API Well Number: 43013507810000

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

FORM 3

AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER
16-6D-46 BTR SWD

2. TYPE OF WORK
DRILL NEW WELL ■ REENTER P&A WELL ☐ DEEPEN WELL ☐

3. FIELD OR WILDCAT
ALTAMONT

4. TYPE OF WELL
Water Disposal 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
dspencer@billbarrettcorp.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
2OG0005608

11. MINERAL OWNERSHIP
FEDERAL ☐ INDIAN ■ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ☐ INDIAN ☐ STATE ☐ FEE ■

13. NAME OF SURFACE OWNER (if box 12 = 'fee')
Circle 3 Ranch Property Trust

14. SURFACE OWNER PHONE (if box 12 = 'fee')
435-548-2330

15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')
PO Box 93, Duchesne, UT 84032

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 ☐ (Submit Commingling Application) NO ■

19. SLANT
VERTICAL ☐ DIRECTIONAL ■ HORIZONTAL ☐

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	200 FSL 99 FEL	SESE	6	4.0 S	6.0 W	U
Top of Uppermost Producing Zone	641 FSL 634 FEL	SESE	6	4.0 S	6.0 W	U
At Total Depth	642 FSL 641 FEL	SESE	6	4.0 S	6.0 W	U

21. COUNTY
DUCHESNE

22. DISTANCE TO NEAREST LEASE LINE (Feet)
641

23. NUMBER OF ACRES IN DRILLING UNIT
640

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
5280

26. PROPOSED DEPTH
MD: 5109 TVD: 5050

27. ELEVATION - GROUND LEVEL
5857

28. BOND NUMBER
LPM8875725

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
Duchesne City Culinary Water Dock

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	Unknown	0	0.0	0.0
Surf	12.25	9.625	0 - 1000	36.0	J-55 ST&C	8.8	Halliburton Light , Type Unknown	100	3.16	11.0
							Halliburton Premium , Type Unknown	210	1.36	14.8
Prod	8.75	5.5	0 - 5050	17.0	P-110 LT&C	9.7	Unknown	670	2.31	11.0
							Unknown	150	1.42	13.5

ATTACHMENTS

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

- ✔ **WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER**
- ✔ **COMPLETE DRILLING PLAN**
- ✔ **AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)**
- ☐ **FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER**
- ✔ **DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)**
- ✔ **TOPOGRAPHICAL MAP**

NAME Tracey Fallang | **TITLE** Regulatory Manager | **PHONE** 303 312-8134

SIGNATURE | **DATE** 05/23/2011 | **EMAIL** tfallang@billbarrettcorp.com

API NUMBER ASSIGNED
43013507810000

APPROVAL

Permit Manager

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DRILLING PLAN

BILL BARRETT CORPORATION

16-6D-46 BTR SWD Well Pad
SE SE, 200' FSL, 99' FEL, Section 6, T4S, R6W, USB&M (surface hole)
SE SE, 642' FSL, 641' FEL, Section 6, T4S, R6W, USB&M (bottom hole)
Duchesne County, Utah

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

Formation	Depth – MD	Depth – TVD
Green River	1343'	1332'
Mahogany	1993'	1972'
Douglas Creek	4216'	4162'
Black Shale	5066'	5007'
TD	5109'	5050'

*The Douglas Creek Member of the Lower Green River is the injection zone for the proposed disposal well.

*This well will not complete as a producer in the spaced interval.

3. BOP and Pressure Containment Data

Depth Intervals	BOP Equipment
0 – 1000'	No pressure control required
1000' – 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 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

Hole Size	SETTING DEPTH (FROM)	(TO)	Casing Size	Casing Weight	Casing Grade	Thread	Condition
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1000'	9 5/8"	36#	J or K 55	BT&C	New
8 ¾"	Surface	TD	5 ½"	17#	P-110	LT&C	New
NOTE: In addition, 8 ¾" hole size may change to 7 7/8" at the point the bit is changed out.							

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Bill Barrett Corporation
Drilling Program
#16-6D-46 BTR SWD
Duchesne County, Utah

5. Cementing Program

Casing	*Cementing*
16" Conductor Casing	*Grout*
9 5/8" Surface Casing	*Lead* with approximately 100 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 ft^3/sx) circulated to surface with 75% excess. Top of lead estimated at surface. *Tail* with approximately 210 sx Halliburton Premium cement with additives mixed at 14.8 ppg (yield = 1.36 ft^3/sx), calculated hole volume with 75% excess. Top of tail estimated at 500'.
5 ½" Production Casing	*Lead* with approximately 670 sx Tuned Light cement with additives, mixed at 11.0 ppg (yield = 2.31 ft^3/sx,) . Top of lead estimated at 500'. *Tail* with approximately 150 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 ft^3/sx). Top of tail estimated at 4566'.

6. Mud Program

Interval	Weight	Viscosity	Fluid Loss (API filtrate)	Remarks
0' – 80'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
80' – 1000'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
1000' – TD	8.6 – 9.7	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.

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Bill Barrett Corporation
Drilling Program
#16-6D-46 BTR SWD
Duchesne County, Utah

8. Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 2547 psi* and maximum anticipated surface pressure equals approximately 1436 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)

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
d) 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.

11. Drilling Schedule

Location Construction:	June 2011
Spud:	June 2011
Duration:	15 days drilling time
	45 days completion time

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Bill Barrett Corporation

LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

2/18/2011

Well Name: 16-6D-46 BTR SWD

Surface Hole Data:

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

Calculated Data:

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

Cement Data:

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

Tail Yield:	1.36	ft^3/sk
% Excess:	75%	
Top of Tail:	500'	

Calculated # of Sacks:

# SK's Lead:	100
# SK's Tail:	210

Production Hole Data:

Total Depth:	5,109'
Top of Cement:	500'
Top of Tail:	4,566'
OD of Hole:	8.750"
OD of Casing:	5.500"

Calculated Data:

Lead Volume:	1540.6	ft^3
Lead Fill:	4,066'	
Tail Volume:	205.8	ft^3
Tail Fill:	543'	

Cement Data:

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

Calculated # of Sacks:

# SK's Lead:	670
# SK's Tail:	150

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16-6D-46 BTR SWD Proposed Cementing Program

Job Recommendation			Surface Casing
Lead Cement - (500' - 0')			
Halliburton Light Premium	Fluid Weight:	11.0	lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield:	3.16	ft^3/sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid:	19.48	Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid:	0'	
2.0% Bentonite	Calculated Fill:	500'	
	Volume:	48.80	bbl
	Proposed Sacks:	**100**	**sks**
Tail Cement - (TD - 500')			
Premium Cement	Fluid Weight:	14.8	lbm/gal
2.0% Calcium Chloride	Slurry Yield:	1.36	ft^3/sk
	Total Mixing Fluid:	6.37	Gal/sk
	Top of Fluid:	500'	
	Calculated Fill:	500'	
	Volume:	48.80	bbl
	Proposed Sacks:	**210**	**sks**

Job Recommendation			Production Casing
Lead Cement - (4566' - 500')			
Tuned Light™ System	Fluid Weight:	11.0	lbm/gal
	Slurry Yield:	2.31	ft^3/sk
	Total Mixing Fluid:	10.65	Gal/sk
	Top of Fluid:	500'	
	Calculated Fill:	4,066'	
	Volume:	274.37	bbl
	Proposed Sacks:	**670**	**sks**
Tail Cement - (5109' - 4566')			
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:	4,566'	
	Calculated Fill:	543'	
	Volume:	36.64	bbl
	Proposed Sacks:	**150**	**sks**

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PRESSURE CONTROL EQUIPMENT – Schematic Attached

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

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

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

C. **Testing Procedure:**

Annular Preventer

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

At a minimum the above pressure test will be performed:

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

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

Blow-Out Preventer

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

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

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

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

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

D. Choke Manifold Equipment:

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

E. Accumulator:

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

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

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

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

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

F. Miscellaneous Information:

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

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

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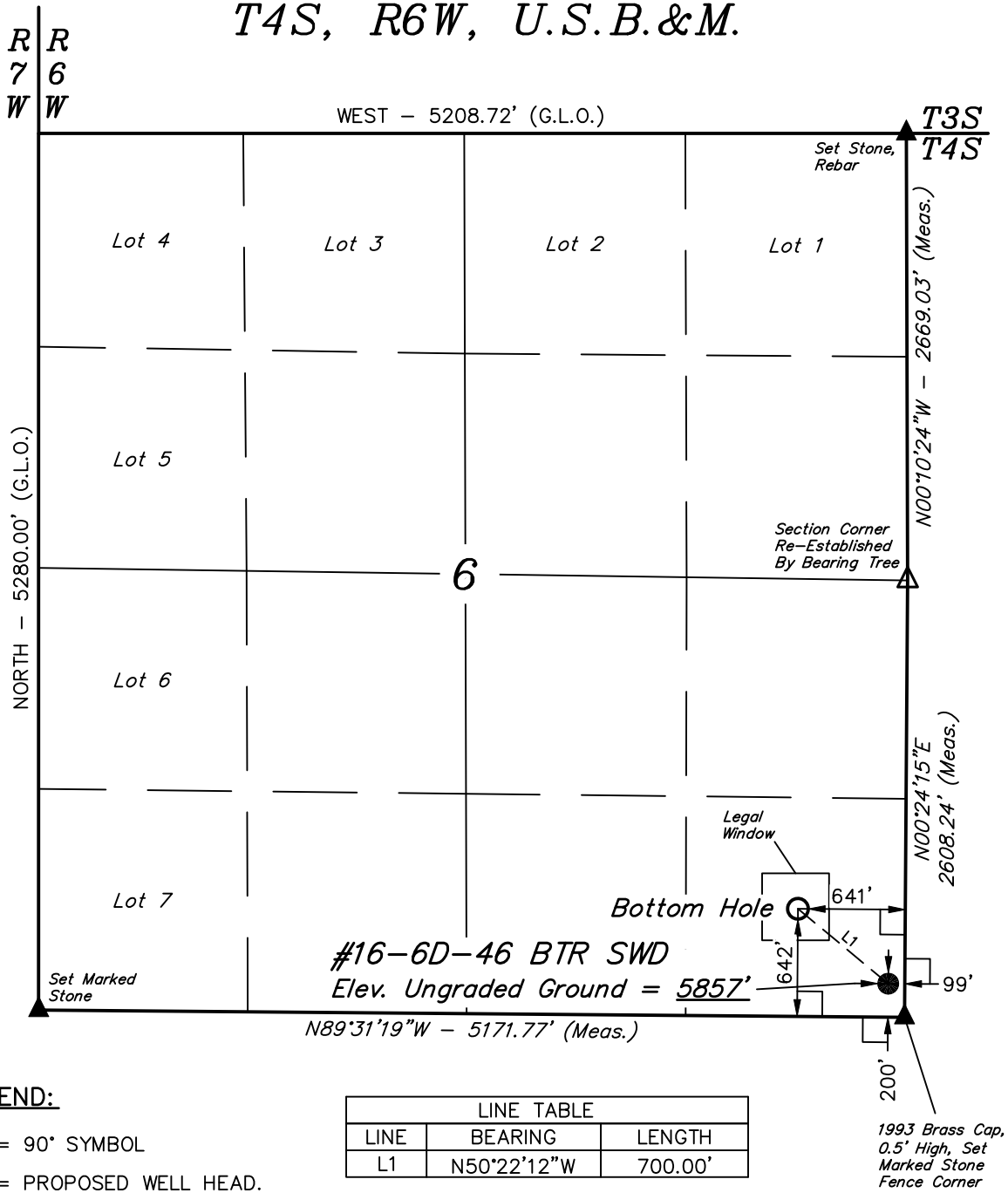
T4S, R6W, U.S.B.&M.



BILL BARRETT CORPORATION

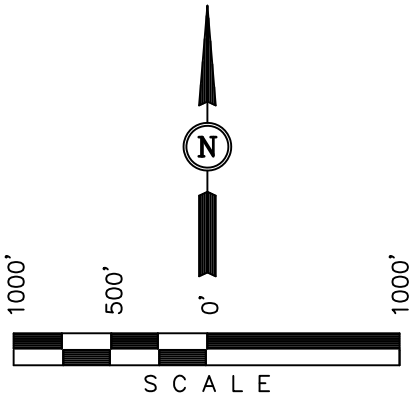
Well location, #16–6D–46 BTR SWD, located as shown in the SE 1/4 SE 1/4 of Section 6, T4S, R6W, U.S.B.&M., Duchesne County, Utah.

BASIS OF ELEVATION

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

BASIS OF BEARINGS

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



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.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REVISED: 04–28–11

05–03–11

API Well Number: 43013507810000

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LEGEND:

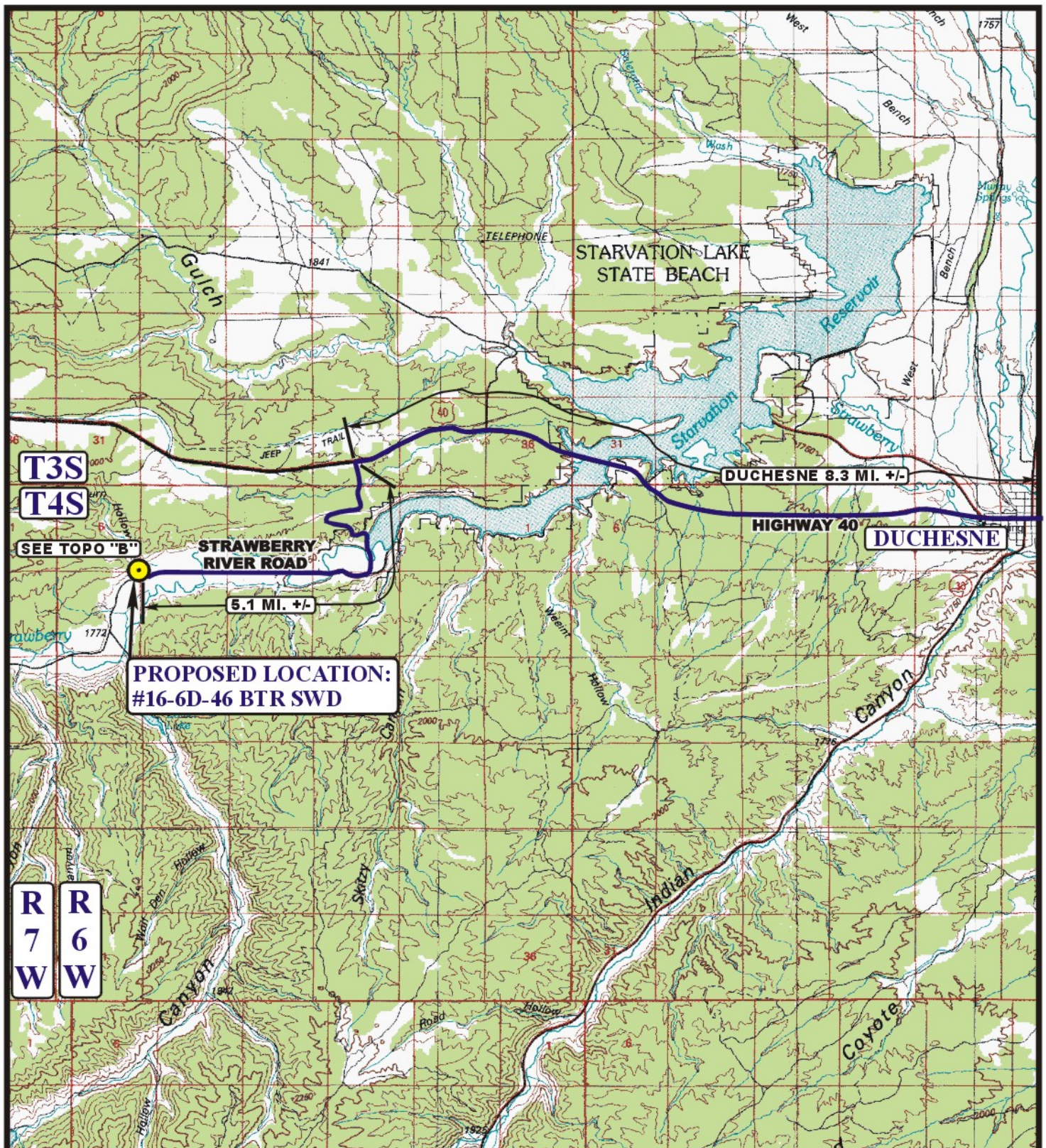
- ∟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE–ESTABLISHED. (Not Set on Ground.)

LINE TABLE		
LINE	BEARING	LENGTH
L1	N50°22'12"W	700.00'

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 40°09'23.05" (40.156403)	LATITUDE = 40°09'18.65" (40.155181)
LONGITUDE = 110°35'55.21" (110.598669)	LONGITUDE = 110°35'48.25" (110.596736)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 40°09'23.21" (40.156447)	LATITUDE = 40°09'18.81" (40.155225)
LONGITUDE = 110°35'52.64" (110.597956)	LONGITUDE = 110°35'45.69" (110.596025)

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

SCALE 1" = 1000'	DATE SURVEYED: 09–21–10	DATE DRAWN: 10–04–10
PARTY D.R. A.W. C.C.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BILL BARRETT CORPORATION	



LEGEND:

PROPOSED LOCATION

N

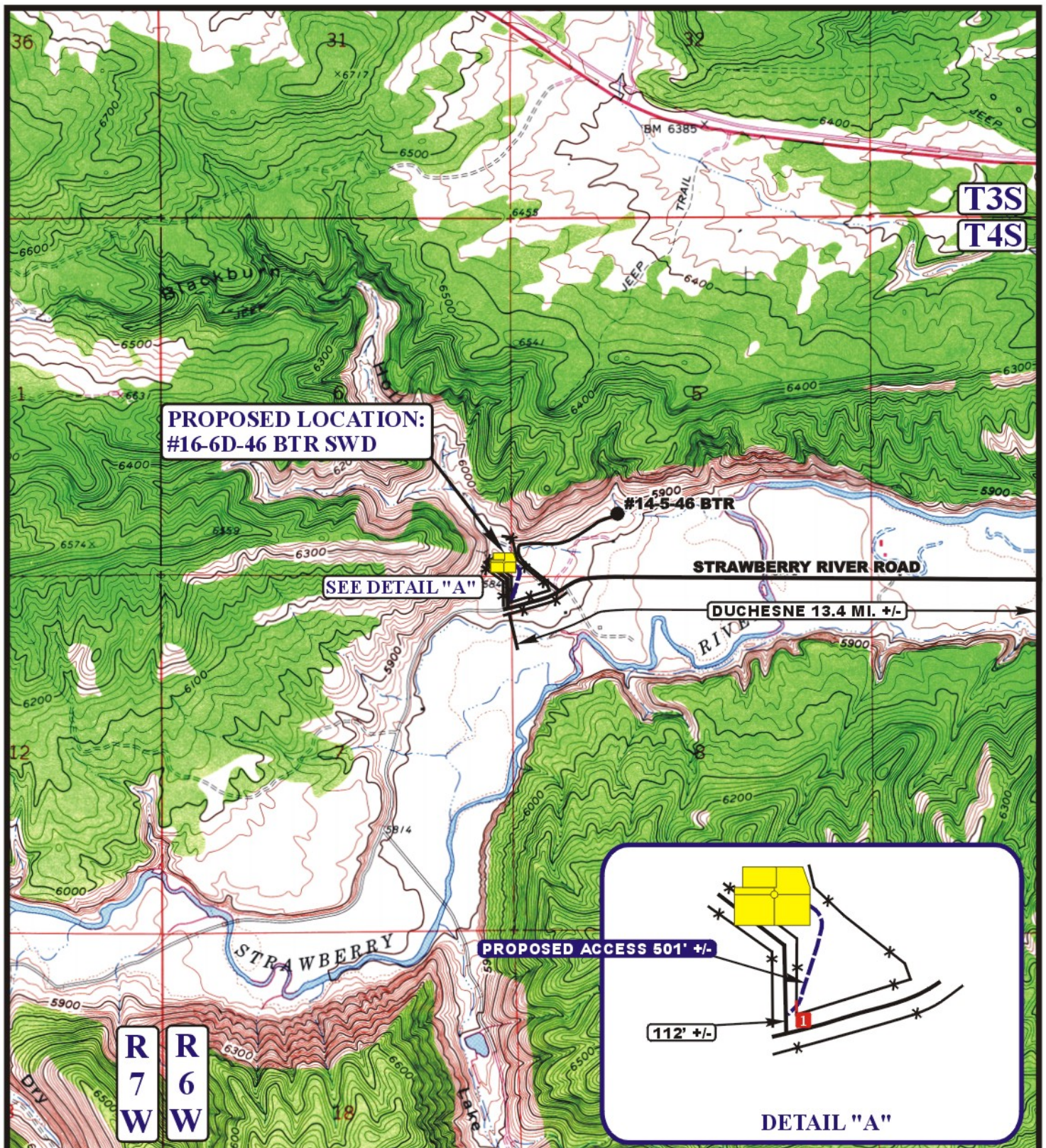
BILL BARRETT CORPORATION

#16-6D-46 BTR SWD
SECTION 6, T4S, R6W, U.S.B.&M.
200' FSL 99' FEL

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

TOPOGRAPHIC MAP	10 MONTH	13 DAY	10 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: J.J.	REVISED: 04-28-11		

RECEIVED: Jun. 28, 2011



LEGEND:

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

N

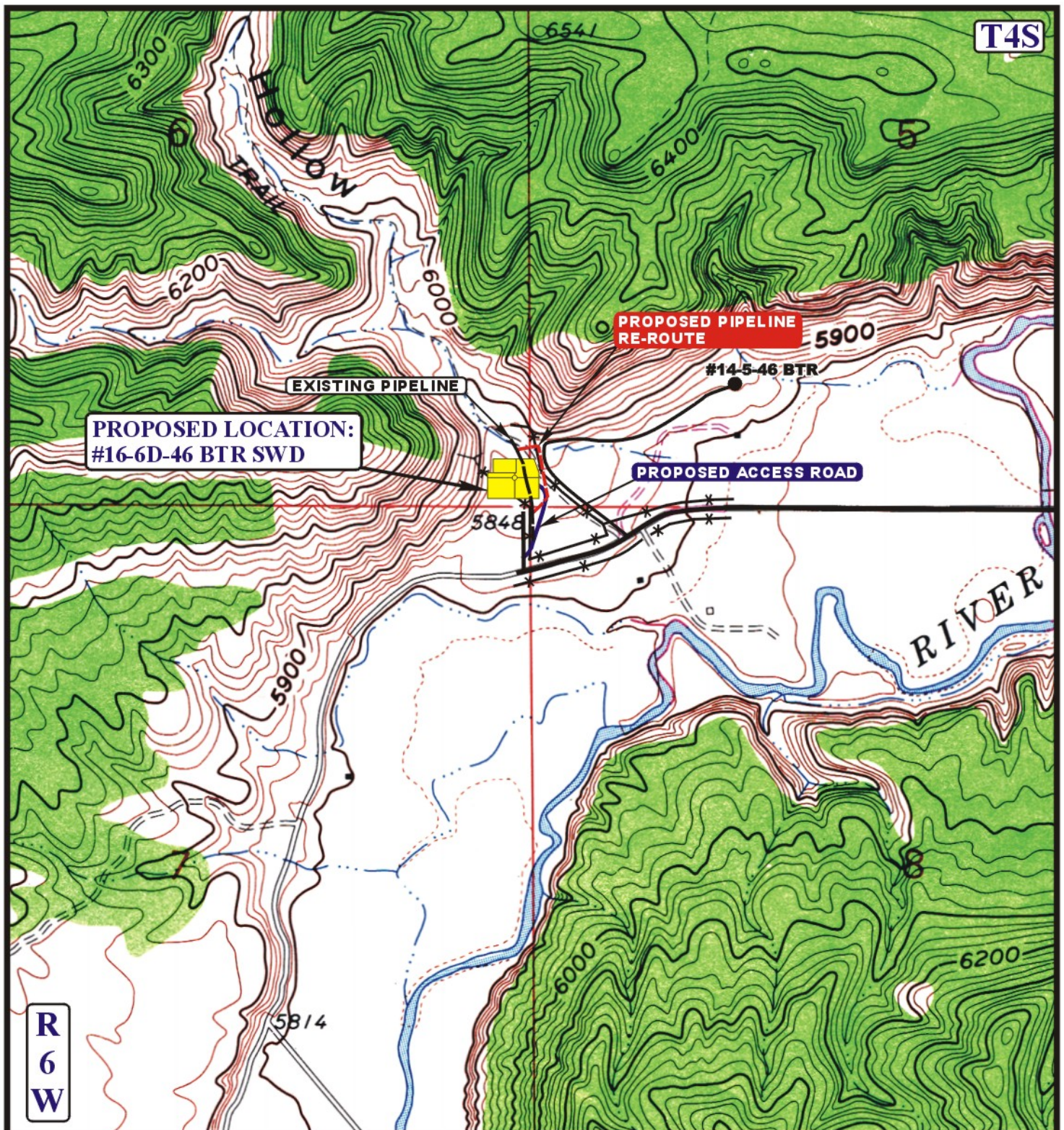
BILL BARRETT CORPORATION

#16-6D-46 BTR SWD
SECTION 6, T4S, R6W, U.S.B.&M.
200' FSL 99' FEL

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

TOPOGRAPHIC MAP	10 MONTH	13 DAY	10 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: J.J.	REVISED: 04-28-11		

RECEIVED: Jun. 28, 2011



APPROXIMATE TOTAL PIPELINE RE-ROUTE DISTANCE = 676' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE

N

BILL BARRETT CORPORATION

#16-6D-46 BTR SWD
SECTION 6, T4S, R6W, U.S.B.&M.
200' FSL 99' FEL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
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TOPOGRAPHIC MAP	10 MONTH	13 DAY	10 YEAR	C TOPO
SCALE: 1" = 1000'	DRAWN BY: J.J.	REVISED: 04-28-11		

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API Well Number: 43013507810000

Project: Duchesne County, UT (NAD 1927)
Site: Sec. 6-T4S-R6W
Well: #16-6D-46 BTR SWD
Wellbore: Plan A Rev 0
Plan: Plan A Rev 0 Proposal

Bill Barrett Corp

HALLIBURTON
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	
3	800.00	10.00	309.514	797.47	27.69	-33.58	2.00	309.51	43.52	
4	4327.96	10.00	309.514	4271.83	417.48	-506.20	0.00	0.00	656.15	
5	4827.96	0.00	0.000	4769.29	445.18	-539.77	2.00	180.00	699.67	
6	5108.67	0.00	0.000	5050.00	445.18	-539.77	0.00	0.00	699.67	#16-6D-46 BTR SWD_BHL

WELL DETAILS #16-6D-46 BTR SWD

Ground Level: 5656.00

Northing	Easting	Latitude	Longitude
664862.95	2252666.70	40° 9' 18.810 N	110° 35' 45.890 W

Azimuths to True North
Magnetic North: 11.57°

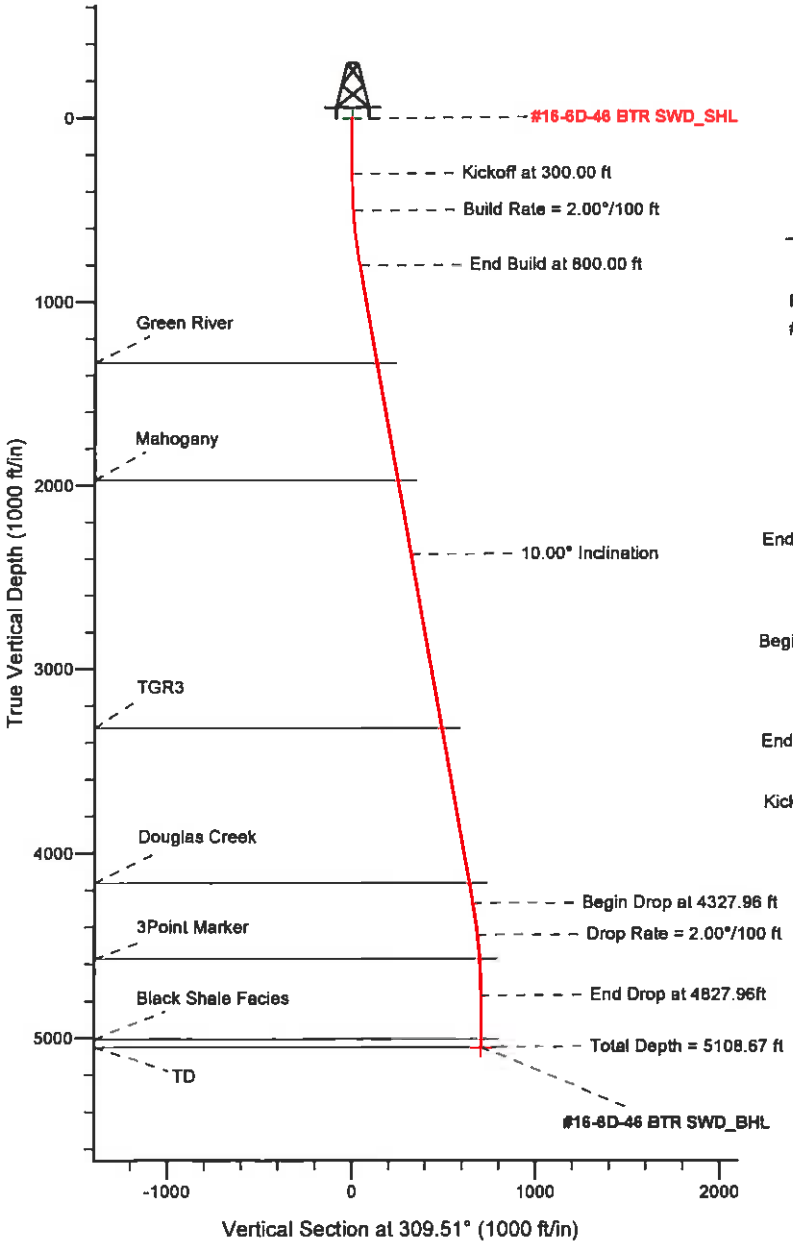
Magnetic Field
Strength: 52205.3snT
Dip Angle: 65.79°
Date: 7/22/2011
Model: BGGM2010

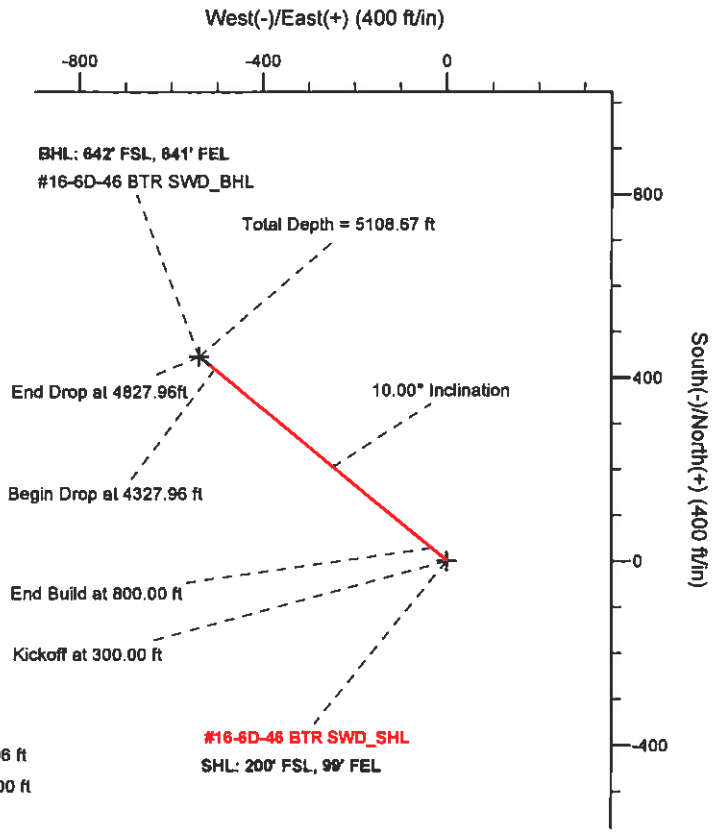
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1332.00	1342.78	Green River
1972.00	1992.65	Mahogany
3322.00	3383.48	TGR3
4162.00	4216.44	Douglas Creek
4572.00	4630.51	3Point Marker
5007.00	5065.67	Black Shale Facies
5050.00	5108.67	TD

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
#16-6D-46 BTR SWD_SHL	0.00	0.00	0.00	
#16-6D-46 BTR SWD_BHL	5050.00	445.18	-539.77	Point





PROJECT DETAILS: Duchesne County, UT (NAD 1927)

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

ANNOTATIONS

TVD	MD	Annotation
300.00	300.00	Kickoff at 300.00 ft
499.84	500.00	Build Rate = 2.00°/100 ft
797.47	800.00	End Build at 800.00 ft
2373.18	2400.00	10.00° Inclination
4271.83	4327.96	Begin Drop at 4327.96 ft
4442.05	4500.00	Drop Rate = 2.00°/100 ft
4769.29	4827.96	End Drop at 4827.96ft
5050.00	5108.67	Total Depth = 5108.67 ft

Plan A Rev 0 Proposal (#16-6D-46 BTR SWD)

Created By: Jerry Popp Date: 05/20/2011

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

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Plan Report for #16-6D-46 BTR SWD - Plan A Rev 0 Proposal

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)	Toolface Azimuth (°)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kickoff at 300.00 ft										
400.00	2.00	309.514	399.98	1.11	-1.35	1.75	2.00	2.00	0.00	309.51
500.00	4.00	309.514	499.84	4.44	-5.38	6.98	2.00	2.00	0.00	0.00
Build Rate = 2.00°/100 ft										
600.00	6.00	309.514	599.45	9.99	-12.11	15.69	2.00	2.00	0.00	0.00
700.00	8.00	309.514	698.70	17.74	-21.51	27.88	2.00	2.00	0.00	0.00
800.00	10.00	309.514	797.47	27.69	-33.58	43.52	2.00	2.00	0.00	0.00
End Build at 800.00 ft										
900.00	10.00	309.514	895.95	38.74	-46.97	60.89	0.00	0.00	0.00	0.00
1,000.00	10.00	309.514	994.43	49.79	-60.37	78.25	0.00	0.00	0.00	0.00
1,100.00	10.00	309.514	1,092.91	60.84	-73.77	95.62	0.00	0.00	0.00	0.00
1,200.00	10.00	309.514	1,191.39	71.89	-87.16	112.98	0.00	0.00	0.00	0.00
1,300.00	10.00	309.514	1,289.87	82.94	-100.56	130.35	0.00	0.00	0.00	0.00
1,342.78	10.00	309.514	1,332.00	87.66	-106.29	137.78	0.00	0.00	0.00	0.00
Green River										
1,400.00	10.00	309.514	1,388.35	93.98	-113.95	147.71	0.00	0.00	0.00	0.00
1,500.00	10.00	309.514	1,486.83	105.03	-127.35	165.08	0.00	0.00	0.00	0.00
1,600.00	10.00	309.514	1,585.31	116.08	-140.75	182.44	0.00	0.00	0.00	0.00
1,700.00	10.00	309.514	1,683.79	127.13	-154.14	199.81	0.00	0.00	0.00	0.00
1,800.00	10.00	309.514	1,782.27	138.18	-167.54	217.17	0.00	0.00	0.00	0.00
1,900.00	10.00	309.514	1,880.75	149.23	-180.94	234.54	0.00	0.00	0.00	0.00
1,992.65	10.00	309.514	1,972.00	159.46	-193.35	250.62	0.00	0.00	0.00	0.00
Mahogany										
2,000.00	10.00	309.514	1,979.23	160.28	-194.33	251.90	0.00	0.00	0.00	0.00
2,100.00	10.00	309.514	2,077.72	171.32	-207.73	269.27	0.00	0.00	0.00	0.00
2,200.00	10.00	309.514	2,176.20	182.37	-221.13	286.63	0.00	0.00	0.00	0.00
2,300.00	10.00	309.514	2,274.68	193.42	-234.52	303.99	0.00	0.00	0.00	0.00
2,400.00	10.00	309.514	2,373.16	204.47	-247.92	321.36	0.00	0.00	0.00	0.00
10.00° Inclination										
2,500.00	10.00	309.514	2,471.64	215.52	-261.32	338.72	0.00	0.00	0.00	0.00
2,600.00	10.00	309.514	2,570.12	226.57	-274.71	356.09	0.00	0.00	0.00	0.00
2,700.00	10.00	309.514	2,668.60	237.62	-288.11	373.45	0.00	0.00	0.00	0.00
2,800.00	10.00	309.514	2,767.08	248.67	-301.50	390.82	0.00	0.00	0.00	0.00
2,900.00	10.00	309.514	2,865.56	259.71	-314.90	408.18	0.00	0.00	0.00	0.00
3,000.00	10.00	309.514	2,964.04	270.76	-328.30	425.55	0.00	0.00	0.00	0.00
3,100.00	10.00	309.514	3,062.52	281.81	-341.69	442.91	0.00	0.00	0.00	0.00
3,200.00	10.00	309.514	3,161.00	292.86	-355.09	460.28	0.00	0.00	0.00	0.00
3,300.00	10.00	309.514	3,259.48	303.91	-368.49	477.64	0.00	0.00	0.00	0.00
3,363.48	10.00	309.514	3,322.00	310.92	-376.99	488.67	0.00	0.00	0.00	0.00
TGR3										
3,400.00	10.00	309.514	3,357.97	314.96	-381.88	495.01	0.00	0.00	0.00	0.00
3,500.00	10.00	309.514	3,456.45	326.01	-395.28	512.37	0.00	0.00	0.00	0.00
3,600.00	10.00	309.514	3,554.93	337.05	-408.68	529.74	0.00	0.00	0.00	0.00
3,700.00	10.00	309.514	3,653.41	348.10	-422.07	547.10	0.00	0.00	0.00	0.00
3,800.00	10.00	309.514	3,751.89	359.15	-435.47	564.47	0.00	0.00	0.00	0.00
3,900.00	10.00	309.514	3,850.37	370.20	-448.87	581.83	0.00	0.00	0.00	0.00
4,000.00	10.00	309.514	3,948.85	381.25	-462.26	599.20	0.00	0.00	0.00	0.00
4,100.00	10.00	309.514	4,047.33	392.30	-475.66	616.56	0.00	0.00	0.00	0.00
4,200.00	10.00	309.514	4,145.81	403.35	-489.05	633.93	0.00	0.00	0.00	0.00
4,216.44	10.00	309.514	4,162.00	405.16	-491.26	636.78	0.00	0.00	0.00	0.00
Douglas Creek										
4,300.00	10.00	309.514	4,244.29	414.40	-502.45	651.29	0.00	0.00	0.00	0.00
4,327.96	10.00	309.514	4,271.83	417.48	-506.20	656.15	0.00	0.00	0.00	0.00
Begin Drop at 4327.96 ft										

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Plan Report for #16-6D-46 BTR SWD - Plan A Rev 0 Proposal

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)	Toolface Azimuth (°)
4,400.00	8.56	309.514	4,342.92	424.88	-515.16	667.76	2.00	-2.00	0.00	180.00
4,500.00	6.56	309.514	4,442.05	433.25	-525.31	680.92	2.00	-2.00	0.00	180.00
Drop Rate = 2.00°/100 ft										
4,600.00	4.56	309.514	4,541.57	439.41	-532.78	690.60	2.00	-2.00	0.00	180.00
4,630.51	3.95	309.514	4,572.00	440.85	-534.53	692.87	2.00	-2.00	0.00	180.00
3Point Marker										
4,700.00	2.56	309.514	4,641.38	443.36	-537.57	696.81	2.00	-2.00	0.00	-180.00
4,800.00	0.56	309.514	4,741.33	445.09	-539.67	699.53	2.00	-2.00	0.00	180.00
4,827.96	0.00	0.000	4,769.29	445.18	-539.77	699.67	2.00	-2.00	0.00	180.00
End Drop at 4827.96ft										
4,900.00	0.00	0.000	4,841.33	445.18	-539.77	699.67	0.00	0.00	0.00	0.00
5,000.00	0.00	0.000	4,941.33	445.18	-539.77	699.67	0.00	0.00	0.00	0.00
5,065.67	0.00	0.000	5,007.00	445.18	-539.77	699.67	0.00	0.00	0.00	0.00
Black Shale Facies										
5,100.00	0.00	0.000	5,041.33	445.18	-539.77	699.67	0.00	0.00	0.00	0.00
5,108.67	0.00	0.000	5,050.00	445.18	-539.77	699.67	0.00	0.00	0.00	0.00
Total Depth = 5108.67 ft - TD - #16-6D-46 BTR SWD_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Kickoff at 300.00 ft
500.00	499.84	4.44	-5.38	Build Rate = 2.00°/100 ft
800.00	797.47	27.69	-33.58	End Build at 800.00 ft
2,400.00	2,373.16	204.47	-247.92	10.00° Inclination
4,327.96	4,271.83	417.48	-506.20	Begin Drop at 4327.96 ft
4,500.00	4,442.05	433.25	-525.31	Drop Rate = 2.00°/100 ft
4,827.96	4,769.29	445.18	-539.77	End Drop at 4827.96ft
5,108.67	5,050.00	445.18	-539.77	Total Depth = 5108.67 ft

Vertical Section Information

	Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target		#16-6D-46 BTR SWD_BHL	309.514	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	5,108.67	Plan A Rev 0 Proposal	MWD

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Plan Report for #16-6D-46 BTR SWD - Plan A Rev 0 Proposal

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,342.78	1,332.00	Green River		0.00	
1,992.65	1,972.00	Mahogany		0.00	
3,363.48	3,322.00	TGR3		0.00	
4,216.44	4,162.00	Douglas Creek		0.00	
4,630.51	4,572.00	3Point Marker		0.00	
5,065.67	5,007.00	Black Shale Facies		0.00	
5,108.67	5,050.00	TD		0.00	

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
#16-6D-46 BTR SWD_BHL	5,050.00	445.18	-539.77	Point
#16-6D-46 BTR SWD_SHL	0.00	0.00	0.00	Point

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Bill Barrett Corp

HALLIBURTON

Duchesne County, UT (NAD 1927)

North Reference Sheet for Sec. 6-T4S-R6W - #16-6D-46 BTR SWD - Plan A Rev 0

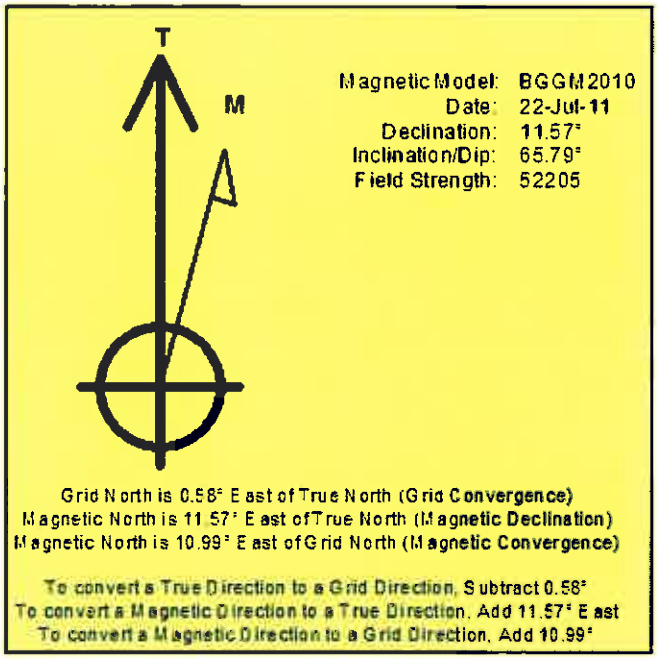
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.
Vertical Depths are relative to RKB 16 @ 5872.00ft (Patterson 506). Northing and Easting are relative to #16-6D-46 BTR SWD
Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is -111.50°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 39' 0.000 N°
False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991441

Grid Coordinates of Well: 664,862.95 ft N, 2,252,666.70 ft E
Geographical Coordinates of Well: 40° 09' 18.81" N, 110° 35' 45.69" W
Grid Convergence at Surface is: 0.58°

Based upon Minimum Curvature type calculations, at a Measured Depth of 5,108.67ft
the Bottom Hole Displacement is 699.67ft in the Direction of 309.51° (True).

