

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 LC Fee 4-24D-47					
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 UNDESIGNATED					
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		1150 FNL 64 FEL		NENE	23	4.0 S	7.0 W	U			
Top of Uppermost Producing Zone		810 FNL 778 FWL		NWNW	24	4.0 S	7.0 W	U			
At Total Depth		810 FNL 810 FWL		NWNW	24	4.0 S	7.0 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) 7450			26. PROPOSED DEPTH MD: 7126 TVD: 7002					
27. ELEVATION - GROUND LEVEL 6822			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 - 1300	36.0	J-55 ST&C	8.8	Halliburton Light , Type Unknown		150	3.16	11.0
							Halliburton Premium , Type Unknown		210	1.36	14.8
PROD	8.75	9.625	0 - 7126	17.0	P-110 LT&C	9.6	Unknown		630	2.31	11.0
							Unknown		680	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 02/21/2013			EMAIL vlangmacher@billbarrettcorp.com					
API NUMBER ASSIGNED 43013520580000			APPROVAL			 Permit Manager					

BILL BARRETT CORPORATION
DRILLING PLAN

LC Tribal 4-24D-47

NE NE, 1150' FNL and 64' FEL, Section 23, T4S-R7W, USB&M (surface hole)
NW NW, 810' FNL and 810' FWL, Section 24, T4S-R7W, 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>
Green River	1,482'	1,472'
Mahogany	2,111'	2,072'
Lower Green River*	3,437'	3,332'
Douglas Creek	4,265'	4,142'
Black Shale	5,111'	4,987'
Castle Peak	5,656'	5,532'
Uteland Butte	5,656'	5,532'
Wasatch*	5,926'	5,802'
TD	7,126'	7,002'

*PROSPECTIVE PAY

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

Base of Useable Water = 3,832'

3. BOP and Pressure Containment Data

<u>Depth Intervals</u>	<u>BOP Equipment</u>
0 – 1,300'	NU Diverter or Rotating Head
1,300' – 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	1,300'	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
 LC Tribal 4-24D-47
 Duchesne County, Utah

5. Cementing Program

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead: 150 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 @ 800'
5 1/2" Production Casing	Lead: 630 sx Tuned Light cement with additives mixed at 11.0 ppg (yield = 2.31 ft ³ /sx). TOC @ 800' Tail: 680 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 @ 4,611'

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' – 1,300'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
1,300' – 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	None anticipated;
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface). FMI & Sonic Scanner to be run at geologist's discretion.

8. Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 3495 psi* and maximum anticipated surface pressure equals approximately 1955 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
LC Tribal 4-24D-47
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: November 2013
Spud: November 2013
Duration: 15 days drilling time
45 days completion time



Bill Barrett Corporation

LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

Well Name: LC Tribal 4-24D-47

Surface Hole Data:

Total Depth:	1,300'
Top of Cement:	0'
OD of Hole:	12.250"
OD of Casing:	9.625"

Calculated Data:

Lead Volume:	438.5	ft ³
Lead Fill:	800'	
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:	150
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Tail Yield:	1.36	ft ³ /sk
% Excess:	75%	
Top of Tail:	800'	

# SK's Tail:	210
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Production Hole Data:

Total Depth:	7,126'
Top of Cement:	800'
Top of Tail:	4,611'
OD of Hole:	8.750"
OD of Casing:	5.500"

Calculated Data:

Lead Volume:	1443.9	ft ³
Lead Fill:	3,811'	
Tail Volume:	953.0	ft ³
Tail Fill:	2,515'	

Cement Data:

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

Calculated # of Sacks:

# SK's Lead:	630
# SK's Tail:	680

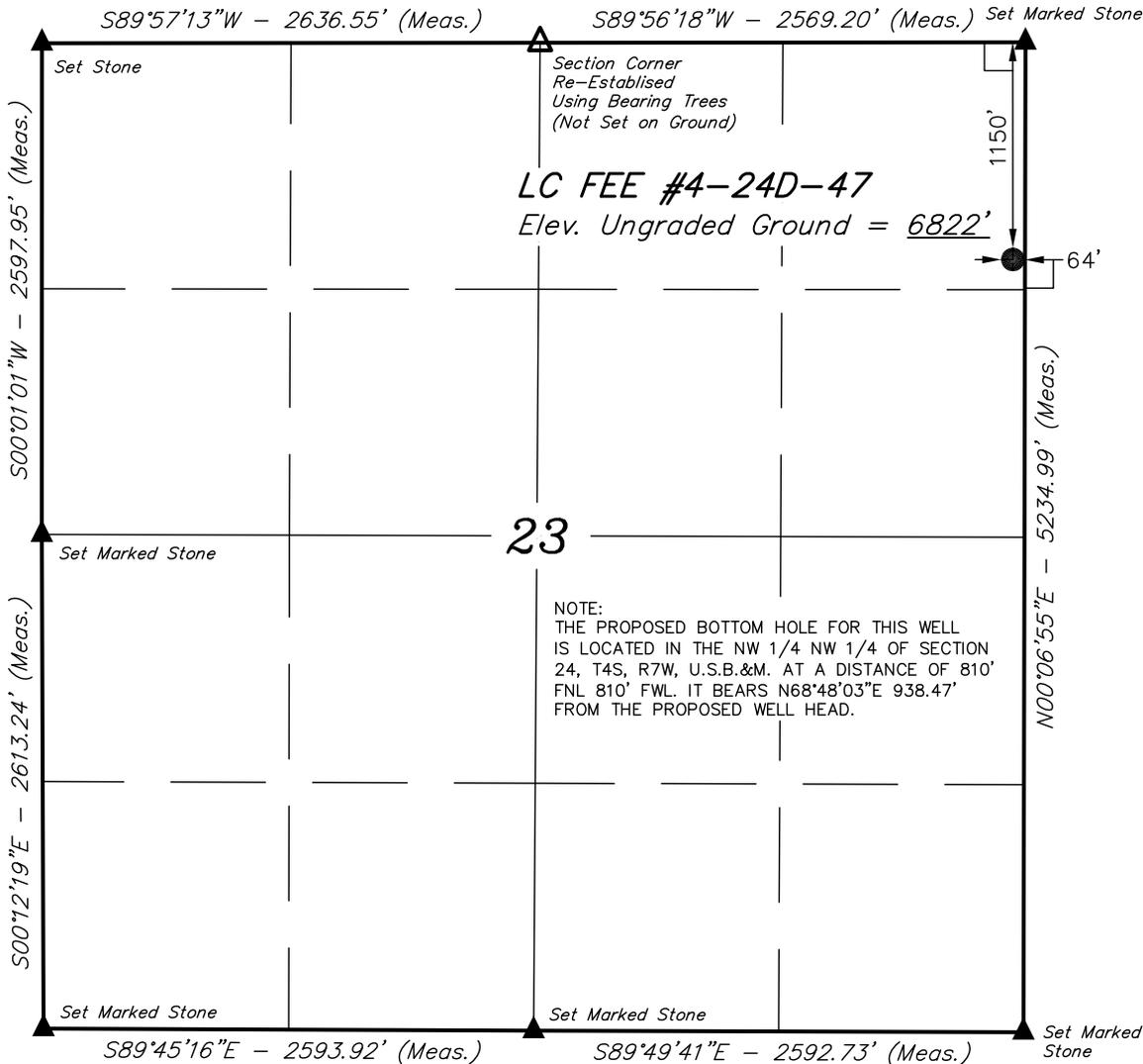
LC Tribal 4-24D-47 Proposed Cementing Program
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<u>Job Recommendation</u>	<u>Surface Casing</u>
Lead Cement - (800' - 0')	
Halliburton Light Premium	Fluid Weight: 11.0 lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield: 3.16 ft ³ /sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid: 19.48 Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid: 0'
2.0% Bentonite	Calculated Fill: 800'
	Volume: 78.09 bbl
	Proposed Sacks: 150 sks
Tail Cement - (TD - 800')	
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: 800'
	Calculated Fill: 500'
	Volume: 48.80 bbl
	Proposed Sacks: 210 sks

<u>Job Recommendation</u>	<u>Production Casing</u>
Lead Cement - (4611' - 800')	
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: 800'
	Calculated Fill: 3,811'
	Volume: 257.16 bbl
	Proposed Sacks: 630 sks
Tail Cement - (7126' - 4611')	
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: 4,611'
	Calculated Fill: 2,515'
	Volume: 169.72 bbl
	Proposed Sacks: 680 sks

T4S, R7W, U.S.B.&M.

BILL BARRETT CORPORATION



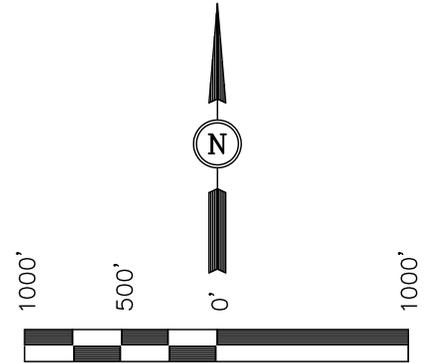
Well location, LC FEE #4-24D-47 (SURFACE LOCATION), located as shown in the NE 1/4 NE 1/4 of Section 23, T4S, R7W, U.S.B.&M., Duchesne County, Utah.

