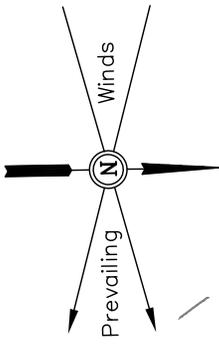
DRAWN BY: P.M.

REVISED: 01-18-12 T.B.

REVISED: 02-24-12 T.B.

REVISED: 03-01-12 T.B.

REVISED: 03-14-12 T.B.



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Elev. Ungraded Ground At #1H Loc. Stake = 7099.5'  
FINISHED GRADE ELEV. AT #1H LOC. STAKE = 7095.4'

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

Received: May 14, 2012

**BILL BARRETT CORPORATION**

**TYPICAL CROSS SECTIONS FOR**

**LC TRIBAL #1H-21-46 & #8H-21-46**

**SECTION 21, T4S, R6W, U.S.B.&M.**

**SW 1/4 NW 1/4**

**FIGURE #2**

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

DATE: 04-20-07

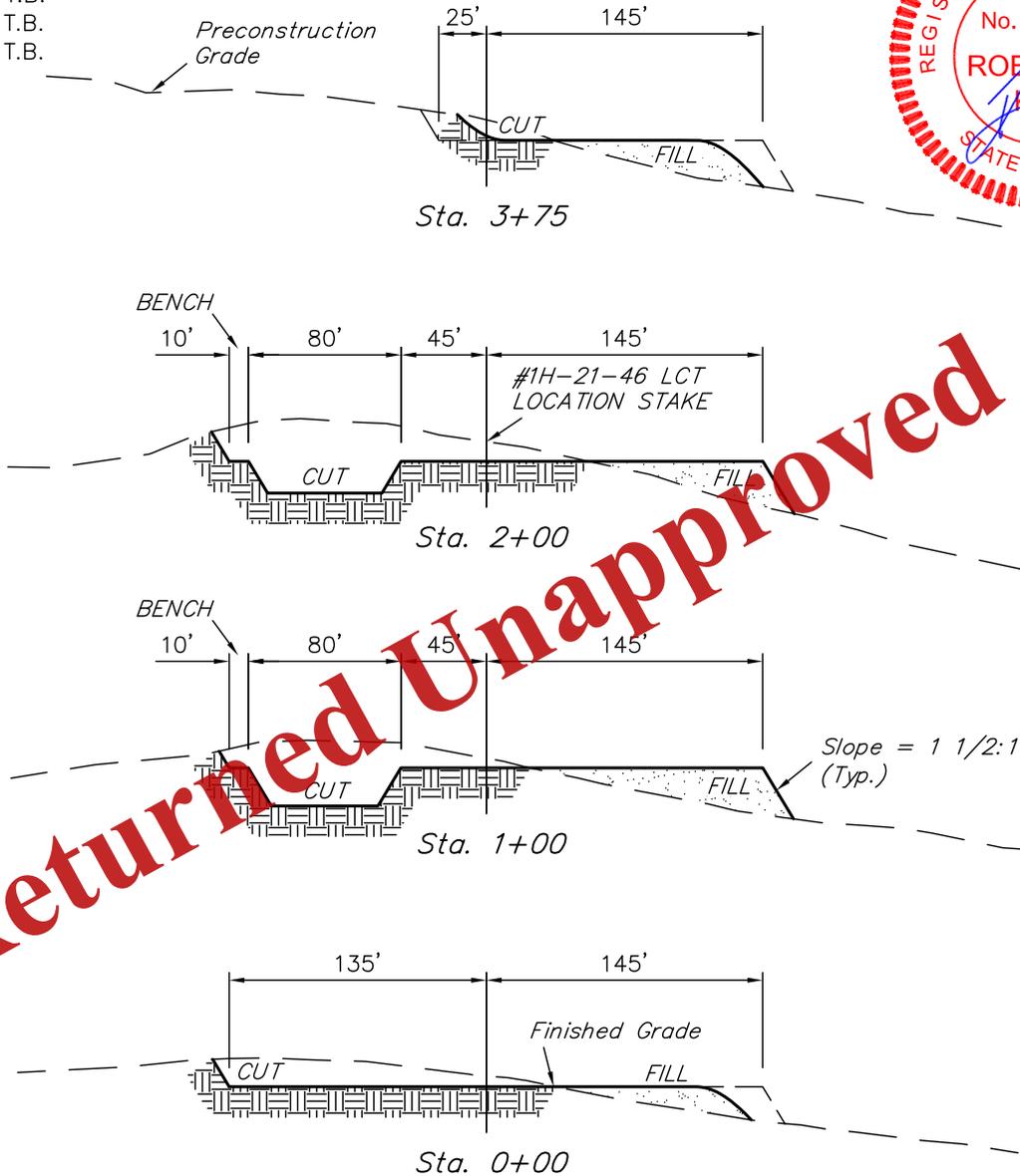
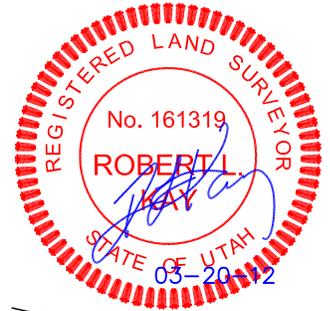
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REVISED: 01-18-12 T.B.