Magnetic Convergence at surface is: -10.99° (22 July 2011, , BGGM2010)



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TURNER PETROLEUM LAND SERVICES, INC.
7026 SOUTH 900 EAST, SUITE B
MIDVALE, UT 84047
(801) 878-9324

March 20, 2011

Mr. and Mrs. Carl Dean Peterson, Trustees of
The Circle 3 Ranch Property Trust
PO Box 93
Duchesne, UT 84032

Re Compensation for Salt Water Disposal Lease

Dear Mr. and Mrs. Peterson:

By Agreement effective March 20, 2011, you granted to Bill Barrett Corporation a Salt Water Disposal Lease for the location of a salt water disposal wellsite, an access road and a pipeline or pipelines located in a portion of the SW1/4SW1/4 of Section 5, T4S-R6W, USM, and the SE1/4SE1/4 of Section 6, Township 4 South, Range 6 West, USM, Duchesne County, Utah.

Very truly yours,

Clint W. Turner
Agent for Bill Barrett Corporation

Accepted and agreed to:
CIRCLE 3 RANCH PROPERTY TRUST

By: Carl Dean Peterson
Carl Dean Peterson, Trustee

By: Veva Pamela Peterson
Veva Pamela Peterson, Trustee

Date: 4-18-11

(435)548-2330

PRODUCED WATER DISPOSAL LEASE
(Between Surface Owner and Producer)

State: UTAH
County: DUCHESNE
Lessor: Carl Dean Peterson and Veva Pamela Peterson, as Co-Trustees of the Circle 3 Ranch Property Trust, PO Box 93, Duchesne, UT 84021
Lessee: Bill Barrett Corporation, 1099 18th Street, Suite 2300, Denver, CO 80202
Effective Date: March 20, 2011

Lessor, whether one or more, named above, valuable consideration, the receipt and sufficiency of which are hereby acknowledged, grants, leases, and lets to Lessee, named above, the right to use the lands described in Exhibit "A", attached hereto and by this reference incorporated herein (the "Lands") for the purposes of disposing of water produced from oil and gas wells ("Water") whether located on the Lands, lands pooled, unitized or communitized with the Lands or on lands owned by third parties, provided such disposition is made in a manner and by means approved by Utah Department of Oil, Gas and Mining or other governmental authorities that may exercise jurisdiction over such disposal. Lessee is granted the right to drill a Water disposal well on the Lands into which Water may be injected into subsurface formations or strata (other than an "Underground Source of Drinking Water" as that term is defined in Utah Admin. Code R649-1-1) under the Lands, and to construct, repair, maintain, and operate pipelines, utility lines and roads necessary to service and operate such Well as more specifically outline below, and a Water injection station consisting of tanks, pumps, and other structures and equipment necessary or convenient to save, take care of, treat, collect, store, transport, and dispose of Water. Lessee agrees to fence all Water injection station areas whenever requested to do so by Lessor, at Lessee's sole cost and expense. Fences erected by Lessee will be sufficient to turn away livestock of ordinary disposition.

Any subsequent grant by Lessor to third parties of rights to use the Lands for the purpose of disposing of Water shall be made expressly subject to the terms of this Agreement excluding compensation paid pursuant to this Agreement and shall expressly provide that the exercise of rights by any third party shall not interfere with the rights of Lessee under this Agreement.

The location of all facilities, including the location of pipeline easements described below, shall be determined by the mutual agreement of Lessor and Lessee to minimize the inconvenience or damage to Lessor's use of the surface of the Lands, both present and prospective. Lessor reserves the right to use and enjoy all of the Lands on or through which this Lease and easement is granted for any purpose which will not interfere with Lessee's intended use.

Lessor expressly grants to Lessee an easement, right of way, and the right of ingress and egress to, from, and across the Lands for the purposes outlined above, including the right to lay a Water pipeline across the lands and all rights necessary for the purpose of construction, operation, and maintenance of the line. Lessee agrees to bury and maintain the pipeline beneath the surface of the ground at a depth sufficient to insure that the top of the pipeline shall not be

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less than _36_ inches beneath the surface of the soil at any point along each pipeline. All ditches in which a pipeline is buried shall be back-filled to a smooth crown and the topsoil removed to bury the pipeline shall be replaced. Exposed rocks shall be removed by Lessee.

All easements for pipelines shall only be _30_ feet in width, except for additional widths that may be temporarily needed for construction and removal of lines.

Lessee shall pay Lessor a disposal royalty [redacted] Water disposed of, in, and under the Lands subject to this Lease. This disposal royalty shall be paid on or before _60_ days following for volumes disposed of during any given month. Payment shall be made by Lessee's check delivered to Lessor. [redacted] with such minimum payment to be suspended for any month where Lessee is unable to dispose of "Water" due to delay caused by applicable laws, rules, regulations or rules, or any delay caused by repair or reworking of the disposal well, fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes. Lessee shall notify Lessor when the disposal well is shut down for any of the foregoing reasons. Such notification to be made by mail addressed to the Lessor at the address shown on this Agreement. Lessee shall have no more than ninety (90) days to get the disposal well back on production after being shut down for any of the aforesaid reasons; provided, however, that said time may be extended for good cause shown and with the written consent of Lessor.

Lessee shall hold Lessor harmless from any losses, damages, liabilities or claims of any kind which may be suffered by or brought against Lessor as a consequence of, in connection with or resulting form the existence and/or operations on this Lease, the Well and Lessees related facilities and operations.

This Lease shall be for a term of _10_ years, unless released in a recordable document, and as long thereafter as: (a) Water is injected through Water disposal wells on the Lands with no cessation of more than _180_ days duration; or, (b) drilling or reworking operations are conducted on the Lands for the drilling or reworking of a Water disposal well or wells, with no cessation of more than _180_ days duration.

Lessee, its successors and assigns, have the obligation at any time during or within _six (_6_) months after the expiration of this Lease, but not later, to remove all property and fixtures placed by Lessee on the Lands, including the right to draw and remove all casing from the well drilled or reworked by Lessee. Any property and fixtures not timely removed shall be deemed abandoned to Lessor. Lessee, its successors and assigns shall, upon abandonment of the well drilled pursuant to this Agreement, restore the surface of the ground to as near its original condition as possible

All payments due Lessor, which become delinquent shall accrue interest at the maximum rate of interest permitted by law.

Lessee shall furnish Lessor a surveyor's plat and metes and bounds description accurately reflecting the as-built location of all disposal and injection wells and the location and size of all pipelines, utility lines, roads and other facilities constructed by Lessee on the Lands.

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Lessee shall install cattleguards and repair or replace any existing fences damaged by Lessee.

Lessee shall use its best efforts to keep dust from the access road and location to a minimum.

All pipeline and other facility easements granted by this Lease are subject to all prior and outstanding easements, rights of way, oil and gas leases, interests of record, or apparent from an inspection of the Lands. Lessor expressly reserves the right to grant other surface easements and rights of way on and over the Lands, over and across Lessee's pipeline easements, provided that any additional easements or rights of way granted will not interfere with the rights granted to Lessee hereunder.

This Lease is a burden upon the Lands and shall be binding on Lessor, Lessee and their respective heirs, representative, successors, and assigns.

This Lease may be executed in any number of counterparts and all such counterparts shall be deemed to constitute a single Lease and the execution of one counterpart by any party hereto shall have the same force and effect as if said party had signed all counterparts.

This Lease is signed by Lessor and Lessee as of the date of the acknowledgment of their signatures below, but shall be effective for all purposes as of the Effective Date stated above.

Lessor
CIRCLE 3 RANCH PROPERTY TRUST

Carl Dean Peterson

Carl Dean Peterson, Trustee

Date: 4-18-11

Veva Peterson

Veva Pamela Peterson, Trustee

Date: 4-18-11

Lessee: BILL BARRETT CORPORATION

By: Clint W. Turner

Clint W. Turner, Its Agent

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[Exhibit "A": Description of Lands]
SEE ATTACHED EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

STATE OF UTAH

COUNTY OF DUCHESNE

INDIVIDUAL ACKNOWLEDGEMENT

On this 18th day of April, 2011, before me, the undersigned Notary Public in and for said County and State, personally appeared Carl Dean Peterson and Veva Pamela Peterson, as Trustees of the Circle 3 Ranch Property Trust known to me to be the person or persons whose name (s) are subscribed to the foregoing instrument, acknowledged that the same was executed and delivered as their free and voluntary act for the purposes therein set forth. In witness whereof I hereunto set my hand and official seal as of the dated hereinabove stated.

My commission Expires: 03-04-13 Diane L Robinson
Notary Public

NOTARY PUBLIC
Diane L. Robinson
57123
My Commission Expires
March 04, 2013
STATE OF UTAH

STATE OF UTAH

COUNTY OF SALT LAKE

CORPORATE ACKNOWLEDGEMENT

On the 4th day of May, 2011, before me the undersigned authority, appeared Clint W. Turner, to me personally known, who, being sworn did say that he is an Agent for Bill Barrett Corporation, and that the foregoing instrument was signed in behalf of said partnership and Appearer acknowledged to me that said instrument to be the free act and deed of Bill Barrett Corporation.

My Commission Expires: 10/19/2014 Tiffany Rowberry
Notary Public

NOTARY PUBLIC
TIFFANY ROWBERRY
Commission No. 582217
Commission Expires
OCTOBER 19, 2014
STATE OF UTAH

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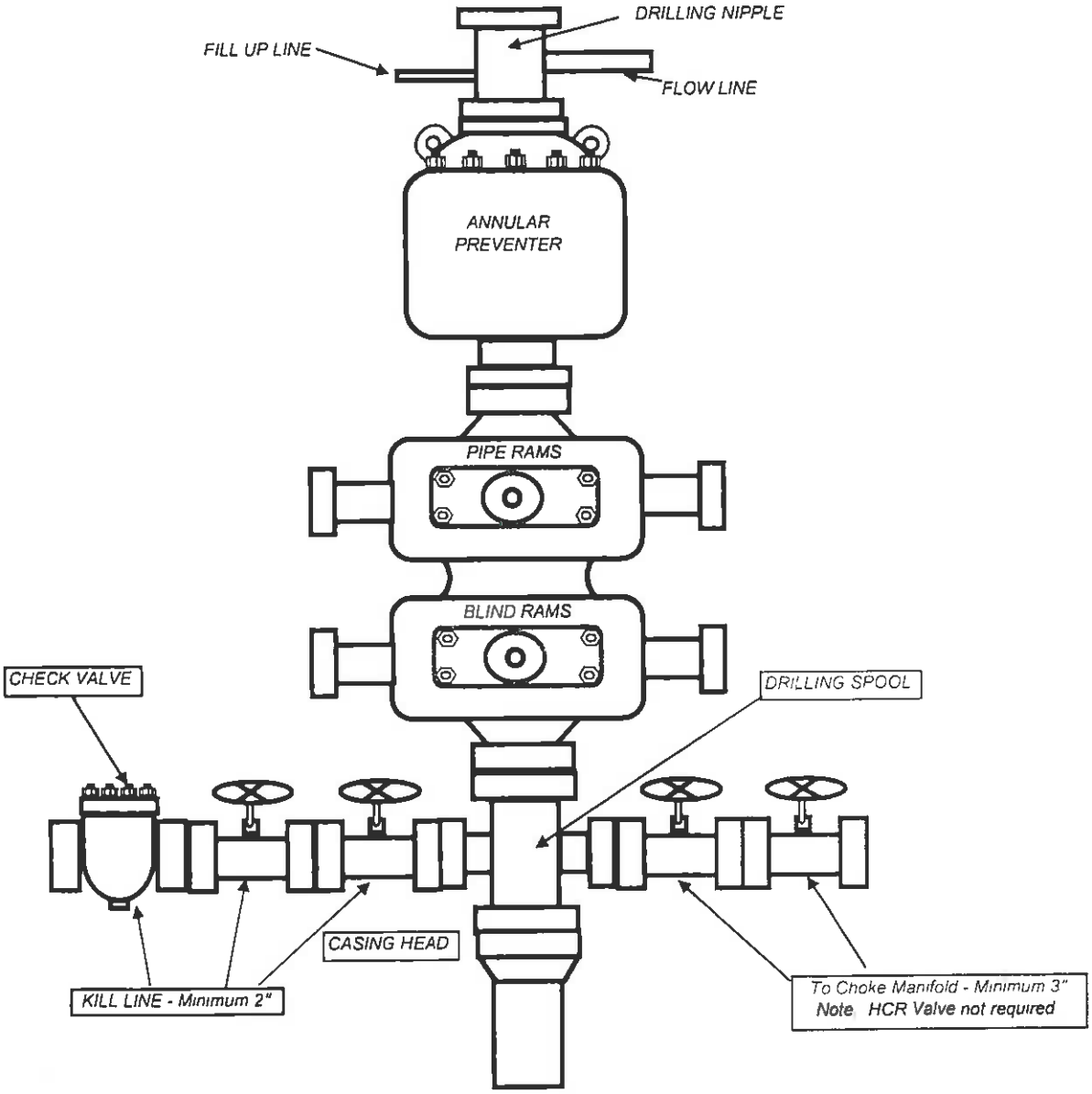
BILL BARRETT CORPORATION

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



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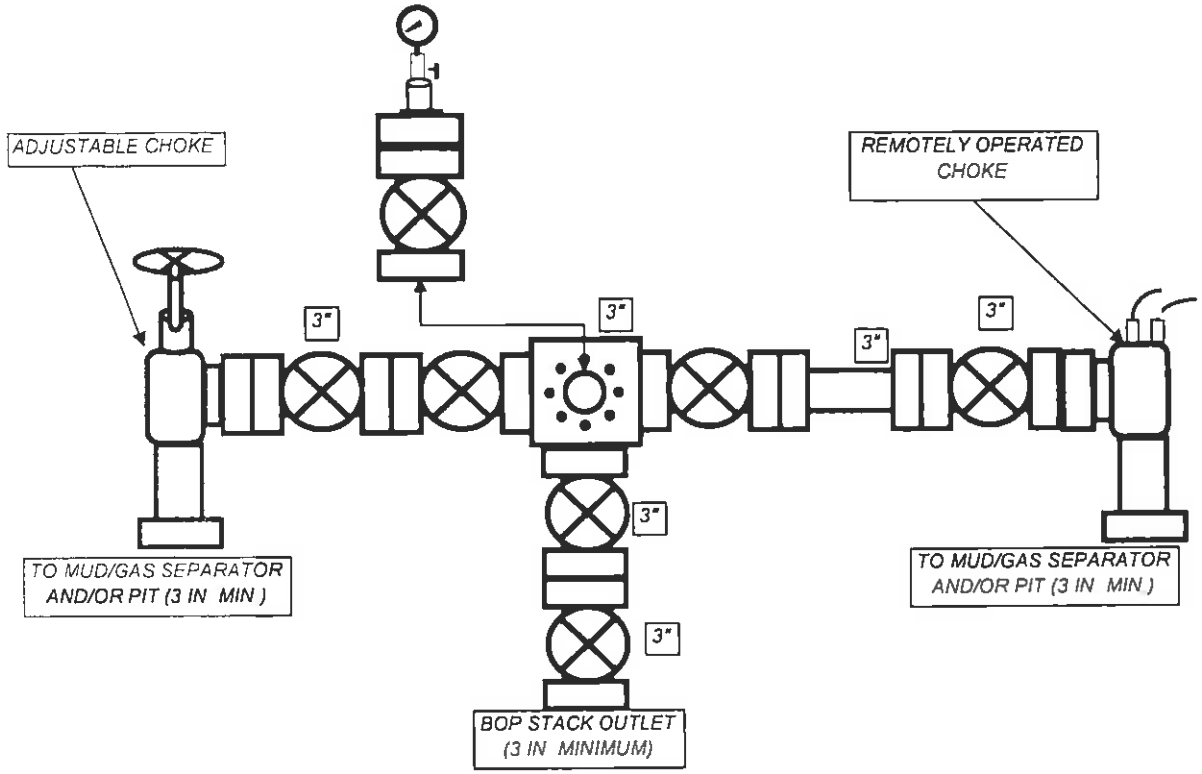
BILL BARRETT CORPORATION

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



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Bill Barrett Corporation

May 23, 2011

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

Re: Directional Drilling R649-3-11
Blacktail Ridge Area #16-6D-46 BTR SWD Well
Surface: 200' FSL & 99' FEL, SE SE, 6-T4S-R6W, USB&M
Bottom Hole: 642' FSL & 641' FEL, SE SE, 6-T4S-R6W, USB&M
Duchesne County, Utah

Dear Ms. Mason,

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

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

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

Sincerely,

Venessa Langmacher for

David Watts
Landman

1099 18TH STREET
SUITE 2300
DENVER, CO 80202

RECEIVED: Jun. 28, 2011

API Well Number: 43013507810000

BILL BARRETT CORPORATION

LOCATION LAYOUT FOR

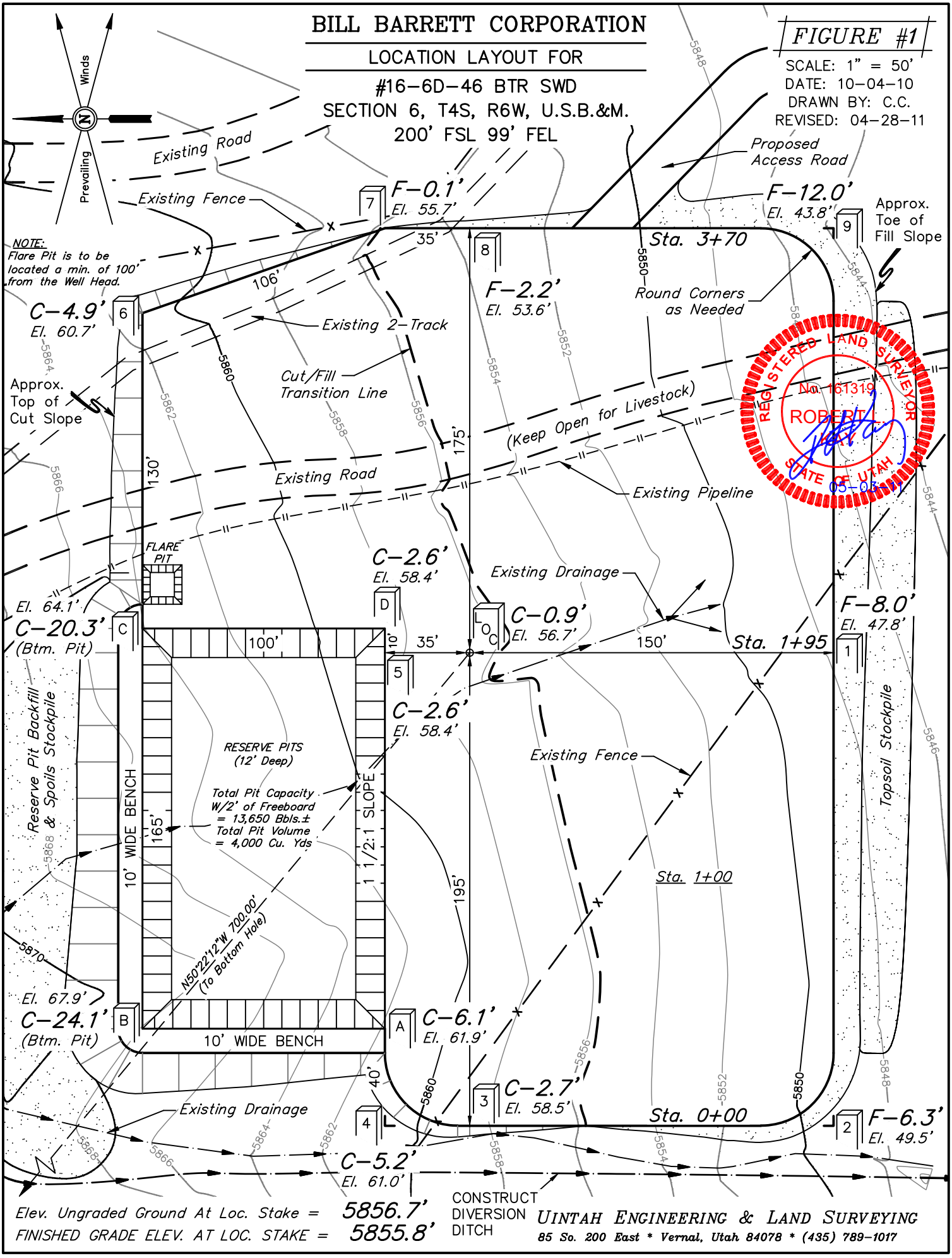
#16-6D-46 BTR SWD

SECTION 6, T4S, R6W, U.S.B.&M.

200' FSL 99' FEL

FIGURE #1

SCALE: 1" = 50'
DATE: 10-04-10
DRAWN BY: C.C.
REVISED: 04-28-11



Elev. Ungraded Ground At Loc. Stake = 5856.7'

FINISHED GRADE ELEV. AT LOC. STAKE = 5855.8'

CONSTRUCT DIVERSION DITCH

UINTAH ENGINEERING & LAND SURVEYING

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

RECEIVED: Jun. 28, 2011

BILL BARRETT CORPORATION

TYPICAL CROSS SECTIONS FOR

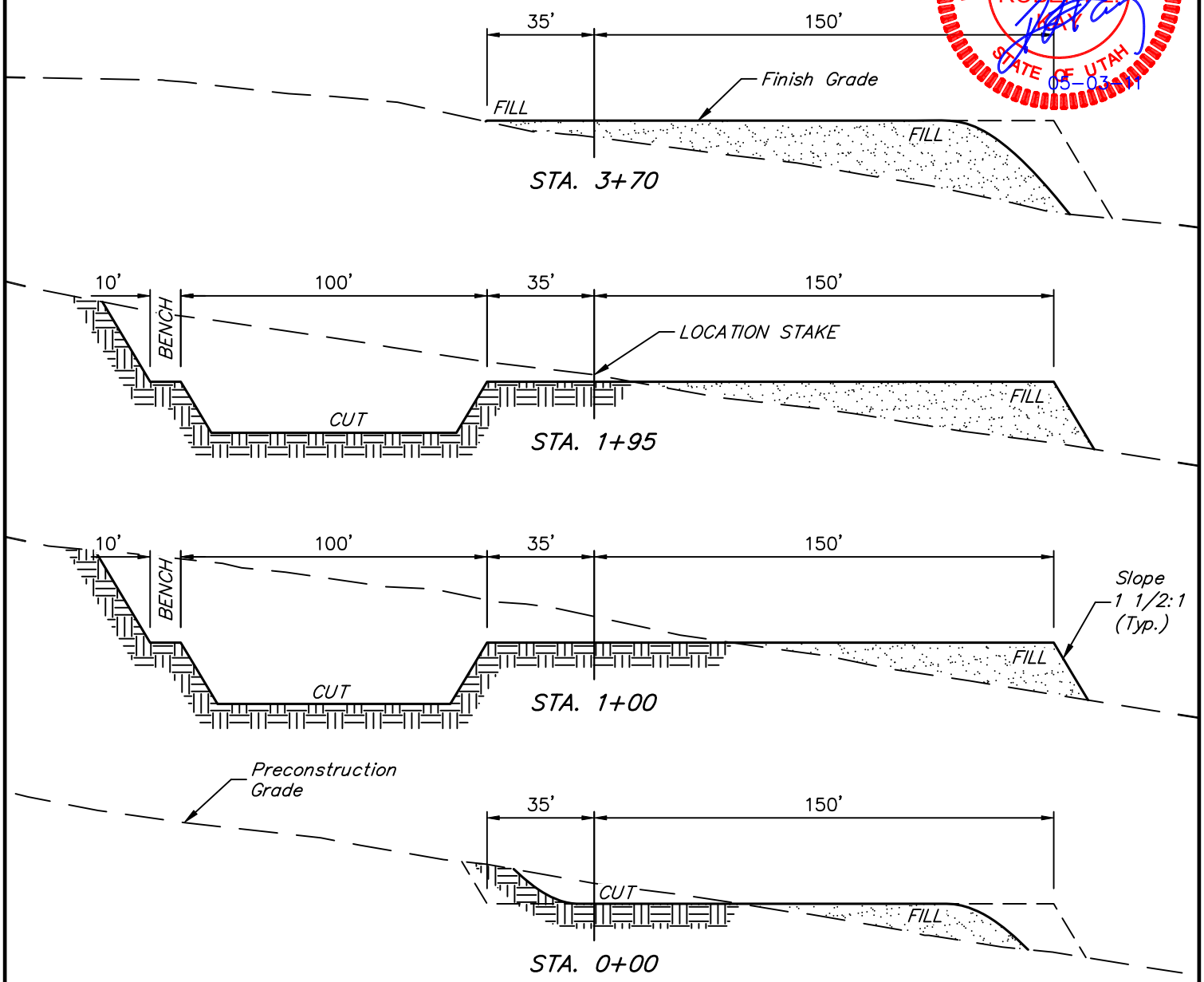
#16-6D-46 BTR SWD
SECTION 6, T4S, R6W, U.S.B.&M.
200' FSL 99' FEL

FIGURE #2

1" = 20'
X-Section Scale
1" = 50'

DATE: 10-04-10
DRAWN BY: C.C.
REVISED: 04-28-11

REGISTERED LAND SURVEYOR
No. 161319
ROBERT L.
STATE OF UTAH
05-03-11



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

APPROXIMATE ACREAGES

WELL SITE DISTURBANCE = ± 3.122 ACRES
ACCESS ROAD DISTURBANCE = ± 0.321 ACRES
PIPELINE RE-ROUTE DISTURBANCE = ± 0.411 ACRES
TOTAL = ± 3.854 ACRES

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

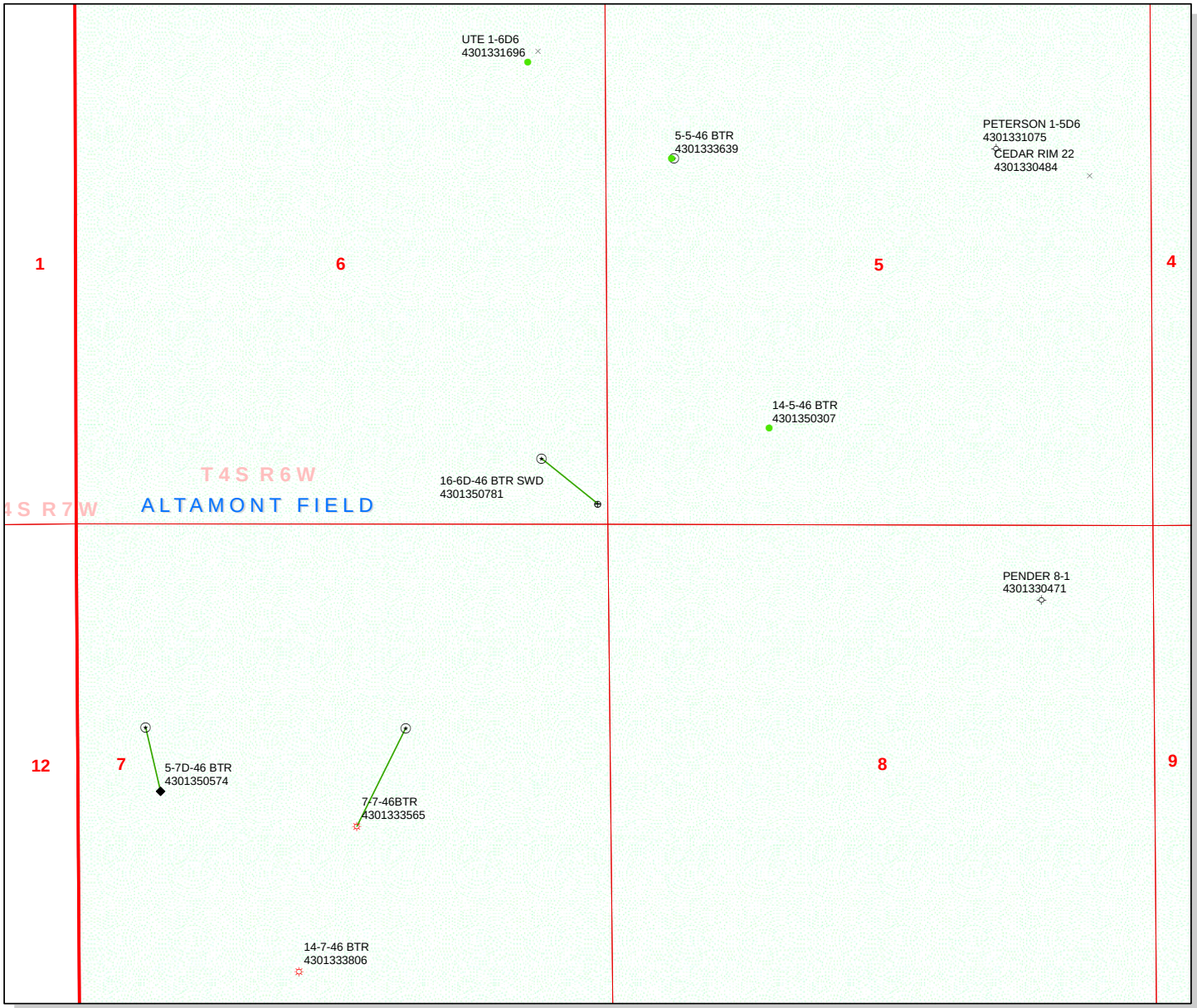
(6") Topsoil Stripping = 2,230 Cu. Yds.
Remaining Location = 13,640 Cu. Yds.
TOTAL CUT = 15,870 CU.YDS.
FILL = 10,180 CU.YDS.

EXCESS MATERIAL = 5,690 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.) = 4,230 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation) = 1,460 Cu. Yds.

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

RECEIVED: Jun. 28, 2011

API Well Number: 43013507810000



API Number: 4301350781

Well Name: 16-6D-46 BTR SWD

Township T0.4 . Range R0.6 . Section 06

Meridian: UBM

Operator: BILL BARRETT CORP

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
ACTIVE
EXPLORATORY
GAS STORAGE
NF PP OIL
NF SECONDARY
PI OIL
PP GAS
PP GEOTHERML
PP OIL
SECONDARY
TERMINATED

Fields
STATUS
Unknown
ABANDONED
ACTIVE
COMBINED
INACTIVE
STORAGE
TERMINATED
Sections
Township

Wells Query
Status
APD - Aproved Permit
DRL - Spuded (Drilling Commenced)
GIW - Gas Injection
GS - Gas Storage
LA - Location Abandoned
LOC - New Location
OPS - Operation Suspended
PA - Plugged Abandoned
PGW - Producing Gas Well
POW - Producing Oil Well
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

N

1,250 625 0 1,250 Feet

1:12,000

RECEIVED: Jun. 28, 2011

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	BILL BARRETT CORP				
Well Name	16-6D-46 BTR SWD				
API Number	43013507810000	**APD No**	3842	**Field/Unit**	ALTAMONT
Location: 1/4,1/4	SESE **Sec** 6 **Tw** 4.0S **Rng** 6.0W 200 FSL 99 FEL				
GPS Coord (UTM)	534450 4444854	**Surface Owner**	Circle 3 Ranch Property Trust		

Participants

James Hereford (BLM), Kary Eldredge (Bill Barrett), Roger Knight (Bill Barrett), Don Hamilton (Star Point), Trevor Anderson (UELS), Joe Avia (EIS), Richard Powell (DOGM), Kelly Jo Jackson (Montgomery)

Regional/Local Setting & Topography

This location sits at the north side of the Strawberry River corridor at the mouth of Blackburn Hollow. To the north of the Strawberry river there are steep ridges which climb to a large bench upon which lies Hwy 40. Blackburn Hollow is a deep canyon which drains from bench above on the north. The location appears to lie outside the floodplain. Duchesne, UT is approximately 13 miles to the east.

Surface Use Plan

Current Surface Use
Grazing

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.095	**Width** 285 **Length** 370	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Deer, elk, coyote, rabbits and other small mammals, song birds, raptors
Sage, prickly pear, salt brush, shadscale, rabbit brush, cheat grass

Soil Type and Characteristics

Clay loam soil

Erosion Issues N

Sedimentation Issues N

Site Stability Issues N

Drainage Diverson Required? Y

Drainage diversion must be constructed around west side of location

Berm Required? N

RECEIVED: Jun. 28, 2011

Erosion Sedimentation Control Required? N

Paleo Survey Run? N **Paleo Potental Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** Y

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	75 to 100	10	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)	10 to 20	5	
Affected Populations			
Presence Nearby Utility Conduits	Unknown	10	
	Final Score	40	1 Sensitivity Level

Characteristics / Requirements

The reserve pit will be place in cut in a stable location. The pit will be 100ft x 165ft x 12ft deep with a total capacity including freeboard of 13,650bbl. Kary Eldredge of BBC said they will use a 20 mil liner with a felt sub-liner.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

Other Observations / Comments

The easting GPS coordinate as read in the field is 44 meters off.
There is an approximately 10 ft horizontal open mine shaft near the location to the north east. Kary Eldredge expressed willingness to close the shaft during location construction if it is desired by the land owner Dean Peterson. However, Kelly Jo Jackson of Montgomery Archeology expressed desire that the shaft remain undisturbed for antiquities purposes.

Richard Powell	6/15/2011
Evaluator	**Date / Time**

RECEIVED: Jun. 28, 2011

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
3842	43013507810000	LOCKED	WD	P	No

Operator	BILL BARRETT CORP	**Surface Owner-APD**	Circle 3 Ranch Property Trust
Well Name	16-6D-46 BTR SWD	**Unit**	
Field	ALTAMONT	**Type of Work**	DRILL
Location	SESE 6 4S 6W U 200 FSL 99 FEL GPS Coord (UTM)	534406E 4444858N	

Geologic Statement of Basis

The mineral rights for the proposed well are owned by the Ute Tribe. The BLM will be the agency responsible for evaluating and approving the drilling, casing and cement programs.

Brad Hill — **APD Evaluator**

6/28/2011 — **Date / Time**

Surface Statement of Basis

This onsite evaluation was arranged by James Hereford in cooperation with Bill Barrett Corporation (BBC). According to Mr. Hereford, land owner Carl Dean Peterson was invited but chose not to attend. According to Kary Eldredge of BBC, Mr. Peterson asked that the well be placed farther up the canyon but the surveyors determined that it could not be placed up canyon due to drainage issues. Basically, if placed farther up the canyon the drainages could not be adequately diverted to protect the well site. No other issues or concerns were voiced during this onsite. This appears to be a good location for this well.

Richard Powell — **Onsite Evaluator**

6/15/2011 — **Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

RECEIVED: Jun. 28, 2011

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/23/2011
API NO. ASSIGNED: 43013507810000
WELL NAME: 16-6D-46 BTR SWD
OPERATOR: BILL BARRETT CORP (N2165)
PHONE NUMBER: 303 312-8134
CONTACT: Tracey Fallang

PROPOSED LOCATION: SESE 06 040S 060W
Permit Tech Review: ✔

SURFACE: 0200 FSL 0099 FEL
Engineering Review: ☐

BOTTOM: 0642 FSL 0641 FEL
Geology Review: ✔

COUNTY: DUCHESNE
LATITUDE: 40.15526
LONGITUDE: -110.59603
UTM SURF EASTINGS: 534406.00
NORTHINGS: 4444858.00
FIELD NAME: ALTAMONT
LEASE TYPE: 2 - Indian
LEASE NUMBER: 2OG0005608
PROPOSED PRODUCING FORMATION(S): GREEN RIVER
SURFACE OWNER: 4 - Fee
COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- ✔ **PLAT**
- ✔ **Bond:** INDIAN - LPM8875725
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ✔ **Water Permit:** Duchesne City Culinary Water Dock
- ☐ **RDCC Review:**
- ✔ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit:

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ✔ **Drilling Unit**

Board Cause No: Cause 139-84
Effective Date: 12/31/2008
Siting: 660' Fr Drl U Bdry & 1320' Fr Other Wells

- ✔ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
4 - Federal Approval - dmason
5 - Statement of Basis - bhill
15 - Directional - dmason

RECEIVED: Jun. 28, 2011

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: 16-6D-46 BTR SWD
API Well Number: 43013507810000
Lease Number: 2OG0005608
Surface Owner: FEE (PRIVATE)
Approval Date: 6/28/2011

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

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

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

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

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

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

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

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 at 801-538-5284 (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

API Well No: 43013507810000

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:

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: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR:
BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR:
1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER:
303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT
  Approximate date work will start:
- ☐ SUBSEQUENT REPORT
  Date of Work Completion:
- ✓ SPUD REPORT
  Date of Spud: 11/9/2011
- ☐ DRILLING REPORT
  Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

This well was spud on 11/09/2011 at 8:00 am by Triple A Drilling.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Venessa Langmacher	303 312-8172	Senior Permit Analyst

SIGNATURE	DATE
N/A	11/9/2011

RECEIVED Nov. 09, 2011

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR:
BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR:
1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER:
303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT
  Approximate date work will start:
- ☐ SUBSEQUENT REPORT
  Date of Work Completion:
- ☐ SPUD REPORT
  Date of Spud:
- ✓ DRILLING REPORT
  Report Date: 11/30/2011

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

November 2011 Monthly Drilling Report attached.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY

NAME (PLEASE PRINT) Brady Riley
PHONE NUMBER 303 312-8115
TITLE Permit Analyst

SIGNATURE N/A
DATE 12/5/2011

RECEIVED Dec. 05, 2011

Bill Barrett Corporation

SWD 16-6D-46 BTR 11/29/2011 01:00 - 11/29/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	DRILLING	3,389.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
01:00	5.00	06:00	1	RIGUP & TEARDOWN	WAIT ON DAYLIGHT. 10% RIGGED DOWN, 0% MOVED.

RECEIVED Dec. 05, 2011

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

FORM 6

ENTITY ACTION FORM

Operator: Bill Barrett Corporation
Address: 1099 18th Street, Suite 2300
city Denver
state CO zip 80202

Operator Account Number: N 2165
Phone Number: (303) 312-8172

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301350781	16-6D-46 BTR SWD		SESE	6	4S	6W	Duchesne
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18327	11/9/2011			11/30/11	

Comments: Spudding Operation was conducted by Triple A Drilling @ 8:00 am.
GRRV

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	

Comments:

ACTION CODES:
- **A** - Establish new entity for new well (single well only)
- **B** - Add new well to existing entity (group or unit well)
- **C** - Re-assign well from one existing entity to another existing entity
- **D** - Re-assign well from one existing entity to a new entity
- **E** - Other (Explain in 'comments' section)

Venessa Langmacher
Name (Please Print)
Venessa Langmacher
Signature
Sr Permit Analyst
Title
11/9/2011
Date

RECEIVED
NOV 09 2011
DIV. OF OIL, GAS & MINING

(5/2000)

Print Form

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corporation Rig Name/# HP 319
Submitted By JET LORENZEN Phone Number 970-623-7078
Well Name/Number SWD16-6D-46 SWD
Qtr/Qtr SE/SE Section 6 Township 4S Range 6W
Lease Serial Number 2OG0005608
API Number 43-013-50781

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 12/03/2011 15:00 AM ☐ PM ☑

BOPE

- ☑ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time 12/04/2011 02:00 AM ☑ PM ☐

RECEIVED
DEC 06 2011
DIV. OF OIL, GAS & MINING

Remarks _____

Print Form

BLM - Vernal Field Office - Notification Form

Operator Bill Barrett Corporation Rig Name/# HP 319
Submitted By JET LORENZEN Phone Number 970-623-7078
Well Name/Number SWD 16-6D-46 BTR
Qtr/Qtr SE/SE Section 6 Township 4S Range 6W
Lease Serial Number 2OG0005608
API Number 43-013-50781

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☐ Surface Casing
☐ Intermediate Casing
☑ Production Casing
☐ Liner
☐ Other

RECEIVED
DEC 06 2011
DIV. OF OIL, GAS & MINING

Date/Time 12/07/2011 01:00 AM ☑ PM ☐

BOPE

☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks _____

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT
  Approximate date work will start:
- ☐ SUBSEQUENT REPORT
  Date of Work Completion:
- ☐ SPUD REPORT
  Date of Spud:
- ✓ DRILLING REPORT
  Report Date: 12/31/2011

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

Attached is the December 2011 monthly drilling report for this well.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
01/05/2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst
SIGNATURE N/A		**DATE** 1/5/2012

RECEIVED Jan. 05, 2012

Bill Barrett Corporation

SWD 16-6D-46 BTR 12/1/2011 06:00 - 12/2/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	24.00	06:00	1	RIGUP & TEARDOWN	SET CENTER STEEL, DRAW TOOL, DOG HOUSE. RAISE DERRICK @ 3 PM. MOVE CAMPS IN SNOW. RIG UP ROTARY TOOLS. FILL PITS.

SWD 16-6D-46 BTR 12/2/2011 06:00 - 12/3/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	10.00	16:00	1	RIGUP & TEARDOWN	RIG UP ROTARY TOOLS
16:00	2.00	18:00	6	TRIPS	PICK UP BHA, OREINTATE MWD FILL PIPE.
18:00	2.25	20:15	2	DRILL ACTUAL	DRLG12 1/4" SURFACE F/ 104' TO 247' (143' IN 2.25 HR = 63.6FPH) SLIDE: 32' IN .5 HR = 64 FPH ROTATE: 79' IN 1.75 HR = 54.5 FPH). MM SPERRY DRILL 8" 4/5 LOBE 6.7 .017 GPR 1.5 BEND 5.80' BTB.
20:15	1.00	21:15	5	COND MUD & CIRC	WORK TIGHT HOLE HOLE SLUFFING
21:15	0.50	21:45	7	LUBRICATE RIG	RIG SERVICE
21:45	7.50	05:15	2	DRILL ACTUAL	DRLG F/ 247' TO 1015' (768' IN 7.5 HR = 102.4 FPH) SLIDE:451' IN 4 HR = 112.75 ROTATE:317' IN 3.5 HR = 90.6 FPH.
05:15	0.50	05:45	5	COND MUD & CIRC	CIRC. SWEEP
05:45	0.25	06:00	6	TRIPS	SHORT TRIP

SWD 16-6D-46 BTR 12/3/2011 06:00 - 12/4/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.00	07:00	6	TRIPS	SHORT TRIP TO DCS
07:00	0.50	07:30	5	COND MUD & CIRC	CIRC.
07:30	2.00	09:30	6	TRIPS	TOOH, L/D 8' TOOLS
09:30	2.00	11:30	12	RUN CASING & CEMENT	HSM RIG UP WEATHERFORD AND RUN CASING. FS (1.00), SHOE JT (43.17), FC (1.00), 23 JTS 9 5/8" 36# J55 ST&C CASING (967.02). LANDED @ 1009' MADE UP W/ BESTOLIFE DOPE TO 3940 FT/LB.
11:30	0.50	12:00	7	LUBRICATE RIG	WORK ON PIPE WRANGLER.
12:00	0.50	12:30	5	COND MUD & CIRC	CIRC. W/ RIG PUMP.
12:30	1.75	14:15	12	RUN CASING & CEMENT	HSM, RIG UP HES AND CEMENT. 20 BLS H2O, 40 BLS SUPERFLUSH, 20 BLS H2O, 100 SKS HLC PREIMIUM 11# 3.16 YEILD W/ 5 LMB SILICALITE, .125 LB POLY-E-FLAKE, .25 LB KWIK SEAL, TAILED W/ 230 SKS TYPE III 14.8# 1.32 YEILD W/ .125 LB POLY-E-FLAKE. DISPLACED W/ 74 BLS H2O. GOOD RETURN ON WHOLE JOB. 29 BLS CEMENT TO SURFACE. BUMP PLUG FLOATS HELD.CEMENT FELL 15' IN 15 MINS.
14:15	2.50	16:45	13	WAIT ON CEMENT	WOC. TEST CASING TO 1500# F/ 30 MINS.
16:45	0.75	17:30	12	RUN CASING & CEMENT	TOP OUT W/ 8O' 1" PIPE 10 BLS CLASS G 15.8# 1.17 YEILD W/ 3% CACL. CEMENT FELL 1' IN HR.
17:30	2.00	19:30	13	WAIT ON CEMENT	WOC
19:30	4.00	23:30	14	NIPPLE UP B.O.P	CUT OFF WELD ON WELL HEAD TEST 100# F/ 10 MINS
23:30	2.00	01:30	7	LUBRICATE RIG	NIPPLE UP BOPS
01:30	3.50	05:00	15	TEST B.O.P	TEST BOPS. TEST ALL RAMS AND VALVES 5000# F/ 10 MINS. TEST ANNNULAR TO 2500# F/ 10 MINS.
05:00	0.50	05:30	14	NIPPLE UP B.O.P	INSTALL WEAR BUSHING
05:30	0.50	06:00	20	DIRECTIONAL WORK	PICK UP DIRCTIONAL TOOLS.