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.

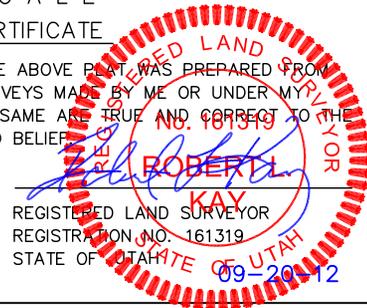
BASIS OF BEARINGS

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



SCALE
 CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT 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.



REVISED: 09-19-12
 REVISED: 02-14-12
 REVISED: 12-15-11

REGISTERED LAND SURVEYOR
 REGISTRATION NO. 161319
 STATE OF UTAH

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

LEGEND:

- = 90° SYMBOL
- = PROPOSED WELL HEAD.
- = SECTION CORNERS LOCATED.

NAD 83 (SURFACE LOCATION)	
LATITUDE =	40°07'20.75" (40.122431)
LONGITUDE =	110°38'01.49" (110.633747)
NAD 27 (SURFACE LOCATION)	
LATITUDE =	40°07'20.90" (40.122472)
LONGITUDE =	110°37'58.93" (110.633036)

SCALE 1" = 1000'	DATE SURVEYED: 09-20-11	DATE DRAWN: 10-06-11
PARTY T.A. C.N. Z.L.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE BILL BARRETT CORPORATION	

RECEIVED: February 21, 2013

T4S, R7W, U.S.B.&M.

BILL BARRETT CORPORATION

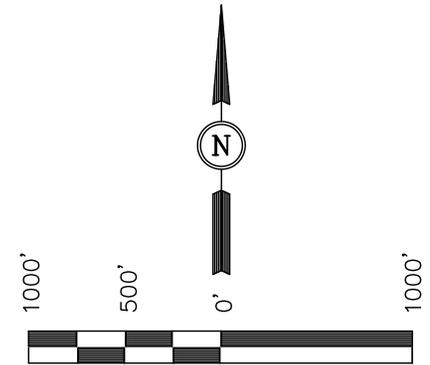
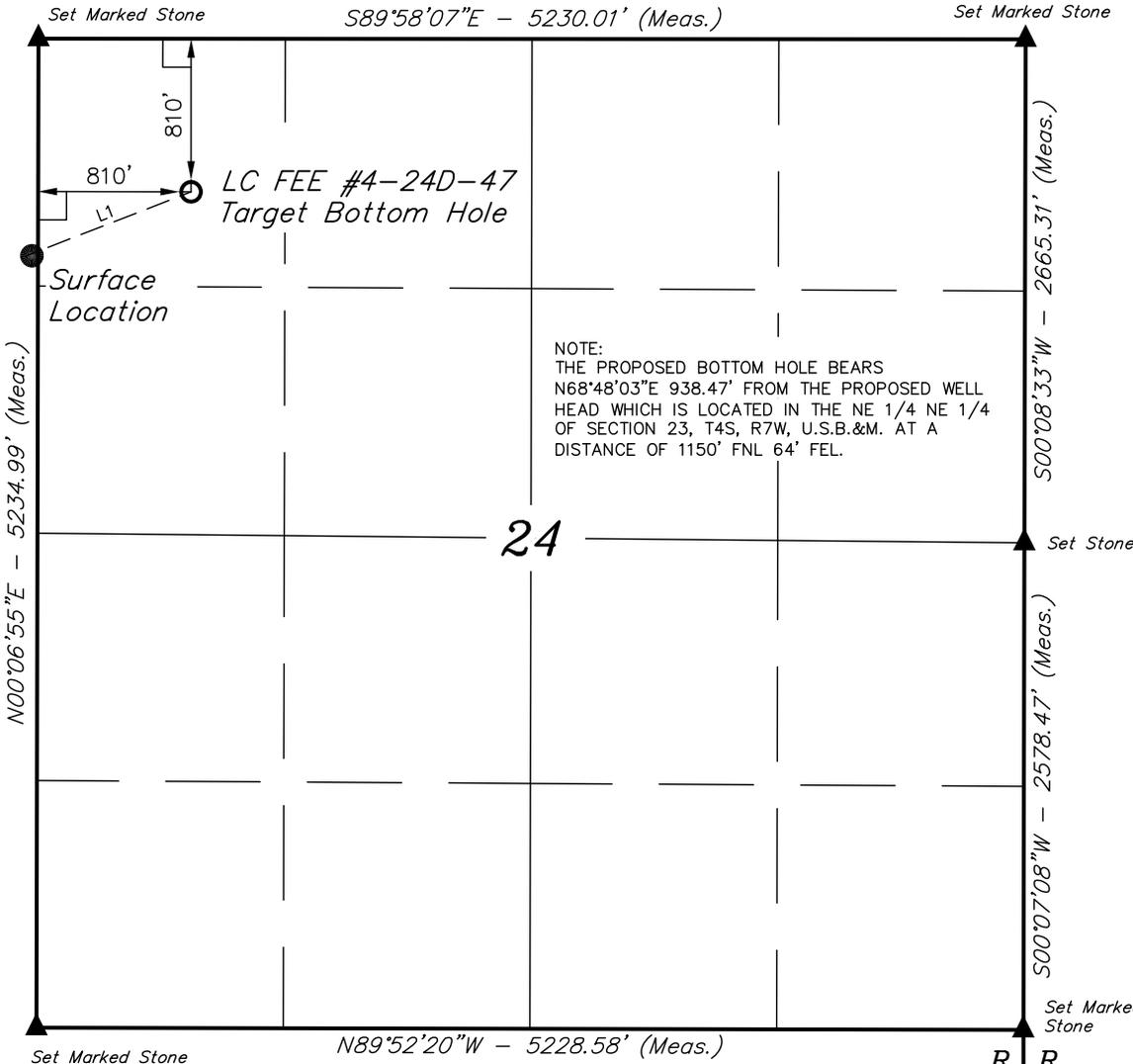
Well location, LC FEE #4-24D-47 (TARGET BOTTOM HOLE), located as shown in the NE 1/4 NE 1/4 of Section 24, T4S, R7W, U.S.B.&M., Duchesne County, Utah.

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 PLAT 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 L. KAY
REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