REVISED: 02-24-12 T.B.

REVISED: 03-01-12 T.B.

REVISED: 03-14-12 T.B.



**NOTE:**

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

\* NOTE: FILL QUANTITY INCLUDES 5% FOR COMPACTION

**APPROXIMATE YARDAGES**

(12") Topsoil Stripping	=	4,110 Cu. Yds.
Remaining Location	=	12,460 Cu. Yds.
<b>TOTAL CUT</b>	=	<b>16,570 CU.YDS.</b>
<b>FILL</b>	=	<b>10,560 CU.YDS.</b>

EXCESS MATERIAL	=	6,010 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	6,010 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	0 Cu. Yds.

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

**Received: May 14, 2012**

**BILL BARRETT CORPORATION**

**TYPICAL RIG LAYOUT FOR**

LC TRIBAL #1H-21-46 & #8H-21-46

SECTION 21, T4S, R6W, U.S.B.&M.

SW 1/4 NW 1/4

**FIGURE #3**

SCALE: 1" = 60'

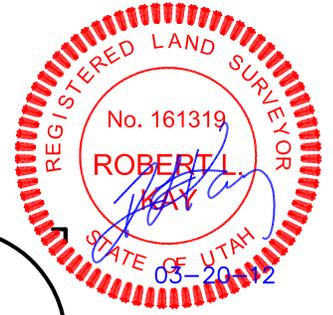
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DRAWN BY: T.B.

REVISED: 02-24-12 T.B.