SWD 16-6D-46 BTR 12/4/2011 06:00 - 12/5/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.50	07:30	20	DIRECTIONAL WORK	PICK UP BHA
07:30	1.50	09:00	6	TRIPS	TIH
09:00	1.50	10:30	21	OPEN	DRILL OUT SHOE TRACK
10:30	0.50	11:00	7	LUBRICATE RIG	RIG SERVICE, X/O TRANCDUECER ON MUD LINE
11:00	0.50	11:30	21	OPEN	EMW 115# W/ 8.6 MUD = 10.8 MUD.

RECEIVED Jan. 05, 2012

Bill Barrett Corporation

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
11:30	18.50	06:00	2	DRILL ACTUAL	DRLG F/ 1015' TO 3389' (2374' IN 18.5 HR = 128.3 FPH) SLIDE:271' IN 4 HR = 67.8 FPH. ROTATE: 2103' IN 14.5 HR = 145 FPH. MM 6 3/4" HUNTING 7/8 LOBE 3.9 STAGE .15 GPR 1.5 FIXED BEND 6.25 BTB. LAST SURVEY 3294' 9.51 DEG 307.28 AZ. 9.72' ABOVE PLAN AND 6.75' LEFT.

SWD 16-6D-46 BTR 12/5/2011 06:00 - 12/6/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	7.75	13:45	2	DRILL ACTUAL	DRLG F/ 3389' TO 3872' (483' IN 7.75 HR = 62.3 FPH) SLIDE: 97' IN 3.75 HR = 25.9 FPH, ROTATE: 386' IN 4 HR = 96.5 FPH. MM 6 3/4" HUNTING 7/8 LOBE 3.9 STAGE .15 GPR 1.5 FIXED BEND 6.25 BTB.
13:45	0.50	14:15	7	LUBRICATE RIG	RIG SERVICE
14:15	10.75	01:00	2	DRILL ACTUAL	DRLG F/ 3872' TO 5120 (1248' IN 10.75 HR = 116 FPH) SLIDE: 49' IN 2 HR = 24.5 FPH, ROTATE: 199' IN 8.75 HR = 137 FPH.
01:00	0.75	01:45	5	COND MUD & CIRC	CIRC. SWEEP
01:45	1.75	03:30	6	TRIPS	SHORT TRIP 25 STDS
03:30	0.75	04:15	5	COND MUD & CIRC	CIRC.
04:15	1.75	06:00	6	TRIPS	TOOH F/ LOGS

SWD 16-6D-46 BTR 12/6/2011 06:00 - 12/7/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.50	07:30	6	TRIPS	TOOH, L/D REAMERS
07:30	7.50	15:00	11	WIRELINE LOGS	HSM RIG UP LOGGERS, TOOLS WOULD NOT WORK, X/O TOOLS LOG AND RIG DN.LOGGER TD 5120'
15:00	3.00	18:00	6	TRIPS	TIH.
18:00	0.50	18:30	5	COND MUD & CIRC	CIRC BOTTOMS UP DRLG 5' TO 5125'
18:30	1.25	19:45	6	TRIPS	LDDP
19:45	0.50	20:15	7	LUBRICATE RIG	RIG SERVICE WORK ON PIPE WRANGLER
20:15	1.25	21:30	8	REPAIR RIG	WO PIPE WRANGLER. HIGH TEMP SHUT DOWN.
21:30	3.75	01:15	6	TRIPS	LDDP AND DCS
01:15	0.50	01:45	14	NIPPLE UP B.O.P	PULL WEAR BUSHING
01:45	4.25	06:00	12	RUN CASING & CEMENT	HSM, RIG UP WEATHERFORD AND RUN CASING. FC (1.00), SHOE JT (43.56), FC (1.00) 18 JTS 5 1/2" P110 17# LT&C CASING (776.89), MARKER JT (20.74), 19 JTS CASING (831.31), MARKER JT (20.85), 78 JTS CASING (3399.13). LANDED @ 5192'. MADE UP W/ BESTOLIFE DOPE TO 4620 FT/LB.

SWD 16-6D-46 BTR 12/7/2011 06:00 - 12/8/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	1.75	07:45	12	RUN CASING & CEMENT	FINISH CASING. INSTALL TRIP NIPPLE. RIG DN TOUNGS
07:45	0.50	08:15	5	COND MUD & CIRC	CIRC BOTTOMS UP
08:15	3.25	11:30	12	RUN CASING & CEMENT	HSM, RIG UP HES AND CEMENT. 10 BLS H2O, 40 BLS SUPERFLUSH, 10 BLS H2O, 385 SKS TUNED LITE 11# 2.32 YEILD W/5LB SILACATE, 10LB SCOTCHLITE, .35 LB HALAD-344, .5 LB D-AIR, .4 LB HR-5, 5 LB BENTONITE, .125 L POLY-E-FLAKE, 1 LB GRANULITE TR. TAILED W/ 450 SKS ECONOCHEM 13.5# 1.42 YEILD W/2% BENTONITE, 3% POTASSIUM CHLORIDE, .75% HALAD-322, .2% FWCA, .3% SUPER CBL, .125 LB POLY-E-FLAKE, 1 LB GRANULITE. DISPLACED W/ 117 BLS CLAY WEBB WATER W/ BIOCED. BUMP PLUG FLOATS HELD. GOOD RETURNS ON WHOLE JOB. 10 BLS CEMENT TO SURFACE.
11:30	6.50	18:00	14	NIPPLE UP B.O.P	NIPPLE DN SET SLIPS W/ 150K CUT OFF INSTALL KNIGHT CAP. CLEAN MUD TANKS. RELEASE RIG @ 18:0-0 HR 12/7/11

SWD 16-6D-46 BTR 12/22/2011 06:00 - 12/23/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

RECEIVED Jan. 05, 2012

Bill Barrett Corporation

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	6.00	12:00	LOCL	Lock Wellhead & Secure	Well was shut in and secured. Cameron Crew travel from 6-32-36 SWD to location.
12:00	2.50	14:30	IWHD	Install Wellhead	Check pressures on 5.5' casing and surface casing, 0 psi and the 75 psi on the surface. open surface casing and bled down pressure. Checked LEL at the well head, 0 lel, removed 11" night cap, Cleaned and dressed up 5.5' casing top. Installed 11" x 7 1/16" 5k B-section with 2-2 1/16' 5k gate valves. pressure tested hanger seals and void section. installed night cap and secured well head.
14:30	15.50	06:00	LOCL	Lock Wellhead & Secure	Secured well head and location.

SWD 16-6D-46 BTR 12/27/2011 06:00 - 12/28/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com
06:00	5.00	11:00	CTUW	W/L Operation	RUN GAUGE RING TO 5006 RUN CBL FROM 5006 TO SURFACE EST. CEMENT TOP @ 64'
11:00	19.00	06:00	GOP	General Operations	DOWN

SWD 16-6D-46 BTR 12/28/2011 06:00 - 12/29/2011 06:00

API/UWI	State/Province	County	Field Name	Well Status	Total Depth (ftKB)	Primary Job Type
4301350781	Utah	Duchesne	Black Tail Ridge	COMPLETION	5,120.0	Drilling & Completion

Time Log

Start Time	Dur (hr)	End Time	Code	Category	Com

RECEIVED Jan. 05, 2012

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR:
BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR:
1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION

- ✓ NOTICE OF INTENT
  Approximate date work will start: 2/3/2012
- ☐ SUBSEQUENT REPORT
  Date of Work Completion:
- ☐ SPUD REPORT
  Date of Spud:
- ☐ DRILLING REPORT
  Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
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☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Water Analysis

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

BBC hereby requests permission to perforate the Lower Douglas Creek formation per the attached procedure, swab test the well and recover a representative water sample from the formation. Water analysis will be performed to prepare for the SWD permit application.

Approved by the Utah Division of Oil, Gas and Mining

Date: January 30, 2012

By:

NAME (PLEASE PRINT)	**PHONE NUMBER**	**TITLE**
Venessa Langmacher	303 312-8172	Senior Permit Analyst

SIGNATURE	**DATE**
N/A	1/27/2012

RECEIVED: Jan. 27, 2012

Bill Barrett Corporation

16-6D-46 BTR SWD
COMPLETION PROCEDURES
SESE Sec 6 T4S R6W
Duchesne County, Utah
API # 43-013-50781

January 26, 2012

OBJECTIVE

Complete the Douglas Creek interval in the 16-6D-46 SWD BTR to be used as a salt water disposal well. Perforate Lower Douglas Creek per the procedure below. Swab test well and recover a representative water sample from the formation. Perform water analysis, submit with permit and wait on permit approval to proceed with further completion activities.

CURRENT WELL STATUS

Currently the well has been TD'd. A cement bond log was run on the 5-1/2" production casing and found top of cement at 64'.

COMPLETION PROCEDURE

1. **Safety is the highest priority**. Hold wellsite safety meetings each morning and prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.

2. Hold and document pre-activity meeting, determine location of necessary equipment and rig up of same, be sure all necessary contractors are present and agree as to the layout of location.

3. MIRU WL unit and lubricator.

4. NU BOP.

5. Pressure test casing to 4,500 psi, hold for 15 minutes, monitor and record bleed off. Chart record for MIT.

6. Perforate Stage 1 per the below perf schedule. Utilize Schlumberger Power Jet Charges (0.38" Entry Hole Diameter)

7. 4 SPF, 120 degree phasing, 4,494'-4,508', 4,538'-4,550', 4,574'-4,584', 4,614'-4620', 4,656'-4,680', 4,686'-4,692', 4,712'-4,718'. 312 shots.

8. RD Wireline. MIRU workover rig.

RECEIVED: Jan. 27, 2012

9. PU 2-7/8" 6.5# L-80 tubing with 5-1/2" packer. RIH set packer @ +/- 4,450'. Pressure test annulus to 1000 psi.

10. Load tubing and break down perfs with 5 to 10 bbls 2% KCL

11. RU swab equipment. Swab 50 bbls fluid then begin taking water samples. Test chloride count on location. Continue to swab until there is a consistent chloride count. Recover 5 samples. Send sample in for TDS analysis. Wait on analysis.

12. RD swab equipment.

13. Release packer. POH with tubing. RIH with kill string. Hang off.

14. ND BOP, NUWH. RDMO workover rig.

15. Wait on permit to proceed.

CASING DATA

STRING	SIZE	WEIGHT	GRADE		DEPTH
Surface	9 5/8"	36#	J-55		1,009'
Production	5-1/2"	17.0#	P-110		5,092'

RECEIVED: Jan. 27, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

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9. API NUMBER: 43013507810000

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PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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- ☐ NOTICE OF INTENT — Approximate date work will start:
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- ☐ SPUD REPORT — Date of Spud:
- ✓ DRILLING REPORT — Report Date: 1/31/2012

TYPE OF ACTION

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☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No January 2012 Monthly Drilling to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
February 07, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst

SIGNATURE	DATE
N/A	2/6/2012

RECEIVED: Feb. 06, 2012

FORM 9

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

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TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No February 2012 monthly activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 07, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst

SIGNATURE	DATE
N/A	3/5/2012

RECEIVED: Mar. 05, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 3/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No March 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
April 13, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst

SIGNATURE	DATE
N/A	4/5/2012

RECEIVED: Apr. 05, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 4/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No April 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 09, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst

SIGNATURE	DATE
N/A	5/3/2012

RECEIVED: May. 03, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

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4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 5/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No May 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
June 08, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	6/5/2012

RECEIVED: Jun. 05, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No June 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
July 03, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	7/3/2012

RECEIVED: Jul. 03, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 7/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No July 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 02, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	8/2/2012

RECEIVED: Aug. 02, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
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	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 8/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No August 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 06, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	9/4/2012

RECEIVED: Sep. 04, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
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	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 9/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No September 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
October 05, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	10/5/2012

RECEIVED: Oct. 05, 2012

Bill Barrett Corporation

Mr. Ammon McDonald
State of Utah
Division of Oil, Gas and Mining
PO Box 145801
Salt Lake City, UT 84114-5801

RE: 16-6D-46 BTR SWD - Application for Disposal

Dear Mr. McDonald:

Bill Barrett Corporation would like to respectfully submit the enclosed application for water disposal as per R649-5-2, Requirements for Class II Injections Wells.

If you require further information, please call me at 303-312-8172 or e-mail me at vlangmacher@billbarrettcorp.com.

Sincerely,

BILL BARRETT CORPORATION

Venessa Langmacher

Venessa Langmacher
Senior Permit Analyst

Enclosures

RECEIVED
APR 05 2012
DIV. OF OIL, GAS & MINING

1099 18TH STREET SUITE 2300 DENVER, CO 80202 USA
T 303.293.9100 F 303.291.0420 www.BILLBARRETTCORP.com

16-6D-46 BTR SWD

RECEIVED
APR 05 2012
DIV. OF OIL, GAS & MINING

UIC FORM 1

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

APPLICATION FOR INJECTION WELL

Name of Operator Bill Barrett Corporation	Utah Account Number N	Well Name and Number 16-6D-46 BTR SWD
Address of Operator 1099 18th Street, 2300 CITY Denver STATE CO ZIP 80202	Phone Number (303) 312-8172	API Number 4301350781
Location of Well Footage : 200' FSL and 99' FEL County : Duchesne QQ, Section, Township, Range: SESE 6 4S 6W State : UTAH		Field or Unit Name Altamont Lease Designation and Number 2OG0005608

Is this application for expansion of an existing project?	Yes ☑	No ☐
Will the proposed well be used for: Enhanced Recovery?	Yes ☐	No ☑
Disposal?	Yes ☑	No ☐
Storage?	Yes ☐	No ☑
Is this application for a new well to be drilled?	Yes ☐	No ☑
If this application is for an existing well, has a casing test been performed? Date of test: 2/8/2012	Yes ☑	No ☐

Proposed injection interval: from 3,828 to 4,718

Proposed maximum injection: rate 14,000 bpd pressure 3,000 psig

Proposed injection zone contains oil ☐, gas ☑, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attachments as required by R649-5-2.

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Venessa Langmacher Title Senior Permit Analyst

Signature Venessa Langmacher Date 4/3/2012

(5/2002)

UIC FORM 1

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

APPLICATION FOR INJECTION WELL

Name of Operator	Utah Account Number	Well Name and Number
Bill Barrett Corporation	N	16-6D-46 BTR SWD
Address of Operator	**Phone Number**	**API Number**
1099 18th Street, 2300 CITY Denver STATE CO ZIP 80202	(303) 312-8172	4301350781
Location of Well		**Field or Unit Name**
Footage : 200' FSL and 99' FEL County : Duchesne		Altamont
QQ, Section, Township, Range: SESE 6 4S 6W State : UTAH		**Lease Designation and Number** 2OG0005608

Is this application for expansion of an existing project?	Yes ☑	No ☐
Will the proposed well be used for: Enhanced Recovery?	Yes ☐	No ☑
Disposal?	Yes ☑	No ☐
Storage?	Yes ☐	No ☑
Is this application for a new well to be drilled?	Yes ☐	No ☑
If this application is for an existing well, has a casing test been performed? Date of test: 2/8/2012	Yes ☑	No ☐

Proposed injection interval: from 3,828 to 4,718

Proposed maximum injection: rate 14,000 bpd pressure 3,000 psig

Proposed injection zone contains oil ☐, gas ☑, and / or fresh water ☐ within ½ mile of the well.

List of attachments: Attachments as required by R649-5-2.

ATTACH ADDITIONAL INFORMATION AS REQUIRED BY CURRENT UTAH OIL AND GAS CONSERVATION GENERAL RULES

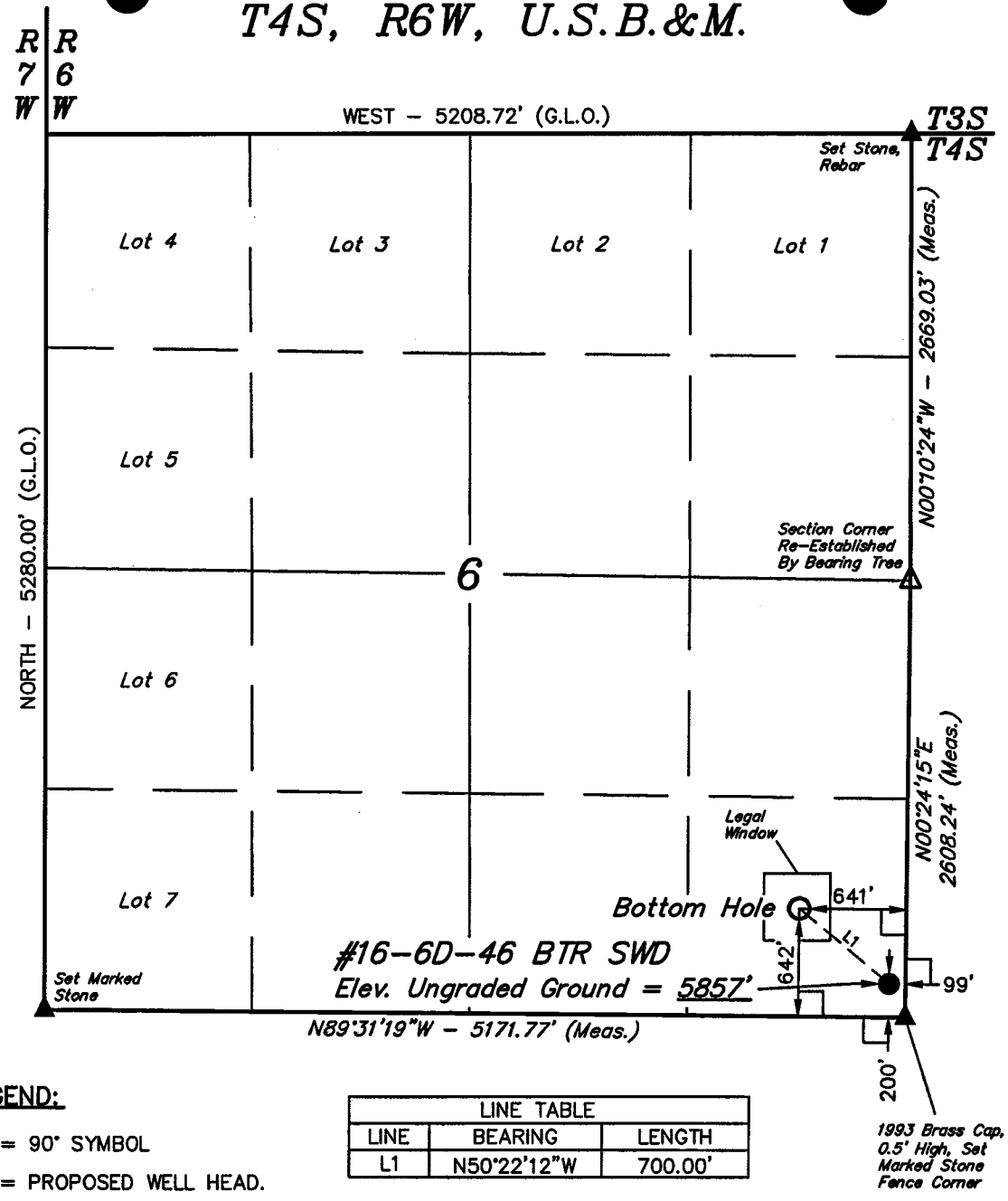
I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Venessa Langmacher Title Senior Permit Analyst

Signature Venessa Langmacher Date 4/3/2012

(5/2002)

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



BILL BARRETT CORPORATION

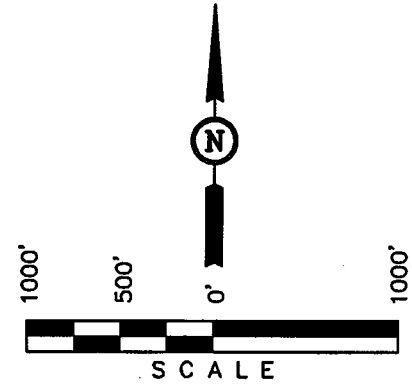
Well location, #16–6D–46 BTR SWD, located as shown in the SE 1/4 SE 1/4 of Section 6, T4S, R6W, U.S.B.&M., Duchesne County, Utah.

BASIS OF ELEVATION

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

BASIS OF BEARINGS

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



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.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REVISED: 04–28–11

LEGEND:

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

LINE TABLE		
LINE	BEARING	LENGTH
L1	N50°22'12"W	700.00'

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 40°09'23.05" (40.156403)	LATITUDE = 40°09'18.65" (40.155181)
LONGITUDE = 110°35'55.21" (110.598669)	LONGITUDE = 110°35'48.25" (110.596736)
NAD 27 (TARGET BOTTOM HOLE)	**NAD 27 (SURFACE LOCATION)**
LATITUDE = 40°09'23.21" (40.156447)	LATITUDE = 40°09'18.81" (40.155225)
LONGITUDE = 110°35'52.64" (110.597956)	LONGITUDE = 110°35'45.69" (110.596025)

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

SCALE 1" = 1000'	DATE SURVEYED: 09–21–10	DATE DRAWN: 10–04–10
PARTY D.R. A.W. C.C.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BILL BARRETT CORPORATION	

R649-5-2. Requirements for Class II Injection Wells Including Water Disposal, Storage and Enhanced Recovery Wells

2. The application for an injection well shall include a properly completed UIC Form 1 **(Enclosed)** and the following:

2.1. A plat showing the location of the injection well, all abandoned or active wells within a one-half mile radius of the proposed well, and the surface owner and the operator of any lands or producing leases, respectively, within a one-half mile radius of the proposed injection well. **(Enclosed)**

2.2. Copies of electrical or radioactive logs, including gamma ray logs, for the proposed well run prior to the installation of casing and indicating resistivity, spontaneous potential, caliper, and porosity. **(Enclosed)**

2.3. A copy of a cement bond or comparable log run for the proposed injection well after casing was set and cemented. **(Enclosed)**

2.4. Copies of logs already on file with the division should be referenced, but need not be refiled. **(Copies previously submitted to UDOGM)**

2.5. A description of the casing or proposed casing program of the injection well and of the proposed method for testing the casing before use of the well. **(Enclosed)**

2.6. A statement as to the type of fluid to be used for injection, its source and estimated amounts to be injected daily. **(Enclosed)**

2.7. Standard laboratory analyses of:

2.7.1. The fluid to be injected, **(Enclosed)**

2.7.2. The fluid in the formation into which the fluid is being injected, and **(Enclosed)**

2.7.3. The compatibility of the fluids. **(Enclosed)**

2.8. The proposed average and maximum injection pressures. **(Enclosed)**

2.9. Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining interval that could enable the injected fluid or formation fluid to enter any fresh water strata. **(Enclosed)**

2.10. Appropriate geological data on the injection interval with confining beds clearly labeled,

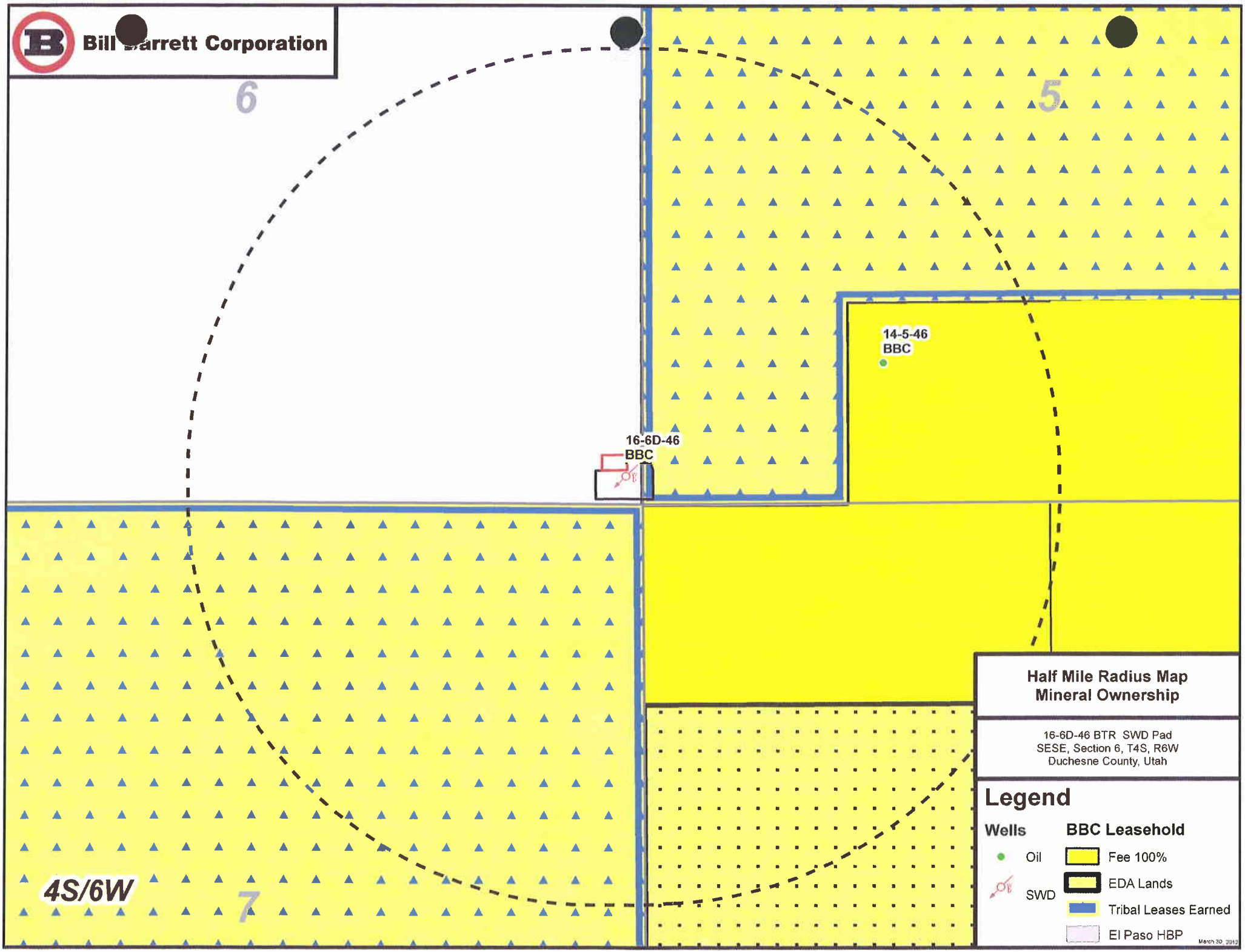
2.10.1. Nearby Underground Sources of Drinking Water, including the geologic formation name, **(Enclosed)**

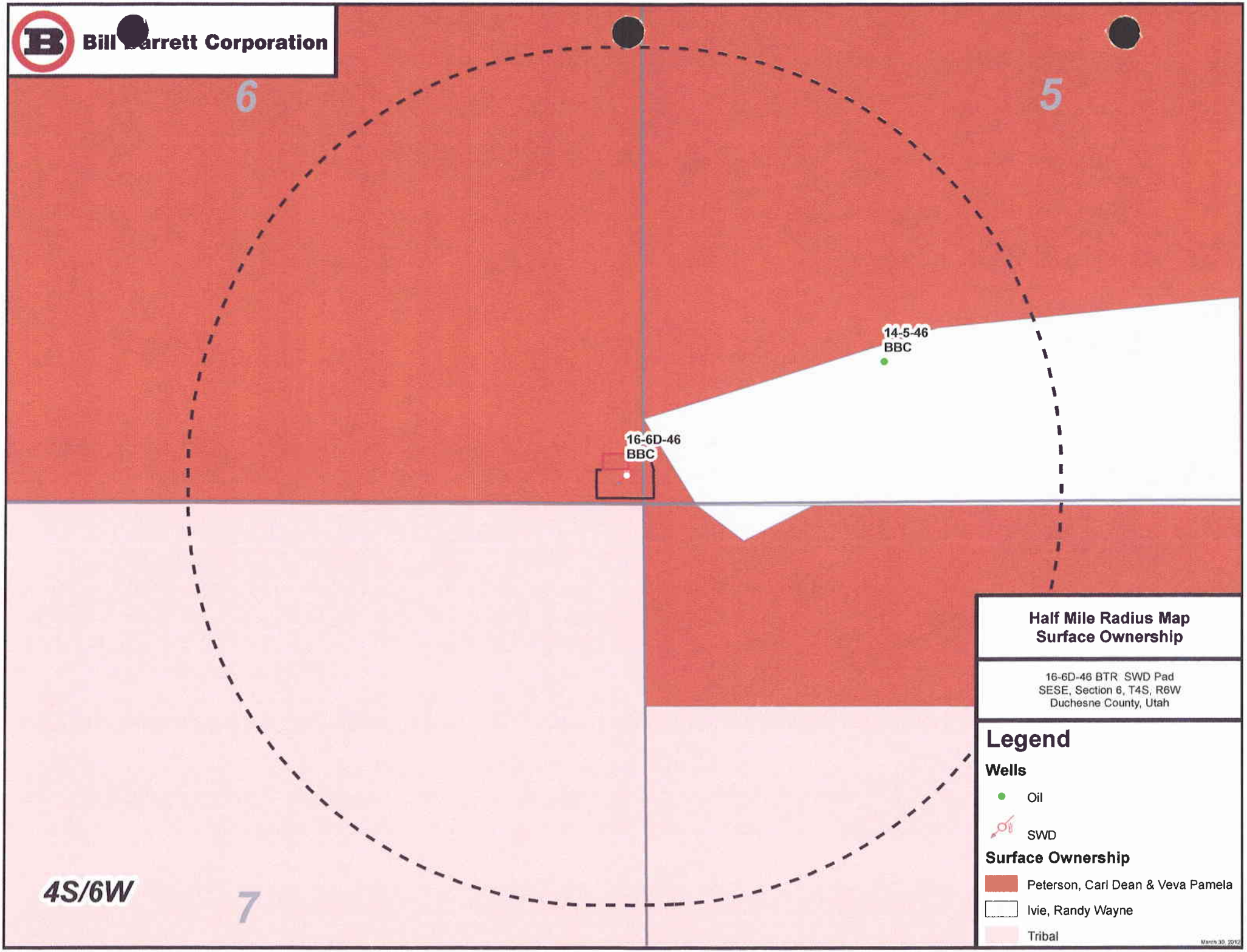
2.10.2. Lithologic descriptions, thicknesses, depths, water quality, and lateral extent; **(Enclosed)**

2.10.3. Information relative to geologic structure near the proposed well that may effect the conveyance and/or storage of the injected fluids. **(Enclosed)**

2.11. A review of the mechanical condition of each well within a one-half mile radius of the proposed injection well to assure that no cond0uit exists that could enable fluids to migrate up or down the wellbore and enter improper intervals. **(Enclosed)**

2.12. An affidavit certifying that a copy of the application has been provided to all operators, owners, and surface owners within a one-half mile radius of the proposed injection well. **(Enclosed)**


Bill Barrett Corporation
6
5
14-5-46
BBC
16-6D-46
BBC
4S/6W
7
Half Mile Radius Map
Mineral Ownership
16-6D-46 BTR SWD Pad
SESE, Section 6, T4S, R6W
Duchesne County, Utah
Legend
Wells
Oil
SWD
BBC Leasehold
Fee 100%
EDA Lands
Tribal Leases Earned
El Paso HBP
March 30, 2012


Bill Barrett Corporation
6
5
14-5-46
BBC
16-6D-46
BBC
4S/6W
7
Half Mile Radius Map
Surface Ownership
16-6D-46 BTR SWD Pad
SESE, Section 6, T4S, R6W
Duchesne County, Utah
Legend
Wells
Oil
SWD
Surface Ownership
Peterson, Carl Dean & Veva Pamela
Ivie, Randy Wayne
Tribal
March 30, 2012

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
DUAL LATEROLOG
MICRO-SPHERICALLY FOCUSED LOG

COMPANY BILL BARRETT CORPORATION
WELL 16-6D-46 BTR SWD
FIELD BLACK TAIL RIDGE
COUNTY DUCHESNE
STATE UTAH

COMPANY **BILL BARRETT CORPORATION**
WELL **16-6D-46 BTR SWD**
FIELD **BLACK TAIL RIDGE**
COUNTY **DUCHESNE** STATE **UTAH**

API No. 43013507810000
Location SURFACE HOLE LOCATION: 200' FSL & 99' FEL, SE/SE
BOTTOM HOLE LOCATION: 642' FSL & 641' FEL, SE/SE
Sect. 3 Twp. 4S Rge. 6W

Other Services: RWCH, BSAT

Permanent Datum	GL	Elev. 5856.0 ft	Elev.: K.B. 5880.0 ft
Log measured from	KB	24.0 ft above perm. Datum	D.F. 5879.0 ft
Drilling measured from	KB		G.L. 5856.0 ft

Date		06-Dec-11		
Run No.		ONE		
Depth - Driller		5120.00 ft		
Depth - Logger		5120.0 ft		
Bottom - Logged Interval		5094.0 ft		
Top - Logged Interval		150.0 ft		
Casing - Driller		9.625 in @ 1009.0 ft	@	@
Casing - Logger		1010.0 ft		
Bit Size		8.750 in	@	@
Type Fluid in Hole		WATER / DAP		
Density	Viscosity	8.8 ppg	36.00 s/qt	
PH	Fluid Loss	8.80 pH	20.0 cptm	
Source of Sample		FLOWLINE		
Rm @ Meas. Temperature		1.060 ohmm @ 53.00 degF	@	@
Rmf @ Meas. Temperature		0.82 ohmm @ 40.00 degF	@	@
Rmc @ Meas. Temperature		1.570 ohmm @ 42.00 degF	@	@
Source Rmf	Rmc	MEASURED	MEASURED	
Rm @ BHT		0.44 ohmm @ 137.0 degF	@	@
Time Since Circulation		8.0 hr		
Time on Bottom		06-Dec-11 12:05		
Max. Rec. Temperature		137.0 degF @ 5120.0 ft	@	@
Equipment	Location	11335318	VERNAL, UT	
Recorded By		K. NORMAND		
Witnessed By		J. LORENZEN		

Fold here

PGM Version: WL INSITE R3.4.2 (Build 2)

Service Ticket No.: 9081765 API Serial No.: 43013507810000

CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE

Date	Sample No.	Depth-Driller	Type Fluid in Hole	Density	Viscosity	Ph	Fluid Loss	Source of Sample	Rm @ Meas. Temp	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source Rmf	Rmc	Rm @ BHT	Rmf @ BHT	Rmc @ BHT
									@	@	@			@	@	@

RESISTIVITY SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

RESISTIVITY EQUIPMENT DATA

Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other
ONE	DLLT-I	N/A	CENT.	N/A
	P773M023S433			
ONE	MSFL-I	SLIM	CENT.	N/A
	S433M259			

EQUIPMENT DATA

GAMMA		ACOUSTIC		DENSITY		NEUTRON	
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE
Serial No.	11277435	Serial No.	10939066	Serial No.	10923744	Serial No.	10917119
Model No.	GTET	Model No.	BSAT	Model No.	SDLT-I	Model No.	DSNT-I
Diameter	3.625"	No. of Cent.	2	Diameter	4.5"	Diameter	3.625"
Detector Model No.	GTET	Spacing	3, 3.5, 4, 4.5, 5	Log Type	GAMMA/GAMMA	Log Type	THERMAL
Type	SCINT.			Source Type	Cs137	Source Type	Am241Be
Length	8"	LSA [Y/N]		Serial No.	5246GW	Serial No.	21480B
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 Ci	Strength	15 Ci

LOGGING DATA

GENERAL | GAMMA | ACOUSTIC | DENSITY | NEUTRON

GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5120	150	REC.	0	150	30%	-10%	SAND	30%	-10%	2.68 g/cc	30%	-10%	SAND

DIRECTIONAL INFORMATION

Maximum Deviation	@	KOP	@

Remarks:

TOOL STRING CONFIGURATION: RWCH/BRIDLE/CR/SP/BRIDLE/BS/GTET/DSNT/SDLT/FLEX/BSAT/DLLT/MSFL/BN

TENSION PULLS AND HOLE RUGOSITY MAY AFFECT LOG QUALITY AND REPEATABILITY

ANNULAR HOLE VOLUME CALCULATED USING 5.5 INCH CASING

CHLORIDES: 550 ppm

SDL WOULD NOT PASS FIELD CALS DUE TO PROXIMITY OF SOURCES ON LOGGER

LATITUDE: 40.15522° N

LONGITUDE: 110.59674° W

CREW: Z. TAYLOR, B. PARRACK

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - VERNAL, UT (435) 789-2550 RIG: H&P #319

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

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PARAMETERS REPORT

Depth ((ft))	Tool Name	Description	Value	Units
TOP				
	SHARED	Bit Size	8.750	in
	SHARED	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	Mud Base	Water	
	SHARED	Borehole Fluid Weight	8.800	ppg
	SHARED	Weighting Agent	Natural	
	SHARED	Borehole salinity	550.00	ppm
	SHARED	Formation Salinity NaCl	0.00	ppm
	SHARED	Percent K in Mud by Weight?	0.00	%
	SHARED	Mud Resistivity	1.060	ohmm
	SHARED	Temperature of Mud	53.0	degF
	SHARED	Logging Interval is Cased?	No	
	SHARED	AHV Casing OD	5.500	in
	SHARED	Surface Temperature	0.0	degF
	SHARED	Total Well Depth	5120.00	ft
	SHARED	Bottom Hole Temperature	137.0	degF
	SHARED	Navigation and Survey Master Tool	NONE	
	SHARED	High Res Z Accelerometer Master Tool	GTET	
	SHARED	Temperature Master Tool	NONE	
	SHARED	Borehole Size Master Tool	NONE	
	Rwa / CrossPlot	Process Crossplot?	Yes	
	Rwa / CrossPlot	Select Source of F	Automatic	
	Rwa / CrossPlot	Archie A factor	0.6200	
	Rwa / CrossPlot	Archie M factor	2.1500	
	Rwa / CrossPlot	Rmf Reference	0.10	ohmm

Rwa / CrossPlot	Rmf Reference	[illegible]	ohmm
Rwa / CrossPlot	Rmf Ref Temp	75.00	degF
Rwa / CrossPlot	Resistivity of Formation Water	0.05	ohmm
Rwa / CrossPlot	Use Air Porosity to calculate CrossplotPhi	No	
GTET	Process Gamma Ray?	Yes	
GTET	Gamma Tool Standoff	0.000	in
GTET	Process Gamma Ray EVR?	No	
GTET	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	Process DSN?	Yes	
DSNT	Process DSN EVR?	No	
DSNT	Neutron Lithology	Sandstone	
DSNT	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.000	in
DSNT	Temperature Correction Type	None	
DSNT	DSN Pressure Correction Type	None	
DSNT	View More Correction Options	No	
DSNT	Use TVD for Gradient Corrections?	No	
DSNT	Logging Horizontal Water Tank?	No	
SDLT	Process Caliper Outputs?	Yes	
SDLT Pad	Process Density?	Yes	
SDLT Pad	Process Density EVR?	No	
SDLT Pad	Logging Calibration Blocks?	No	
SDLT Pad	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	Disable temperature warning	No	
SDLT Pad	Formation Density Matrix	2.680	g/cc
SDLT Pad	Formation Density Fluid	1.000	g/cc
BSAT	Compute BCAS Results?	Yes	
BSAT	Frequency Filter Low Pass Value?	5000	Hz
BSAT	Frequency Filter High Pass Value?	27000	Hz
BSAT	Delta -T Fluid	189.00	uspf
BSAT	Delta -T Matrix Type	Sandstone 55.5	
BSAT	Delta -T Shale	100.00	uspf
BSAT	Acoustic Porosity Equation	Wylie	
DLLT	Process Dual Laterolog?	Yes	
DLLT	Process Dual Laterolog Borehole Corrections?	No	
DLLT	Calculate Dual Laterolog DI?	Yes	
MSFL	Process MSFL?	Yes	
MSFL	Use MSFL Slim Hole Pad?	Yes	
MSFL	MSFL Slim Hole Pad K Factor	1.750	
MSFL	Process Caliper Outputs?	Yes	

BOTTOM

Data: 16_6D_46_BTRSWD\0002 IQ_QUAD_DLLT_BSAT\IDLE **Date: 06-Dec-11 13:55:46**

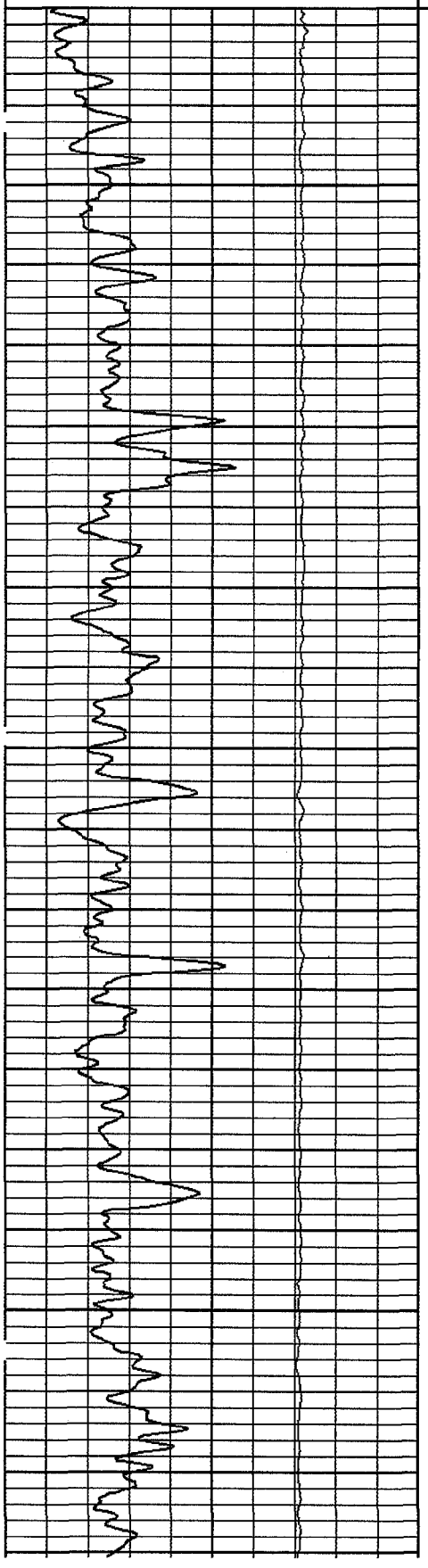
HALLIBURTON

Plot Time: 06-Dec-11 16:12:16
Plot Range: 148 ft to 5126 ft
Data: 16_6D_46_BTRSWD\Well Based\MAIN
Plot File: \\TRIPLE\I_BBC_TRIPLE_M

MAIN PASS 5" = 100'

0	GAMMA RAY	150			30	DEN POROSITY	-10
	api					2.68 g/cc	
	CALIPER			DEEP		NEU POROSITY	

6	CALIPER	16	AHV	1	DEEP	1K	30 NEU POROSITY -10
	inches				ohm-metre		sand
0	SP	100	BHV	1	SHALLOW	1K	0 PE 10
	millivolts				ohm-metre		
10000	TENSION	0	1 : 240 FT.	1	MSFL	1K	-0.25 DENSITY COR.
	pounds				ohm-metre		g/cc