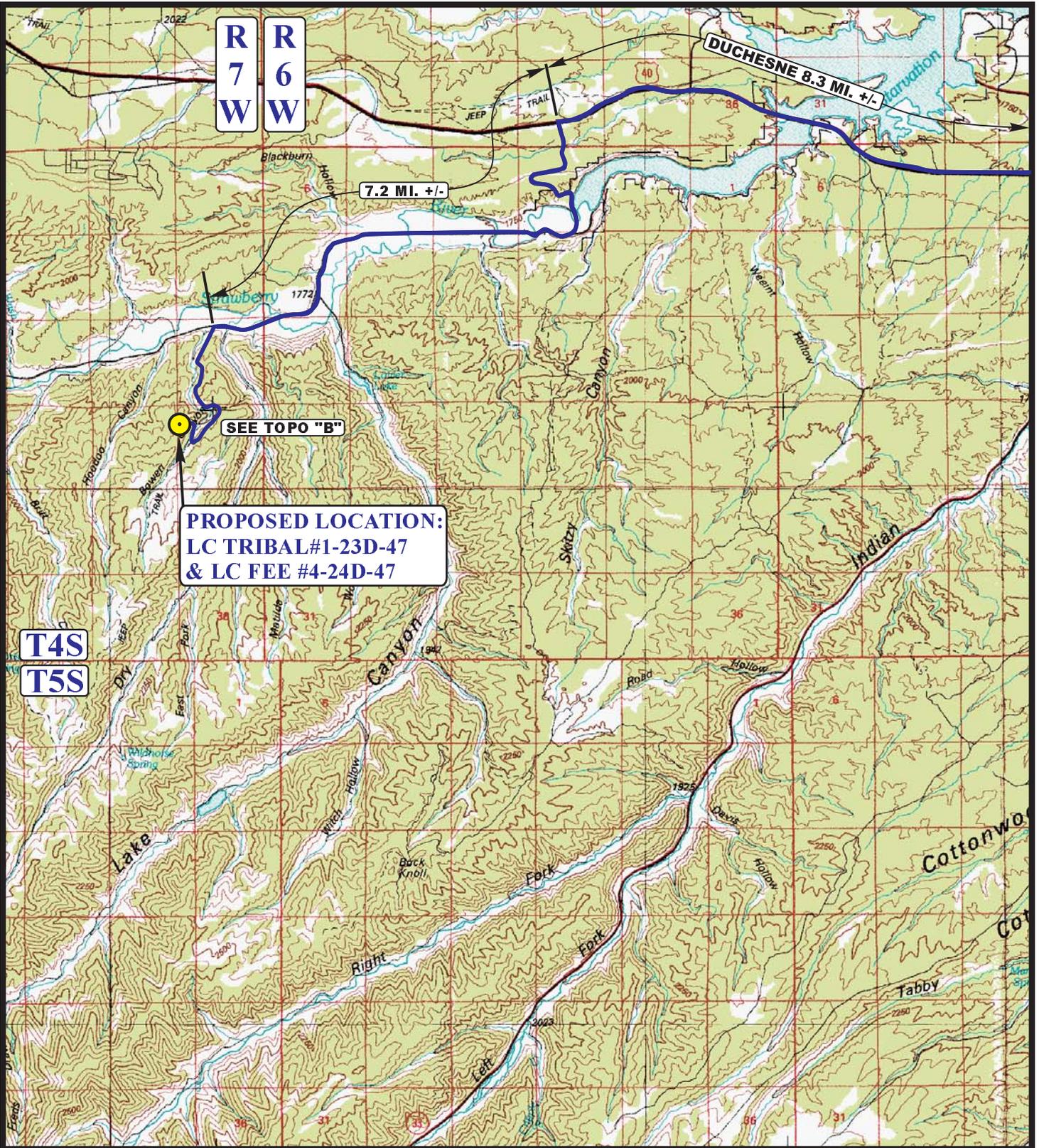
REVISED: 09-19-12
REVISED: 12-15-11

LINE TABLE		
LINE	BEARING	LENGTH
L1	N68°48'03"E	938.47'

- LEGEND:**
- └─┘ = 90° SYMBOL
 - = PROPOSED WELL HEAD.
 - ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	
LATITUDE = 40°07'24.13" (40.123369)	
LONGITUDE = 110°37'50.24" (110.630622)	
NAD 27 (TARGET BOTTOM HOLE)	
LATITUDE = 40°07'24.28" (40.123411)	
LONGITUDE = 110°37'47.68" (110.629911)	

UINTAH ENGINEERING & LAND SURVEYING		
85 SOUTH 200 EAST - VERNAL, UTAH 84078		
(435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 09-20-11	DATE DRAWN: 10-06-11
PARTY T.A. C.N. Z.L.	REFERENCES G.L.O. PLAT	
WEATHER HOT	FILE BILL BARRETT CORPORATION	



LEGEND:

 PROPOSED LOCATION



BILL BARRETT CORPORATION

**LC TRIBAL #1-23D-47 & LC FEE #4-24D-47
SECTION 23, T4S, R7W, U.S.B.&M.
NE 1/4 NE 1/4**



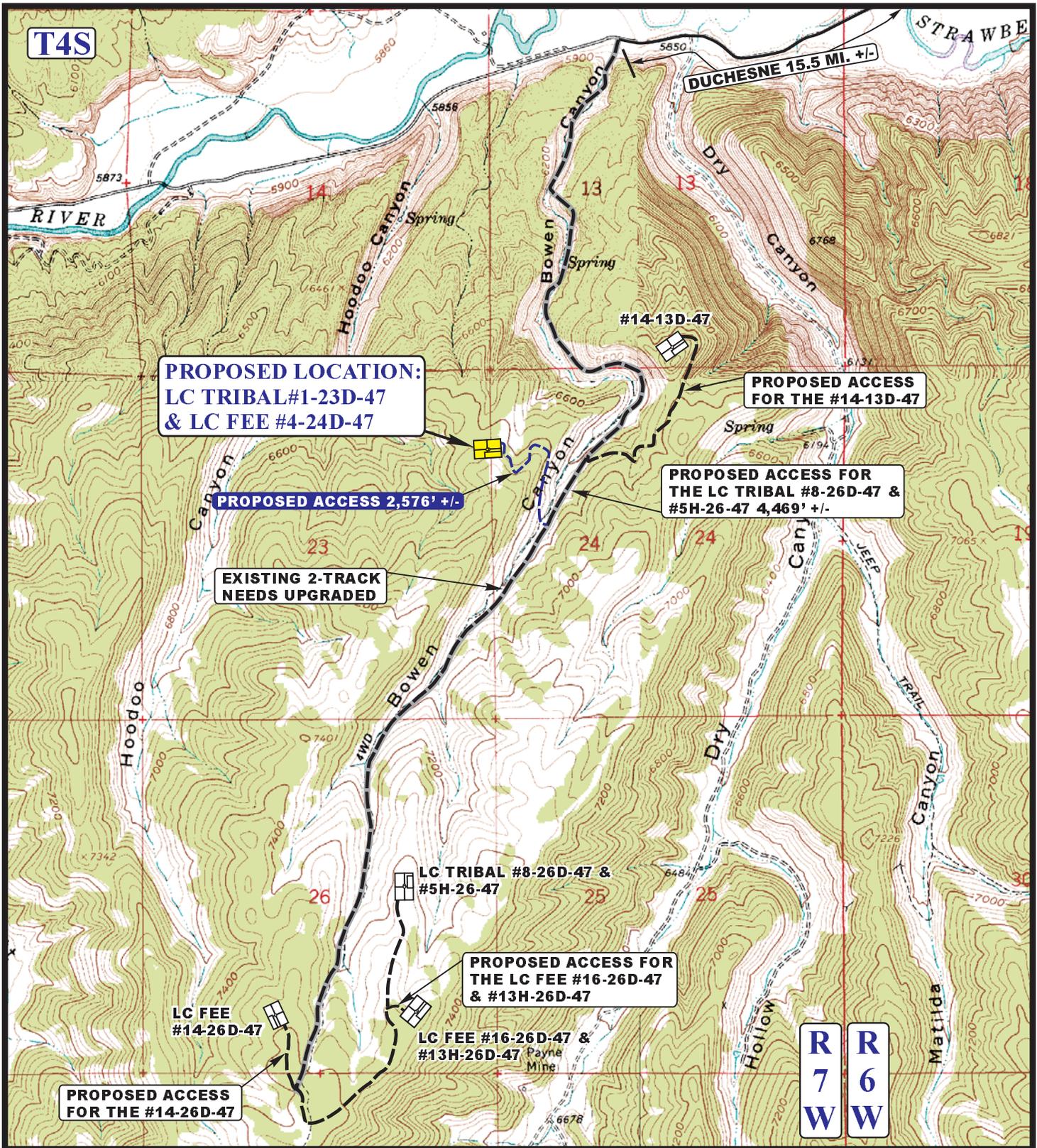
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