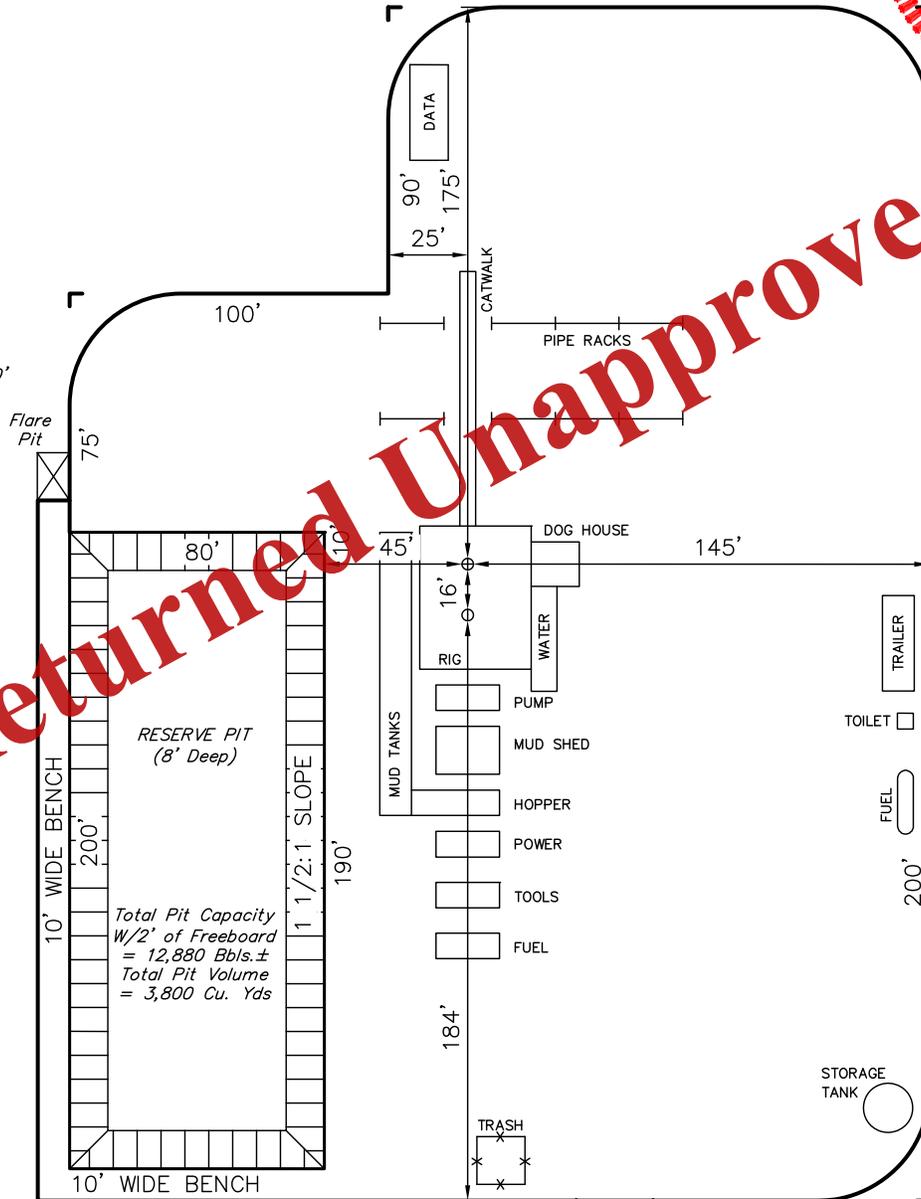
REVISED: 03-01-12 T.B.

REVISED: 03-14-12 T.B.



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

**Returned Unapproved**



Proposed Access Road

**BILL BARRETT CORPORATION**

**INTERIM RECLAMATION PLAN FOR**

**LC TRIBAL #1H-21-46 & #8H-21-46**

**SECTION 21, T4S, R6W, U.S.B.&M.**

**SW 1/4 NW 1/4**

**FIGURE #4**

SCALE: 1" = 60'