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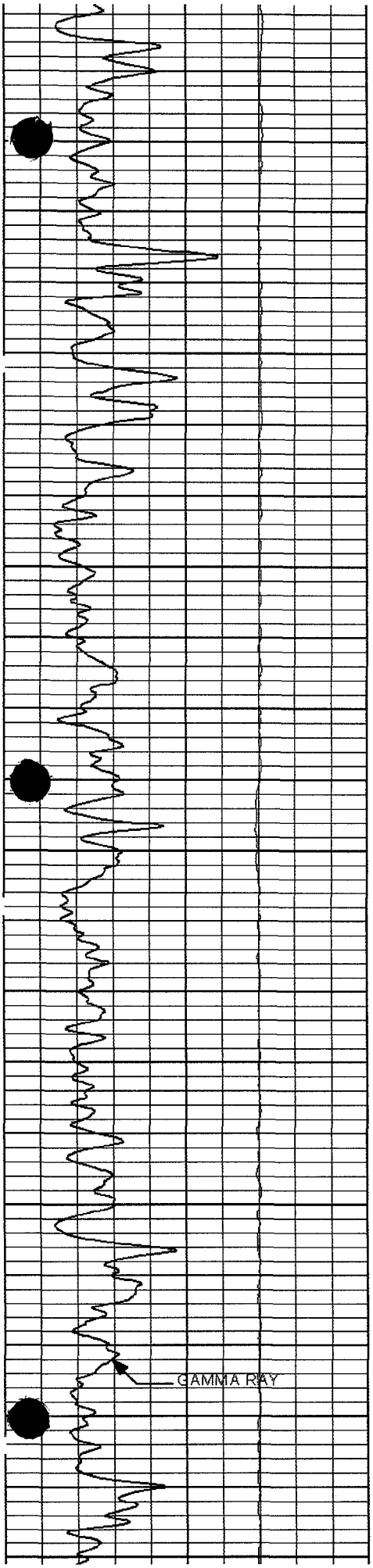
300



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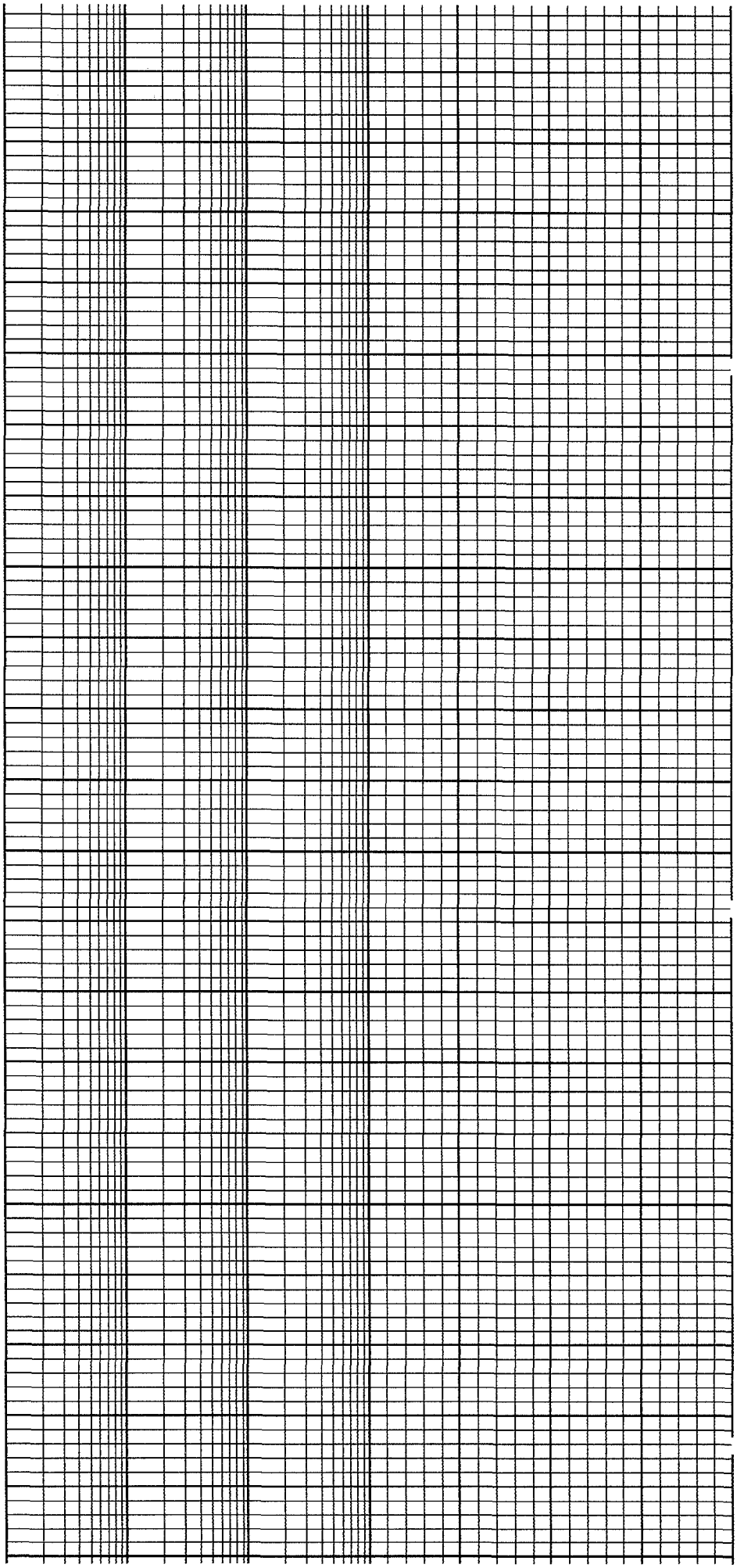

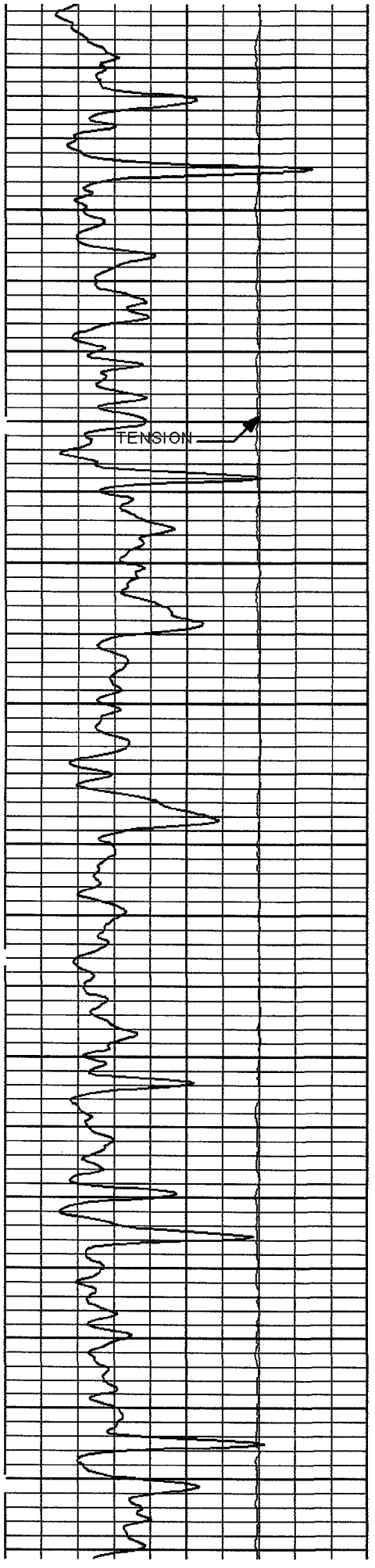

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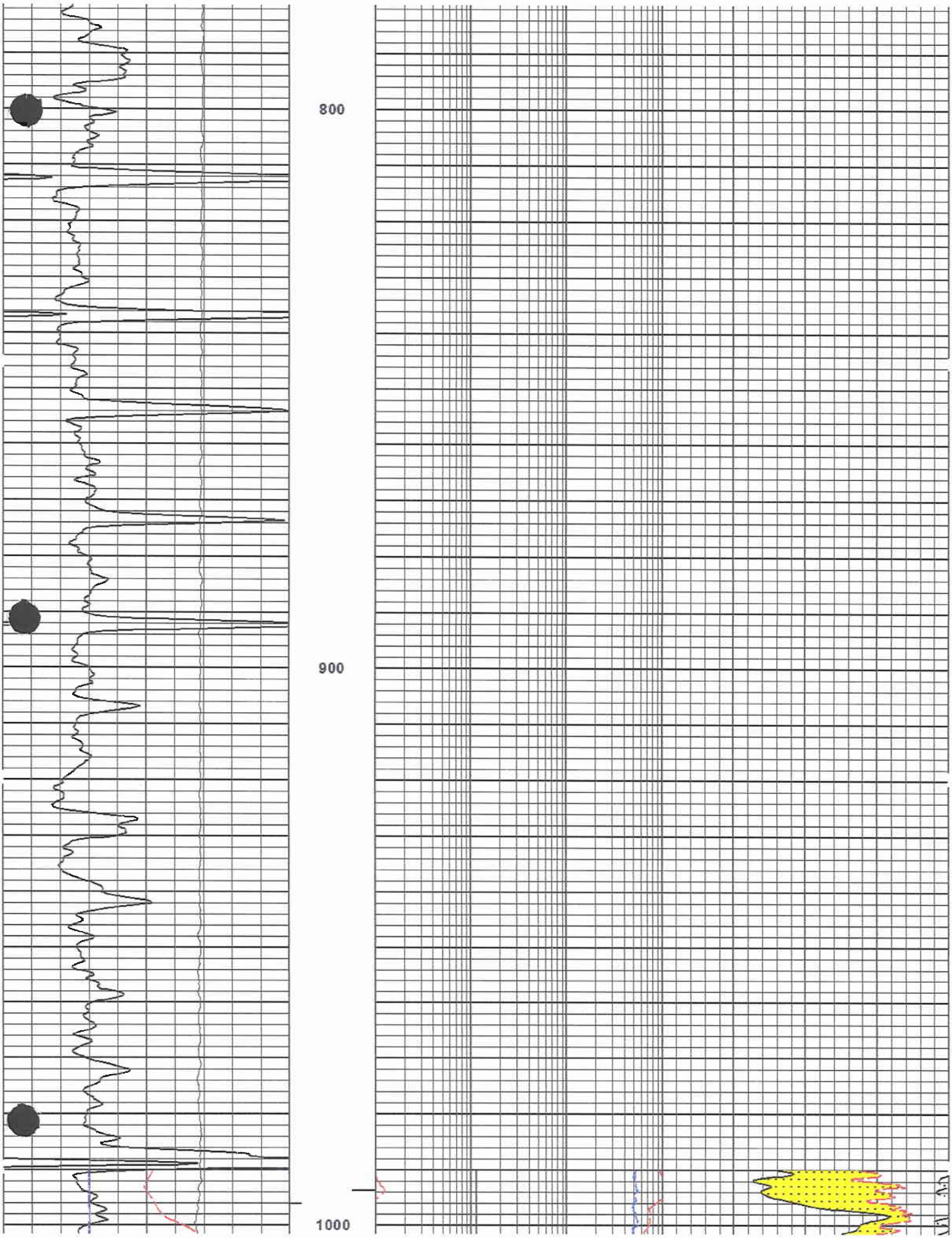
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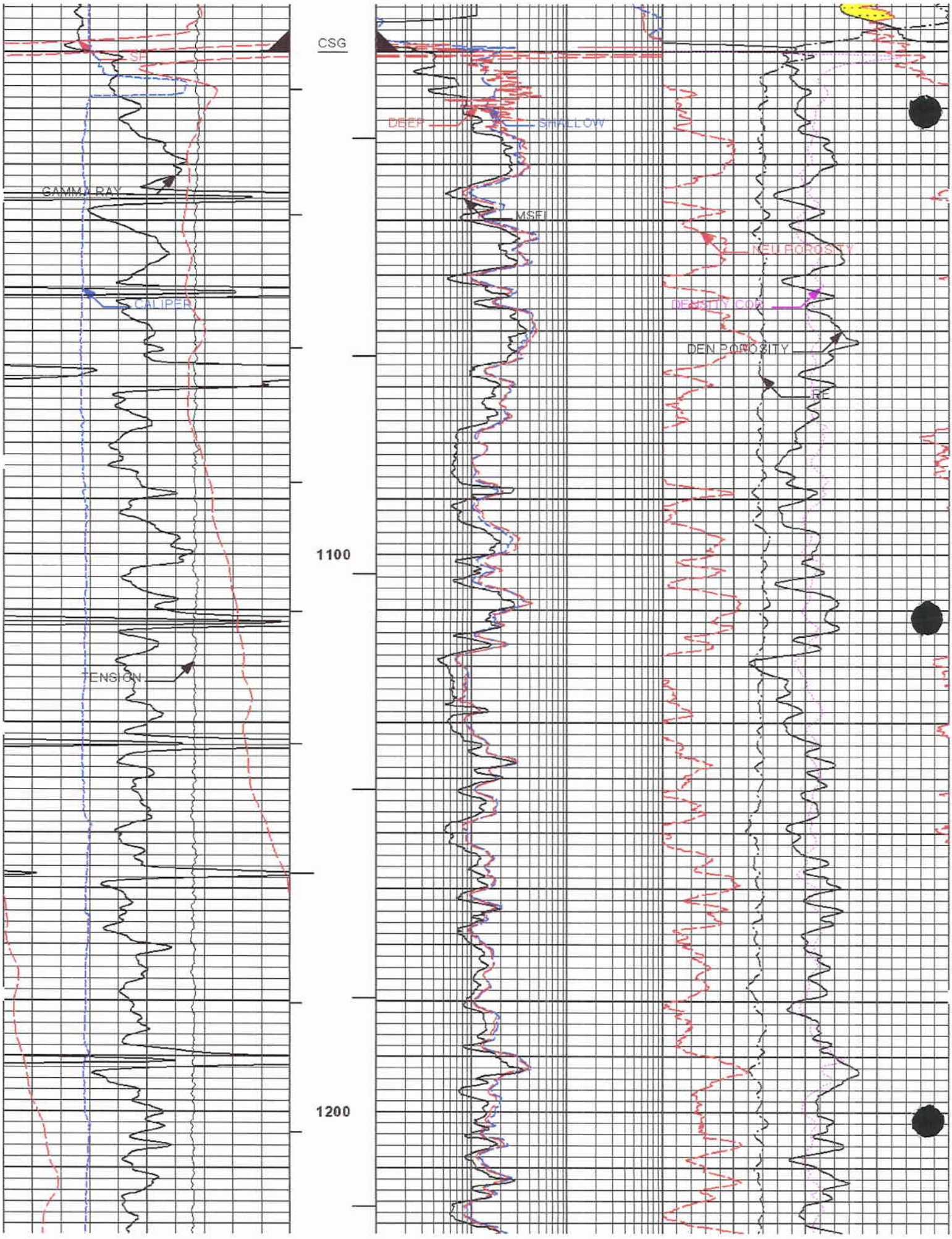
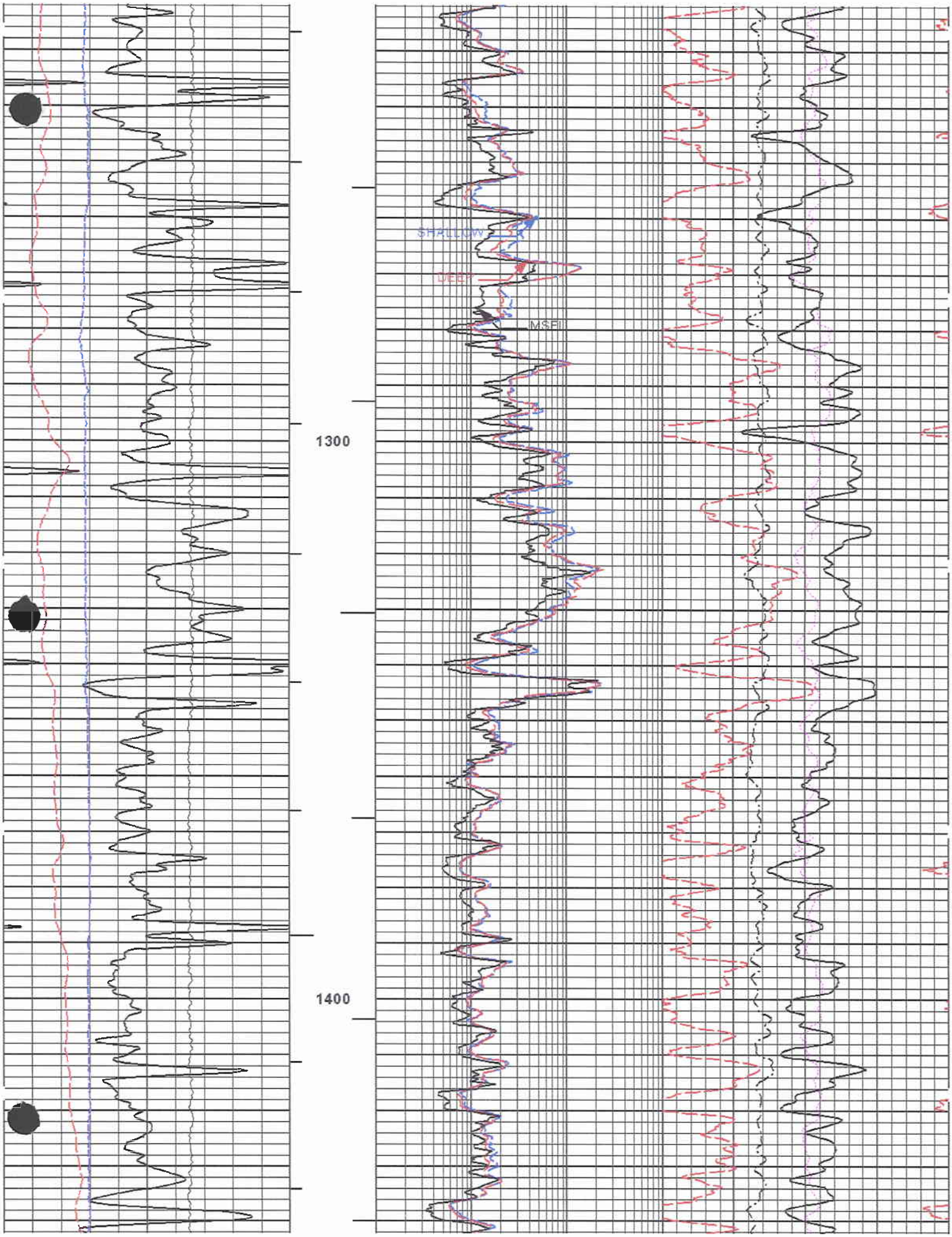
900
1000


CSG
SP
GAMMA RAY
CALIPER
TENSION
1100
1200
DEEP
SHALLOW
MSFL
NEU POROSITY
DENSITY COR
DEN POROSITY
RF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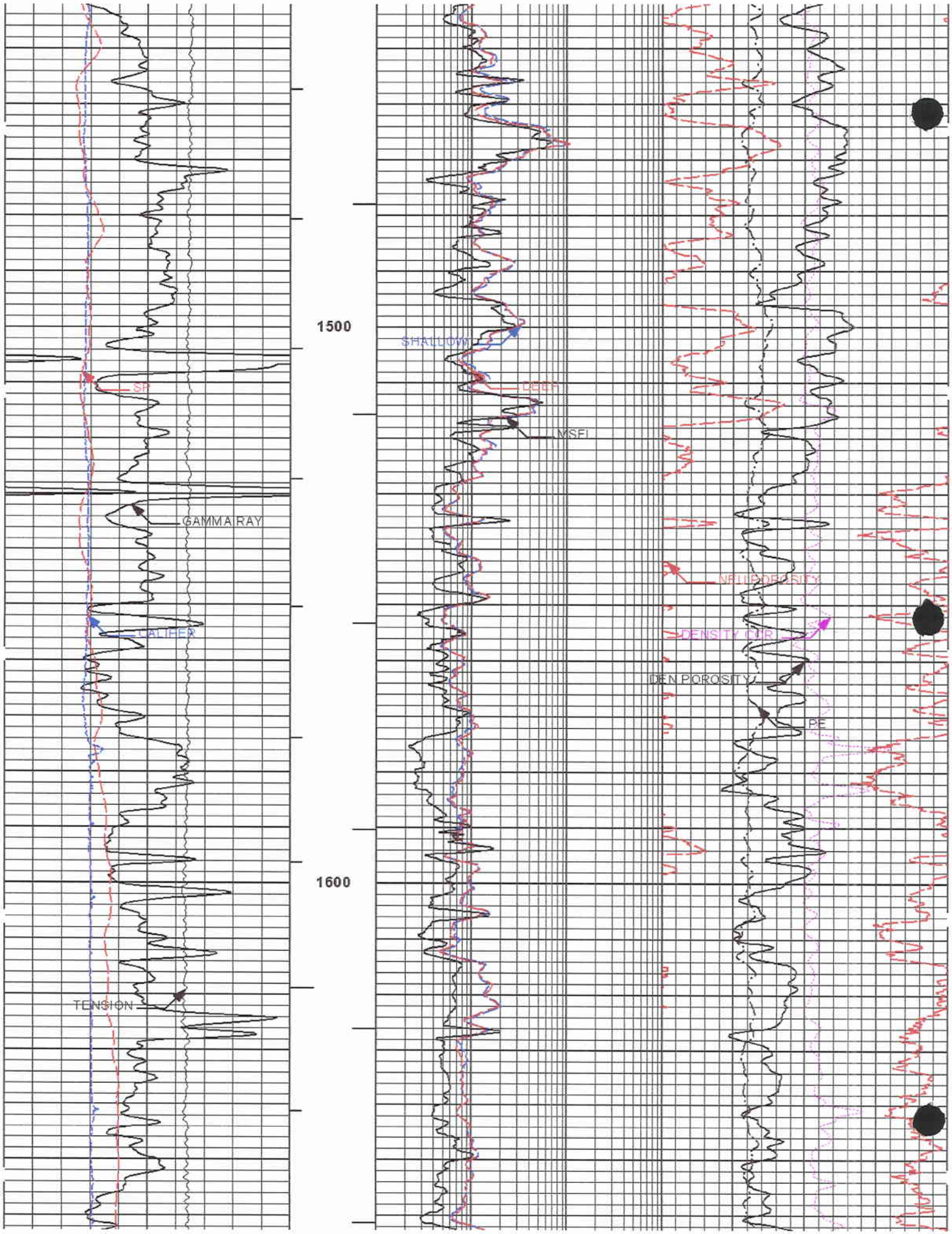
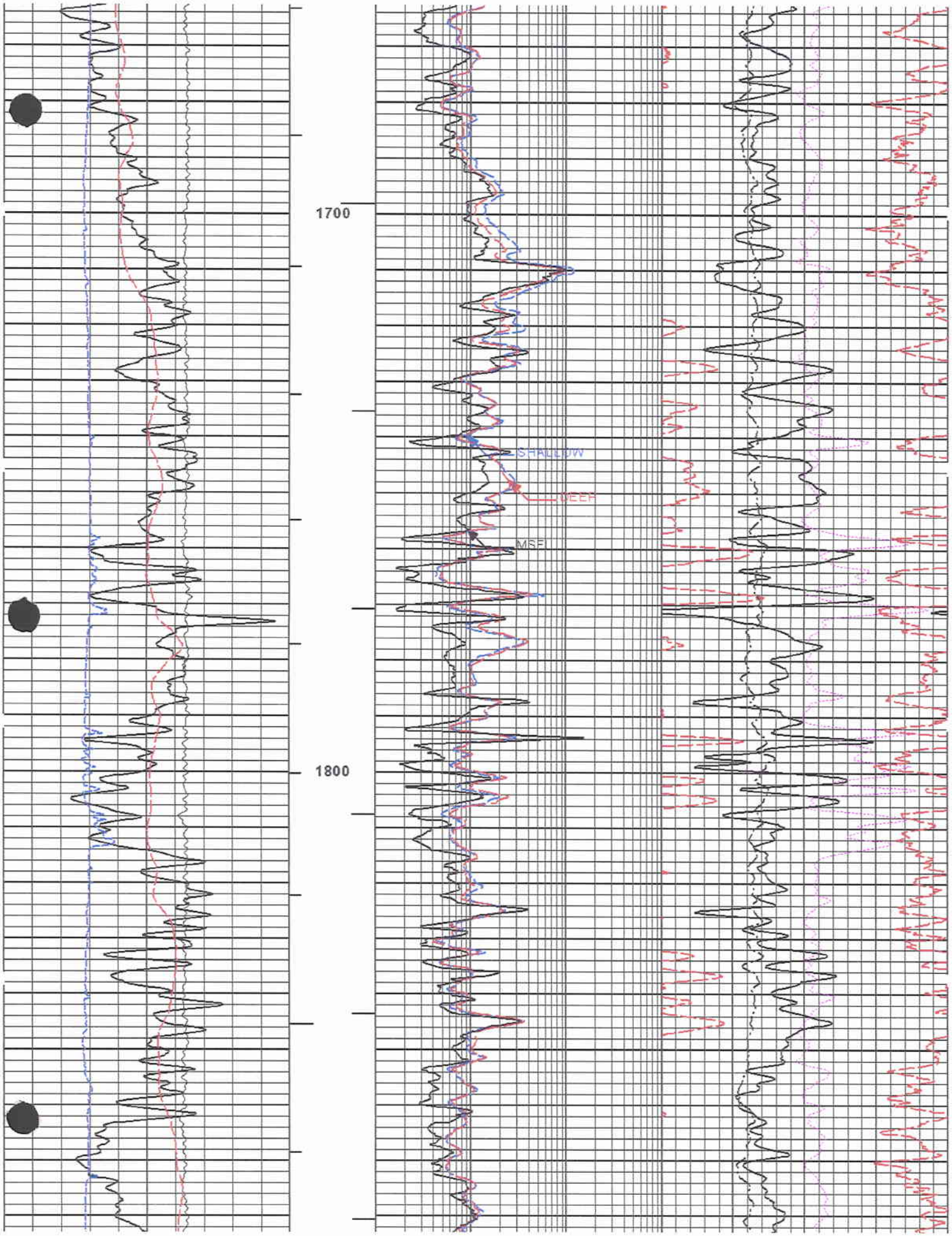
DEEP
MSFL
1300
1400