**ACCESS ROAD
M A P**

09 22 11
MONTH DAY YEAR



SCALE: 1:100,000 | DRAWN BY: C.I. | REVISED: 02-15-13



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

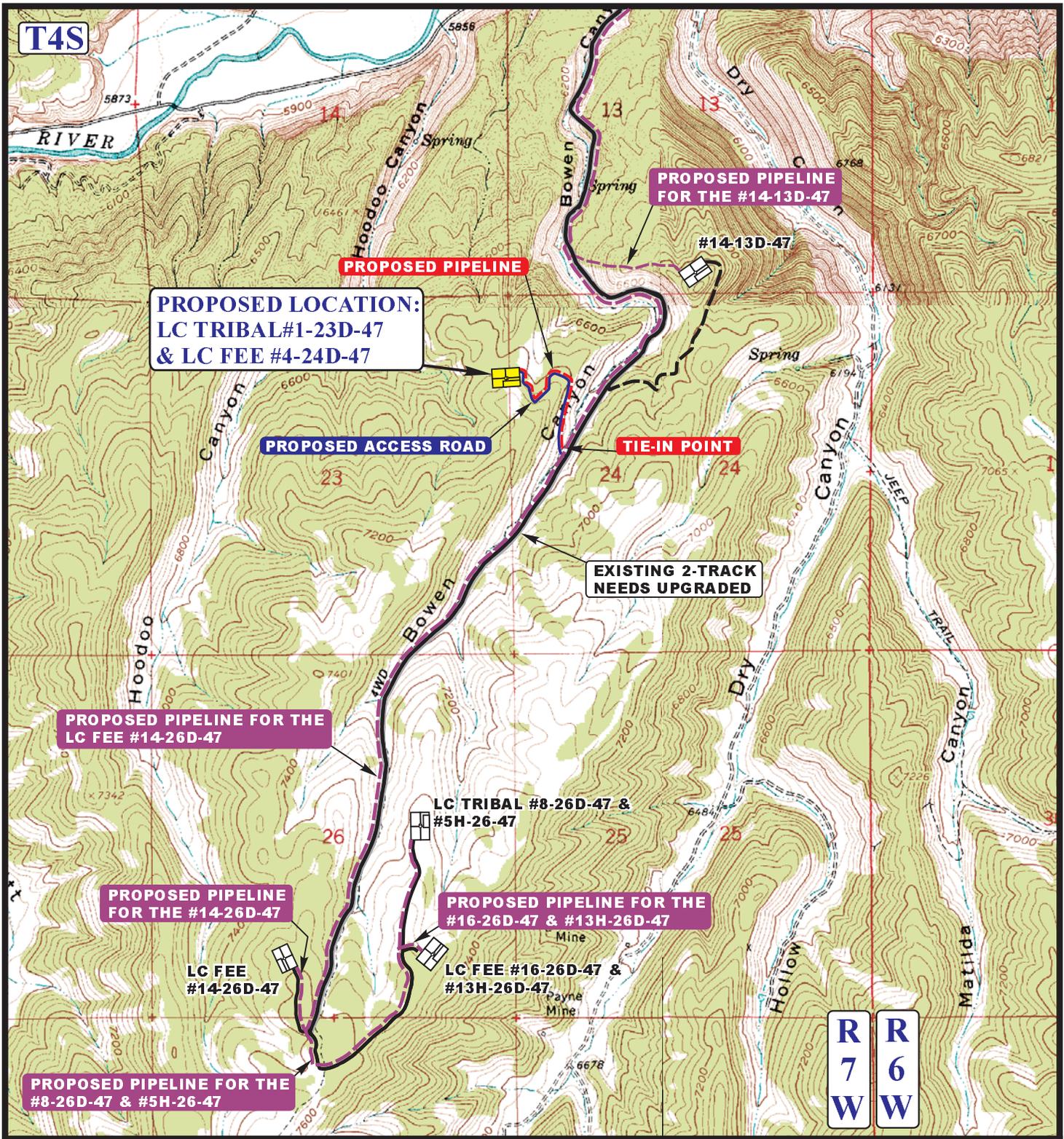


ACCESS ROAD MAP

09 22 11
 MONTH DAY YEAR

SCALE: 1" = 2000' | **DRAWN BY: C.I.** | **REVISED: 02-15-13**

B TOPO



APPROXIMATE TOTAL PIPELINE DISTANCE = 2,573' +/-

LEGEND:

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

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



BILL BARRETT CORPORATION
 LC TRIBAL #1-23D-47 & LC FEE #4-24D-47
 SECTION 23, T4S, R7W, U.S.B.&M.
 NE 1/4 NE 1/4

TOPOGRAPHIC	09	22	11	C TOPO
MAP	MONTH	DAY	YEAR	
SCALE: 1" = 2000'	DRAWN BY: C.I.		REVISED: 02-15-13	



Bill Barrett Corp.
 Project: Duchesne Co., UT (NAD27)
 Site: Sec.23-T4S-R7W
 Well: LC FEE 4-24D-47
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 40° 7' 20.910 N
 Longitude: 110° 37' 58.519 W
 Ground Level: 6817.00
 WELL @ 6817.00usft (Original Well Elev)



WELL DETAILS: LC FEE 4-24D-47

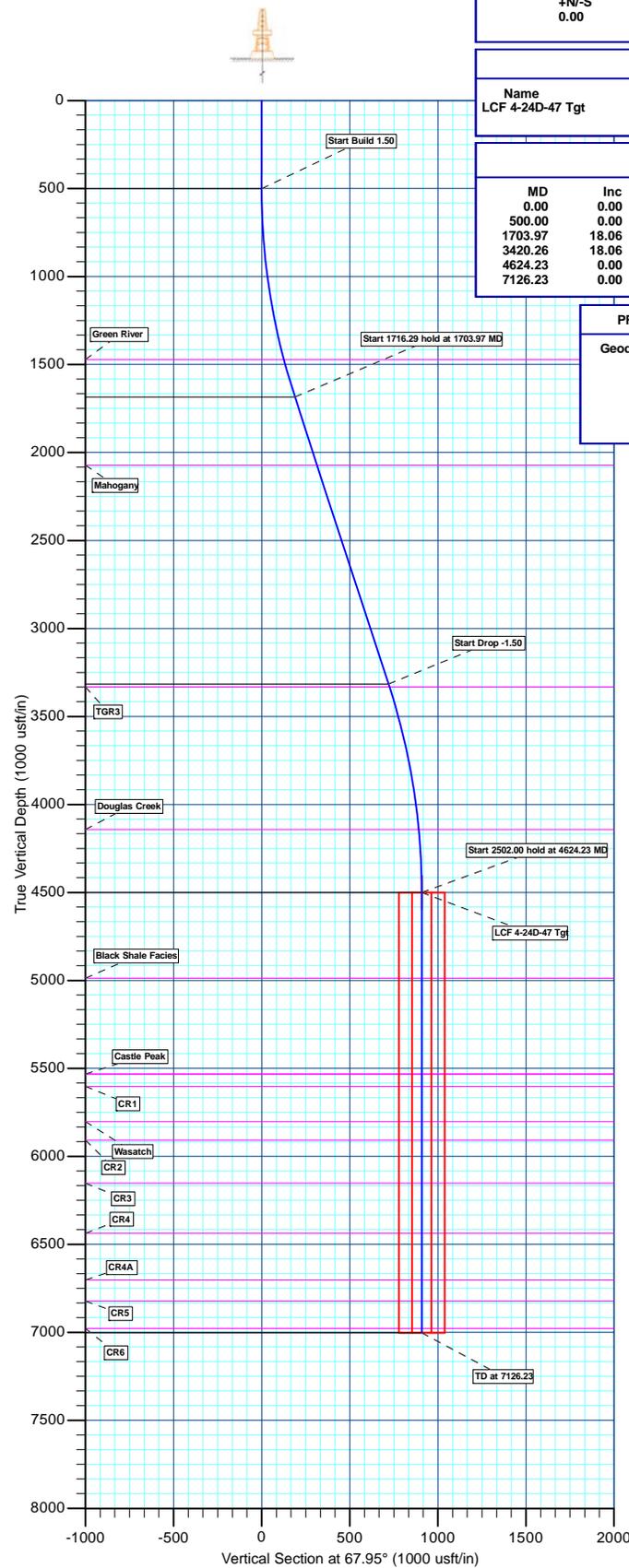
+N-S	+E-W	Northing	Ground Level:	6817.00	Latitude	Longitude	Slot
0.00	0.00	652831.995	Easting	2242469.726	40° 7' 20.910 N	110° 37' 58.519 W	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape
LCF 4-24D-47 Tgt	4500.00	340.97	842.00	40° 7' 24.280 N	110° 37' 47.680 W	Rectangle (Sides: L200.00 W200.00)

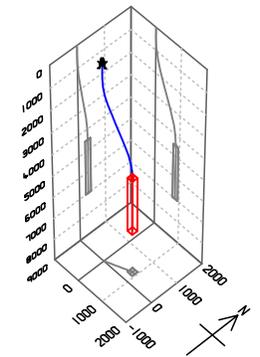
SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
1703.97	18.06	67.95	1684.13	70.63	174.42	1.50	67.95	188.18	Start 1716.29 hold at 1703.97 MD
3420.26	18.06	67.95	3315.87	270.33	667.58	0.00	0.00	720.24	Start Drop -1.50
4624.23	0.00	0.00	4500.00	340.97	842.00	1.50	180.00	908.42	Start 2502.00 hold at 4624.23 MD
7126.23	0.00	0.00	7002.00	340.97	842.00	0.00	0.00	908.42	TD at 7126.23



PROJECT DETAILS: Duchesne Co., UT (NAD27)
 Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Utah Central 4302
 System Datum: Mean Sea Level

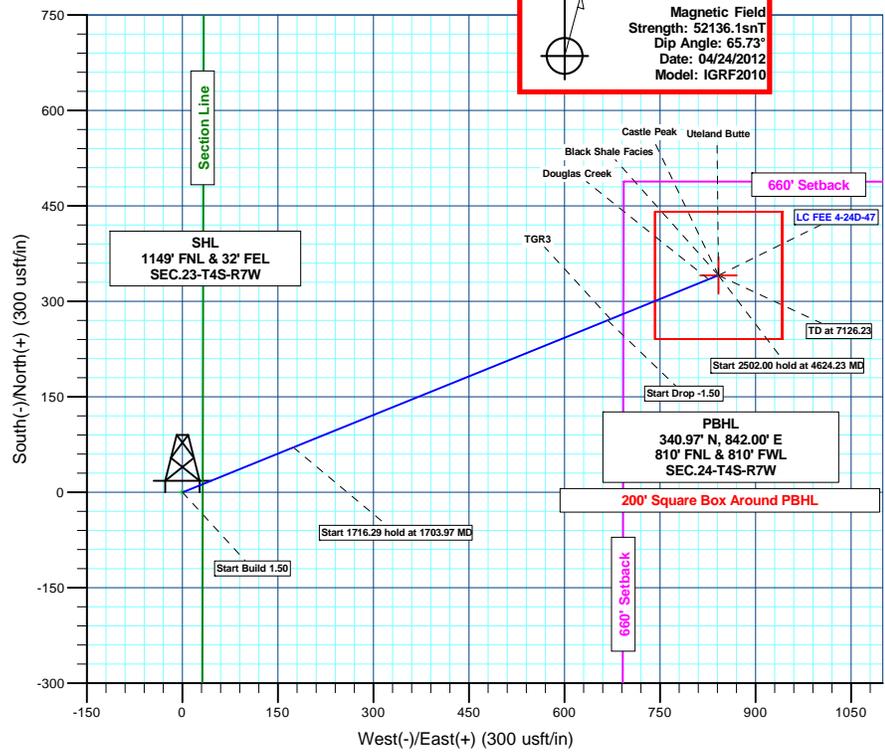
REFERENCE INFORMATION
 Co-ordinate (N/E) Reference: Well LC FEE 4-24D-47, True North
 Vertical (TVD) Reference: WELL @ 6817.00usft (Original Well Elev)
 Section (VS) Reference: Slot - (0.00N, 0.00E)
 Measured Depth Reference: WELL @ 6817.00usft (Original Well Elev)
 Calculation Method: Minimum Curvature