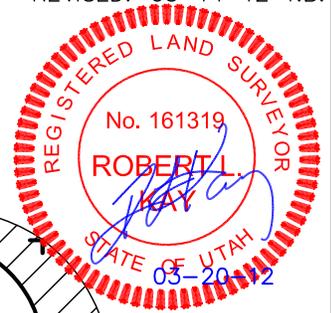
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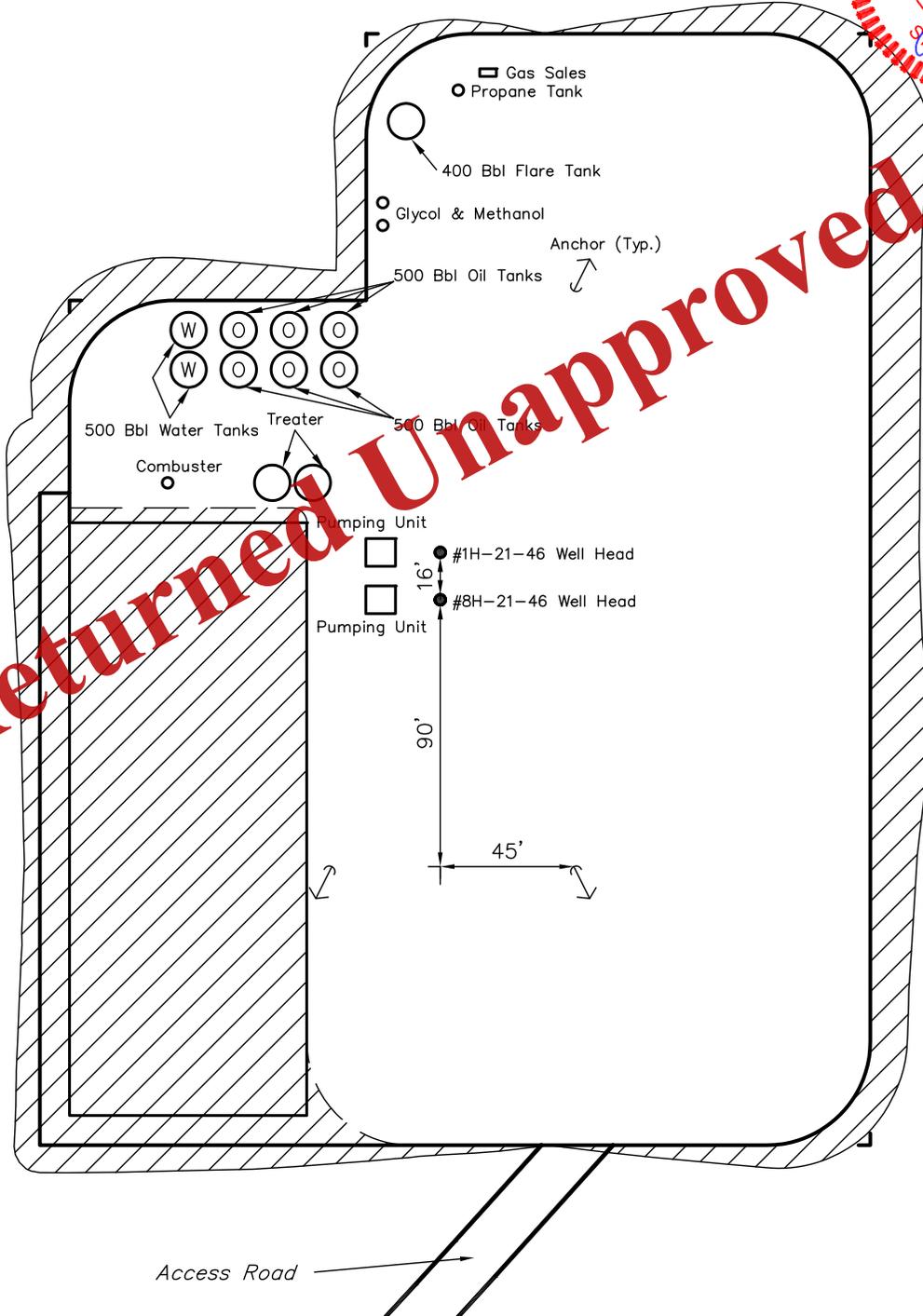
REVISED: 02-24-12 T.B.

REVISED: 03-01-12 T.B.

REVISED: 03-14-12 T.B.