1500
1600
SP
GAMMA RAY
CALIPER
TENSION
SHALLOW
DEEP
MSFL
NEUTRON POROSITY
DENSITY CUR
DEN POROSITY
PE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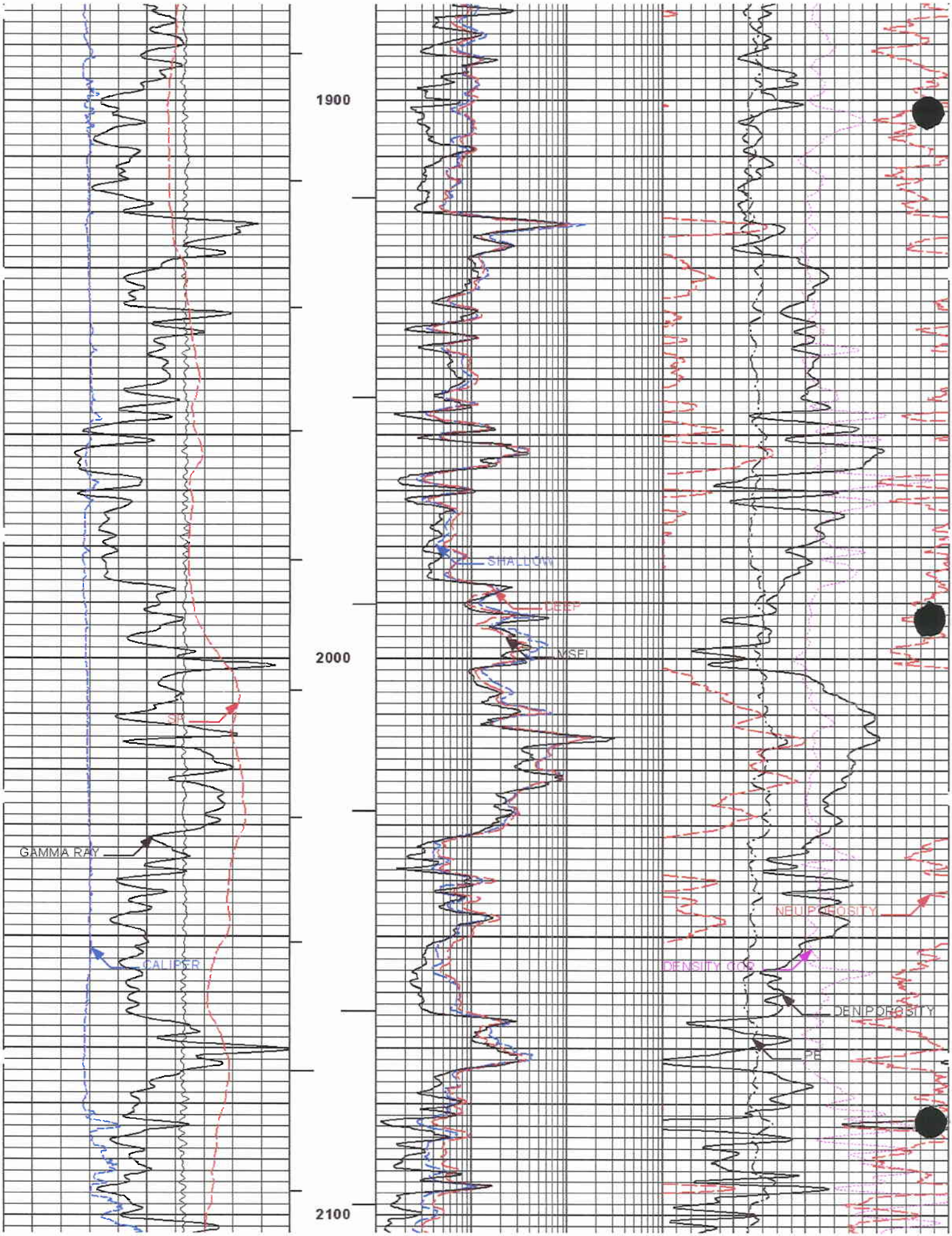
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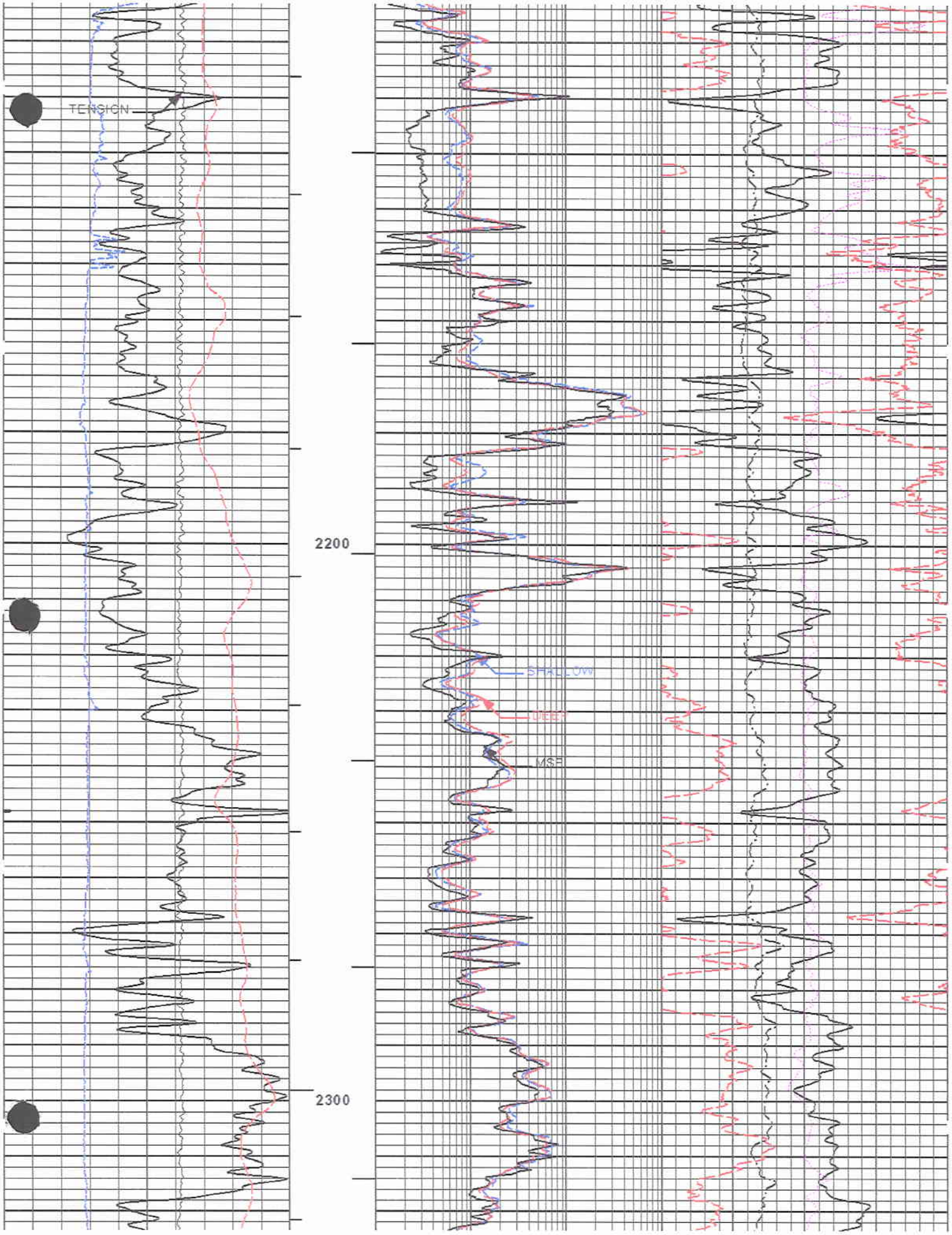
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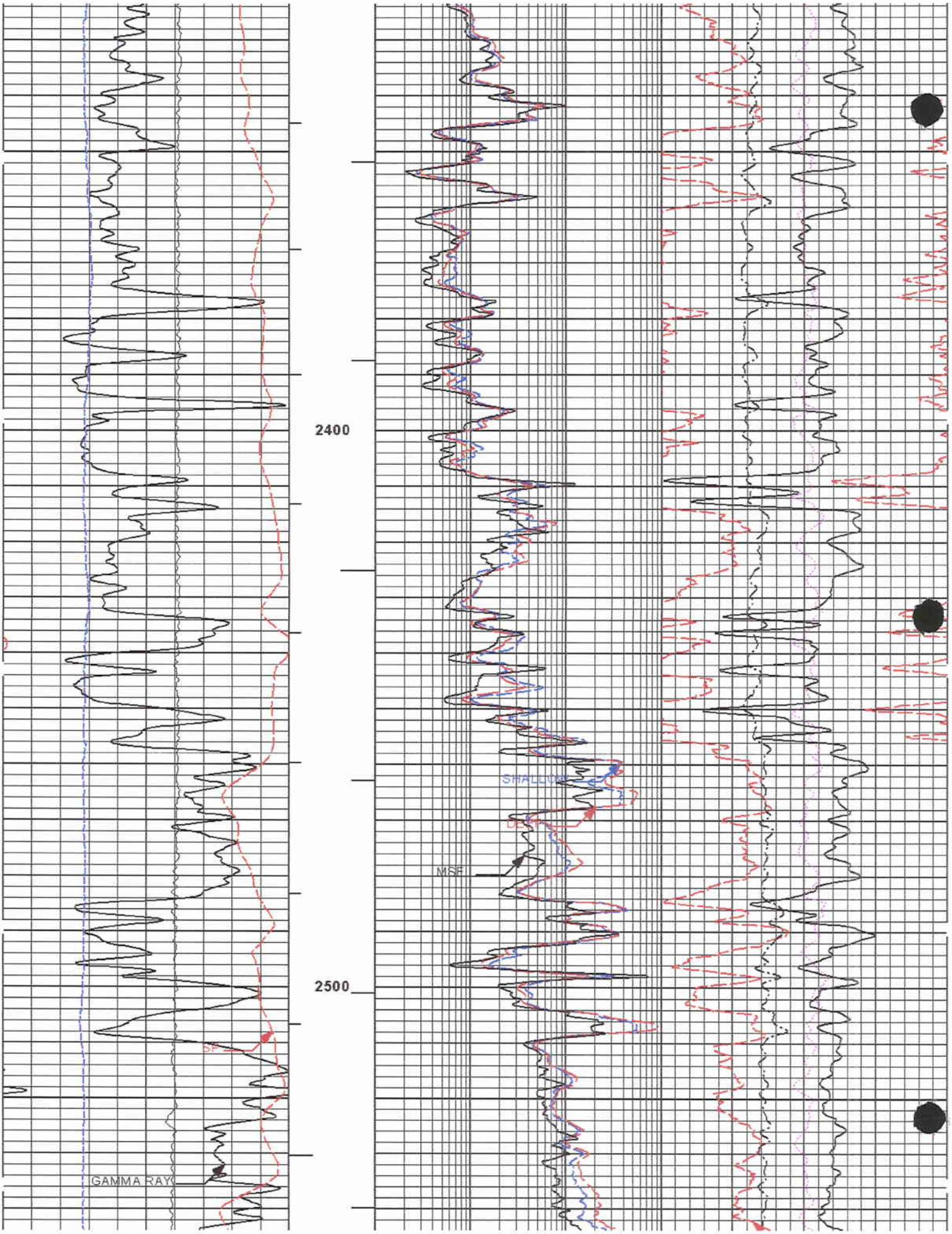
MSF
2300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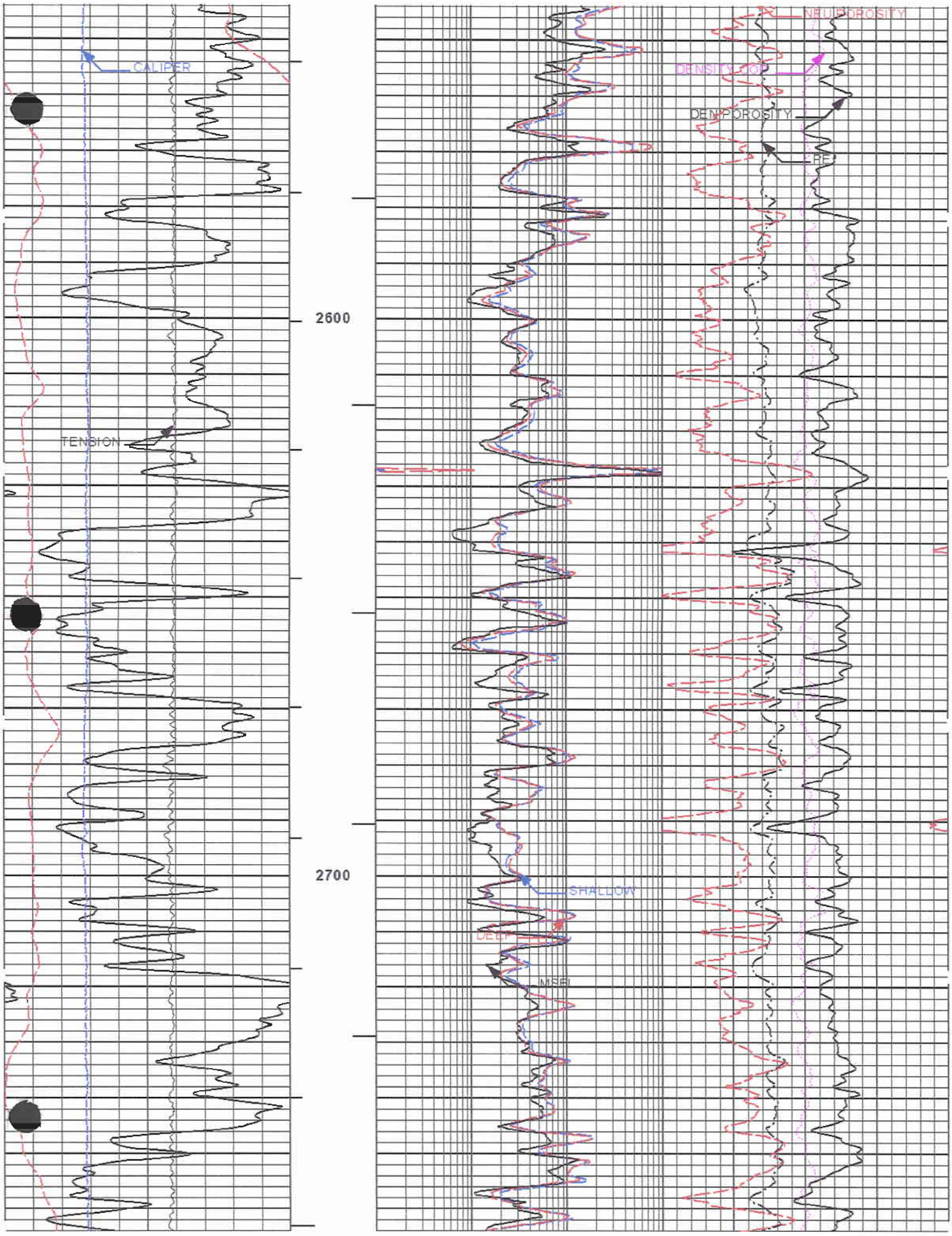
2500
GAMMA RAY
SHALLOW
DEEP
MSF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TENSION
2600
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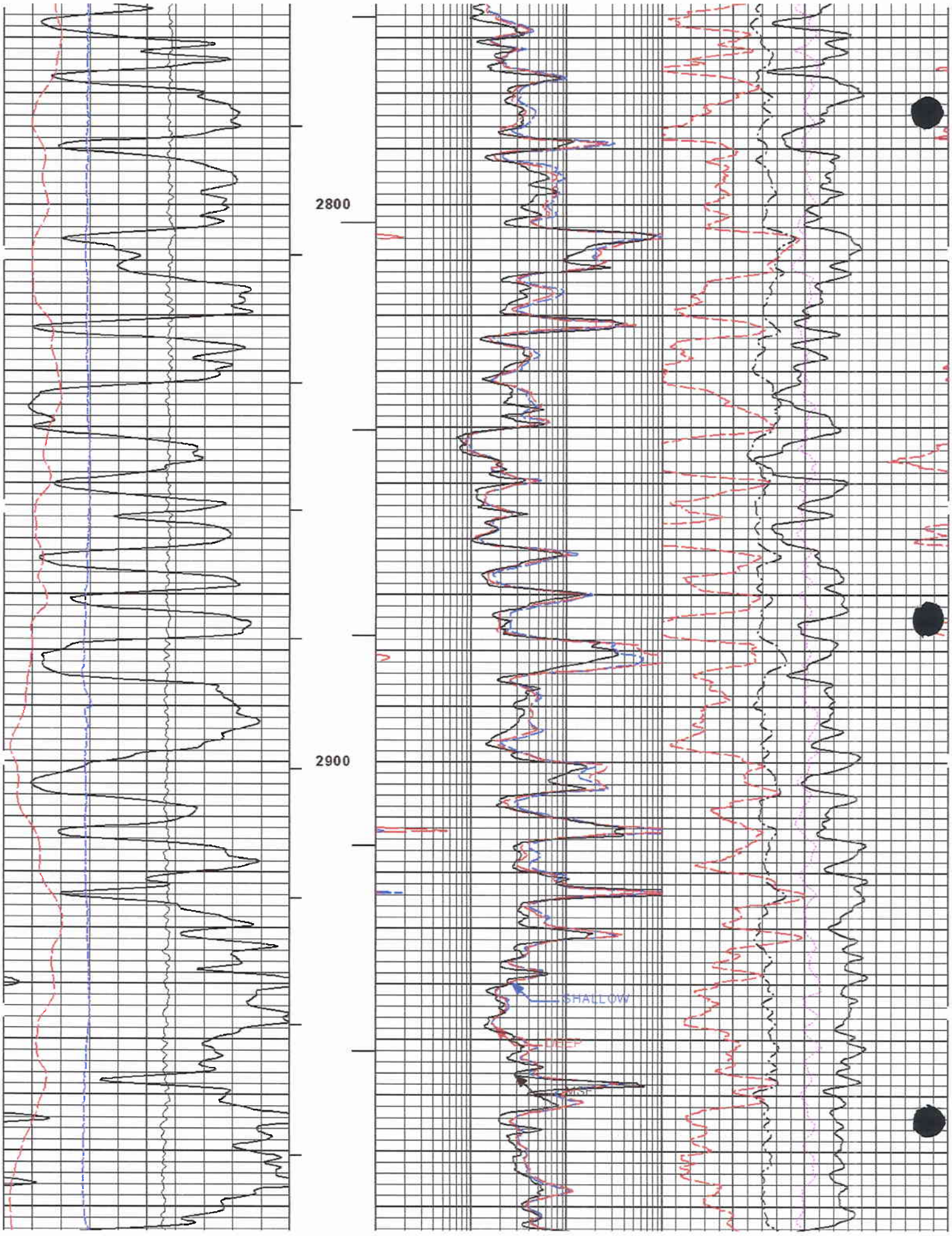
NEUTRONPOROSITY
DENSITY COR
DENPOROSITY
PE
SHALLOW
DEEP
MSFL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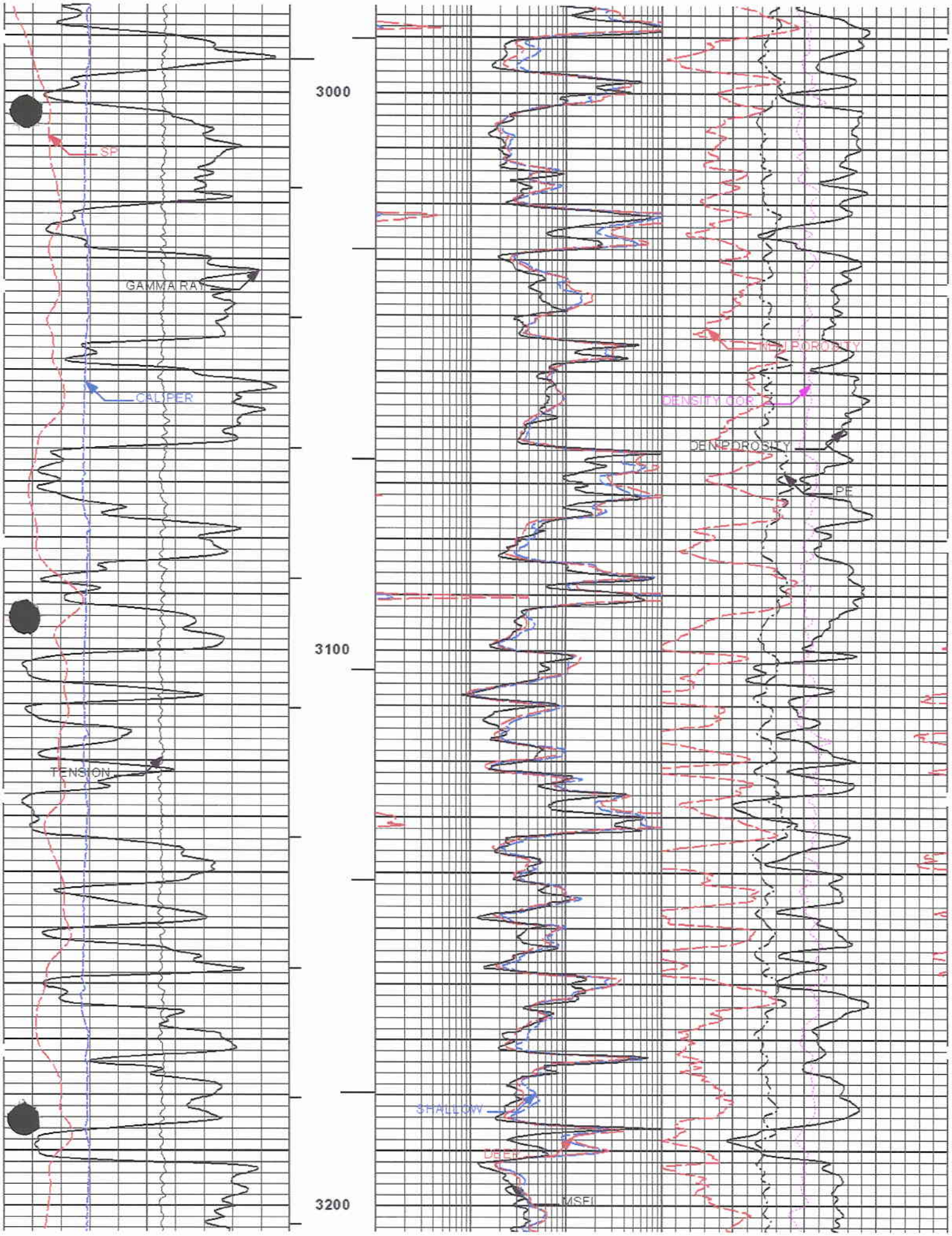
DEEP
MSF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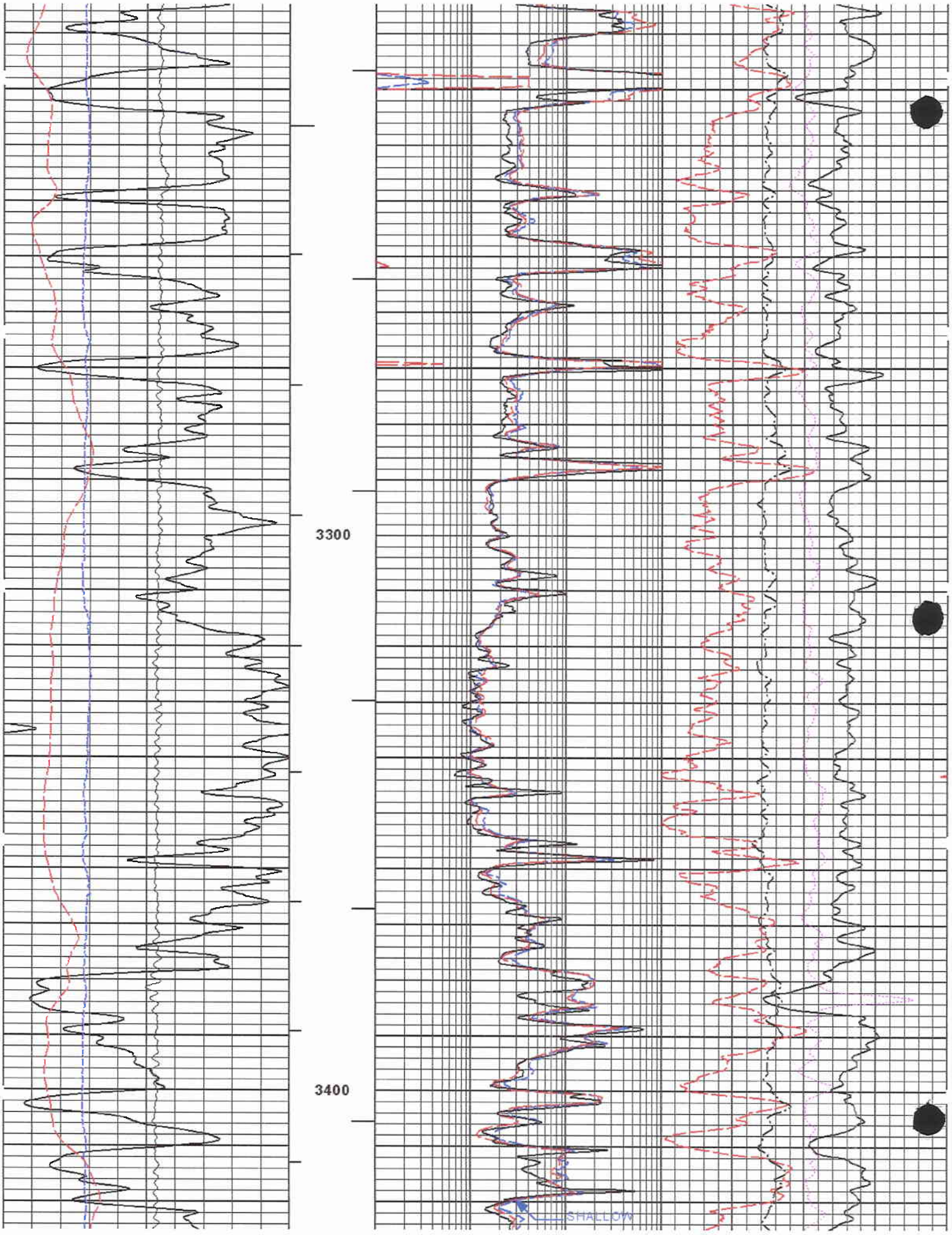
DENSITY COR
DENPOROSITY
PE
SHALLOW
DEEP
MSFL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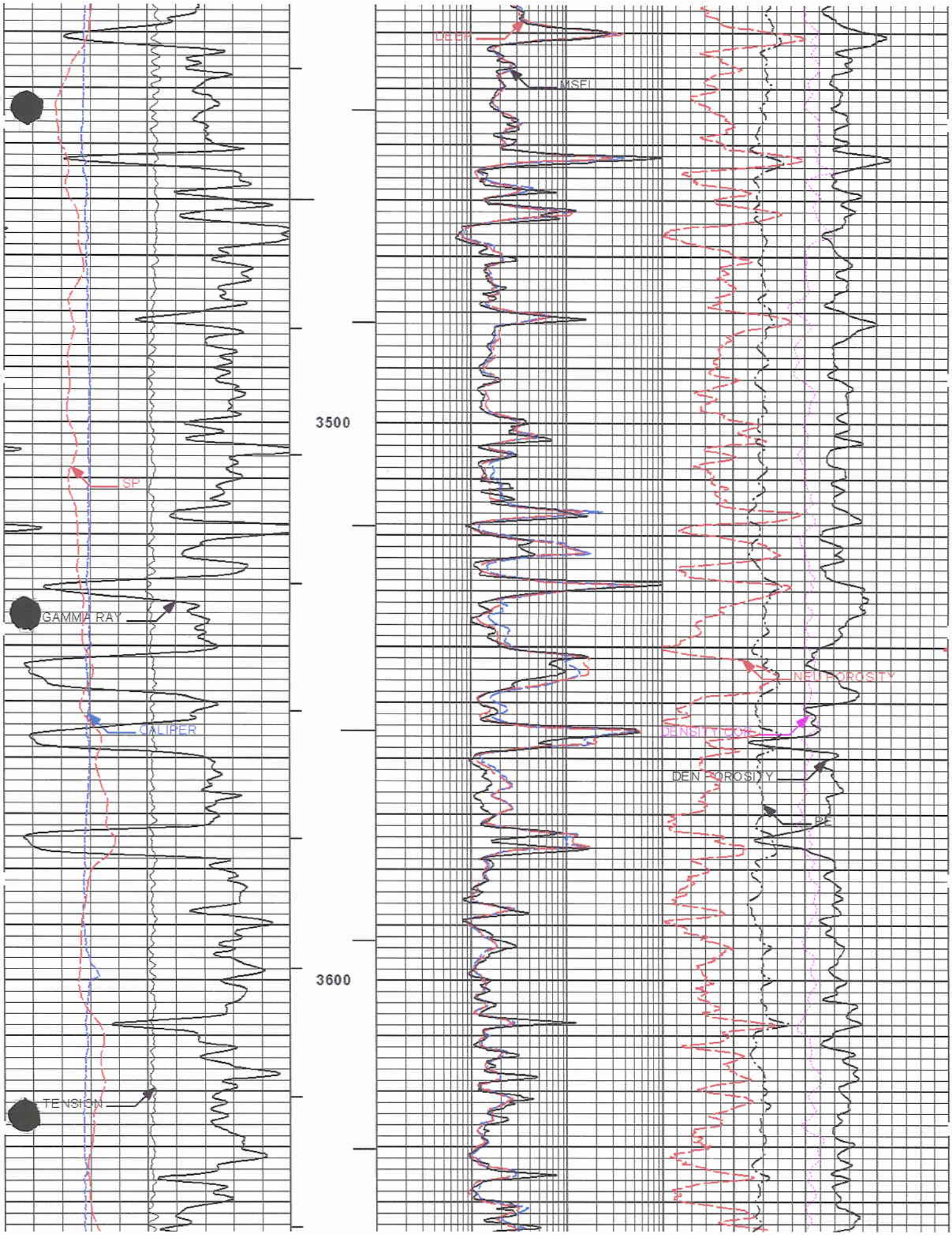
3400
SHALLOW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GAMMA RAY
CALIPER
TENSION
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3600
DEEP
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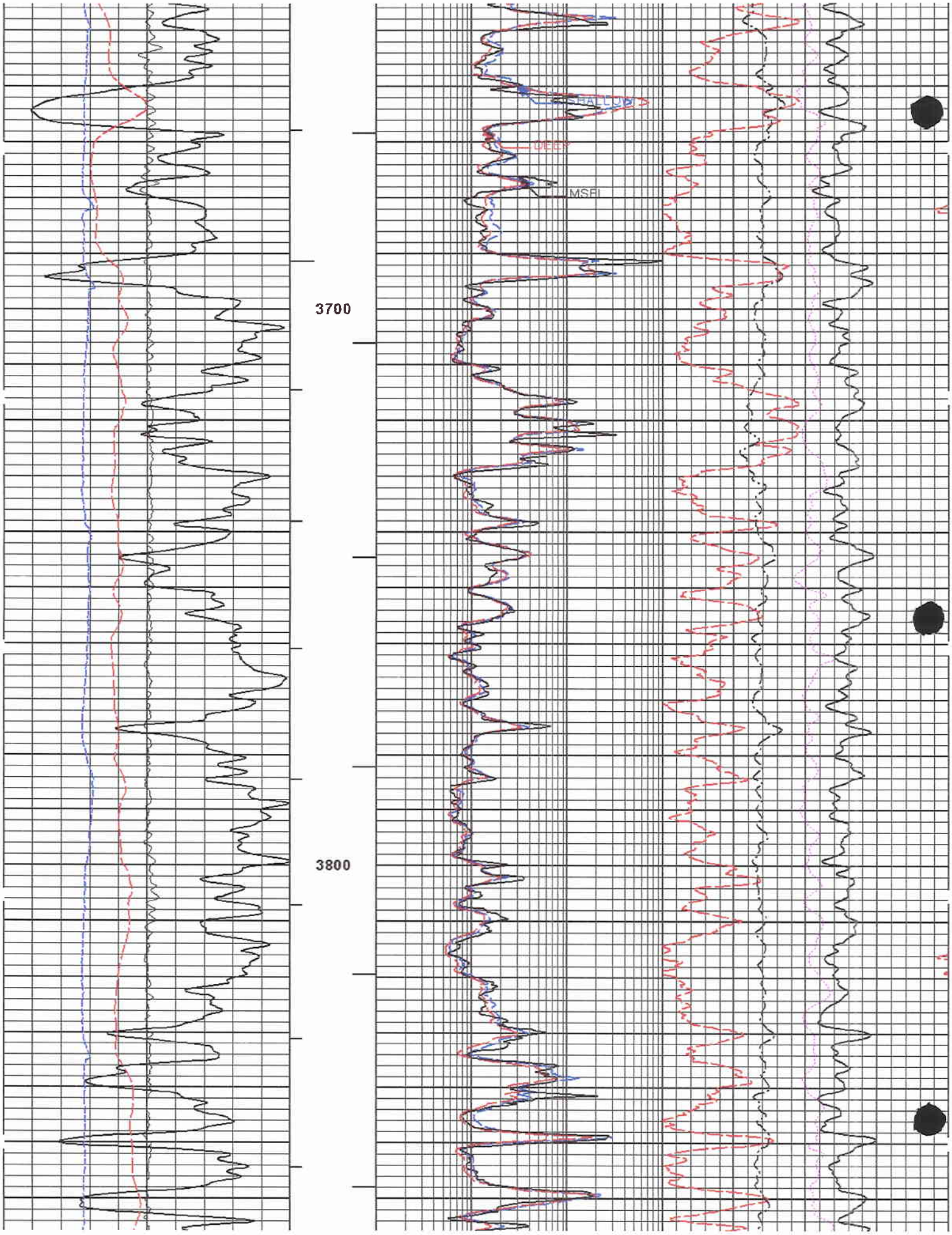
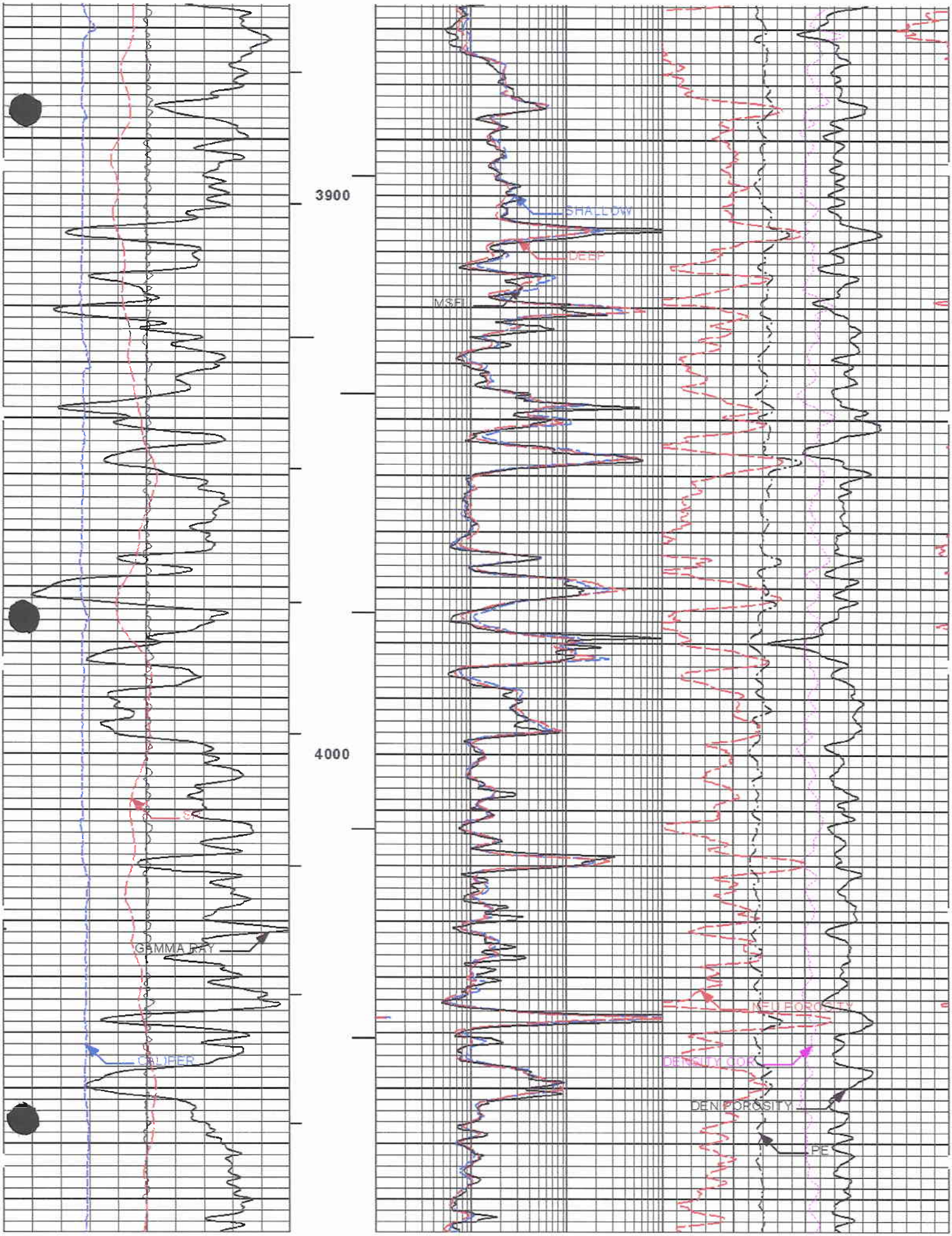
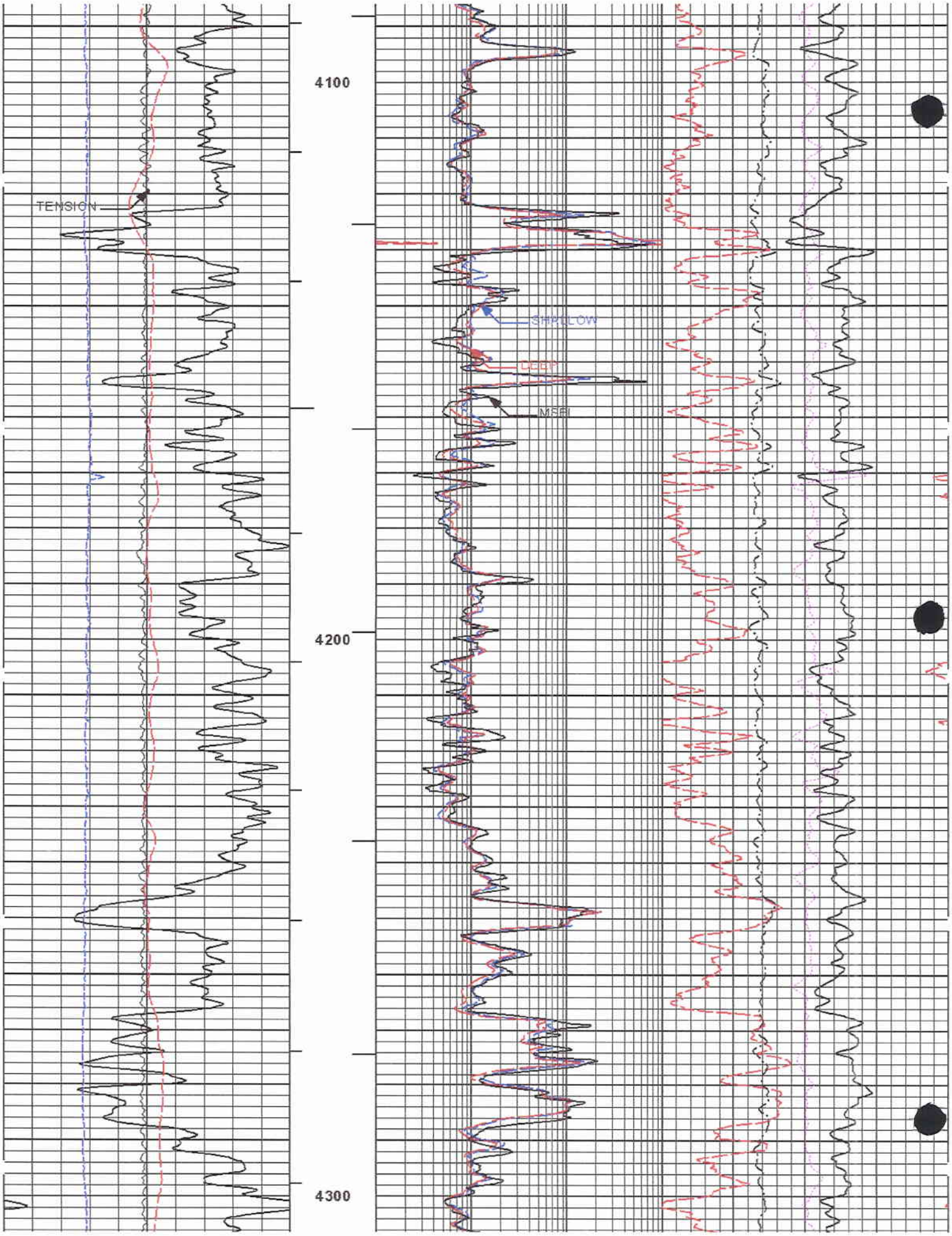
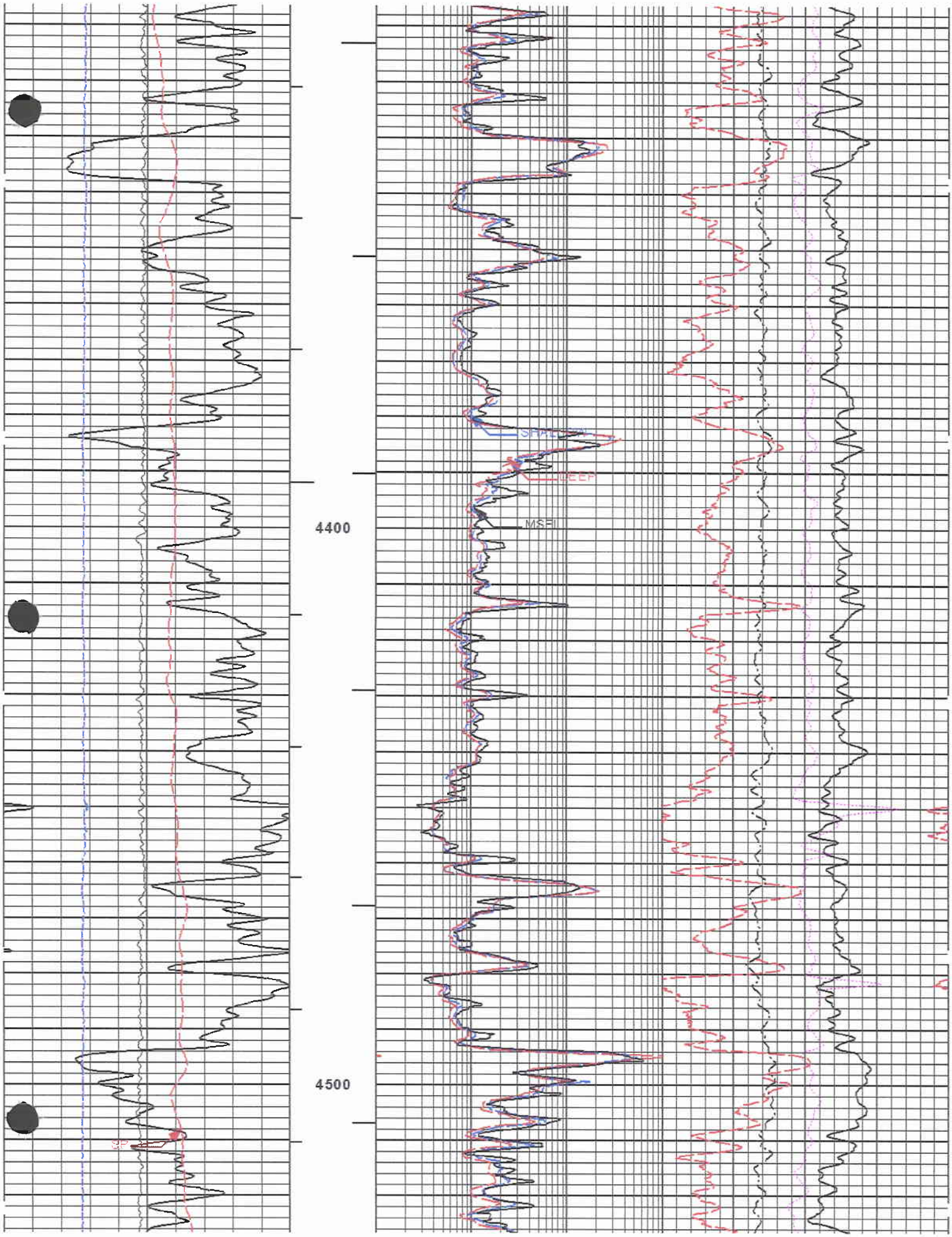
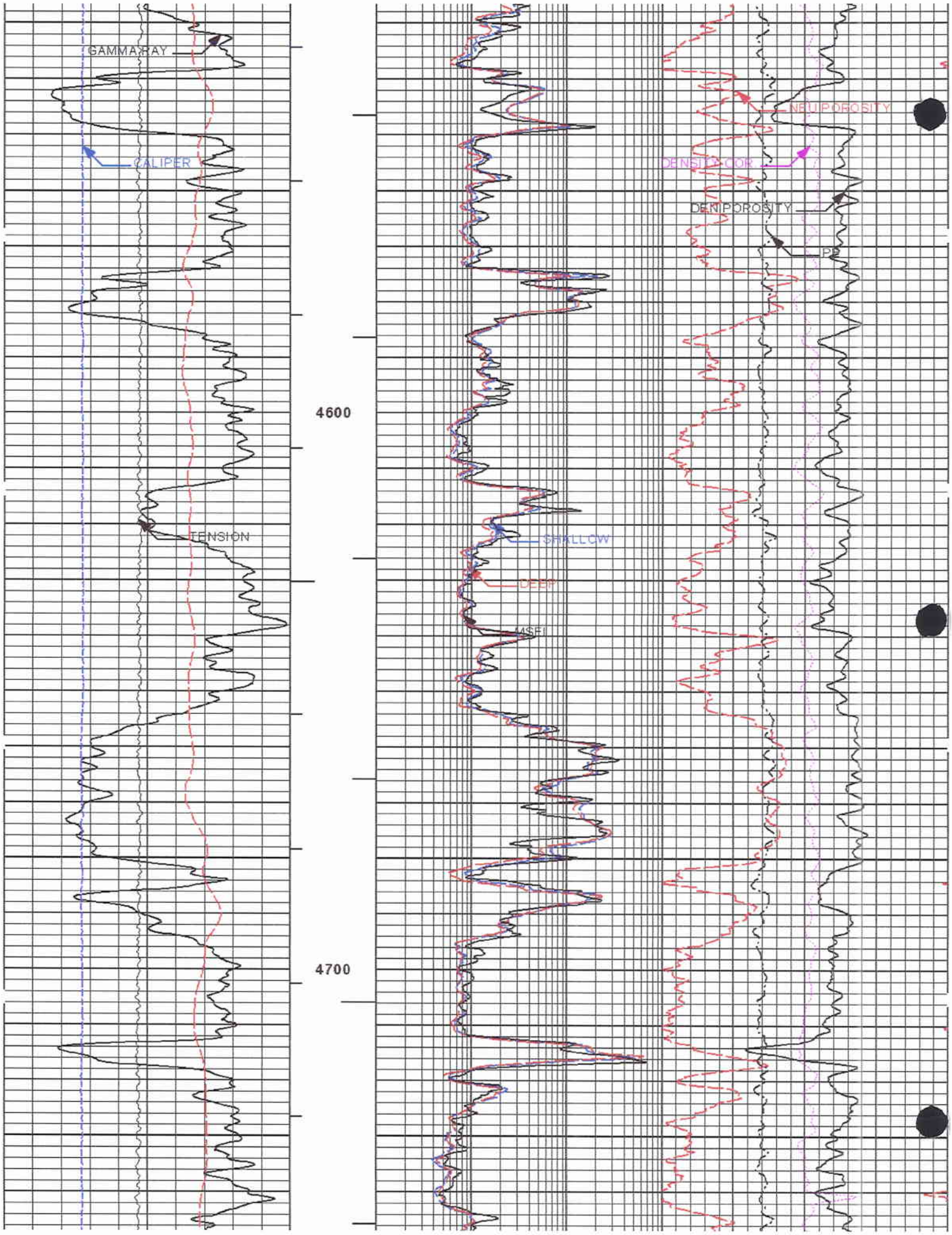
NEUTRON POROSITY
DENSITY POROSITY
PE

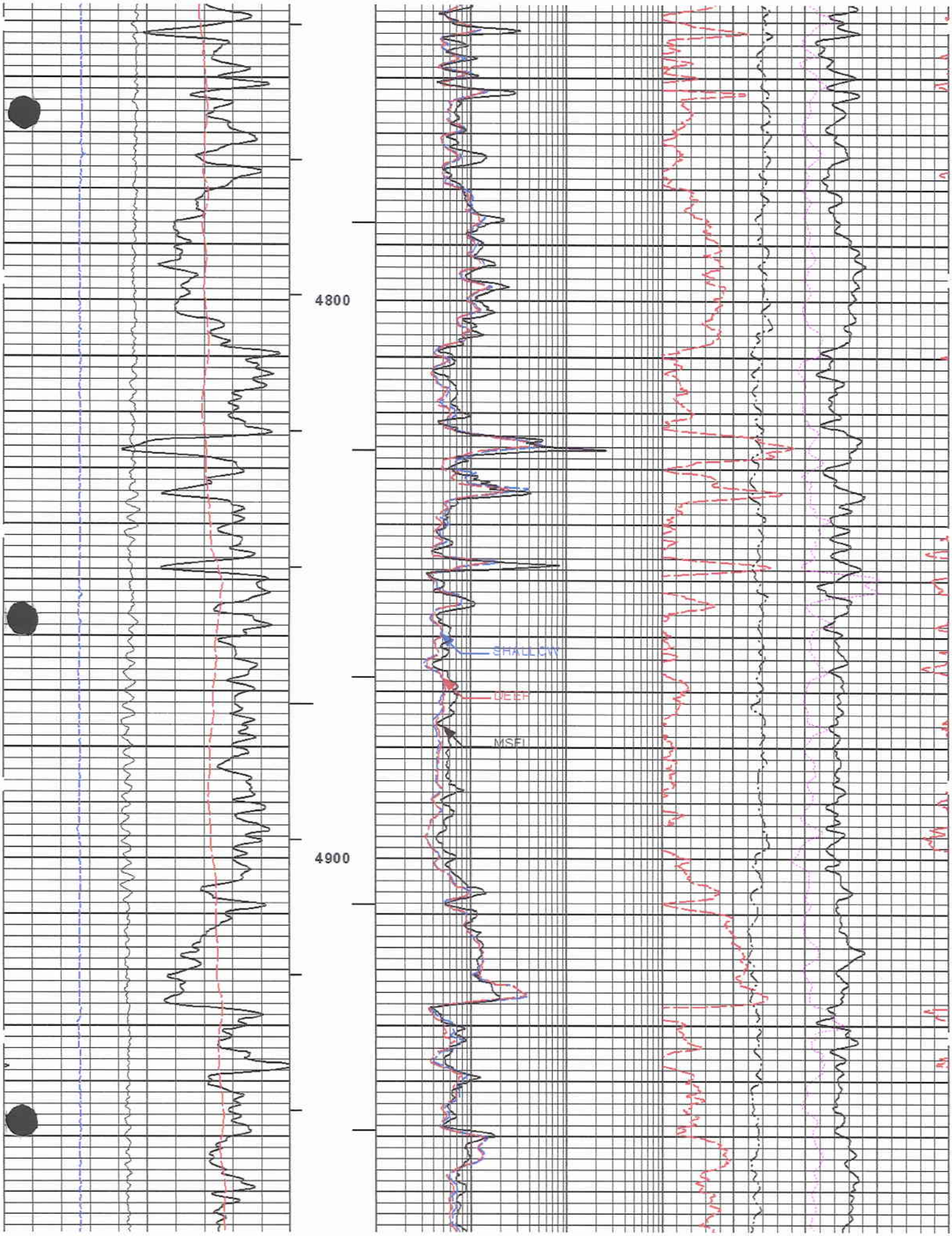

3700
3800
MSFI

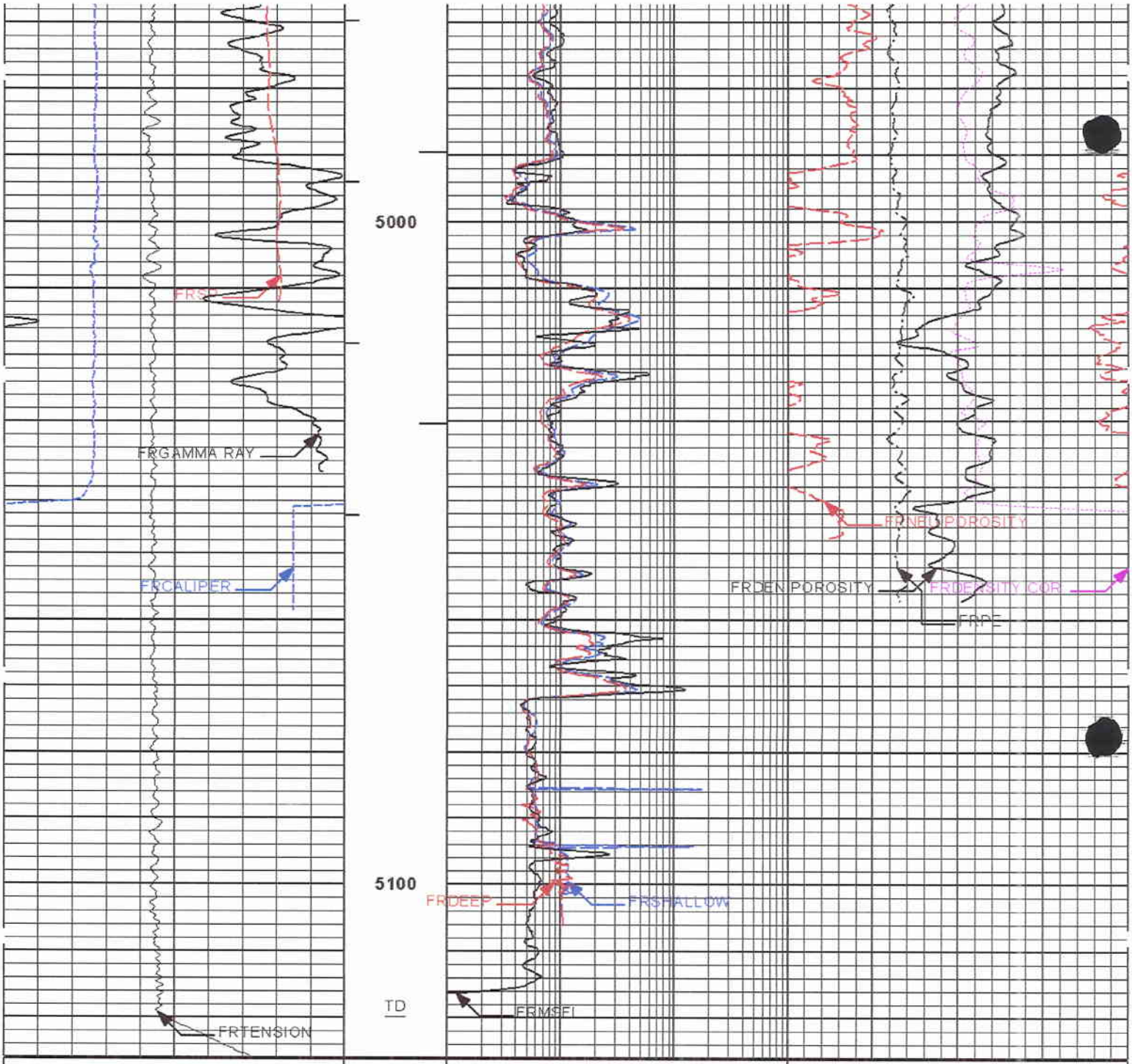

3900
4000
SHALLOW
DEEP
MSFL
GAMMA RAY
CALIPER
NEUTRON POROSITY
DENSITY COR
DEN POROSITY
PE


4100
4200
4300
TENSION
SHALLOW
DEEP
MSFL


SFLU
LLD
MSFL
4400
4500


GAMMA RAY
CALIPER
TENSION
4600
4700
SHALLOW
DEEP
MSFL
NEUPOROSITY
DENSITY COR
DENPOROSITY
PP


4800
4900
SHALLOW
DEEP
MSFL



10000	TENSION	0	1 : 240 FT.	1	MSFL	1K	-0.25 DENSITY COR. 0.25
	pounds				ohm-metre		g/cc
0	SP	100	BHV	1	SHALLOW	1K	0 PE 10
	millivolts				ohm-metre		
6	CALIPER	16	AHV	1	DEEP	1K	30 NEU POROSITY -10
	inches				ohm-metre		sand
0	GAMMA RAY	150					30 DEN POROSITY -10
	api						2.68 g/cc

HALLIBURTON

Plot Time: 06-Dec-11 16:12:40
Plot Range: 148 ft to 5126 ft
Data: 16_6D_46_BTRSWD\Well Based\MAIN\
Plot File: \\TRIPLE\I_BBC_TRIPLE_M

MAIN PASS 5" = 100'

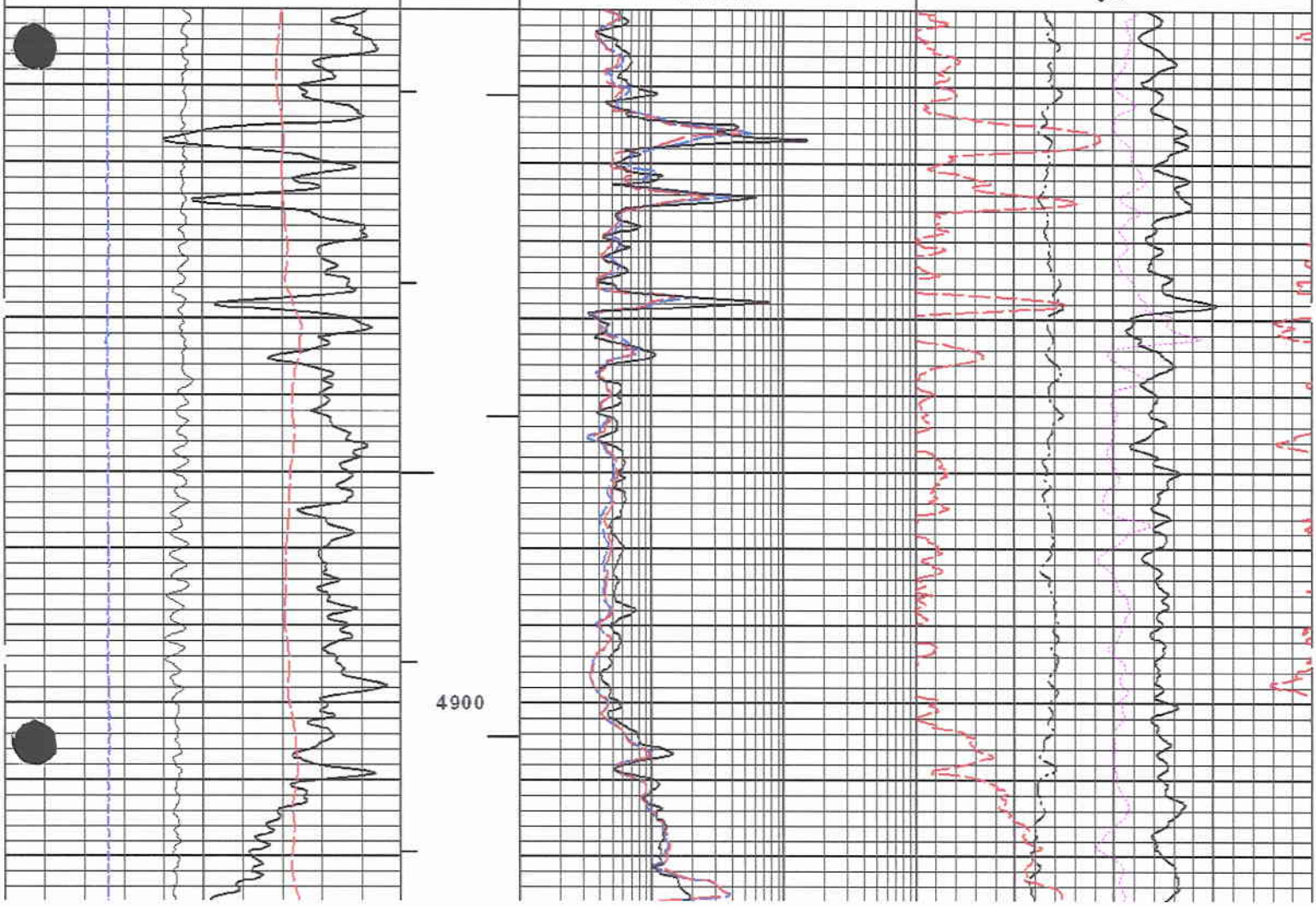
MAIN PASS 5" = 100'