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1472.00	1482.81	Green River
2072.00	2111.94	Mahogany
3332.00	3437.21	TGR3
4142.00	4265.70	Douglas Creek
4987.00	5111.23	Black Shale Facies
5532.00	5656.23	Castle Peak
5532.00	5656.23	Uteland Butte
5602.00	5726.23	CR1
5802.00	5926.23	Wasatch
5907.00	6031.23	CR2
6152.00	6276.23	CR3
6437.00	6561.23	CR4
6702.00	6826.23	CR4A
6822.00	6946.23	CR5
6977.00	7101.23	CR6

Azimuths to True North
 Magnetic North: 11.44°
 Magnetic Field
 Strength: 52136.1snT
 Dip Angle: 65.73°
 Date: 04/24/2012
 Model: IGRF2010



Created By: BRET WOLFORD Date: 14:36, April 24 2012



Bill Barrett Corporation

Bill Barrett Corp.

Duchesne Co., UT (NAD27)

Sec.23-T4S-R7W

LC FEE 4-24D-47

Wellbore #1

Plan: Design #1

Standard Planning Report

24 April, 2012





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well LC FEE 4-24D-47
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 6817.00usft (Original Well Elev)
Project:	Duchesne Co., UT (NAD27)	MD Reference:	WELL @ 6817.00usft (Original Well Elev)
Site:	Sec.23-T4S-R7W	North Reference:	True
Well:	LC FEE 4-24D-47	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Duchesne Co., UT (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site	Sec.23-T4S-R7W				
Site Position:		Northing:	652,830.602 usft	Latitude:	40° 7' 20.899 N
From:	Lat/Long	Easting:	2,242,437.858 usft	Longitude:	110° 37' 58.930 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.56 °

Well	LC FEE 4-24D-47					
Well Position	+N/-S	1.08 usft	Northing:	652,831.995 usft	Latitude:	40° 7' 20.910 N
	+E/-W	31.88 usft	Easting:	2,242,469.726 usft	Longitude:	110° 37' 58.519 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,817.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	04/24/12	11.44	65.73	52,136

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	4,500.00	0.00	0.00	67.95

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,703.97	18.06	67.95	1,684.13	70.63	174.42	1.50	1.50	0.00	67.95	
3,420.26	18.06	67.95	3,315.87	270.33	667.58	0.00	0.00	0.00	0.00	
4,624.23	0.00	0.00	4,500.00	340.97	842.00	1.50	-1.50	0.00	180.00	LCF 4-24D-47 Tgt
7,126.23	0.00	0.00	7,002.00	340.97	842.00	0.00	0.00	0.00	0.00	



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well LC FEE 4-24D-47
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 6817.00usft (Original Well Elev)
Project:	Duchesne Co., UT (NAD27)	MD Reference:	WELL @ 6817.00usft (Original Well Elev)
Site:	Sec.23-T4S-R7W	North Reference:	True
Well:	LC FEE 4-24D-47	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50										
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.50	67.95	599.99	0.49	1.21	1.31	1.50	1.50	1.50	0.00
700.00	3.00	67.95	699.91	1.96	4.85	5.23	1.50	1.50	1.50	0.00
800.00	4.50	67.95	799.69	4.42	10.91	11.77	1.50	1.50	1.50	0.00
900.00	6.00	67.95	899.27	7.85	19.39	20.92	1.50	1.50	1.50	0.00
1,000.00	7.50	67.95	998.57	12.27	30.29	32.68	1.50	1.50	1.50	0.00
1,100.00	9.00	67.95	1,097.54	17.65	43.59	47.03	1.50	1.50	1.50	0.00
1,200.00	10.50	67.95	1,196.09	24.01	59.29	63.96	1.50	1.50	1.50	0.00
1,300.00	12.00	67.95	1,294.16	31.33	77.37	83.47	1.50	1.50	1.50	0.00
1,400.00	13.50	67.95	1,391.70	39.61	97.82	105.54	1.50	1.50	1.50	0.00
Green River										
1,482.81	14.74	67.95	1,472.00	47.20	116.55	125.74	1.50	1.50	1.50	0.00
1,500.00	15.00	67.95	1,488.62	48.85	120.64	130.15	1.50	1.50	1.50	0.00
1,600.00	16.50	67.95	1,584.86	59.04	145.80	157.30	1.50	1.50	1.50	0.00
Start 1716.29 hold at 1703.97 MD										
1,703.97	18.06	67.95	1,684.13	70.63	174.42	188.18	1.50	1.50	1.50	0.00
1,800.00	18.06	67.95	1,775.43	81.81	202.01	217.95	0.00	0.00	0.00	0.00
1,900.00	18.06	67.95	1,870.51	93.44	230.75	248.95	0.00	0.00	0.00	0.00
2,000.00	18.06	67.95	1,965.58	105.08	259.48	279.95	0.00	0.00	0.00	0.00
2,100.00	18.06	67.95	2,060.65	116.71	288.22	310.95	0.00	0.00	0.00	0.00
Mahogany										
2,111.94	18.06	67.95	2,072.00	118.10	291.65	314.65	0.00	0.00	0.00	0.00
2,200.00	18.06	67.95	2,155.73	128.35	316.95	341.95	0.00	0.00	0.00	0.00
2,300.00	18.06	67.95	2,250.80	139.98	345.68	372.95	0.00	0.00	0.00	0.00
2,400.00	18.06	67.95	2,345.87	151.62	374.42	403.95	0.00	0.00	0.00	0.00
2,500.00	18.06	67.95	2,440.95	163.26	403.15	434.95	0.00	0.00	0.00	0.00
2,600.00	18.06	67.95	2,536.02	174.89	431.89	465.95	0.00	0.00	0.00	0.00
2,700.00	18.06	67.95	2,631.09	186.53	460.62	496.95	0.00	0.00	0.00	0.00
2,800.00	18.06	67.95	2,726.17	198.16	489.35	527.95	0.00	0.00	0.00	0.00
2,900.00	18.06	67.95	2,821.24	209.80	518.09	558.95	0.00	0.00	0.00	0.00
3,000.00	18.06	67.95	2,916.31	221.43	546.82	589.95	0.00	0.00	0.00	0.00
3,100.00	18.06	67.95	3,011.39	233.07	575.55	620.95	0.00	0.00	0.00	0.00
3,200.00	18.06	67.95	3,106.46	244.71	604.29	651.96	0.00	0.00	0.00	0.00
3,300.00	18.06	67.95	3,201.53	256.34	633.02	682.96	0.00	0.00	0.00	0.00
3,400.00	18.06	67.95	3,296.61	267.98	661.76	713.96	0.00	0.00	0.00	0.00
Start Drop -1.50										
3,420.26	18.06	67.95	3,315.87	270.33	667.58	720.24	0.00	0.00	0.00	0.00
TGR3										
3,437.21	17.81	67.95	3,332.00	272.29	672.42	725.46	1.50	-1.50	0.00	0.00
3,500.00	16.86	67.95	3,391.93	279.32	689.76	744.16	1.50	-1.50	0.00	0.00
3,600.00	15.36	67.95	3,488.00	289.73	715.48	771.92	1.50	-1.50	0.00	0.00
3,700.00	13.86	67.95	3,584.77	299.20	738.86	797.15	1.50	-1.50	0.00	0.00
3,800.00	12.36	67.95	3,682.15	307.72	759.89	819.83	1.50	-1.50	0.00	0.00
3,900.00	10.86	67.95	3,780.10	315.27	778.55	839.96	1.50	-1.50	0.00	0.00
4,000.00	9.36	67.95	3,878.55	321.86	794.83	857.52	1.50	-1.50	0.00	0.00
4,100.00	7.86	67.95	3,977.42	327.48	808.71	872.50	1.50	-1.50	0.00	0.00
4,200.00	6.36	67.95	4,076.64	332.13	820.18	884.88	1.50	-1.50	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well LC FEE 4-24D-47
Company:	Bill Barrett Corp.	TVD Reference:	WELL @ 6817.00usft (Original Well Elev)
Project:	Duchesne Co., UT (NAD27)	MD Reference:	WELL @ 6817.00usft (Original Well Elev)
Site:	Sec.23-T4S-R7W	North Reference:	True
Well:	LC FEE 4-24D-47	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
Douglas Creek										
4,265.70	5.38	67.95	4,142.00	334.65	826.41	891.60	1.50	-1.50	0.00	
4,300.00	4.86	67.95	4,176.16	335.80	829.25	894.66	1.50	-1.50	0.00	
4,400.00	3.36	67.95	4,275.90	338.50	835.90	901.84	1.50	-1.50	0.00	
4,500.00	1.86	67.95	4,375.80	340.21	840.13	906.40	1.50	-1.50	0.00	
4,600.00	0.36	67.95	4,475.77	340.94	841.93	908.34	1.50	-1.50	0.00	
Start 2502.00 hold at 4624.23 MD - LCF 4-24D-47 Tgt										
4,624.23	0.00	0.00	4,500.00	340.97	842.00	908.42	1.50	-1.50	0.00	
4,700.00	0.00	0.00	4,575.77	340.97	842.00	908.42	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,675.77	340.97	842.00	908.42	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,775.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,875.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,100.00	0.00	0.00	4,975.77	340.97	842.00	908.42	0.00	0.00	0.00	
Black Shale Facies										
5,111.23	0.00	0.00	4,987.00	340.97	842.00	908.42	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,075.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,175.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,275.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,375.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,475.77	340.97	842.00	908.42	0.00	0.00	0.00	
Castle Peak - Uteland Butte										
5,656.23	0.00	0.00	5,532.00	340.97	842.00	908.42	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,575.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR1										
5,726.23	0.00	0.00	5,602.00	340.97	842.00	908.42	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,675.77	340.97	842.00	908.42	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,775.77	340.97	842.00	908.42	0.00	0.00	0.00	
Wasatch										
5,926.23	0.00	0.00	5,802.00	340.97	842.00	908.42	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,875.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR2										
6,031.23	0.00	0.00	5,907.00	340.97	842.00	908.42	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,975.77	340.97	842.00	908.42	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,075.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR3										
6,276.23	0.00	0.00	6,152.00	340.97	842.00	908.42	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,175.77	340.97	842.00	908.42	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,275.77	340.97	842.00	908.42	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,375.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR4										
6,561.23	0.00	0.00	6,437.00	340.97	842.00	908.42	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,475.77	340.97	842.00	908.42	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,575.77	340.97	842.00	908.42	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,675.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR4A										
6,826.23	0.00	0.00	6,702.00	340.97	842.00	908.42	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,775.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR5										
6,946.23	0.00	0.00	6,822.00	340.97	842.00	908.42	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,875.77	340.97	842.00	908.42	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,975.77	340.97	842.00	908.42	0.00	0.00	0.00	
CR6										