**Returned Unapproved**

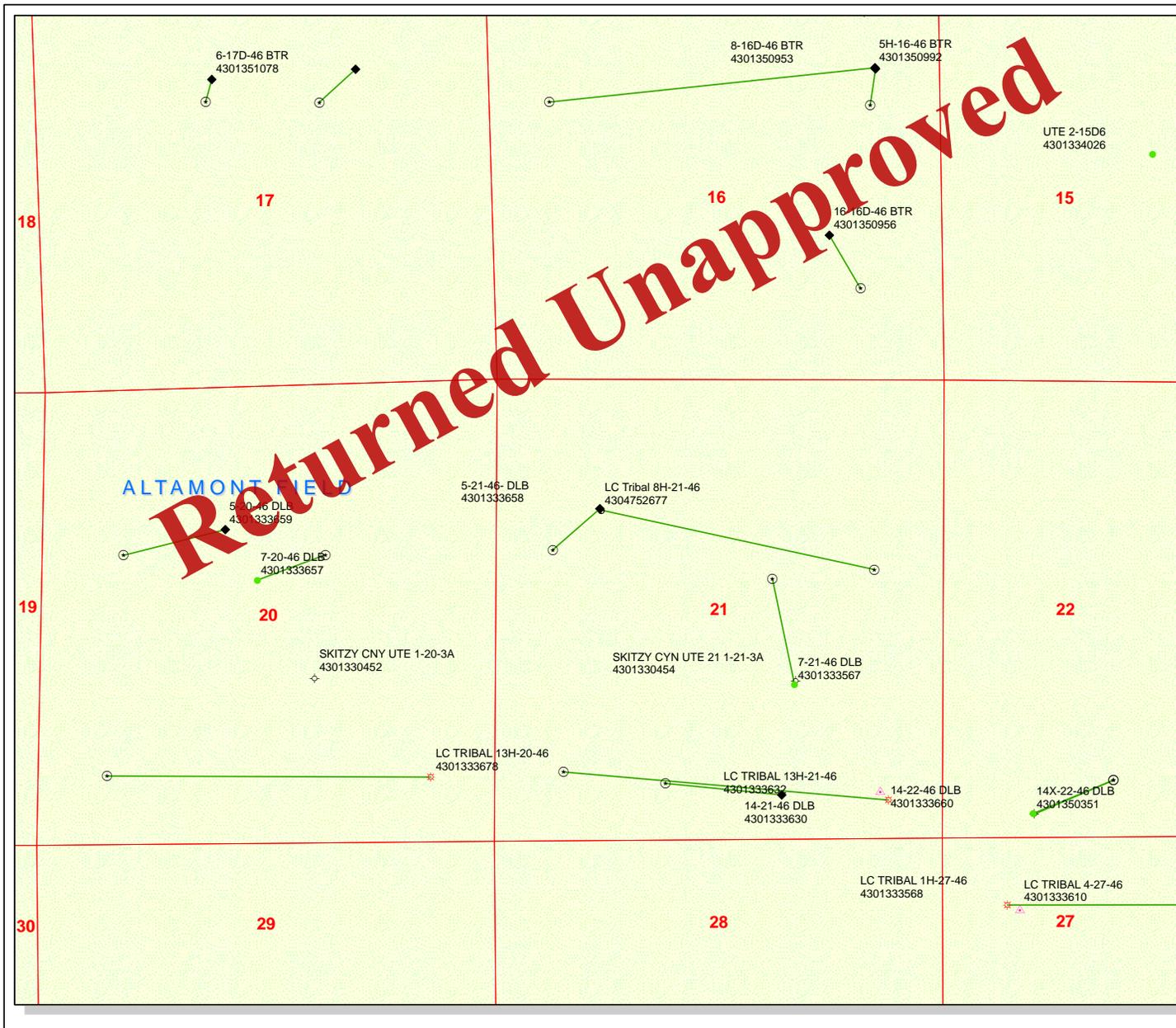


 INTERIM RECLAMATION AREA

APPROXIMATE ACREAGES  
UN-RECLAIMED = ± 1.693 ACRES

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

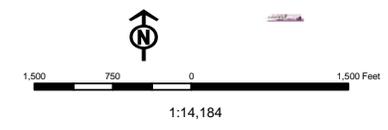
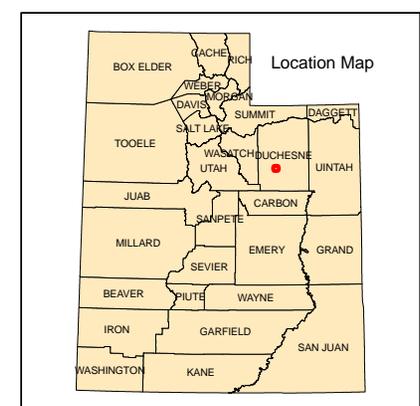
**Received: May 14, 2012**



**API Number:**  
**Well Name: LC Tribal 8H-21-46**  
**Township T0.4 . Range R0.6 . Section 21**  
**Meridian: UBM**  
**Operator: BILL BARRETT CORP**

Map Prepared:  
 Map Produced by Diana Mason

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





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*

May 30, 2012

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 LC Tribal 8H-21-46 well, API 43047526770000 that was submitted May 14, 2012 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