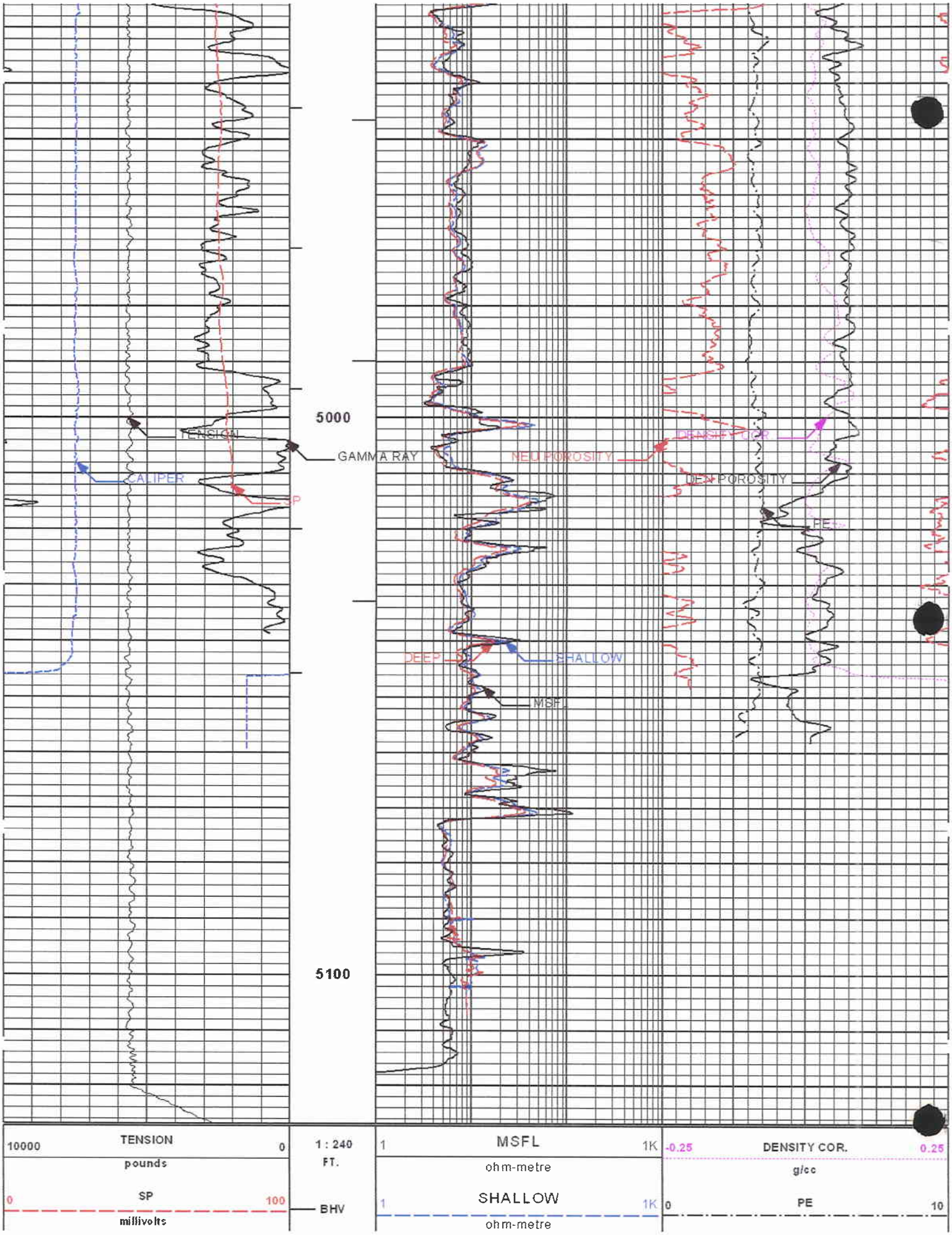
HALLIBURTON

Plot Time: 06-Dec-11 16:12:40
Plot Range: 4810 ft to 5127 ft
Data: 16_6D_46_BTRSWD\Well Based\REPEAT\
Plot File: \\TRIPLE_BBC_TRIPLE_R

REPEAT PASS 5" = 100'

0	GAMMA RAY (api)	150			30	DEN POROSITY (2.68 g/cc) -10
6	CALIPER (inches)	16	AHV	1 DEEP (ohm-metre) 1K	30	NEU POROSITY (sand) -10
0	SP (millivolts)	100	BHV	1 SHALLOW (ohm-metre) 1K	0	PE 10
10000	TENSION (pounds)	0	1 : 240 FT.	1 MSFL (ohm-metre) 1K	-0.25	DENSITY COR. (g/cc) 0.25




5000
5100
TENSION
GAMMA RAY
CALIPER
SP
NEU POROSITY
DENSITY COR
DEN POROSITY
PE
DEEP
SHALLOW
MSFL
10000
TENSION
0
pounds
0
SP
100
millivolts
1 : 240
FT.
BHV
1
MSFL
1K
ohm-metre
1
SHALLOW
1K
ohm-metre
-0.25
DENSITY COR.
0.25
g/cc
0
PE
10

6	CALIPER	16	AHV	1	DEEP	1K	30	NEU POROSITY	-10
	inches				ohm-metre			sand	
0	GAMMA RAY	150					30	DEN POROSITY	-10
	api							2.68 g/cc	

HALLIBURTON

Plot Time: 06-Dec-11 16:12:44
Plot Range: 4810 ft to 5127 ft
Data: 16_6D_46_BTRSWD\Well Based\REPEAT\
Plot File: \\TRIPLE\I_BBC_TRIPLE_R

REPEAT PASS 5" = 100'

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	**GTET - 11277435**	**Reference Calibration Date:**	**17-Nov-11 12:18:35**
Engineer:	**K. NORMAND**	**Calibration Date:**	**17-Nov-11 12:22:40**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-271
Calibrator API Reference:236.00 api
Equivalent Calibrator API Reference:240.1 api

Measurement	Measured	Calibrated	Units
Background	44.7	45.1	api
Background + Calibrator	282.4	285.2	api
Calibrator	237.7	240.1	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	**GTET - 11277435**	**Reference Calibration Date:**	**17-Nov-11 12:22:40**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 08:21:16**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-271
Calibrator API Reference:236.00 api
Equivalent Calibrator API Reference:240.1 api

Field Verification	Shop	Field	Units
Background	45.1	95.0	api
Background + Calibrator	285.2	330.0	api
Calibrator	240.1	235.0	api

Shop	Field	Difference	Tolerance
240.1	235.0	5.1	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name:	**GTET - 11277435**	**Reference Calibration Date:**	**06-Dec-11 08:21:16**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 15:58:08**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Calibrator Source S/N: TB-271

Calibrator API Reference:236.00 api

Calibrator API Reference:240.1 api

Post Verification	Field	Post	Units
Background	95.0	92.2	api
Background + Calibrator	330.0	334.1	api
Calibrator	235.0	241.9	api

Shop	Field	Post	Difference	Tolerance
240.1	235.0	241.9	-6.9	+/- 9.00

ACCELEROMETER SHOP CALIBRATION

Tool Name: GTET - 11277435 **Reference Calibration Date:** 17-Nov-11 12:31:17

Engineer: K. NORMAND **Calibration Date:** 17-Nov-11 12:33:38

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Horizontal-1 Telemetry	Horizontal-2 Telemetry	Vertical Telemetry	Units
-335.64	-130.36	-16485.54	cnts

Coefficient	Coefficient Value	Tolerance
Gain	-0.000062	-----
Offset	-0.014	-----
Noise	0.0007	0.0000 - 0.0030

Orientation	Measured	Tolerance	Calibrated	Tolerance
Horizontal	0.00	-0.10 - 0.10	0.00	-0.10 - 0.10
Vertical	1.00	0.90 - 1.10	1.00	0.90 - 1.10

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10917119 **Reference Calibration Date:** 17-Nov-11 11:54:04

Engineer: K. NORMAND **Calibration Date:** 17-Nov-11 12:10:32

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Logging Source S/N: 21480B

Tank Serial Number: 105045

Reference value assigned to Tank: 52.630

Snow Block S/N: DEFIANT

Calibration Tank Water Temperature: 66 degF

Min. Tool Housing Outside Diameter: 3.570 in

CALIBRATION CONSTANTS

Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.957	0.960	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)

Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change
Porosity (decp):	0.2090	0.2098	0.0008	+/- 0.0020
Calibrated Ratio:	9.66	9.69	0.028	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0709	0.02000 - 0.09000

PASS/FAIL SUMMARY

Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name:	**DSNT - 10917119**	**Reference Calibration Date:**	**17-Nov-11 12:10:32**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 08:39:56**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: 21480B

Snow Block S/N: DEFIANT

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0709	0.0654	-0.0054	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DUAL SPACED NEUTRON POST CALIBRATION

Tool Name:	**DSNT - 10917119**	**Reference Calibration Date:**	**06-Dec-11 08:39:56**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 16:04:29**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Logging Source S/N: 21480B

Snow Block S/N: DEFIANT

NEUTRON POST-CHECK SUMMARY

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0654	0.0693	0.0039	+/- 0.0150

PASS/FAIL SUMMARY

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	**SDLT - 10923744**	**Reference Calibration Date:**	**11-Nov-11 10:53:01**
Engineer:	**K. NORMAND**	**Calibration Date:**	**17-Nov-11 21:23:30**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1663.88	-2044.23	-7000.00 - -1000.00
Pad Gain	0.0003732	0.0003800	0.000200 - 0.000600
Arm Offset	-2826.16	-3169.71	-5000.00 - 3000.00
Arm Gain	0.0005295	0.0005803	0.000300 - 0.000700
Arm Power	-0.000003778	-0.000006671	-0.000010 - 0.000010

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER

Tool Diameter: 4.50 in

CALIBRATION RINGS

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.11	2.00	-0.11	+/- 0.20
Medium Ring (in)	3.82	3.75	-0.07	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.67	6.50	-0.17	+/- 0.20
Medium Ring (in)	8.31	8.25	-0.06	+/- 0.20
Large Ring (in)	15.05	15.00	-0.05	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed

SDLT CALIPER FIELD CALIBRATION

Tool Name:	**SDLT - 10923744**	**Reference Calibration Date:**	**17-Nov-11 21:23:30**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 08:46:13**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.80	0.05	+/- 0.10
Ring Diameter	8.25	8.20	-0.05	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
Diameter Check:	Passed

DUAL LATEROLOG SHOP CALIBRATION

Tool Name:	**DLLT - P773M023S433**	**Reference Calibration Date:**	**26-Nov-11 15:22:33**
Engineer:	**C. BRUNTZ**	**Calibration Date:**	**26-Nov-11 15:27:49**
Software Version:	**WL INSITE R3.4.0 (Build 4)**	**Calibration Version:**	**1**

Measurement	Deep Measured	Deep Calibrated	Shallow Measured	Shallow Calibrated	Units
External Cal Point #1	1.04	1.04	1.00	1.00	ohmm
External Cal Point #2	119.46	119.47	99.68	99.63	ohmm
External Cal Point #3	1540.81	1541.79	1025.05	1019.96	ohmm
External Check Point	1539.86	1540.84	1024.82	1019.73	ohmm
Internal Reference	15.98	15.98	20.19	20.19	ohmm

DUAL LATEROLOG FIELD CALIBRATION

Tool Name:	**DLLT - P773M023S433**	**Reference Calibration Date:**	**26-Nov-11 15:27:49**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 12:11:57**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Measurement	Deep Shop	Deep Field	Shallow Shop	Shallow Field	Units
Internal Reference	15.98	15.94	20.19	20.21	ohmm

PASS/FAIL SUMMARY

Measurement	Difference	Tolerance	Pass/Fail

Internal Deep	0.04	+/- 0.8	Passed
Internal Shallow	0.01	+/- 0.8	Passed

DUAL LATEROLOG POST CALIBRATION

Tool Name: DLLT - P773M023S433 **Reference Calibration Date:** 06-Dec-11 12:11:57

Engineer: K. NORMAND **Calibration Date:** 06-Dec-11 14:49:16

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Measurement	Deep Field	Deep Post	Shallow Field	Shallow Post	Units
Internal Reference	15.94	15.99	20.21	20.18	ohmm

PASS/FAIL SUMMARY

Measurement	Difference	Tolerance	Pass/Fail
Internal Deep	0.06	+/- 0.8	Passed
Internal Shallow	0.02	+/- 0.8	Passed

MICRO SPHERICALLY FOCUSED LOG SHOP CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 26-Nov-11 15:35:43

Engineer: C. BRUNTZ **Calibration Date:** 26-Nov-11 15:38:16

Software Version: WL INSITE R3.4.0 (Build 4) **Calibration Version:** 1

Measurement	Measured	Calibrated	Units
External Cal Point #1	0.20	0.20	ohmm
External Cal Point #2	20.00	20.00	ohmm
External Cal Point #3	2001.31	2000.00	ohmm
Internal Reference	19.93	19.93	ohmm

MICRO SPHERICALLY FOCUSED LOG FIELD CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 26-Nov-11 15:38:16

Engineer: K. NORMAND **Calibration Date:** 06-Dec-11 12:12:13

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Measurement	Shop	Field	Change	Control Limit On	Units
Internal Reference	19.93	19.93	0.002	0.800	ohmm

PASS/FAIL SUMMARY

Internal Reference: Passed

MICRO SPHERICALLY FOCUSED LOG POST CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 06-Dec-11 12:12:13

Engineer: K. NORMAND **Calibration Date:** 06-Dec-11 14:49:39

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Measurement	Field	Post	Change	Control Limit On	Units
Internal Reference	19.93	19.93	-0.001	0.800	ohmm

PASS/FAIL SUMMARY

Internal Reference: Passed

CALIPER SHOP CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 26-Nov-11 15:41:07

Engineer: C. BRUNTZ **Calibration Date:** 26-Nov-11 15:42:28

Software Version: WL INSITE R3.4.0 (Build 4) **Calibration Version:** 1

CALIBRATION RINGS AND INTERNAL

Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change
RING DIAMETER:			
Ring #1 (in)	8.22	8.25	-0.0300
Ring #2 (in)	15.00	15.00	0.0000
Hi/Lo Internal:			
Lo Internal (in)	3.65	3.65	0.0000
Hi Internal (in)	19.06	19.06	0.0000

CALIPER FIELD CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 26-Nov-11 15:42:28

Engineer: K. NORMAND **Calibration Date:** 06-Dec-11 12:12:49

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

MEASURED CALIPER VALUES

Measurement	Shop	Field	Change	Control Limit On New Value
Lo Internal (in)	3.65	3.70	-0.057	+/- 0.500
Hi Internal (in)	19.06	19.04	0.019	+/- 0.500

PASS/FAIL SUMMARY

Lo Internal Check: Passed

Hi Internal Check: Passed

CALIPER POST CALIBRATION

Tool Name: MSFL - S433M259 **Reference Calibration Date:** 06-Dec-11 12:12:49

Engineer: K. NORMAND **Calibration Date:** 06-Dec-11 14:54:12

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

MEASURED CALIPER VALUES

Measurement	Field	Post	Change	Control Limit On New Value
Lo Internal (in)	3.70	3.70	-0.008	+/- 0.500
Hi Internal (in)	19.04	19.05	0.007	+/- 0.500

PASS/FAIL SUMMARY

Lo Internal Check: Passed

Hi Internal Check: Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name: SDLT Pad - 10923744 **Reference Calibration Date:** 17-Nov-11 20:45:19

Engineer: K. NORMAND **Calibration Date:** 17-Nov-11 21:06:05

Software Version: WL INSITE R3.4.2 (Build 2) **Calibration Version:** 1

Logging Source S/N: 5246GW

Aluminum Block S/N: 63069 Density: 2.583g/cc Pe: 3.170

Magnesium Block S/N: 63376 Density: 1.685g/cc Pe: 2.594

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9691	0.9870	0.90 - 1.10
Near Dens Gain	0.9687	0.9820	0.90 - 1.10
Near Peak Gain	0.9579	0.9646	0.90 - 1.10
Near Lith Gain	0.9616	0.9489	0.90 - 1.10
Far Bar Gain	0.9985	0.9996	0.90 - 1.10
Far Dens Gain	0.9892	0.9917	0.90 - 1.10

Far Peak Gain	0.9844	0.9856	0.90 - 1.10
Far Lith Gain	0.9658	0.9668	0.90 - 1.10
Near Bar Offset	0.3139	0.1473	NONE
Near Dens Offset	0.2859	0.1656	NONE
Near Peak Offset	0.3528	0.2960	NONE
Near Lith Offset	0.2888	0.3970	NONE
Far Bar Offset	0.0129	0.0035	NONE
Far Dens Offset	0.0804	0.0577	NONE
Far Peak Offset	0.0780	0.0706	NONE
Far Lith Offset	0.1990	0.1932	NONE
Near Bar Background	938.31	938.52	700 - 1450
Near Dens Background	305.65	306.41	230 - 480
Near Peak Background	133.71	132.08	100 - 210
Near Lith Background	163.68	163.51	125 - 260
Far Bar Background	546.09	548.62	450 - 900
Far Dens Background	213.60	211.73	175 - 345
Far Peak Background	84.68	86.02	70 - 140
Far Lith Background	87.54	87.00	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.685	1.685	0.000	+/- 0.015
Pe	2.535	2.553	0.018	+/- 0.150
ALUMINUM				
Density (g/cc)	2.583	2.583	0.000	+/- 0.01500
Pe	3.150	3.125	-0.025	+/- 0.150

TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0006	+/- 0.0110	-0.0006	+/- 0.0140
Magnesium Block	0.0002	+/- 0.0110	-0.0007	+/- 0.0140
Aluminum Block	-0.0003	+/- 0.0110	-0.0007	+/- 0.0140
Resolution	9.17	6.00 - 11.50	9.14	6.00 - 11.50
Internal Verifier(B+D+P+L)	1541	1200 - 2700	933	800 - 1700

PASS/FAIL SUMMARY

Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 15:58:18**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Pad Temperature: 64.7 degF

DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1540.521	1529.073	-11.448	15.802
Far (B+D+P+L) cps	933.367	934.816	1.449	16.522
Near Resolution	9.17	9.34	0.170	0.50
Far Resolution	9.14	9.70	0.560	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

SPECTRAL DENSITY POST CHECK

Tool Name:	**SDLT Pad - 10923744**	**Reference Calibration Date:**	**06-Dec-11 15:58:18**
Engineer:	**K. NORMAND**	**Calibration Date:**	**06-Dec-11 16:01:36**
Software Version:	**WL INSITE R3.4.2 (Build 2)**	**Calibration Version:**	**1**

Pad Temperature: 64.7 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1529.073	1533.088	4.015	15.802
Far (B+D+P+L) cps	934.816	930.983	-3.833	16.522
Near Resolution	9.34	9.41	0.070	0.50
Far Resolution	9.70	9.75	0.050	1.00

PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11277435						
Gamma Ray Calibrator	240.1	235.0	241.9	-6.9	+/- 9.00	api
DSNT-10917119						
Snow-Block Porosity	0.0709	0.0654	0.0693	-0.0039	+/- 0.0150	decp
SDLT-10923744						
Pad Extension	3.75	3.80	----------	-0.05	+/-0.10	in
Ring Diameter	8.25	8.20	----------	0.050	+/-0.15	in
DLLT-P773M023S433						
Deep Internal Ref.	15.98	15.94	15.99	-0.05	+/- 0.8	ohmm
Shallow Internal Ref.	20.19	20.21	20.18	0.03	+/- 0.8	ohmm
MSFL-S433M259						
MSFL Internal Ref.	19.93	19.93	19.93	0.00	+/- 0.800	ohmm
Caliper Lo. Internal	3.65	3.70	3.70	0.00	+/- 0.500	in
Caliper Hi. Internal	19.06	19.04	19.05	-0.01	+/- 0.500	in
SDLT Pad-10923744						
Near(B+D+P+L)	1540.521	1529.073	1533.088	-4.015	+/-15.802	cps
Far(B+D+P+L)	933.367	934.816	930.983	3.833	+/-16.522	cps

HALLIBURTON

CUSTOMER EVENT LOG

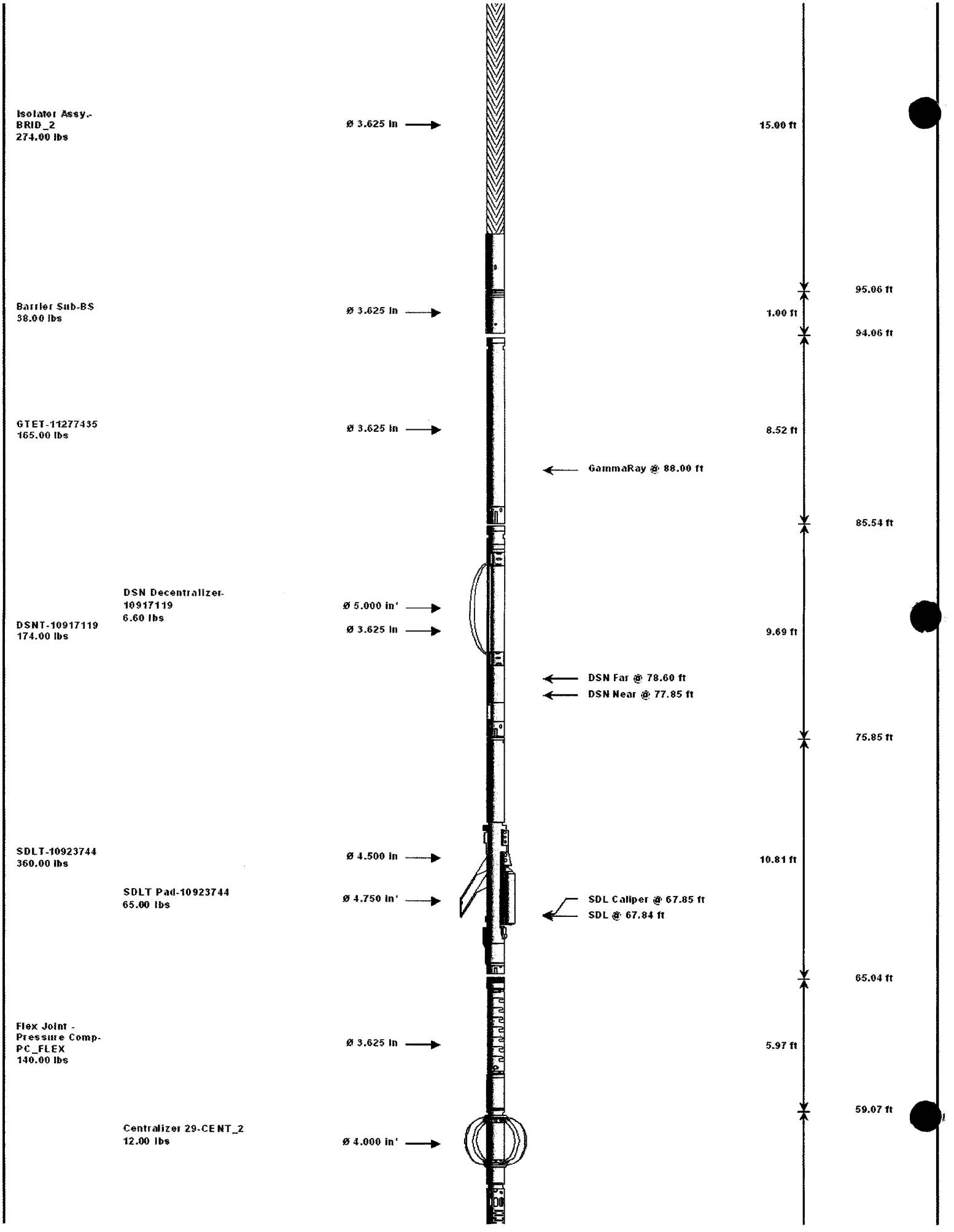
Event Type	Time & Date	Depth (ft)	Event Description
	06-Dec-11 12:22:14	1324.75	Logging 001 06-Dec-11 12:22 Up @1324.8f
	06-Dec-11 12:30:06	978.46	Halting 001 06-Dec-11 12:22 Up @1324.8f
	06-Dec-11 12:30:26	826.00	Logging 002 06-Dec-11 12:30 Dn @826.0f
	06-Dec-11 12:49:05	5082.32	Halting 002 06-Dec-11 12:30 Dn @826.0f
	06-Dec-11 12:50:39	5128.00	Logging 003 06-Dec-11 12:50 Up @5128.0f
	06-Dec-11 13:01:21	4682.28	Halting 003 06-Dec-11 12:50 Up @5128.0f
	06-Dec-11 13:05:21	5127.25	Logging 004 06-Dec-11 13:05 Up @5127.3f
	06-Dec-11 14:48:31	147.96	Halting 004 06-Dec-11 13:05 Up @5127.3f

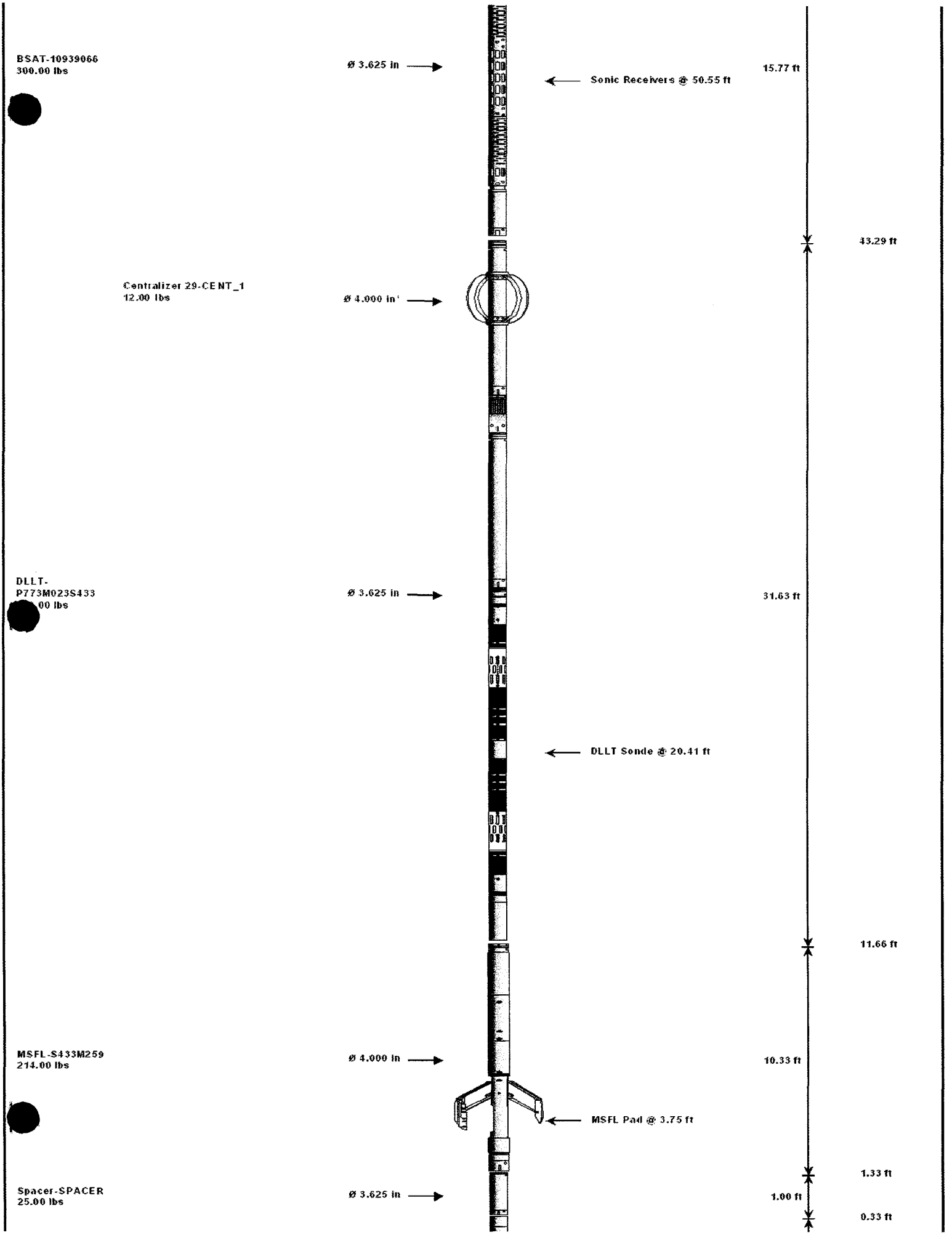
Data: 16_6D_46_BTRSWD\0002 IQ_QUAD_DLLT_BSAT\HW11384 Date: 06-Dec-11 14:54:21

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
						137.55 ft
RWCH-10763226 135.00 lbs		Ø 3.625 in		Load Cell @ 133.86 ft BH Temperature @ 133.30 ft	6.25 ft	
						131.30 ft
Isolator Assy.- BRID_1 274.00 lbs		Ø 3.625 in			15.00 ft	
						116.30 ft
Return Electrode- CR 57.00 lbs		Ø 3.625 in			2.50 ft	
						113.80 ft
SP Sub-SP_SUB 60.00 lbs		Ø 3.625 in		SP @ 112.02 ft	3.74 ft	
						110.06 ft


Isolator Assy.-
BRID_2
274.00 lbs
Ø 3.625 in
15.00 ft
95.06 ft
Barrier Sub-BS
38.00 lbs
Ø 3.625 in
1.00 ft
94.06 ft
GTET-11277435
165.00 lbs
Ø 3.625 in
8.52 ft
GammaRay @ 88.00 ft
85.54 ft
DSN Decentralizer-
10917119
6.60 lbs
Ø 5.000 in'
DSNT-10917119
174.00 lbs
Ø 3.625 in
9.69 ft
DSN Far @ 78.60 ft
DSN Near @ 77.85 ft
75.85 ft
SDLT-10923744
360.00 lbs
Ø 4.500 in
10.81 ft
SDLT Pad-10923744
65.00 lbs
Ø 4.750 in'
SDL Caliper @ 67.85 ft
SDL @ 67.84 ft
65.04 ft
Flex Joint -
Pressure Comp-
PC_FLEX
140.00 lbs
Ø 3.625 in
5.97 ft
59.07 ft
Centralizer 29-CENT_2
12.00 lbs
Ø 4.000 in'


BSAT-10939066
300.00 lbs
Ø 3.625 in
Sonic Receivers @ 50.55 ft
15.77 ft
43.29 ft
Centralizer 29-CENT_1
12.00 lbs
Ø 4.000 in
DLLT-
P773M023S433
00 lbs
Ø 3.625 in
31.63 ft
DLLT Sonde @ 20.41 ft
11.66 ft
MSFL-S433M259
214.00 lbs
Ø 4.000 in
10.33 ft
MSFL Pad @ 3.75 ft
1.33 ft
Spacer-SPACER
25.00 lbs
Ø 3.625 in
1.00 ft
0.33 ft

Bull Nose-BN
5.00 lbs

Ø 2.750 in

0.33 ft

0.00 ft

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)		Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head	10763226	135.00	6.25		131.30	300.00
ISA	Isolator Assembly - Rigid Bridle	BRID_1	274.00	15.00		116.30	300.00
RE	Return Electrode - Rigid Bridle	CR	57.00	2.50		113.80	300.00
SP	SP Sub	SP_SUB	60.00	3.74		110.06	300.00
ISA	Isolator Assembly - Rigid Bridle	BRID_2	274.00	15.00		95.06	300.00
BSUB	Barrier Sub - Rigid Bridle	BS	38.00	1.00		94.06	300.00
GTET	Gamma Telemetry Tool	11277435	165.00	8.52		85.54	60.00
DSNT	Dual Spaced Neutron	10917119	174.00	9.69		75.85	60.00
DCNT	DSN Decentralizer	10917119	6.60	5.13	*	79.18	300.00
SDLT	Spectral Density Tool	10923744	360.00	10.81		65.04	60.00
SDLP	Density Insite Pad	10923744	65.00	2.55	*	67.25	60.00
FLEX	Flex Joint - Pressure Compensated	PC_FLEX	140.00	5.97		59.07	300.00
BSAT	Borehole Sonic Array Tool	10939066	300.00	15.77		43.29	60.00
OBCEN	Centralizer - 29 in.Overbody	CENT_2	12.00	2.42	*	56.35	300.00
DLLT	Dual Laterolog	P773M023S433	390.00	31.63		11.66	100.00
OBCEN	Centralizer - 29 in.Overbody	CENT_1	12.00	2.42	*	39.45	300.00
MSFL	Micro Spherically Focussed Log	S433M259	214.00	10.33		1.33	60.00
SPC	Test	SPACER	25.00	1.00		0.33	100.00
BLNS	Bull Nose	BN	5.00	0.33		0.00	300.00
Total			**2,706.60**	**137.55**			

* Not included in Total Length and Length Accumulation.

Data: 16_6D_46_BTRSWD\0002 IQ_QUAD_DLLT_BSAT\004 06-Dec-11 13:05 Up @5127.3f

Date: 06-Dec-11 13:53:43

COMPANY	**BILL BARRETT CORPORATION**		
WELL	**16-6D-46 BTR SWD**		
FIELD	**BLACK TAIL RIDGE**		
COUNTY	**DUCHESNE**	STATE	**UTAH**

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
DUAL LATEROLOG
MICRO-SPHERICALLY
FOCUSED LOG

OPERATOR: Bill Barrett Corp
WELL NAME: SWD #16-6D-46
FIELD NAME: Black Tail Ridge
DRILLING RIG: Helmerich & Payne #319
API #: 43-013-50781

SCALE: 5" = 100'
SURFACE HOLE: 200 FSL, 99" FEL
BOTTOM HOLE: 642' FSL, 641" FEL
LOCATION: SESE-Sec 6-T4S-6W

Precision Well Site Consulting, Inc.

SWD #16-6D-46

COUNTY: Duchesne
STATE: Utah
GROUND ELEVATION: 5,856 Ft.
KELLY BUSHING: 5,880 Ft.
DRILLING FLUID: Water based Gel
TVD VS. MD = 5,063' VS. 5,120'
SPUD DATE: Dec 2, 2011
FGS BEGIN LOGGING: 1010'; Dec 4, 2011
TD DATE: Dec 6, 2011
DATES LOGGED: Dec 4 - Dec 6, 2011
DEPTHS LOGGED: 1010' - 5,120'
LOGGER: Dean L Pesci - Precision Well Site Consulting

LITHOLOGY LEGEND

COAL; CARBONACEOUS SHALE; SHALE; SILTSTONE; SANDSTONE; ARGILLACEOUS SANDSTONE; CONGLOMERATE; GLAUCONITE; DOLOMITIC LIMESTONE; DOLOMITE; SANDY LIMESTONE; SILTY LIMESTONE; SHALY LIMESTONE; LIMESTONE; BENTONITE; ANHYDRITE; CHERT; DOLOMITIC MUDSTONE; ARGILLACEOUS LIMESTONE; CLAYSTONE; LIMESTONE MUDSTONE

FORMATION · CONNECTION · MIDNIGHT · NEW BIT

Depth (Feet) | ROP 0 MIN/FT 5 | SLIDE BAR SYMBOLS | INTERP | WOB 0 Klbs 40 | MV 200 BBL 800 | GAS 1 UNIT 1000 | Depth (Feet) | COMMENT | CUTTINGS | SAMPLE DESCRIPTION

COMMENT

- -980 Spud surface hole @ 1800 hrs on 12/2/11; TD surface @ 1,010' @ 0530 hrs on 12/3/11. Bit #1 - Smith MDI716, 12.25"
- -1020 Drill out from surface @ 1130 hrs on 12/4/11. Bit # 2 - HC Q506FX, 8.75"
- -1060 Drilling with water
- -1126 Inc. 9.8, Az. 307
- -1360 Inc. 10.5, Az. 312
- -1550 Inc. 10.4, Az. 310
- -1740 Inc. 10.5, Az. 306
- -1800 Pason EDR Out
- -1900 Pason EDR Out
- -1930 Inc. 11.3, Az. 309
- -1970 Pason EDR Out
- [illegible]
- -3120 Pason EDR Repaired
- -3150 First mud check - WT 8.7/VIS 35
- -3250 Inc. 9.5, Az. 308
- -3350 WT 8.6/VIS 28
- -3440 Inc. 10.6, Az. 310
- -3550 WT 8.7/VIS 32
- -3630 Inc. 9.0, Az. 310
- -3750 WT 8.8/VIS 34
- -3860 Inc. 9.4, Az. 310
- -3950 WT 8.8/VIS 36
- -4050 Inc. 9.6, Az. 309
- -4150 WT 8.8/VIS 37
- -4280 Inc. 5.2, Az. 279
- -4350 WT 8.8/VIS 38
- -4470 Inc. 4.2, Az. 252
- -4550 WT 8.8/VIS 38
- -4660 Inc. 4.1, Az. 230
- -4750 WT 8.9/VIS 35
- -4850 Inc. 3.1, Az. 218
- -4950 WT 8.9/VIS 34
- -5035 0000 hrs on 12/6/11
- -5060 Inc. 3.9, Az. 197
- -5080 WT 8.9/VIS 34
- -5100 TD @ 5120' at 0100 hrs on 12/6/11

SAMPLE DESCRIPTION

-1050 SHLY LS: lt-med brn-tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; LS: lt gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to lt-med tan, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; fair cream cut flor w/ streaming; lt amber res cut

-1100 SHLY LS: med-dk yel-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to lt-med brn, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; fair cream cut flor w/ streaming; lt amber res cut

-1150 SNDY LS: off wh to lt-med-dk brn, olive, gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; fair cream cut flor w/ streaming; lt amber res cut

-1200 SNDY LS: off wh to lt-med brn, med blue-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; SHLY LS: lt-med brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; lt amber res cut

-1250 SNDY LS: off wh to lt-med-dk yel-brn, gy, olive, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; SHLY LS: lt-med olive-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; bri wh cut flor w/ streaming; med amber res cut

-1300 SNDY LS: off wh to lt-med gy-brn, olive, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; SHLY LS: med-dk brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; med amber res cut

-1350 SNDY LS: off wh to yel-brn-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; SS: wh, milky, clr LS s&p & incl, op, sbang, ang, w srt, w cmt, f gr, calc mtrx, sil cmt; SHLY LS: med yel-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; bri wh cut flor w/ streaming; dk amber res cut

-1400 SHLY LS: lt yel-tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; LS: med brn, olive-brn, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: off wh to lt gy, med brn, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; bri wh cut flor w/ streaming; med amber res cut

-1450 SNDY LS: wh, off wh to lt-med trnsl yel-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; LS: lt gy, olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: med-dk brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; bri wh cut flor w/ streaming; dk amber res cut

-1500 LS: med olive, olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: lt-med tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; bri wh cut flor w/ streaming; dk amber res cut

-1550 LS: lt-med gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: lt-med yel-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; dk amber res cut

-1600 LS: lt-med gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: med yel-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; dk green-amber res cut

-1650 SHLY LS: mottled gy-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; LS: lt-med gy, op, trnsl yel-brn, mic xl, suc, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; lt yel-gn res cut

-1700 SHLY LS: dirty olive-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; CALC SH: med-dk orange-brn, rotten, sft-mod hd, sbrnd-sbblky; fair cream cut flor w/ streaming; lt yel-gn res cut

-1750 SHLY LS: med gy, brn, olive, sndy ip, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-1800 LS: lt gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: med orange-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fnt cut flor

-1850 LS: trnsl yel, lt op gy, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: dirty brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fnt cut flor

-1900 SHLY LS: lt-med olive-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; LS: lt-med gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-1950 LS: lt gy, olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: lt tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-3150 LS: med-dk gy, gy-brn, dol ip, op, mic xl, suc, mod hd-hd, sbplty-plty; fnt cut flor

-3200 LS: med gy-dk brn, dol ip, op, mic xl, suc, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; lt yel-blue res cut

-3250 DOL LS: v dk gy, brn, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: lt cream-tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; lt yel-blue res cut

-3300 SHLY LS: med steel blue-gy, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; SNDY LS: off wh to lt-med trnsl blue-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-3350 SHLY LS: med steel blue-gy, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; SNDY LS: off wh to trnsl lt-med blue-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-3400 LS: med-dk olive, dk blue-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: med gy, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; fnt cut flor

-3450 LS: lt-med olive-gy, yel gy, dk brn, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; fnt cut flor

-3500 LS: med-dk steel blue-gy, olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-3550 LS: lt tan, calc coat, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn, olive brn, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; bri wh cut flor w/ streaming; bri cream res cut

-3600 SNDY LS: off wh to med trnsl steel blue-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; LS: med blue-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-3650 SNDY LS: wh, off wh to lt-med trnsl yel-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; LS: med-dk gy-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; fnt cut flor

-3700 SNDY LS: wh, off wh to lt-med trnsl yel-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; LS: dk gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-3750 LS: lt-med gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-3800 LS: med-dk gy, olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk red-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; fnt cut flor

-3850 LS: v dk olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-3900 LS: med-dk blue-gy, olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to lt-med trnsl gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-3950 LS: med olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: dirty gy-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-4000 LS: med-dk olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4050 LS: med-dk gy, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn to blk, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4100 SHLY LS: lt dirty tan, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; LS: med-dk blue gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4150 LS: lt olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: lt-med tan-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-4200 LS: med-dk olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4250 LS: lt-med gy, olive-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4300 LS: lt-med blue-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn-blk, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4350 LS: lt-med gy, trnsl-op, v calc coat, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to v lt trnsl gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-4400 LS: lt-med-dk gy, gy brn, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: med tan-brn, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-4450 LS: med-dk gy-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk red-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4500 LS: med-dk olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to v lt trnsl gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-4550 LS: med-dk gy, op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk brn, olive, op, mic xl, suc, mod hd-hd, sbplty-plty; fair cream cut flor w/ streaming; wk lt blue res cut

-4600 LS: lt-med blue-gy, olive-gy, gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; DOL LS: v dk olive-brn, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4650 LS: lt-med gy, yel-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4700 LS: lt-med-dk gy, olive-gy, brn-gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4750 LS: lt-med gy, calc coat, op, mic xl, suc, mod hd-hd, sbplty-plty; SHLY LS: dirty lt gy, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

-4800 LS: lt-med gy, olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4850 LS: lt-med gy, trnsl-op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4900 LS: lt-med brn-olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-4950 LS: med-dk blue-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; SNDY LS: wh, off wh to lt-med trnsl gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; NSFOC

-5000 SNDY LS: wh, off wh to lt gy, grades to limy SS, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; BLK SH: blk, carbon-metallic, sft-mod hd, sbrnd-sbblky; NSFOC

-5050 BLK SH: blk, rthy to mic xl, dull-shiny, sft-mod hd, sbrnd-sbblky; SNDY LS: wh, off wh to lt-med trnsl yel-gy, mic xl ip, suc ip, fn grain clastics, mod hd, sbrnd-sbplty-plty; LS: v lt gy, op, mic xl, suc, mod hd-hd, sbplty-plty; NSFOC

-5120 LS: lt-med gy, olive-gy, op, mic xl, suc, mod hd-hd, sbplty-plty; BLK SH: blk, rthy to mic xl, dull to shiny, sft-mod hd, sbrnd-sbblky; SHLY LS: med olive-gy, op, mic xl ip, suc ip, mod hd-hd, sbplty-plty; NSFOC

2.4

The following logs were run and are on file with the Division:

-Triple Combo to bottom of Surface Casing

-Gamma Ray to Surface

-Mudlog from TD to Bottom of Surface Casing

-CBL

Bill Barrett Corporation

CMS Downhole Well Profile

Well Name: SWD 16-6D-46 BTR

API/UWI	Field Name	Division	Ground Elevation (ft)	Orig KB Elev (ft)	KB-Grd (ft)	Total Depth (ftKB)
4301350781	Black Tail Ridge		5,856.00	5,880.00	24.00	5,120.0

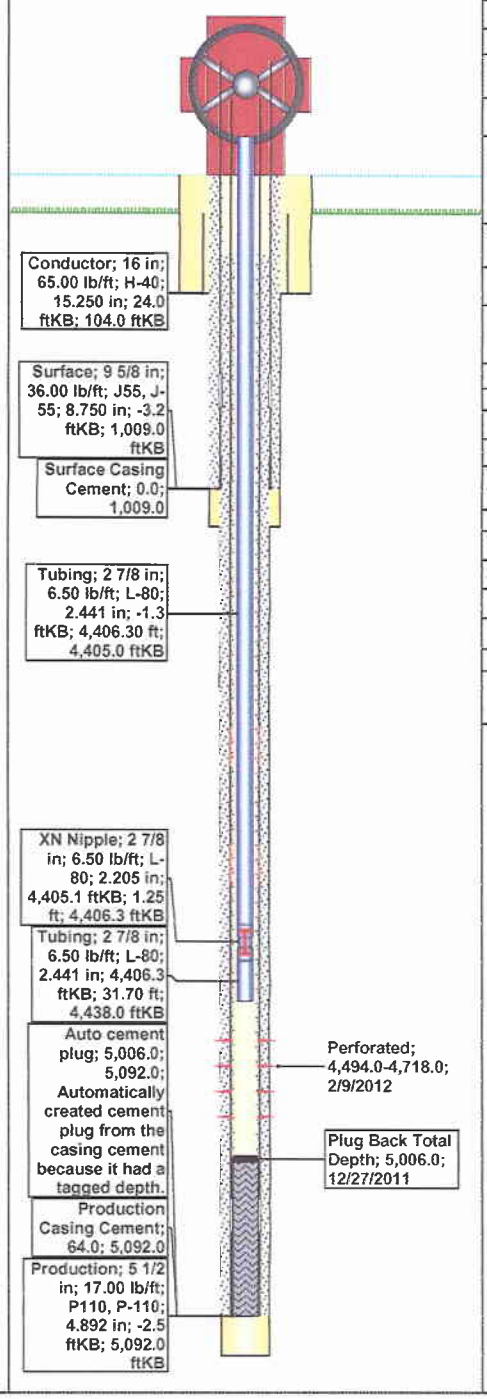
County	State/Prov	Surface Legal Location	E/W Dist (ft)	E/W Ref	N/S Dist (ft)	N/S Ref
Duchesne	Utah	SESE, Sec. 6, T4S, R6W	99.0	FEL	200.0	FSL

Type	Working Pressure (psi)	Size (in)
SURFACE	5,000.0	

Deviated - Original Hole, 3/26/2012 1:21:10 PM

MD (ftKB)	TVD (ftKB)

Vertical schematic (actual)



Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Set Depth (ftKB)
Conductor	16	65.00	H-40		104.0
Surface	9 5/8	36.00	J-55	STC	1,009.0
Production	5 1/2	17.00	P-110	LTC	5,092.0

Cement Stages

String	Description	Top (ftKB)	Top Measurement Method
Surface, 1,009.0ftKB	Surface Casing Cement	0.0	Volume Calculations

Fluid	Amount (sacks)	Class	Dens (lb/gal)	Yield (ft³/sack)
Lead	100	G	11.00	3.16
Tail	230	G	14.80	1.32
Top Out	50	G	15.80	1.17

String	Description	Top (ftKB)	Top Measurement Method
Production, 5,092.0ftKB	Production Casing Cement	64.0	Acoustic Log

Fluid	Amount (sacks)	Class	Dens (lb/gal)	Yield (ft³/sack)
Lead	385	G	11.00	2.32
Tail	450	G	13.50	1.42

Plug Back Total Depths

Date	Depth (ftKB)	Type	Method
12/27/2011	5,006.0	Fill	Wireline

Tubing - Production set at 4,438.0ftKB on 2/13/2012 12:00

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing - Production	2/13/2012	4,439.25	4,438.0

Item Des	Jts	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)
Tubing	139	2 7/8	2.441	6.50	L-80	4,406.30	-1.3
XN Nipple	1	2 7/8	2.205	6.50	L-80	1.25	4,405.1
Tubing	1	2 7/8	2.441	6.50	L-80	31.70	4,406.3

Perforation Summary

Date	Top (ftKB)	Btm (ftKB)	Zone
2/9/2012	4,494.0	4,718.0	Lower Douglas Creek, Original Hole

16-6D-46 BTR SWD MIT PROCEDURE

WELL:	16-6D-46 BTR SWD	**DATE:**	March 26, 2012
API:	43013507810000	**FIELD:**	Blacktail Ridge

OBJECTIVE: Pressure test casing, injection packer and tubing.