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well LC FEE 4-24D-47
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Project:	Duchesne Co., UT (NAD27)	MD Reference:	WELL @ 6817.00usft (Original Well Elev)
Site:	Sec.23-T4S-R7W	North Reference:	True
Well:	LC FEE 4-24D-47	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,101.23	0.00	0.00	6,977.00	340.97	842.00	908.42	0.00	0.00	0.00
TD at 7126.23									
7,126.23	0.00	0.00	7,002.00	340.97	842.00	908.42	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LCF 4-24D-47 Tgt	0.00	0.00	4,500.00	340.97	842.00	653,181.107	2,243,308.379	40° 7' 24.280 N	110° 37' 47.680 W
- hit/miss target									
- Shape									
- plan hits target center									
- Rectangle (sides W200.00 H200.00 D2,502.00)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,482.81	1,472.00	Green River		0.00		
2,111.94	2,072.00	Mahogany		0.00		
3,437.21	3,332.00	TGR3		0.00		
4,265.70	4,142.00	Douglas Creek		0.00		
5,111.23	4,987.00	Black Shale Facies		0.00		
5,656.23	5,532.00	Uteland Butte		0.00		
5,656.23	5,532.00	Castle Peak		0.00		
5,726.23	5,602.00	CR1		0.00		
5,926.23	5,802.00	Wasatch		0.00		
6,031.23	5,907.00	CR2		0.00		
6,276.23	6,152.00	CR3		0.00		
6,561.23	6,437.00	CR4		0.00		
6,826.23	6,702.00	CR4A		0.00		
6,946.23	6,822.00	CR5		0.00		
7,101.23	6,977.00	CR6		0.00		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
500.00	500.00	0.00	0.00	Start Build 1.50
1,703.97	1,684.13	70.63	174.42	Start 1716.29 hold at 1703.97 MD
3,420.26	3,315.87	270.33	667.58	Start Drop -1.50
4,624.23	4,500.00	340.97	842.00	Start 2502.00 hold at 4624.23 MD
7,126.23	7,002.00	340.97	842.00	TD at 7126.23

SURFACE USE PLAN**BILL BARRETT CORPORATION
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, Utah**

<p align="center"><u>LC Tribal 1-23D-47</u></p> <p>NENE, 1150' FNL & 80' FEL, Sec. 23, T4S-R7W (surface hole) NENE, 700' FNL & 700' FEL, Sec. 23, T4S-R7W (bottom hole)</p>	<p align="center"><u>LC Fee 4-24D-47</u></p> <p>NENE, 1150' FNL & 64' FEL, Sec. 23, T4S-R7W (surface hole) NWNW, 810' FNL & 810' FWL, Sec. 24, T4S-R7W (bottom hole)</p>
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The onsite inspection for this pad occurred on February 1, 2012. This is a new pad with a total of three proposed wells. Plat changes and site specific stipulations requested at the onsite are reflected within this APD and summarized below.

- a) Relocated topsoil from corners 2 & 8 area to corner 7 and corners A & 2 areas to maximize interim reclamation and minimize topsoil loss;
- b) Pit liner to be 16 mil with felt underlayment;

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 16.8 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 maintained Highway 40 would be utilized from Duchesne for 8.3 miles to the existing Duchesne County maintained Strawberry River Road. The Strawberry River Road would be utilized for 7.2 miles to the Bowen Canyon access road that 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.
- 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.

Bill Barrett Corporation
Surface Use Plan
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

- f. All existing roads would be maintained and kept in good repair during all phases of operation.

2. Planned Access Road:

- a. Approximately 2,576 feet of access road is planned from the existing/approved LC Tribal 8-26D-47 & 5H-26-47 access road (ROW H62-2010-063). The existing/approved LC Tribal 8-26D-47 & 5H-26-47 access road continues an additional 4,469 feet to the existing Strawberry River access road (see Topographic Map B). The proposed access road crosses entirely Ute Tribe surface.
- 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
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
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. 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 none
 - vii. abandoned wells none

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

Bill Barrett Corporation
Surface Use Plan
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

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 2,573 feet of pipeline corridor 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 to the existing LC Tribal 14-26D-47 pipeline corridor (ROW H62-2012-230). The existing LC Tribal 14-26D-47 pipeline corridor continues an additional 5,353 feet to the 1-13D-47 BTR pipeline corridor (see Topographic Map C). 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 Beetle Green, to match the standard environmental colors. All

Bill Barrett Corporation
 Surface Use Plan
 LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
 Duchesne County, UT

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	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
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

- 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 16 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.
- d. 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 following state-approved disposal facilities:

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

Bill Barrett Corporation
 Surface Use Plan
 LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
 Duchesne County, UT

Disposal Facilities
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 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.

Bill Barrett Corporation
Surface Use Plan
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

- 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 proposed at this time but may be applied for in the future.

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 277 feet with an inboard reserve pit size of 235 feet x 70 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.

Bill Barrett Corporation
Surface Use Plan
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

- 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

Bill Barrett Corporation
Surface Use Plan
LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
Duchesne County, UT

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 has been submitted under separate cover to the appropriate agencies by Montgomery as report 12-076 (U-12-MQ-0361i) dated May 24, 2012.
- 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.

Bill Barrett Corporation
 Surface Use Plan
 LC Tribal 1-23D-47 and LC Fee 4-24D-47 Pad
 Duchesne County, UT

d. Disturbance estimates:

Approximate Acreage Disturbances

Well Pad		4.795	acres
Access	2,576 feet	1.774	acres
Pipeline	2,573 feet	1.772	acres
	Total	8.341	acres

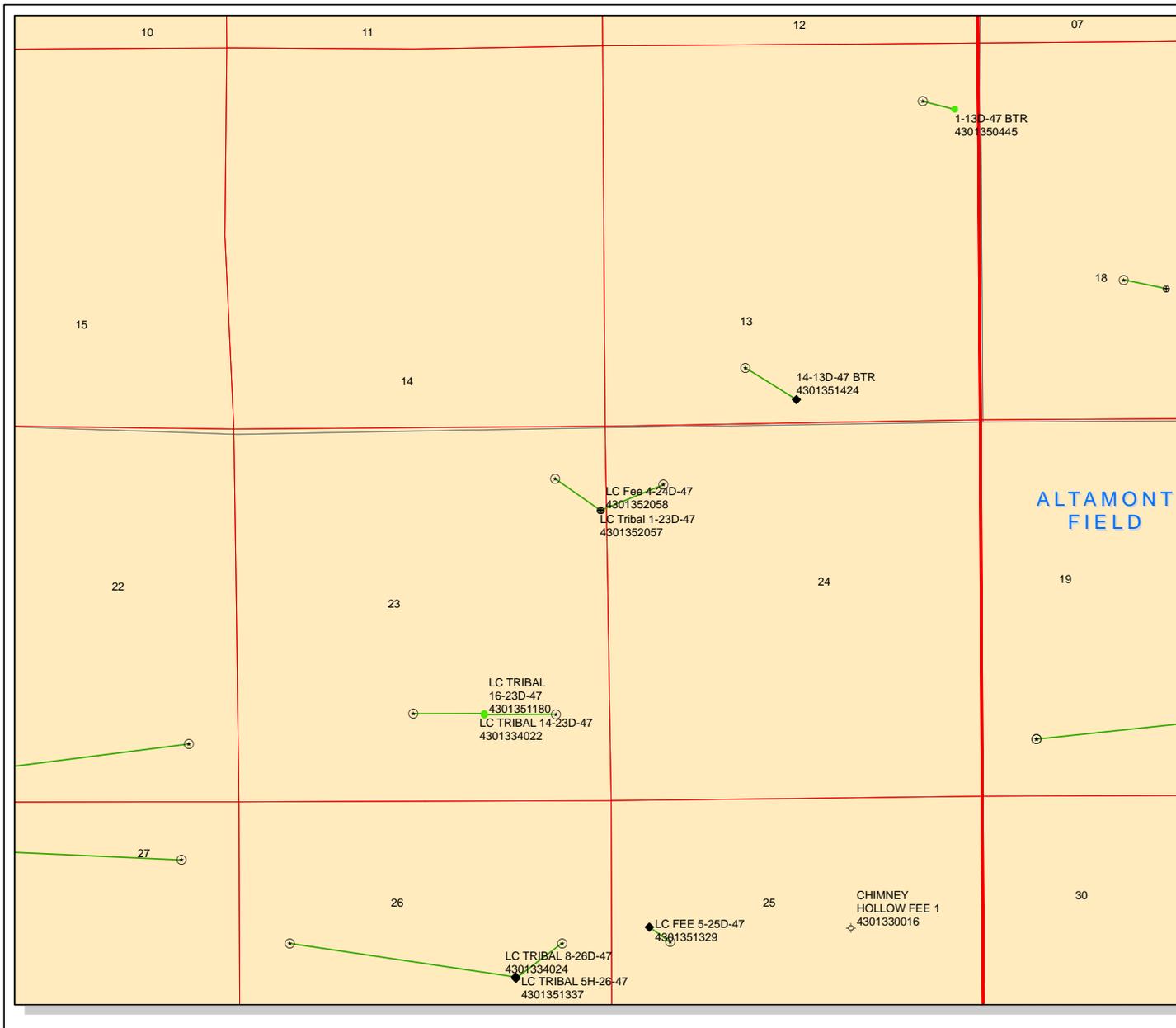
OPERATOR CERTIFICATION

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	<u>21st day of February, 2013</u>
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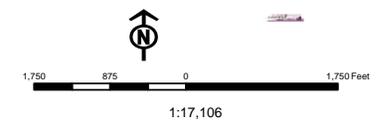
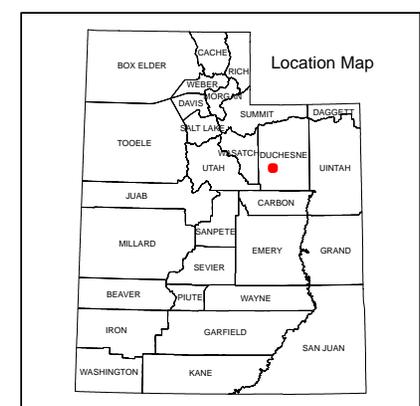

 Venessa Langmacher, Senior Permit Analyst



API Number: 4301352058
Well Name: LC Fee 4-24D-47
Township T04.0S Range R07.0W Section 23
Meridian: UBM
Operator: BILL BARRETT CORP

Map Prepared:
 Map Produced by Diana Mason

- Units**
- ACTIVE
 - EXPLORATORY
 - GAS STORAGE
 - NF PP OIL
 - NF SECONDARY
 - PI OIL
 - PP GAS
 - PP GEOTHERMAL
 - PP OIL
 - SECONDARY
 - TERMINATED
- Fields**
- Unknown
 - ABANDONED
 - ACTIVE
 - COMBINED
 - INACTIVE
 - STORAGE
 - TERMINATED



Well Name	BILL BARRETT CORP LC Fee 4-24D-47 43013520580000			
String	COND	SURF	PROD	
Casing Size(")	16.000	9.625	9.625	
Setting Depth (TVD)	80	1294	7002	
Previous Shoe Setting Depth (TVD)	0	80	1294	
Max Mud Weight (ppg)	8.8	8.8	9.6	
BOPE Proposed (psi)	0	500	5000	
Casing Internal Yield (psi)	1000	3520	10640	
Operators Max Anticipated Pressure (psi)	3495		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=		80	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

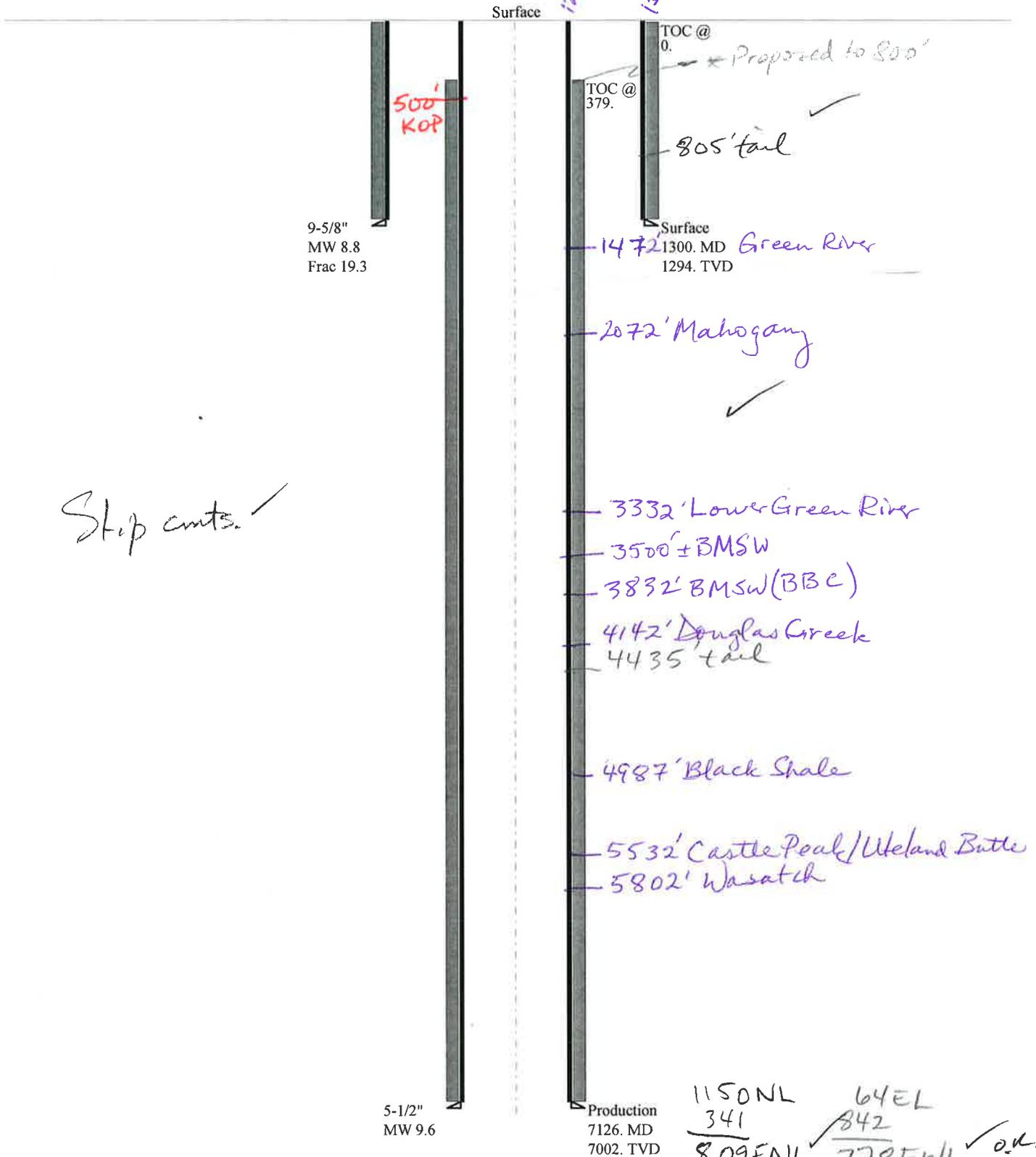
Calculations	SURF String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	592	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	437	YES Fresh wtr spud mud, diverter or rotate head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	307	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	325	NO OK
Required Casing/BOPE Test Pressure=		1294	psi
*Max Pressure Allowed @ Previous Casing Shoe=		80	psi *Assumes 1psi/ft frac gradient

Calculations	PROD String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	3495	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2655	YES DAP polymer fluid, 11" 5M Ram Type BOP &
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1955	YES 5M Annular
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	2239	NO OK
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		1294	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

43013520580000 LC Fee 4-24D-47

Casing Schematic



$$\begin{array}{r}
 1150NL \\
 341 \\
 \hline
 809FNL
 \end{array}
 \begin{array}{r}
 64EL \\
 842 \\
 \hline
 778FWL \checkmark o.k.
 \end{array}$$

NW NW Sec 24 - 4S - 7W

Well name:	43013520580000 LC Fee 4-24D-47		
Operator:	BILL BARRETT CORP.		
String type:	Surface	Project ID:	43-013-52058
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 92 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 1,139 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 1,294 psi

No backup mud specified.

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: 1,129 ft

Directional Info - Build & Drop

Kick-off point 500 ft
 Departure at shoe: 83 ft
 Maximum dogleg: 1.5 °/100ft
 Inclination at shoe: 12 °

Re subsequent strings:

Next setting depth: 7,002 ft
 Next mud weight: 9.600 ppg
 Next setting BHP: 3,492 psi
 Fracture mud wt: 19,250 ppg
 Fracture depth: 1,294 ft
 Injection pressure: 1,294 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	1300	9.625	36.00	J-55	ST&C	1294	1300	8.796	11300

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	592	1987	3.358	1294	3520	2.72	46.6	394	8.46 J

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

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

Date: April 1, 2013
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1294 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

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	43013520580000 LC Fee 4-24D-47		
Operator:	BILL BARRETT CORP.		
String type:	Production	Project ID:	43-013-52058
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

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

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 172 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft
 Cement top: 379 ft

Burst

Max anticipated surface pressure: 1,951 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 3,492 psi

No backup mud specified.

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: 6,107 ft

Directional Info - Build & Drop

Kick-off point 500 ft
 Departure at shoe: 908 ft
 Maximum dogleg: 1.5 °/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	7126	5.5	17.00	P-110	LT&C	7002	7126	4.767	46938
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	3492	7480	2.142	3492	10640	3.05	119	445	3.74 J

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

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

Date: April 1, 2013
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 7002 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



April 23, 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: **Exception Location –LC Fee #4-24D-47 – Lake Canyon Area**
Surface Location: 1,150' FNL & 64' FEL, NENE, 23-T4S-R7W, USB&M
Bottom Location: 810' FNL & 810' FWL, NWNW, 24-T4S-R7W, USB&M
Duchesne County, Utah

Dear Ms. Mason,

Bill Barrett Corporation ("BBC") hereby submits an exception location letter in accordance with Oil & Gas Conservation Order #139-87, requesting an exception well location, supported by the following information:

- The location is within our Lake Canyon Area.
- BBC is requesting an exception to Spacing Order #139-87 by drilling multiple well bores from a single well pad where the horizontal wellbore will strictly produce hydrocarbons from the Uteland Butte formation and the other vertical wellbore will produce from formations excluding the Uteland Butte. This well configuration results in the wellbores being closer than the 1,320 feet allowed by spacing order.
- This will allow for a more efficient drainage of the reservoir formation being targeted.
- The exception location is due to topography requirements and to minimize surface disturbance.
- BBC certifies that it is the working interest owner along with Crescent Point Energy U.S. Corp and Berry Petroleum Company (who also consent to this exception location request), and together we own 100% of the working interest within 460 feet of the proposed well location.
- Our rights are owned under an Exploration and Development Agreement with the Ute Indian Tribe and Ute Distribution Corporation which provides for the drilling of exploratory wells. This agreement provides that we consult with these owners regarding the drilling of this well.

Based on the information provided, BBC requests the Division grant this exception to the locating, siting and spacing requirements of Order #139-87. 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 'David Watts' with a small flourish at the end.

David Watts
Landman

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

RECEIVED: April 23, 2013

**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
7689	43013520580000	LOCKED	OW	I	No
Operator	BILL BARRETT CORP		Surface Owner-APD		
Well Name	LC Fee 4-24D-47		Unit		
Field	UNDESIGNATED		Type of Work	DRILL	
Location	NENE 23 4S 7W U 1150 FNL (UTM) 531200E 4441397N		64 FEL GPS Coord		

Geologic Statement of Basis

Bill Barrett proposes to set 80 ' of conductor and 1,300' of surface casing at this location. Conductor and surface casing holes will be drilled with a fresh water mud system. The base of the moderately saline water is at approximately 3,500 feet in this area. This location lies on 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 3 water wells within a 10,000 foot radius of the center of Section 23. All wells are located over a mile from the proposed location. These wells produce from depths ranging from 30-75 feet and probably produce from alluvium associated with the Strawberry River. Listed uses are domestic, irrigation and stock watering. Production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

3/26/2013
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

3/26/2013
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
	None.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 2/21/2013

API NO. ASSIGNED: 43013520580000

WELL NAME: LC Fee 4-24D-47

OPERATOR: BILL BARRETT CORP (N2165)

PHONE NUMBER: 303 312-8172

CONTACT: Venessa Langmacher

PROPOSED LOCATION: NENE 23 040S 070W

Permit Tech Review:

SURFACE: 1150 FNL 0064 FEL

Engineering Review:

BOTTOM: 0810 FNL 0810 FWL

Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.12231

LONGITUDE: -110.63384

UTM SURF EASTINGS: 531200.00

NORTHINGS: 4441397.00

FIELD NAME: UNDESIGNATED

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 139-87
- Effective Date: 12/6/2011
- Siting: 4 Prod LGRRV-WSTC Wells
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations:

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

RECEIVED: April 23, 2013



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: LC Fee 4-24D-47
API Well Number: 43013520580000
Lease Number: Fee
Surface Owner: INDIAN
Approval Date: 4/23/2013

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 139-87. 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

Exception Location:

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

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 4 1/2 production string shall be determined from actual

hole diameter in order to place cement from the pipe setting depth back to 800' 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:

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 5.LEASE DESIGNATION AND SERIAL NUMBER: Fee
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.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE
1. TYPE OF WELL Oil Well		7.UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: BILL BARRETT CORP		8. WELL NAME and NUMBER: LC Fee 4-24D-47
3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202		9. API NUMBER: 43013520580000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1150 FNL 0064 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 23 Township: 04.0S Range: 07.0W Meridian: U		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: 4/23/2015	<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 for APD

Approved by the
Feb Davis, 2015
Oil, Gas and Mining

Date: _____

By:

NAME (PLEASE PRINT) Christina Hirtler	PHONE NUMBER 303 312-8597	TITLE Administrative Assistant
SIGNATURE N/A	DATE 2/11/2015	



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 43013520580000

API: 43013520580000

Well Name: LC Fee 4-24D-47

Location: 1150 FNL 0064 FEL QTR NENE SEC 23 TWNP 040S RNG 070W MER U

Company Permit Issued to: BILL BARRETT CORP

Date Original Permit Issued: 4/23/2013

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: Christina Hirtler

Date: 2/11/2015

Title: Administrative Assistant 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

April 7, 2016

Brady Riley
BILL BARRETT CORPORATION
1099 18th Street | Suite 2300
Denver, CO 80202

Re: APDs Rescinded for Bill Barrett Corporation, Duchesne County

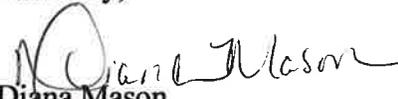
Dear Ms. Riley:

Enclosed find the list of APDs that is being rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded as of April 7, 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

43-013-52058 LC Fee 4-24D-47
43-013-52056 LC Fee 15-26D-47
43-013-52090 LC Fee 5-34D-47
43-013-52081 LC Fee 5-35D-47



Diana Mason <dianawhitney@utah.gov>

BBC Rescind Request

Brady Riley <briley@billbarrettcorp.com>
To: "dianawhitney@utah.gov" <dianawhitney@utah.gov>

Thu, Apr 7, 2016 at 9:22 AM

Diana,

Please rescind the following approved APDs, as they expire this month and BBC would like to refile these permits.

LC Fee 4-24D-47

LC Fee 15-26D-47

LC Fee 5-34D-47

LC Fee 5-35D-47

Thanks and please let me know if you have questions.

Brady Riley

BILL BARRETT CORPORATION

1099 18th Street | Suite 2300

Denver, CO 80202

D 303.312.8115

C 720.402.7541

F 303.291.0420

briley@billbarrettcorp.com

www.billbarrettcorp.com