LOCATION: SESE-Sec 6-T4S-R6W, Duchesne County, UT

ELEVATION: 5,856' GL; 5,880' KB

DEPTH: 5,120' TD, 5,006' PBTD

CASING RECORD: 9-5/8", 36#, J-55 @ 1,009', Cmt'd to surface w/ 380 sx
5-1/2", 17#, P-110 @ 5,092', cmt'd w/ 835 sx. TOC @ 64' CBL

EXISTING PERFORATIONS:

Douglas Creek	3,828' – 4,022'	520 HOLES
Douglas Creek	4,122' – 4,338'	256 HOLES
Douglas Creek	4,494' – 4,718'	312 HOLES

Casing	5-1/2", 17#, P-110 Yield 80% = 6579 psi Capacity = 0.0232 bbl/ft	ID = 4.892", drift = 4.767" Yield 100% = 10,640 psi
Tubing		

RECOMMENDED PROCEDURE:

1) MIRU workover rig, kill well. ND tree, NU BOP and test to 250 psi and 4500 psi.
2) Rig up wireline. Run in hole with 4.7" gauge ring to 4,800'. POOH
3) PU 5-1/2" Nickel coated Baker Hornet packer with 4' pup, XN Nipple and wireline re-entry guide.
4) RIH and set packer at +/- 3,750'. RDMO wireline.
5) PU L-10 on/off tool on 2-7/8" L-80 6.5# EUE tubing. RIH and latch onto packer.
6) Space out tubing and land in hanger.
7) Rig up pump and pressure test equipment to 5-1/2" annulus.

8) Test 5-1/2" casing, 5-1/2" packer and 2-7/8" tubing by loading the 5-1/2" x 2-7/8" annulus.

9) Pressure annulus to 1000 psi. Shut in and record on chart for 30 min. Record both casing and tubing pressure. (If there is not significant pressure change, 10% or more, the test may be completed as passed).

10) Rig down tubing equipment and work floor.

11) Nipple down BOP. Nipple up tree and test upper hanger to 5000psi.

12) RDMO workover rig.

Proposed Wellbore Schematic

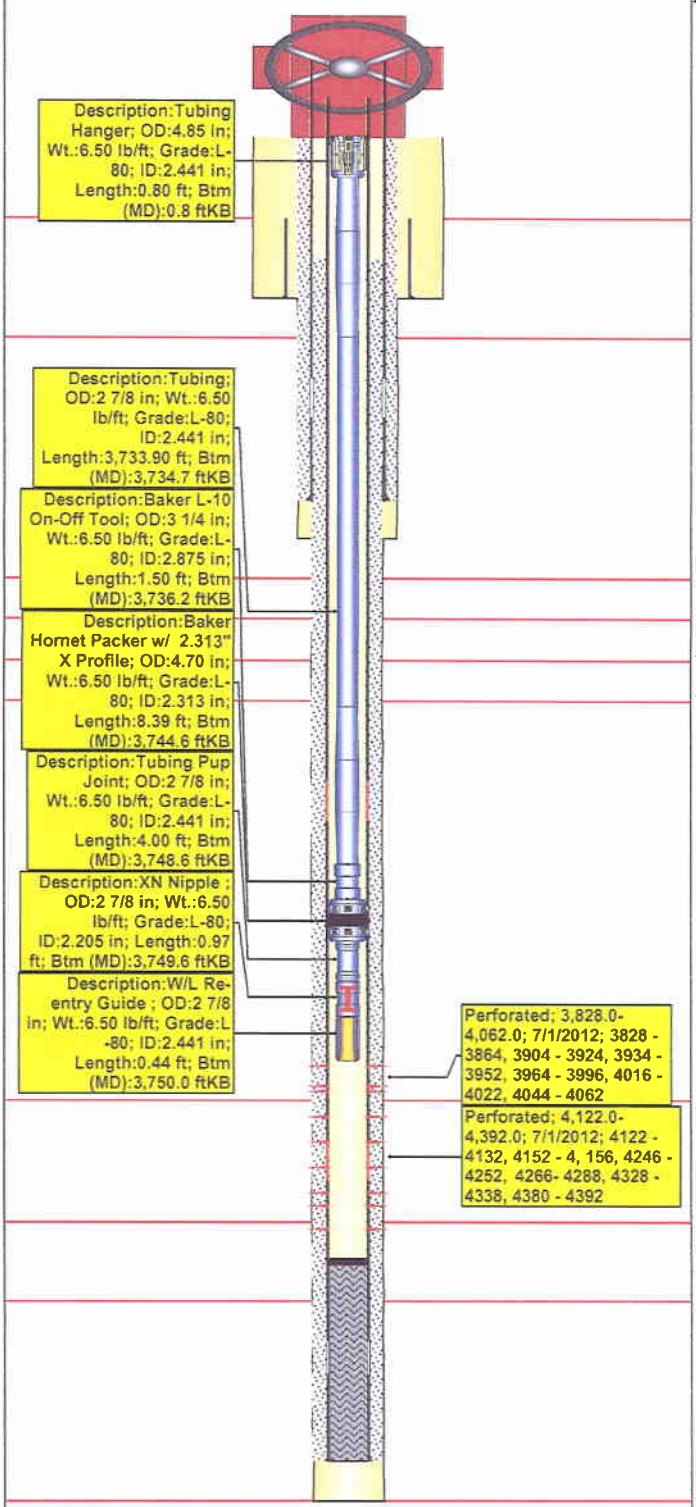
Field: Black Tail Ridge **Well Name:** SWD 16-6D-46 BTR

State: Utah **County:** Duchesne **Location:** SESE, Sec. 6, T4S, R6W **API#:** 4301350781

Deviated - Original Hole, 7/1/2012 1:00:00 PM

MD (ft

Vertical schematic (proposed)



Column list (actual)

Description	Top (MD)	Btm (MD)
ELEV_GR	24.0	
BASE_MODERATELY_SALINE_WATER	833.0	
GREEN_RIVER *	1,341.0	
MAHOGANY	1,985.0	
TOP CONFINING BED	3,294.0	
TGR3 *	3,377.0	
DOUGLAS_CRK	4,244.0	
Perforated	4,494.0	4,718.0
3PT_MKR *	4,653.0	
Plug Back Total Depth	5,006.0	5,006.0
BOTTOM CONFINING BED	5,041.0	
TD *	5,120.0	

Bill Barrett Corporation

SWD 16-6D-46 BTR
COMPLETION PROCEDURES
SESE Sec 6 T4S R6W
Duchesne County, Utah
API # 43-013-50781

July 1, 2012

OBJECTIVE

Complete the Douglas Creek interval in the SWD 16-6D-46 BTR to be used as a salt water disposal well. Perforate and acidize Douglas Creak per the procedure below. Drill out CBP's run tubing.

MATERIAL NEEDS:

15% HCL Acid: 456 BBL's
Water: 594 BBL's

CURRENT WELL STATUS

Currently the well has been completed per the procedure below shut in and secured.

COMPLETION PROCEDURE

1. **Safety is the highest priority**. Hold wellsite safety meetings each morning and prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.

2. Hold and document pre-activity meeting, determine location of necessary equipment and rig up of same, be sure all necessary contractors are present and agree as to the layout of location.

3. MIRU WL unit and lubricator.

4. NU frac tree.

5. Pressure test casing and CBP to 4,500 psi, hold for 15 minutes, monitor and record bleed off.

6. Perforate Stage 1 per the below perf schedule. Utilize Schlumberger Power Jet Charges (0.38" Entry Hole Diameter)

STRING	SIZE	WEIGHT	GRADE		DEPTH
Surface	9 5/8"	36#	J-55		1,009'
Production	5-1/2"	17.0#	P-110		5,092'

	FROM	TO	SHOTS	Phasing
STAGE 1				
GUN SYSTEM	3 1/8			
CHARGE	PF			
	4494	4508	56	120
	4538	4550	48	120
	4574	4584	40	120
	4614	4620	24	120
	4656	4680	96	120
	4686	4692	24	120
	4712	4718	24	120
Total			312	

7. MIRU & spot Halliburton Acid equipment.

8. Pressure test all lines to 10,000 psi.

9. Acid stimulate interval #1.

10. RU & RIH with CBP and perforating guns.

11. Set CBP @ 4,412'.

12. Perforate Stage 2 of Douglas Creak as follows: Utilize Schlumberger Power Jet Charges (0.38" Entry Hole Diameter)

	FROM	TO	SHOTS	Phasing
STAGE 2				
GUN SYSTEM	3 1/8			
CHARGE	PF			
	4122	4132	40	120
	4152	4156	16	120
	4246	4252	24	120
	4266	4288	88	120
	4328	4338	40	120
	4380	4392	48	120
Total			256	

13. Acid stimulate interval # 2.

14. RU & RIH with CBP and perforating guns.

15. Set CBP @ 4,082'.

16. Perforate Stage 3 of Douglas Creak as follows: Utilize Schlumberger Power Jet Charges (0.38" Entry Hole Diameter)

	FROM	TO	SHOTS	Phasing
STAGE 3				
GUN SYSTEM	3 1/8			
CHARGE	PF			
	3828	3864	144	120
	3904	3924	80	120
	3934	3952	72	120
	3964	3996	128	120
	4016	4022	24	120
	4044	4062	72	120
Total			520	

17. Acid stimulate Douglas Creak interval # 8 per design.

18. RU & RIH with CBP

19. RD Halliburton frac equipment, clear location of all unnecessary personnel and equipment.

20. Set CBP @ 3700'

21. ND frac tree and NU production tree and BOP's.

22. MIRU workover rig unit

23. Drill out CBP's and land tubing.

CASING DATA

Bill Barrett Corporation

Black Tail Ridge SWD Well Application

Maximum Allowable Surface Pressure Calculations
Based on Observed Fracture Gradients

Water SG=1.02 Gradient=0.4417 psi/ft

Water SG = 1.004 Gradient=0.4417 psi/ft

BTR 14-5-46

Depth (ft) Midperf Calculation	Observed ISIP (psig)	Calculated Btm Hole (psig)	Resulting Frac Grad (psi/ft)
5297	1655	3957.6	0.75
5432	1557	3918.3	0.72
5580	1787	4212.6	0.75
5745	1881	4378.4	0.76
6020	1874	4490.9	0.75
6397	1984	4764.8	0.74
6932	2000	5013.3	0.72

Requested Max Surface Pressure=3000 psig

ISIP Data Collected during initial completion treatments

Calculated Bottom Hole Pressure = ISIP + 0.4347 x Depth
Resulting Frac Gradient=Calculated Btm Hole Pressure/Depth

Requested Max Surface Pressure < 90% x ISIP
Anticipated Avg Surface Pressure=75% x Max Surface Pressure

Anticipated Avg Disposal Rate=7000 bwpd
Requested Maximum Disposal Rate=14,000 bwpd

Only water from wells within the Blacktail Ridge/Lake Canyon
will be injected into the 16-6D-46 BTR SWD

Perf Interval is from 3,828' - 4,718'

3828	2909.71	2755.7267
4718	3586.11	3396.5267

Field Group	API Number	Well Name
Black Tail Ridge	4301333868	01-05-45 BTR
Black Tail Ridge	4301334101	01-09-45 BTR
Black Tail Ridge	4301350445	01-13D-47 BTR
Black Tail Ridge	4301334136	01-23-36 BTR
Black Tail Ridge	4301334134	01-30-36 BTR
Black Tail Ridge	4301334099	02-03-45 BTR
Black Tail Ridge	4301334137	03-23-36 BTR
Black Tail Ridge	4301350398	03-36-36 BTR
Black Tail Ridge	4301334139	04-26-36 BTR
Black Tail Ridge	4301333973	04-30-36 BTR
Black Tail Ridge	4301334089	05-04-45 BTR
Black Tail Ridge	4301333639	05-05-46 BTR
Black Tail Ridge	4301350574	05-07D-46 BTR
Black Tail Ridge	4301350607	05-08-45 BTR
Black Tail Ridge	4301334115	05-13-46 BTR
Black Tail Ridge	4301333970	05-16-36 BTR
Black Tail Ridge	4301350611	05-18D-45 BTR
Black Tail Ridge	4301333641	05-21-36 BTR
Black Tail Ridge	4301333642	05-23-36 BTR
Black Tail Ridge	4301334021	05-25-36 BTR
Black Tail Ridge	4301333972	05-29-36 BTR
Black Tail Ridge	4301350756	05-32D-36 BTR
Black Tail Ridge	4301334114	06-12-46 BTR
Black Tail Ridge	4301334100	07-06-45 BTR
Black Tail Ridge	4301333565	07-07-46 BTR
Black Tail Ridge	4301333820	07-08-45 BTR
Black Tail Ridge	4301350437	07-10-36 BTR
Black Tail Ridge	4301350470	07-13D-46 BTR
Black Tail Ridge	4301334133	07-16-36 BTR
Black Tail Ridge	4301334104	07-17-45 BTR
Black Tail Ridge	4301350641	07-26-37 BTR
Black Tail Ridge	4301350647	07-27-37 BTR
Black Tail Ridge	4301334102	08-10-45 BTR
Black Tail Ridge	4301334276	09-11-36 BTR
Black Tail Ridge	4301333638	12-36-36 BTR
Black Tail Ridge	4301350469	13-12-46 BTR
Black Tail Ridge	4301350757	13-16D-36 BTR
Black Tail Ridge	4301333980	13-26-36 BTR
Black Tail Ridge	4301350468	13H-13-46 BTR
Black Tail Ridge	4301350676	14-03-45 BTR
Black Tail Ridge	4301350307	14-05-46 BTR
Black Tail Ridge	4301350568	14-05D-45 BTR
Black Tail Ridge	4301333806	14-07-46 BTR
Black Tail Ridge	4301350613	14-07D-36 BTR

Black Tail Ridge	4301350612	14-08D-36 BTR
Black Tail Ridge	4301350567	14-08D-45 BTR
Black Tail Ridge	4301334131	14-21-36 BTR
Black Tail Ridge	4301333643	14-29-36 BTR
Black Tail Ridge	4301333644	14-30-36 BTR
Black Tail Ridge	4301334277	15-10-36 BTR
Black Tail Ridge	4301334112	15-18-45 BTR
Black Tail Ridge	4301350844	16-05D-46 BTR
Black Tail Ridge	4301350610	16-06D-45 BTR
Black Tail Ridge	4301334111	16-07-45 BTR
Black Tail Ridge	4301350645	16-09-36 BTR
Black Tail Ridge	4301350467	16-12D-46 BTR
Black Tail Ridge	4301350372	16-13-36 BTR
Black Tail Ridge	4301334138	16-16-36 BTR
Black Tail Ridge	4301334130	16-21-36 BTR
Black Tail Ridge	4301333971	16-23-36 BTR
Black Tail Ridge	4301334132	16-26-36 BTR
Black Tail Ridge	4301334135	16-30-36 BTR
Black Tail Ridge	4301350573	16-31D-36 BTR
Black Tail Ridge	4301350623	16X-23D-36 BTR
Lake Canyon	4301333568	01H-27-46 LC Tribal
Lake Canyon	4301350397	05-33-46 DLB
Lake Canyon	4301350415	05-34-46 DLB
Lake Canyon	4301333657	07-20-46 DLB
Lake Canyon	4301333567	07-21-46 DLB
Lake Canyon	4301333569	07-28-46 DLB
Lake Canyon	4301333584	07-29-46 DLB
Lake Canyon	4301333631	12H-28-46 LC
Lake Canyon	4301350431	12H-32-46 LC
Lake Canyon	4301333678	13H-20-46 LC
Lake Canyon	4301333632	13H-21-46 LC
Lake Canyon	4301350575	13H-33-46 LC Tribal
Lake Canyon	4301350351	14X-22-46 DLB

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Water Analysis Report

Production Company:	BILL BARRETT CORPORATION	Sales Rep:	Chad Horrocks
Well Name:	BTR 16-31D-36	Lab Tech:	Gary Peterson
Sample Point:	Wellhead		
Sample Date:	2/27/2012		
Sample ID:	WA-208436		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	2/27/2012
System Temperature 1 (°F):	300.00
System Pressure 1 (psig):	3000.00
System Temperature 2 (°F):	70.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.01
pH:	7.90
Calculated TDS (mg/L):	10825.80
CO2 in Gas (%):	0.00
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	0.00
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics

Cations	mg/L	Anions	mg/L
Sodium (Na):	3684.00	Chloride (Cl):	3200.00
Potassium (K):	131.00	Sulfate (SO_4):	2500.00
Magnesium (Mg):	25.00	Bicarbonate (HCO_3):	1098.00
Calcium (Ca):	187.00	Carbonate (CO_3):	0.00
Strontium (Sr):	0.00	Acetic Acid (CH_3COO)	0.00
Barium (Ba):	0.06	Propionic Acid (C_2H_5COO)	0.00
Iron (Fe):	0.52	Butanoic Acid (C_3H_7COO)	0.00
Zinc (Zn):	0.01	Isobutyric Acid ($(CH_3)_2CHCOO$)	0.00
Lead (Pb):	0.15	Fluoride (F):	0.00
Ammonia NH_3:	0.00	Bromine (Br):	0.00
Manganese (Mn):	0.06	Silica (SiO_2):	0.00

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	1.24	70.68	0.78	0.03	0.00	0.00	0.46	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	1.27	71.80	0.54	0.02	0.00	0.00	0.58	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	1.35	80.11	0.35	0.02	0.00	0.00	0.73	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	1.46	89.46	0.20	0.01	0.00	0.00	0.89	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	1.57	99.51	0.10	0.01	0.00	0.00	1.03	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	1.69	109.82	0.02	0.00	0.00	0.00	1.17	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	1.81	119.93	0.00	0.00	0.00	0.00	1.30	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	1.94	129.40	0.00	0.00	0.00	0.00	1.41	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	2.06	137.84	0.00	0.00	0.00	0.00	1.50	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	2.17	144.94	0.00	0.00	0.00	0.00	1.57	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

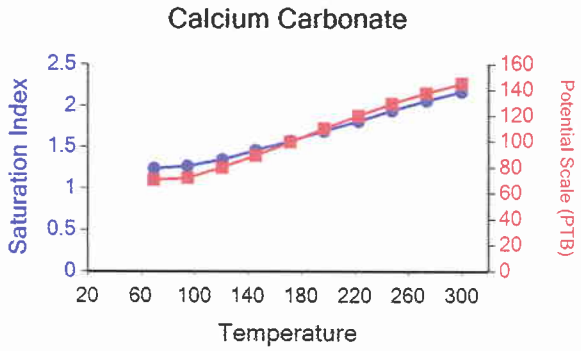
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	0.00	0.00	0.02	7.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	0.00	0.00	0.19	71.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	0.00	0.00	0.37	118.20	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	0.01	3.78	0.55	151.16	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

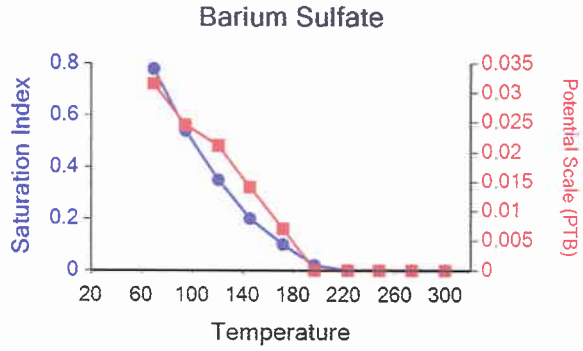
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate

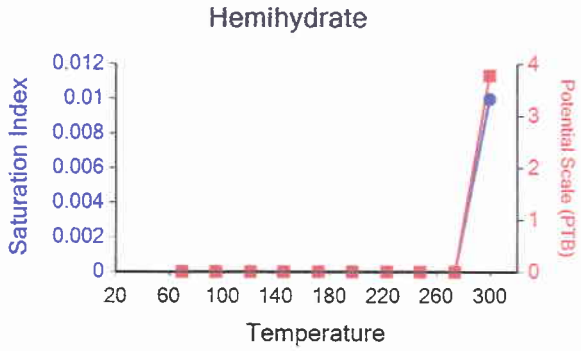
Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

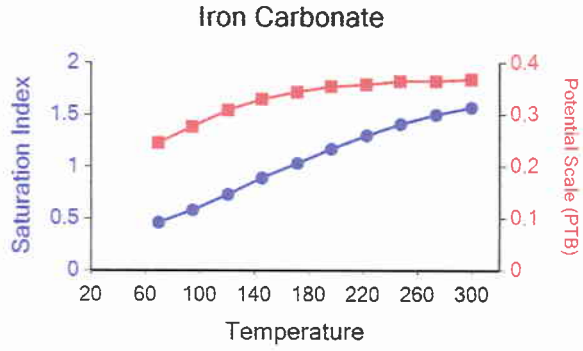
multi-chem
A HALLIBURTON SERVICE

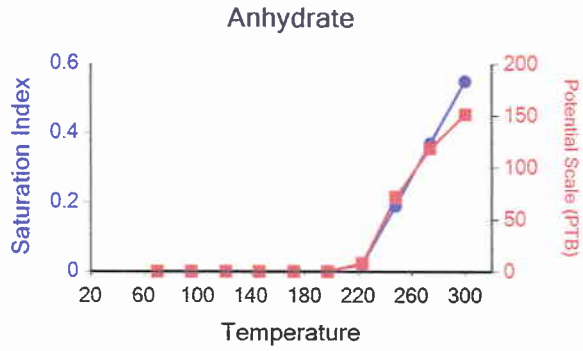
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Hemihydrate Anhydrate Zinc Carbonate

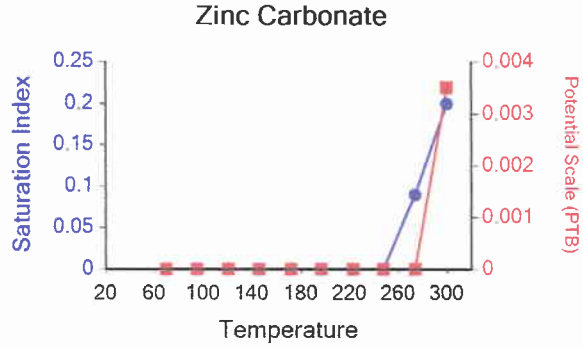












Multi-Chem Analytical Laboratory
1553 East Highway 40
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Water Analysis Report

Production Company:	**BILL BARRETT CORPORATION**	Sales Rep:	**Chad Horrocks**
Well Name:	**BTR 14-7-46**	Lab Tech:	**Gary Peterson**
Sample Point:	**Wellhead**		
Sample Date:	**2/27/2012**		
Sample ID:	**WA-208434**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	2/27/2012
System Temperature 1 (°F):	300.00
System Pressure 1 (psig):	3000.00
System Temperature 2 (°F):	70.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.00
pH:	7.90
Calculated TDS (mg/L):	7621.69
CO2 in Gas (%):	0.00
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	0.00
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2645.00	Chloride (Cl):	2600.00
Potassium (K):	13.00	Sulfate (SO_4):	961.00
Magnesium (Mg):	6.00	Bicarbonate (HCO_3):	1342.00
Calcium (Ca):	54.40	Carbonate (CO_3):	0.00
Strontium (Sr):	0.00	Acetic Acid (CH_3COO)	0.00
Barium (Ba):	0.27	Propionic Acid (C_2H_5COO)	0.00
Iron (Fe):	0.00	Butanoic Acid (C_3H_7COO)	0.00
Zinc (Zn):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	0.00
Lead (Pb):	0.00	Fluoride (F):	0.00
Ammonia NH_3:	0.00	Bromine (Br):	0.00
Manganese (Mn):	0.02	Silica (SiO_2):	0.00

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.91	30.37	1.22	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.93	30.83	0.97	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	1.02	33.61	0.78	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	1.13	36.43	0.64	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	1.25	39.07	0.54	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	1.39	41.37	0.47	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	1.53	43.22	0.43	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	1.67	44.63	0.41	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	1.81	45.63	0.41	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	1.95	46.31	0.42	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate

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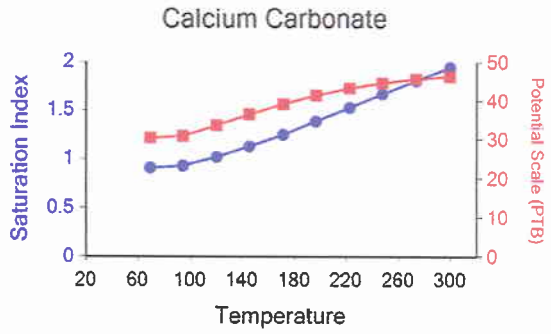
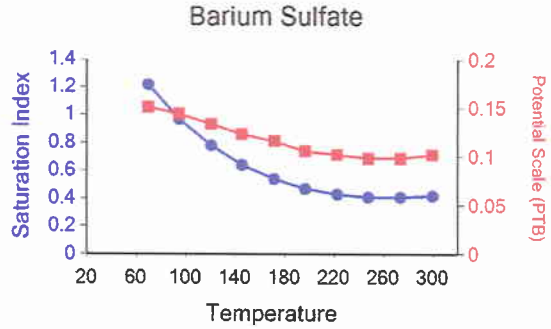
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate





Multi-Chem Analytical Laboratory
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Water Analysis Report

Production Company:	**BILL BARRETT CORPORATION**	Sales Rep:	**Chad Horrocks**
Well Name:	**BTR 5-5-46**	Lab Tech:	**Gary Peterson**
Sample Point:	**Wellhead**		
Sample Date:	**2/27/2012**		
Sample ID:	**WA-208435**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	2/27/2012
System Temperature 1 (°F):	300.00
System Pressure 1 (psig):	3000.00
System Temperature 2 (°F):	70.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.00
pH:	7.70
Calculated TDS (mg/L):	7011.72
CO2 in Gas (%):	0.00
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	0.00
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2431.00	Chloride (Cl):	2600.00
Potassium (K):	29.00	Sulfate (SO_4):	402.00
Magnesium (Mg):	9.00	Bicarbonate (HCO_3):	1464.00
Calcium (Ca):	74.00	Carbonate (CO_3):	0.00
Strontium (Sr):	0.00	Acetic Acid (CH_3COO)	0.00
Barium (Ba):	0.20	Propionic Acid (C_2H_5COO)	0.00
Iron (Fe):	2.20	Butanoic Acid (C_3H_7COO)	0.00
Zinc (Zn):	0.02	Isobutyric Acid ($(CH_3)_2CHCOO$)	0.00
Lead (Pb):	0.16	Fluoride (F):	0.00
Ammonia NH_3:	0.00	Bromine (Br):	0.00
Manganese (Mn):	0.14	Silica (SiO_2):	0.00

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.92	42.80	0.77	0.10	0.00	0.00	1.24	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.94	43.33	0.53	0.08	0.00	0.00	1.35	1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	1.05	47.07	0.34	0.06	0.00	0.00	1.53	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	1.17	50.82	0.20	0.04	0.00	0.00	1.71	1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	1.31	54.28	0.10	0.02	0.00	0.00	1.88	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	1.46	57.24	0.03	0.01	0.00	0.00	2.05	1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	1.62	59.59	0.00	0.00	0.00	0.00	2.20	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	1.78	61.35	0.00	0.00	0.00	0.00	2.35	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	1.95	62.58	0.00	0.00	0.00	0.00	2.48	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	2.12	63.40	0.00	0.00	0.00	0.00	2.60	1.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate

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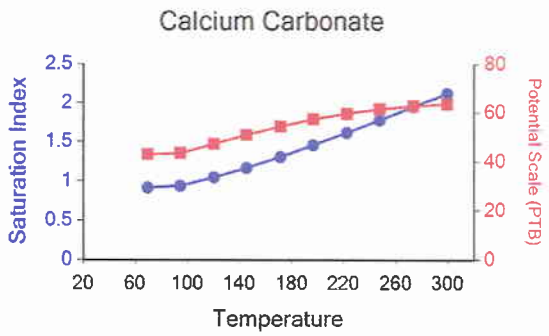
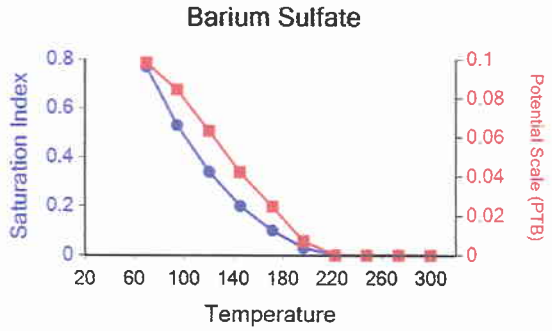
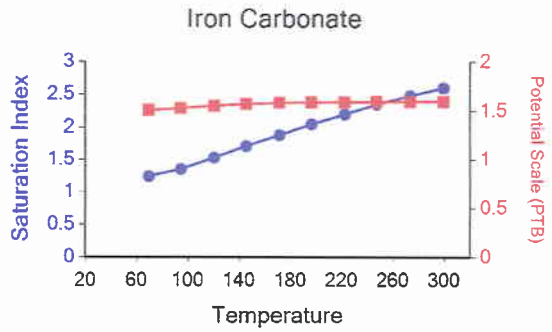
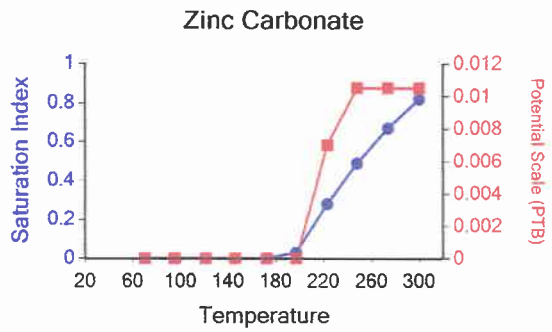
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Zinc Carbonate









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Water Analysis Report

Production Company:	**BILL BARRETT CORPORATION**	Sales Rep:	**Chad Horrocks**
Well Name:	**BTR 14-30-36**	Lab Tech:	**Gary Peterson**
Sample Point:	**Wellhead**		
Sample Date:	**2/27/2012**		
Sample ID:	**WA-208437**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	2/27/2012
System Temperature 1 (°F):	300.00
System Pressure 1 (psig):	3000.00
System Temperature 2 (°F):	70.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.01
pH:	7.90
Calculated TDS (mg/L):	11738.43
CO2 in Gas (%):	0.00
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	0.00
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4097.00	Chloride (Cl):	3800.00
Potassium (K):	33.00	Sulfate (SO_4):	1750.00
Magnesium (Mg):	15.00	Bicarbonate (HCO_3):	1952.00
Calcium (Ca):	89.60	Carbonate (CO_3):	0.00
Strontium (Sr):	0.00	Acetic Acid (CH_3COO)	0.00
Barium (Ba):	0.06	Propionic Acid (C_2H_5COO)	0.00
Iron (Fe):	1.50	Butanoic Acid (C_3H_7COO)	0.00
Zinc (Zn):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	0.00
Lead (Pb):	0.12	Fluoride (F):	0.00
Ammonia NH_3:	0.00	Bromine (Br):	0.00
Manganese (Mn):	0.15	Silica (SiO_2):	0.00

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	1.20	59.03	0.64	0.03	0.00	0.00	1.28	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	1.23	59.53	0.39	0.02	0.00	0.00	1.39	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	1.32	62.93	0.20	0.01	0.00	0.00	1.55	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	1.42	66.23	0.06	0.00	0.00	0.00	1.71	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	1.53	69.21	0.00	0.00	0.00	0.00	1.85	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	1.66	71.73	0.00	0.00	0.00	0.00	1.99	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	1.79	73.73	0.00	0.00	0.00	0.00	2.12	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	1.93	75.23	0.00	0.00	0.00	0.00	2.24	1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	2.07	76.30	0.00	0.00	0.00	0.00	2.35	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	2.21	77.03	0.00	0.00	0.00	0.00	2.44	1.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		Hemihydrate CaSO4·0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
121	678	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	0.00	0.00	0.12	23.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate

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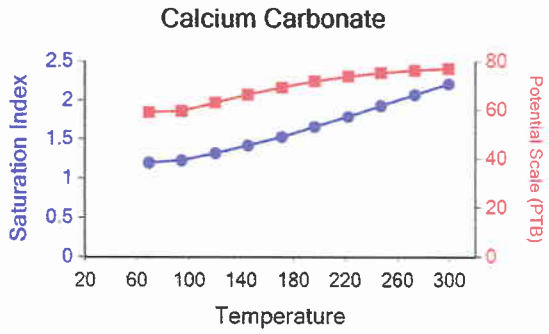
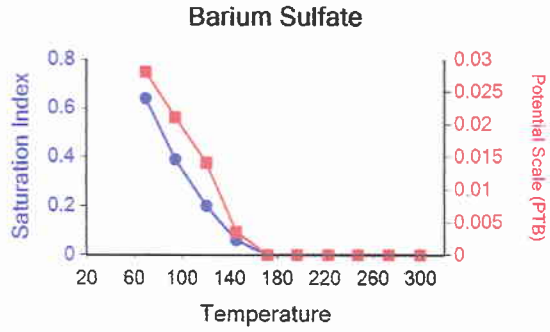
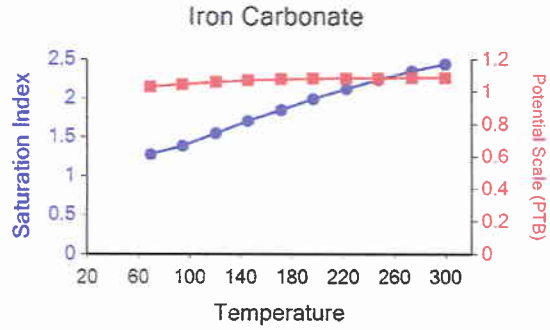
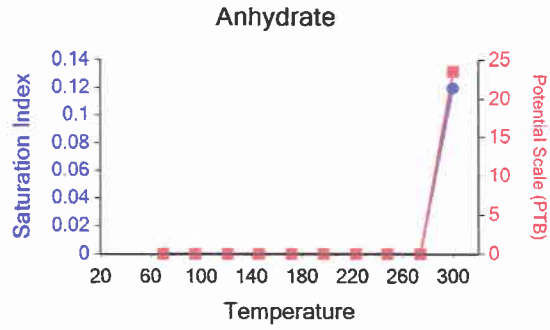
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Carbonate Anhydrate









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Water Analysis Report

Production Company:	**BILL BARRETT**	Sales Rep:	**Chad Horrocks**
Well Name:	**BTR 16-6d-46 SWD**	Lab Tech:	**Gary Peterson**
Sample Point:	**Wellhead D**		
Sample Date:	**2/13/2012**		
Sample ID:	**WA-206644**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	2/13/2012
System Temperature 1 (°F):	300.00
System Pressure 1 (psig):	3000.00
System Temperature 2 (°F):	70.00
System Pressure 2 (psig):	14.70
Calculated Density (g/ml):	1.00
pH:	8.20
Calculated TDS (mg/L):	10197.02
CO2 in Gas (%):	0.00
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	0.00
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3117.22	Chloride (Cl):	1800.00
Potassium (K):	14.50	Sulfate (SO_4):	0.00
Magnesium (Mg):	1.70	Bicarbonate (HCO_3):	5246.00
Calcium (Ca):	5.60	Carbonate (CO_3):	0.00
Strontium (Sr):	0.00	Acetic Acid (CH_3COO)	0.00
Barium (Ba):	2.80	Propionic Acid (C_2H_5COO)	0.00
Iron (Fe):	8.40	Butanoic Acid (C_3H_7COO)	0.00
Zinc (Zn):	0.70	Isobutyric Acid ($(CH_3)_2CHCOO$)	0.00
Lead (Pb):	0.02	Fluoride (F):	0.00
Ammonia NH_3:	0.00	Bromine (Br):	0.00
Manganese (Mn):	0.08	Silica (SiO_2):	0.00

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.88	4.22	0.00	0.00	4.10	4.52	3.22	6.11	0.00	0.00	0.00	0.00	0.00	0.00	10.86	0.36
95	346	0.91	4.26	0.00	0.00	3.89	4.51	3.34	6.11	0.00	0.00	0.00	0.00	0.00	0.00	10.34	0.36
121	678	0.98	4.36	0.00	0.00	3.77	4.50	3.49	6.11	0.00	0.00	0.00	0.00	0.00	0.00	9.94	0.36
146	1009	1.06	4.46	0.00	0.00	3.72	4.50	3.63	6.11	0.00	0.00	0.00	0.00	0.00	0.00	9.61	0.36
172	1341	1.17	4.55	0.00	0.00	3.72	4.50	3.77	6.11	0.00	0.00	0.00	0.00	0.00	0.00	9.34	0.36
197	1673	1.29	4.64	0.00	0.00	3.76	4.50	3.91	6.11	0.00	0.00	0.00	0.00	0.00	0.00	9.13	0.36
223	2004	1.42	4.71	0.00	0.00	3.84	4.51	4.04	6.11	0.00	0.00	0.00	0.00	0.00	0.00	8.96	0.36
248	2336	1.57	4.76	0.00	0.00	3.95	4.51	4.16	6.11	0.00	0.00	0.00	0.00	0.00	0.00	8.82	0.36
274	2668	1.72	4.81	0.00	0.00	4.08	4.52	4.27	6.11	0.00	0.00	0.00	0.00	0.00	0.00	8.72	0.36
300	3000	1.88	4.84	0.00	0.00	4.22	4.52	4.37	6.11	0.00	0.00	0.00	0.00	0.00	0.00	8.64	0.36

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
70	14	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.41	11.72	0.01	0.00	0.00	0.00	0.00	0.00	0.00
95	346	0.00	0.00	0.00	0.00	0.00	0.00	1.27	0.45	10.88	0.01	0.00	0.00	0.00	0.00	0.00	0.00
121	678	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.46	10.20	0.01	0.00	0.00	0.00	0.00	0.00	0.00
146	1009	0.00	0.00	0.00	0.00	0.00	0.00	1.92	0.47	9.62	0.01	0.00	0.00	0.00	0.00	0.00	0.00
172	1341	0.00	0.00	0.00	0.00	0.00	0.00	2.19	0.47	9.14	0.01	0.00	0.00	0.00	0.00	0.00	0.00
197	1673	0.00	0.00	0.00	0.00	0.00	0.00	2.44	0.47	8.73	0.01	0.00	0.00	0.00	0.00	0.00	0.00
223	2004	0.00	0.00	0.00	0.00	0.00	0.00	2.65	0.47	8.39	0.01	0.00	0.00	0.00	0.00	0.00	0.00
248	2336	0.00	0.00	0.00	0.00	0.00	0.00	2.84	0.47	8.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00
274	2668	0.00	0.00	0.00	0.00	0.00	0.00	3.00	0.47	7.87	0.01	0.00	0.00	0.00	0.00	0.00	0.00
300	3000	0.00	0.00	0.00	0.00	0.00	0.00	3.14	0.47	7.67	0.01	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide

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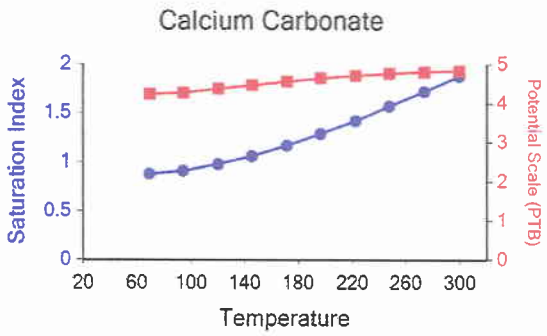
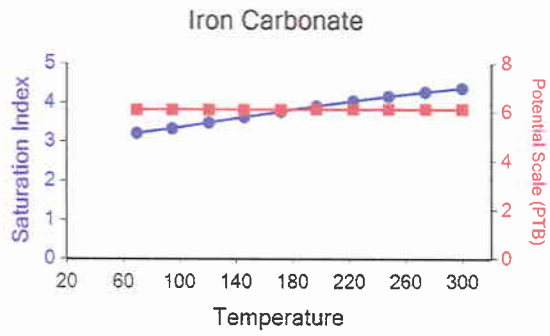
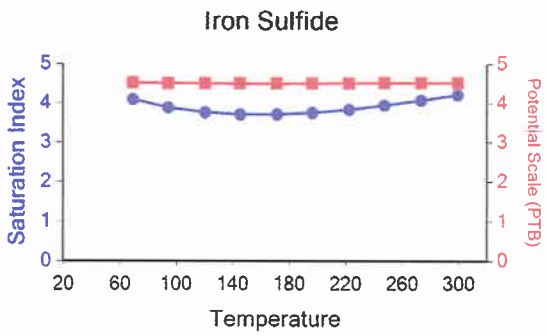
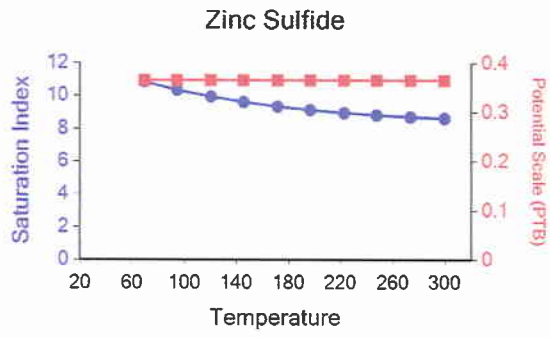
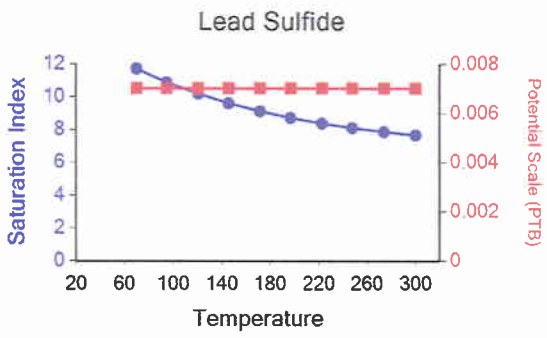
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide

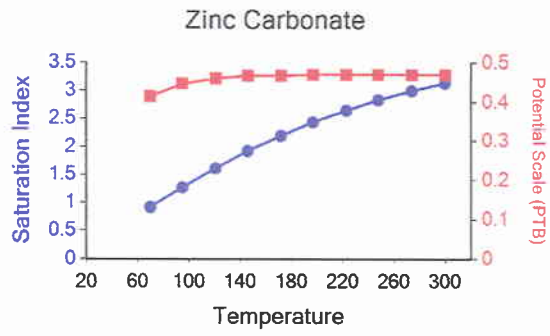








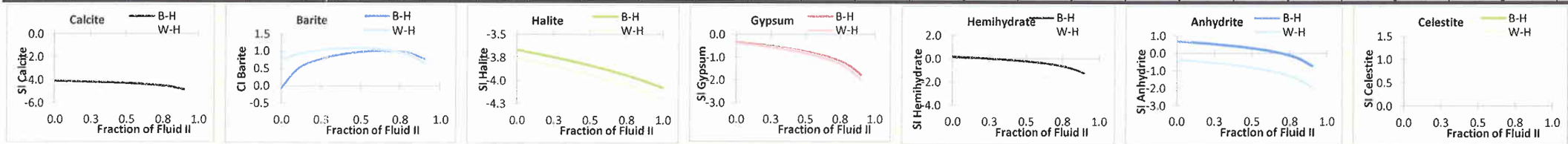


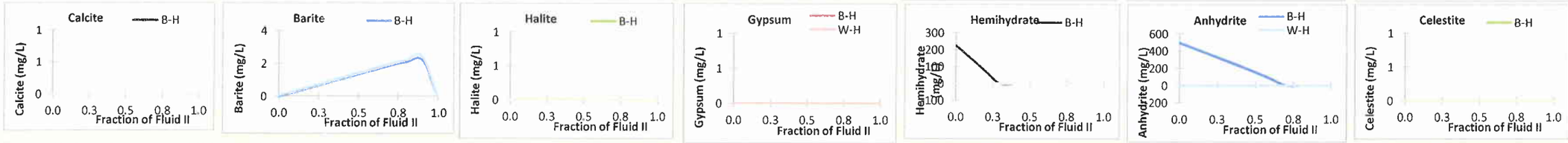


Mixing Two Wells 16-6D-46 SWD and 16-31D-36

Well(s): 16-31d-36 Date: 2/28/2012

Produced	Calcite - SI		Barite - SI		Halite - SI		Calcite (mg/L) [2]		Barite (mg/L)		Halite (mg/L)		Gypsum - SI		hemihydrate- SI		Anhydrite - SI		Celestite - SI		Gypsum (mg/L)		Hemihydrate (mg/L		Anhydrite (mg/L)		Celestite (mg/L)	
Fluids #2[1]	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H
0.00	-4.07	-4.42	-0.07	0.40	-3.67	-3.76	0	0	0	0	0	0	-0.37	-0.38	0.20	-0.95	0.70	-0.37			0	0	227	0	495	0	0	0
0.10	-4.11	-4.46	0.49	0.95	-3.70	-3.79	0	0	0	0	0	0	-0.42	-0.45	0.14	-1.02	0.64	-0.43			0	0	151	0	428	0	0	0
0.20	-4.14	-4.51	0.71	1.16	-3.73	-3.82	0	0	1	1	0	0	-0.49	-0.52	0.07	-1.09	0.57	-0.51			0	0	75	0	362	0	0	0
0.30	-4.18	-4.56	0.84	1.29	-3.76	-3.86	0	0	1	1	0	0	-0.56	-0.61	0.00	-1.18	0.50	-0.59			0	0	0	0	294	0	0	0
0.40	-4.23	-4.62	0.93	1.37	-3.80	-3.90	0	0	1	1	0	0	-0.65	-0.71	-0.09	-1.28	0.41	-0.69			0	0	0	0	225	0	0	0
0.50	-4.28	-4.69	0.98	1.42	-3.84	-3.94	0	0	1	1	0	0	-0.75	-0.83	-0.19	-1.40	0.31	-0.81			0	0	0	0	155	0	0	0
0.60	-4.34	-4.79	1.01	1.44	-3.88	-3.98	0	0	2	2	0	0	-0.88	-0.98	-0.32	-1.55	0.18	-0.97			0	0	0	0	81	0	0	0
0.70	-4.43	-4.91	1.01	1.43	-3.92	-4.03	0	0	2	2	0	0	-1.06	-1.18	-0.50	-1.75	0.00	-1.16			0	0	0	0	1	0	0	0
0.80	-4.56	-5.10	0.96	1.36	-3.97	-4.08	0	0	2	2	0	0	-1.31	-1.47	-0.75	-2.04	-0.25	-1.45			0	0	0	0	0	0	0	0
0.90	-4.82	-5.45	0.79	1.17	-4.02	-4.13	0	0	2	2	0	0	-1.77	-1.97	-1.21	-2.54	-0.71	-1.95			0	0	0	0	0	0	0	0
1.00					-4.08	-4.19	0	0	0	0	0	0									0	0	0	0	0	0	0	0



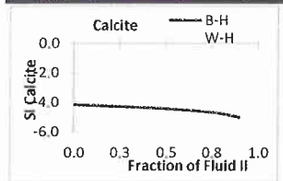


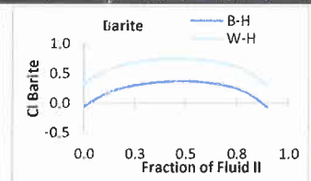
Note: (1) In order to run additional mixing ratios, change the fractions of Bine II in the shaded boxes, at the left, and click on the above button.

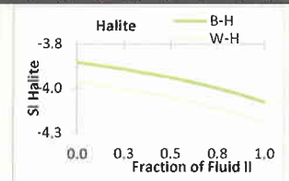
(2) This represents the precipitation in mg/l at each (T,P) point.

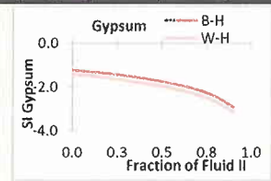
Mixing Two Wells 16-6D-46 SWD and 5-5-46
Well(s): 5-5-46 **Date:** 2/28/2012

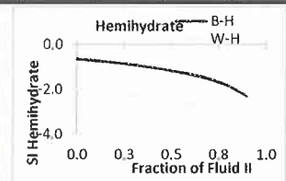
Produced	Calcite - SI		Barite - SI		Halite - SI		Calcite (mg/L) [2]		Barite (mg/L)		Halite (mg/L)		Gypsum - SI		hemihydrate- SI		Anhydrite - SI		Celestite - SI		Gypsum (mg/L)		Hemihydrate (mg/L		Anhydrite (mg/L)		Celestite (mg/L)	
Fluids #2[1]	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H
0.00	-4.18	-4.67	-0.06	0.33	-3.85	-3.96	0	0	0	0	0	0	-1.22	-1.42	-0.66	-1.99	-0.16	-1.40			0	0	0	0	0	0	0	0
0.10	-4.22	-4.71	0.15	0.53	-3.87	-3.98	0	0	0	0	0	0	-1.30	-1.50	-0.74	-2.07	-0.24	-1.49			0	0	0	0	0	0	0	0
0.20	-4.27	-4.76	0.26	0.65	-3.88	-3.99	0	0	0	1	0	0	-1.39	-1.59	-0.83	-2.16	-0.33	-1.58			0	0	0	0	0	0	0	0
0.30	-4.32	-4.82	0.33	0.71	-3.90	-4.01	0	0	1	1	0	0	-1.49	-1.70	-0.93	-2.27	-0.43	-1.68			0	0	0	0	0	0	0	0
0.40	-4.38	-4.89	0.36	0.74	-3.92	-4.03	0	0	1	1	0	0	-1.60	-1.82	-1.04	-2.39	-0.54	-1.80			0	0	0	0	0	0	0	0
0.50	-4.45	-4.97	0.37	0.75	-3.94	-4.05	0	0	1	1	0	0	-1.74	-1.96	-1.18	-2.53	-0.68	-1.94			0	0	0	0	0	0	0	0
0.60	-4.53	-5.07	0.35	0.72	-3.96	-4.08	0	0	1	2	0	0	-1.91	-2.13	-1.35	-2.70	-0.85	-2.12			0	0	0	0	0	0	0	0
0.70	-4.63	-5.20	0.29	0.66	-3.99	-4.10	0	0	1	2	0	0	-2.12	-2.35	-1.56	-2.92	-1.06	-2.34			0	0	0	0	0	0	0	0
0.80	-4.77	-5.38	0.18	0.54	-4.01	-4.13	0	0	1	2	0	0	-2.42	-2.66	-1.86	-3.22	-1.36	-2.64			0	0	0	0	0	0	0	0
0.90	-5.03	-5.69	-0.07	0.30	-4.04	-4.16	0	0	0	1	0	0	-2.90	-3.14	-2.34	-3.71	-1.84	-3.13			0	0	0	0	0	0	0	0
1.00					-4.08	-4.19	0	0	0	0	0	0									0	0	0	0	0	0	0	0

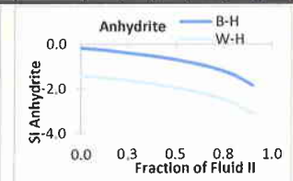


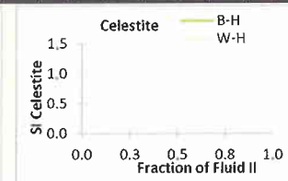


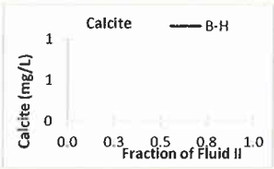


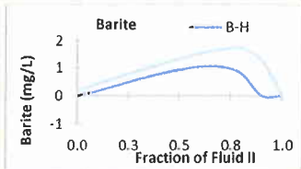


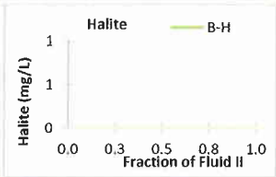


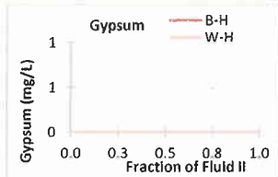


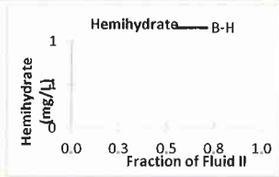


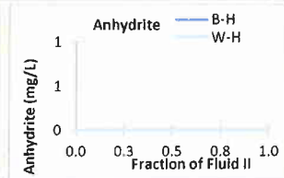


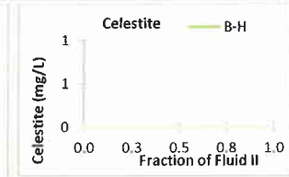










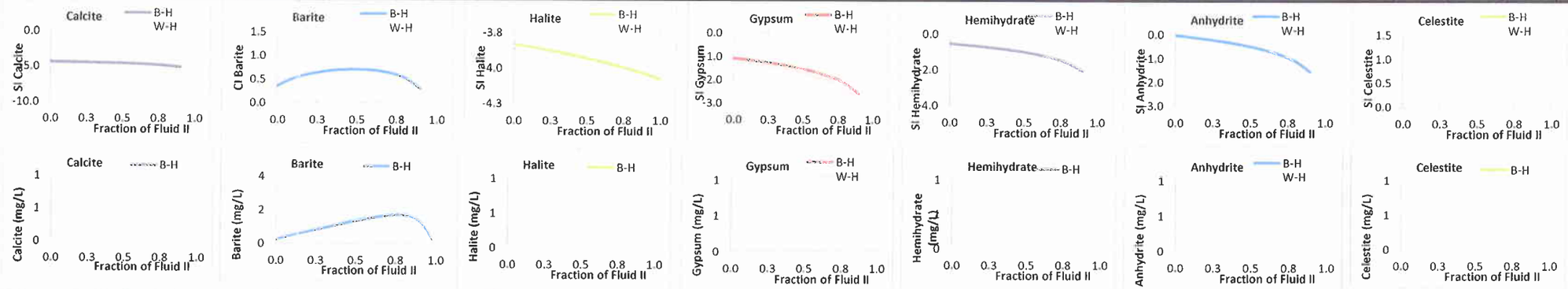


Note: (1) In order to run additional mixing ratios, change the fractions of Bine II in the shaded boxes, at the left, and click on the above button.
(2) This represents the precipitation in mg/l at each (T,P) point.

Mixing Two Wells 16-6D-46 SWD and 14-7-46

Well(s): 14-7-46 **Date:** 2/28/2012

Produced Fluids #2[1]	Calcite - SI		Barite - SI		Halite - SI		Calcite (mg/L)[2]		Barite (mg/L)		Halite (mg/L)		Gypsum - SI		hemihydrate- SI		Anhydrite - SI		Celestite - SI		Gypsum (mg/L)		Hemihydrate (mg/L		Anhydrite (mg/L)		Celestite (mg/L)	
	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H
0.00	-4.40	-4.84	0.35	0.76	-3.83	-3.94	0	0	0	0	0	0	-1.10	-1.24	-0.54	-1.81	-0.04	-1.22			0	0	0	0	0	0	0	0
0.10	-4.44	-4.88	0.51	0.92	-3.85	-3.96	0	0	0	1	0	0	-1.16	-1.31	-0.60	-1.88	-0.10	-1.30			0	0	0	0	0	0	0	0
0.20	-4.47	-4.93	0.60	1.01	-3.87	-3.98	0	0	1	1	0	0	-1.24	-1.40	-0.68	-1.97	-0.18	-1.38			0	0	0	0	0	0	0	0
0.30	-4.52	-4.98	0.66	1.06	-3.89	-4.00	0	0	1	1	0	0	-1.33	-1.50	-0.77	-2.06	-0.27	-1.48			0	0	0	0	0	0	0	0
0.40	-4.56	-5.04	0.70	1.09	-3.91	-4.02	0	0	1	1	0	0	-1.43	-1.61	-0.87	-2.18	-0.37	-1.59			0	0	0	0	0	0	0	0
0.50	-4.62	-5.12	0.71	1.10	-3.93	-4.04	0	0	1	2	0	0	-1.55	-1.74	-0.99	-2.31	-0.49	-1.72			0	0	0	0	0	0	0	0
0.60	-4.69	-5.21	0.69	1.08	-3.96	-4.07	0	0	2	2	0	0	-1.70	-1.90	-1.14	-2.47	-0.64	-1.89			0	0	0	0	0	0	0	0
0.70	-4.77	-5.32	0.64	1.02	-3.98	-4.09	0	0	2	2	0	0	-1.90	-2.11	-1.34	-2.68	-0.84	-2.09			0	0	0	0	0	0	0	0
0.80	-4.89	-5.49	0.53	0.91	-4.01	-4.12	0	0	2	2	0	0	-2.17	-2.39	-1.61	-2.96	-1.11	-2.38			0	0	0	0	0	0	0	0
0.90	-5.11	-5.77	0.30	0.67	-4.04	-4.16	0	0	1	2	0	0	-2.61	-2.85	-2.05	-3.42	-1.55	-2.83			0	0	0	0	0	0	0	0
1.00					-4.08	-4.19	0	0	0	0	0	0									0	0	0	0	0	0	0	0



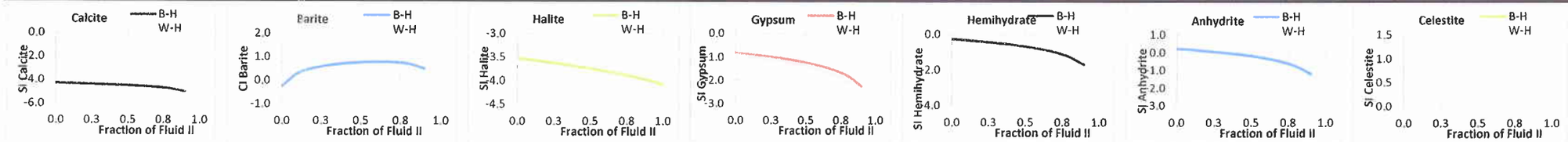
Note: (1) In order to run additional mixing ratios, change the fractions of Bine II in the shaded boxes, at the left, and click on the above button.

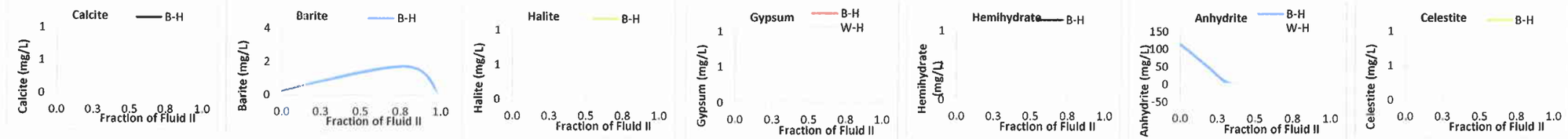
(2) This represents the precipitation in mg/l at each (T,P) point.

Mixing Two Wells 16-6D-46 SWD and 14-30-36

Well(s): 14-30-36 **Date:** 2/28/2012

Produced	Calcite - SI		Barite - SI		Halite - SI		Calcite (mg/L) [2]		Barite (mg/L)		Halite (mg/L)		Gypsum - SI		hemihydrate- SI		Anhydrite - SI		Celestite - SI		Gypsum (mg/L)		Hemihydrate (mg/L)		Anhydrite (mg/L)		Celestite (mg/L)	
Fluids #2[1]	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H	B-H	W-H
0.00	-4.30	-4.71	-0.26	0.19	-3.53	-3.62	0	0	0	0	0	0	-0.84	-0.93	-0.28	-1.49	0.22	-0.91			0	0	0	0	113	0	0	0
0.10	-4.33	-4.75	0.29	0.74	-3.56	-3.66	0	0	0	0	0	0	-0.90	-1.00	-0.34	-1.56	0.16	-0.98			0	0	0	0	79	0	0	0
0.20	-4.37	-4.79	0.51	0.95	-3.60	-3.70	0	0	0	1	0	0	-0.97	-1.07	-0.41	-1.64	0.09	-1.05			0	0	0	0	44	0	0	0
0.30	-4.41	-4.84	0.64	1.08	-3.65	-3.75	0	0	1	1	0	0	-1.04	-1.16	-0.48	-1.73	0.02	-1.14			0	0	0	0	7	0	0	0
0.40	-4.45	-4.90	0.72	1.15	-3.69	-3.79	0	0	1	1	0	0	-1.13	-1.26	-0.57	-1.83	-0.07	-1.24			0	0	0	0	0	0	0	0
0.50	-4.50	-4.97	0.77	1.19	-3.74	-3.84	0	0	1	1	0	0	-1.24	-1.38	-0.68	-1.95	-0.18	-1.37			0	0	0	0	0	0	0	0
0.60	-4.57	-5.06	0.79	1.20	-3.80	-3.90	0	0	1	2	0	0	-1.38	-1.54	-0.82	-2.10	-0.32	-1.52			0	0	0	0	0	0	0	0
0.70	-4.65	-5.18	0.78	1.18	-3.85	-3.96	0	0	2	2	0	0	-1.56	-1.74	-1.00	-2.30	-0.50	-1.72			0	0	0	0	0	0	0	0
0.80	-4.78	-5.35	0.71	1.10	-3.92	-4.03	0	0	2	2	0	0	-1.82	-2.02	-1.26	-2.59	-0.76	-2.00			0	0	0	0	0	0	0	0
0.90	-5.02	-5.66	0.52	0.89	-3.99	-4.10	0	0	2	2	0	0	-2.26	-2.49	-1.71	-3.06	-1.21	-2.47			0	0	0	0	0	0	0	0
1.00					-4.08	-4.19	0	0	0	0	0	0									0	0	0	0	0	0	0	0





Note: (1) In order to run additional mixing ratios, change the fractions of Bine II in the shaded boxes, at the left, and click on the above button.

(2) This represents the precipitation in mg/l at each (T,P) point.

Maximum Allowable Injection Pressure (MAIP) will be determined when the Step Rate Test is conducted. The actual pressure will depend upon the step rate test approved by the UDOGM.

Surface pressure will be monitored during the Step Rate Test. Upon successful completion of the Step Rate Test the maximum allowable surface injection pressure and rate will be obtained.

The fracture gradient is 0.75 psi/ft. the specific gravity of the disposal fluid is 1.004 and the approximate depth to the top of the injection zone is 3828'.

BBC is requesting a maximum injection rate of 14,000 BWPD with an average injection rate of 7,000 BWPD. The Maximum injection pressure and the maximum injection rate will be determined during the Step Rate Test. Only BBC wells in Black Tail Ridge and Lake Canyon will be injected into the 16-6D-46 SWD.

BTR 14-5-46

Depth (ft) Midperf Calculation	Observed ISIP (psig)	Calculated Btm Hole (psig)	Resulting Frac Grad (psi/ft)
5297	1655	3957.6	0.75
5432	1557	3918.3	0.72
5580	1787	4212.6	0.75
5745	1881	4378.4	0.76
6020	1874	4490.9	0.75
6397	1984	4764.8	0.74
6932	2000	5013.3	0.72

Requested Max Surface Pressure=3000 psig

ISIP Data Collected during initial completion treatments

Calculated Bottom Hole Pressure = ISIP + 0.4347 x Depth
Resulting Frac Gradient=Calculated Btm Hole Pressure/Depth

Anticipated Avg Disposal Rate=7000 bwpd
Requested Maximum Disposal Rate=14,000 bwpd

Maximum Allowable Injection Pressure (MAIP): Reservoir

16-6D-46 BTR SWD fracture gradient:	0.75 psi/ft.
Disposal Fluid specific gravity:	1.004
Approximate depth to top of injection zone:	3828'

MAIP = ((0.75-(0.433*1.004)*3828) = 1207 psi

Actual pressure will depend upon the step rate test approved by the UDOGM. Step Rate Test will be the maximum allowable surface injection pressure approved by the UDOGM.

2.9

Evidence and data to support a finding that the proposed injection well will not initiate fractures through the overlying strata or a confining interval that could enable the injected fluid or formation fluid to enter any fresh water strata:

Please refer to tab 2.8 for this information.

Geologic Overview

Uinta Formation: Surface to 1,341' in the 16-6D-46 BTR SWD

The Uinta Formation (Eocene) consists of alternating beds of light-gray calcareous mudstones and light brown to brown siltstones and sandstones. Individual siltstone and sandstone beds are discontinuous, have limited areal extent (typically < 40 acres) and are isolated from each other by low permeability calcareous mudstones. The Uinta Formation was deposited in fluvial and flood plain environments. The siltstone and sandstone beds were deposited in fluvial channels and are more abundant in the lower portion of the formation. The intervening calcareous mudstones were deposited in flood plain environments. The lower portion of the Uinta Formation is transitional into lacustrine deposits in the central portion of the Uinta Basin.

Green River Formation: Estimated 1,341' to 5850' in the 16-6D-46 BTR SWD area.

The Green River Formation (Eocene) is a complex mixture of clastics, carbonates and organic rich claystones deposited in an alluvial to lacustrine depositional system. A complex interfingering of alluvial, fluvial, marginal-lacustrine and lacustrine sediments was produced by significant lake level fluctuations caused by tectonic activity and climatic changes. The Green River Formation is subdivided into four members which in ascending order are: Douglas Creek Member, Garden Gulch Member, Parachute Creek Member and Evacuation Creek Member.

- The Douglas Creek Member consists of light gray alternating beds of calcareous sandstone and dark gray to brown brittle shale with minor amounts of oil shale, dolomite and limestone. Deposition took place in a marginal lacustrine environment. Three major facies are recognized in the Douglas Creek Member: fluvial deltaic, mudflat-lagoon and barrier-beach. The fluvial-deltaic deposits contain channel sandstones that fine upwards from medium to very coarse grained sands at their base to very fine grained sands interbedded with siltstones and shales at the top. The intra channel deposits consist of floodplain shales and claystones. The mudflat-lagoon sediments are characterized by interbedded shale, and siltstone with calcareous and dolomitic mudstones. The sediments were deposited in low energy areas protected from waves and isolated from major clastic input. The barrier-beach deposits are characterized by upward coarsening sequences. The lower portion of the sequences consist of gray to dark gray, laminated silty shale, which grade upward into light gray very fine to fine grained sandstone in the upper portion of the sequences. Ooids and carbonate coated quartz are also common in the upper portions of the sequences.

- The Garden Gulch Member directly overlies the Douglas Creek Member and consists primarily of dark colored shales and very fine grained sandstones. Depositional environments and facies were similar to those of the Douglas Creek Member, but dominated primarily by lacustrine processes. Shale intervals are thicker than those of the Douglas Creek Member and organic rich.

- The Parachute Creek Member directly overlies the Garden Gulch Member and consists of a thick succession of dark brown, dark gray, light green and red shales with occasional fine grained sandstones. The shales were deposited in the deeper portions of the open lacustrine environment and the sandstones were deposited in the shallower

marginal lacustrine environments. The Parachute Creek Member contains the most organic rich oil shales, including the Mahogany Oil Shale Zone.

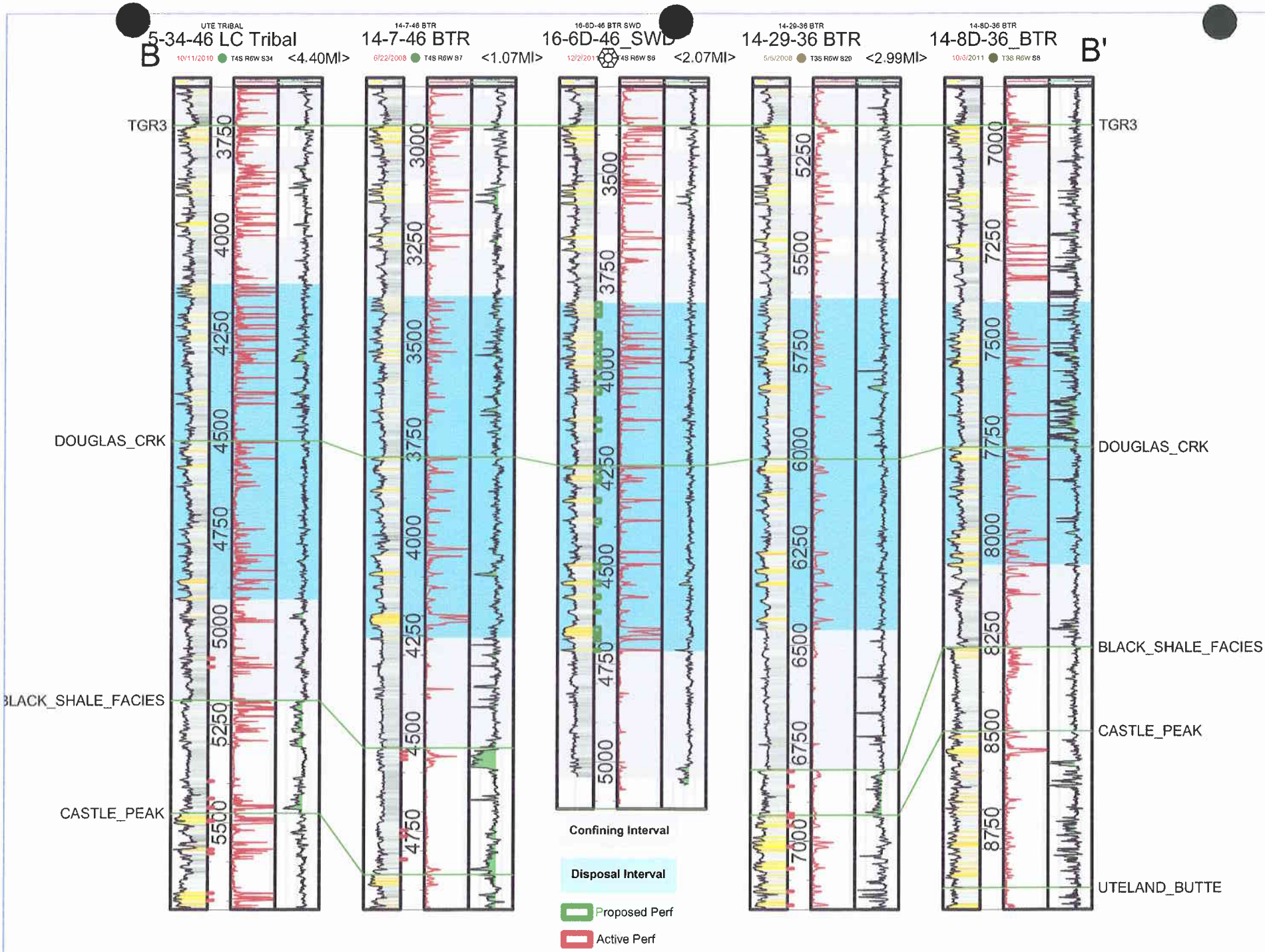
The Evacuation Creek Member directly overlies the Parachute Creek Member and is overlain by the Uinta Formation. The Evacuation Creek Member is composed primarily of light gray-green shale, tan marl and interbedded thin brown sandstones. The upper portion of the Evacuation Creek Member contains the informally named "Birds Nest" zone. The Birds Nest was deposited during a regressive lacustrine phase. The lake waters in the deeper portion of the lake became concentrated in salts, primarily sodium bicarbonate during this regressive phase. Nahcolite was deposited in the marl sediments in the form as nodules as the salty waters were expelled during early diagenesis. Percolating ground waters subsequently dissolved the nacholite nodules to form the Birds Nest Aquifer in the uppermost portion of the Green River Formation. The Birds Nest Aquifer is not present in the 16-6D-46 BTR SWD area.

Wasatch Formation: Estimated 5,850' to 10,500' in the 16-6D-46 BTR SWD area.

The Wasatch Formation (Paleocene - Eocene) consists of poorly sorted variegated mudstones and siltstones in shades of red, green and gray interbedded with beds and lenses of sandstone, conglomerate and minor carbonate deposits. Sandstones are very light brown to gray, irregularly bedded and are fine to medium grained. Conglomeratic sandstones often containing black chert and varicolored quartzite pebbles commonly occurring at the base of sand bodies. Wasatch deposition took place in mixed fluvial to lacustrine depositional environments. The Wasatch Formation interfingers with and in places is time equivalent to the Green River Formation. The Wasatch sandstones and carbonates in the SWD 9-36 BTR area are productive of natural gas and oil.

Mesaverde Formation: Estimated 10,500' to 12,500' in the 16-6D-46 BTR SWD area.

The Mesaverde Formation (Upper Cretaceous) consists of mostly gray to brown, well sorted, sandstone interbedded with greenish-gray silty shale. The sandstones are typically well sorted, medium grained, cross bedded and thin to thick bedded and are locally conglomeratic. Lower portion of the Mesaverde Formation often contains coals. Mesaverde deposition took place in continental fluvial to flood plain depositional environments. The Mesaverde Formation is the deepest formation penetrated in the immediate area of the SWD 9-36 BTR area.



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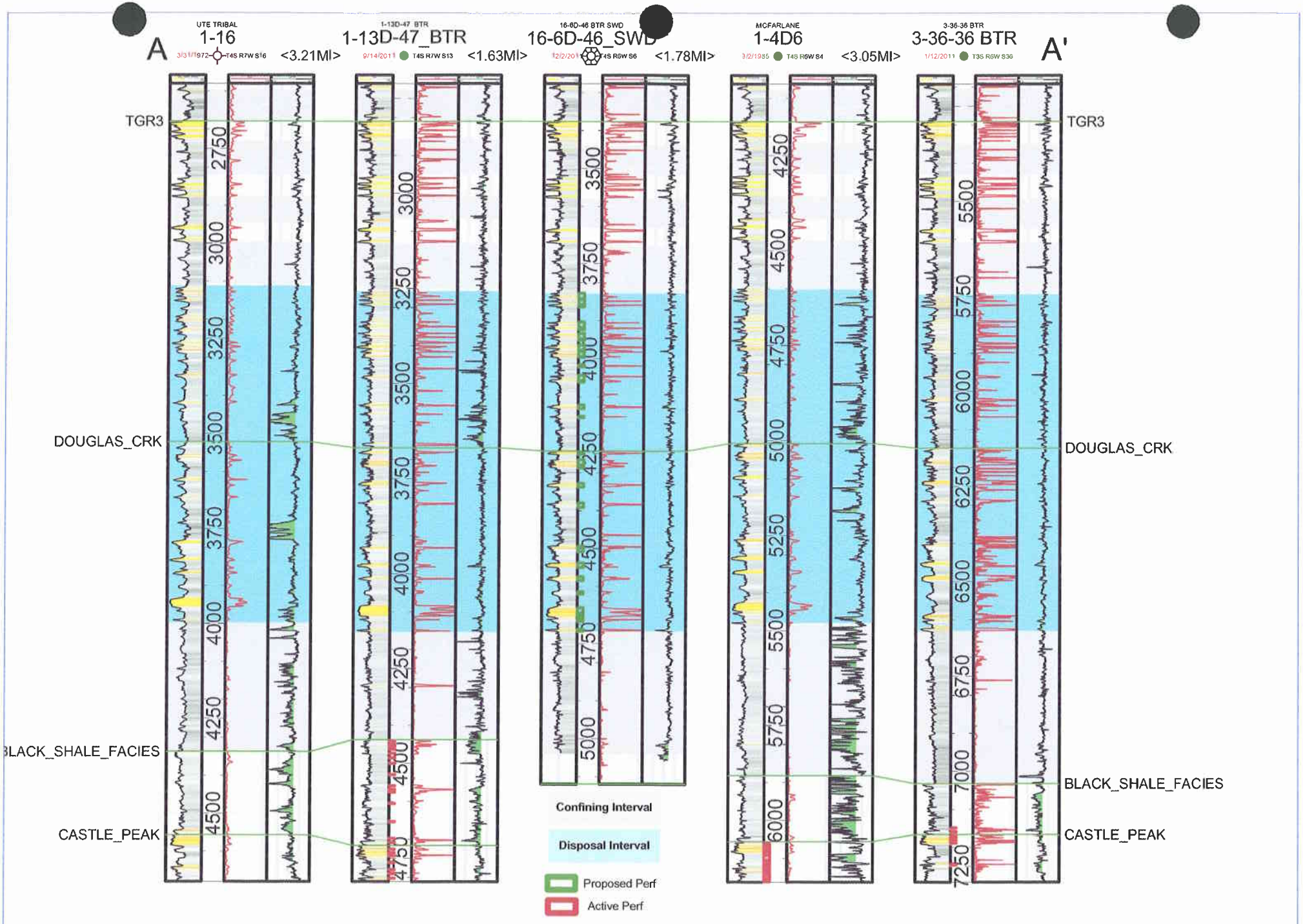

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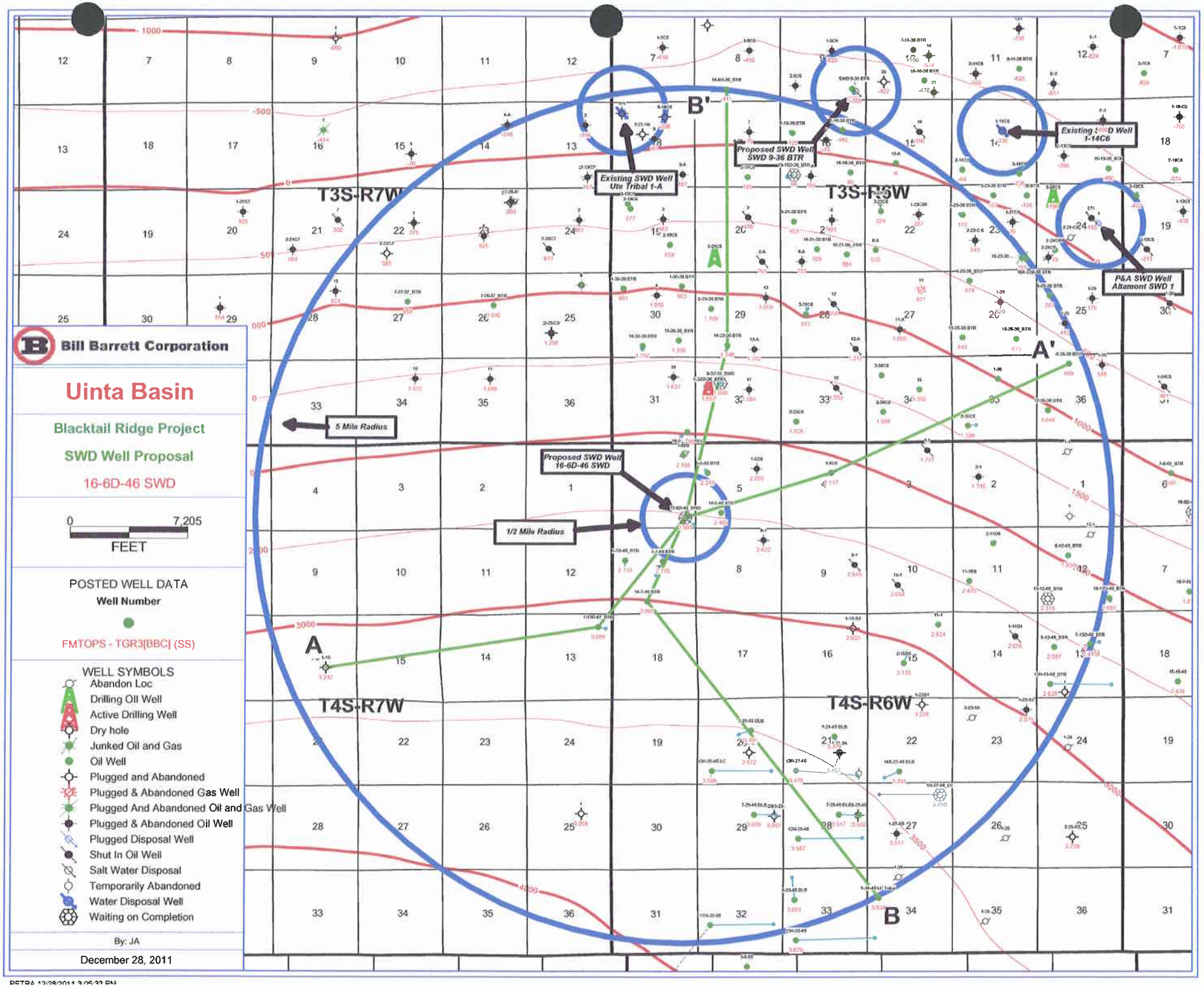

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2.10.1

Surface Geology and Water Wells

The surface geology surrounding the 16-6D-46 SWD is primarily Quaternary alluvium and colluvium. The Quaternary alluvium and colluvium deposits are generally 0-500' thick. There are 2 water wells surrounding the 16-6D-46 SWD (Table 1). These wells range in total depth (TD) from 575-600'. Beneath the Quaternary deposits, is the Eocene Uinta Formation. The Uinta Formation, near the 16-6D-46 SWD, is approximately 1,300' thick. The Uinta Formation consists of alternating beds of light-gray calcareous mudstones and light brown to brown siltstones and sandstones. Individual siltstone and sandstone beds are discontinuous, have limited areal extent (typically < 40 acres) and are isolated from each other by low permeability calcareous mudstones. The Uinta Formation was deposited in fluvial and flood plain environments. The siltstone and sandstone beds were deposited in fluvial channels and are more abundant in the lower portion of the formation. The intervening calcareous mudstones were deposited in flood plain environments. The lower portion of the Uinta Formation is transitional into lacustrine deposits in the central portion of the Uinta Basin. At a measured depth of approximately 833', in the area of the 16-6D-46 SWD, is the base of moderately saline water mapped out by the U.S. Geological Survey in 1987 (Tech Pub No. 92). Below this depth, the TDS of the groundwater is generally greater than 10,000 mg/L.

Table 1. Water wells surrounding the 16-6D-46 SWD

WRNUM/Appl. No.	Depth	Location	Approx. Distance to SWD 32-36
43-12172	600'	N 150, E 1910, SW, Sec. 32, T3S-R6W	5,550'
43-12057	575'	N 150, E 510, W4, Sec. 1, T4S-R7W	9,850'

2.10.2

Reservoir Rocks (injection zones)

The Garden Gulch and Douglas Creek Members of the Lower Green River formation are comprised of limestones, dolomites, shales and a few sandstones. The Lower Green River is characterized by transgressive and regressive sequences of Lake Uinta during the Tertiary. The carbonates and shales are very continuous across the Blacktail Ridge field. The carbonates range in thickness from a few feet to 20'. The few sandstones that are present in this stratigraphic section are thin (5'-10') and lenticular in nature. In the Blacktail Ridge field, the Douglas Creek Member ranges in depth from 7,400' to the north and 3,650' (measured depth) to the south. This section is considered to be normally pressured and have some degree of natural fracturing. The azimuth of the fractures trends tends to be perpendicular to the north-south oriented maximum principle stress. The carbonates in this area can be highly fractured, the sandstones are less fractured and the shales are the least fractured. The porosities in the carbonates and sandstone are generally less than 10%. The permeability for all rock type in this section is very low (<0.01 md) unless a fracture is encountered. Through this entire section, the carbonates and sandstones are considered the reservoir rocks. Mud oil and gas shows are also seen throughout this section but the oil and gas do not exist in economic quantities.

Confining Layers

There are many confining layers present in the Lower Green River. At the location of the 16-6D-46 BTR SWD, the base of the moderately saline water is at a measured depth of 833'. The injected interval will be from 3,828'-4,718'. The injection zones will be 2,995' below the base of the moderately saline water. In this interval, there are many confining layers that are identified on the attached log. In the first 400' of section above the first perforation, there are 3 zones that total 278' which are considered to be confining zones. In addition to the confining beds above the injection zone, there are many confining beds within the injection zone itself. From 3,828' to 4,718' there are approximately 28 confining layers that total 257'. In addition to the confining beds in and above the injection zone, they are also present below. Below the last perforation, there is 1 confining layers totaling 320'. All of the confining layers are shales with very low permeability (<0.01md), porosity (<5%) and are more ductile than the surrounding carbonates and sandstones.

2.10.3

Structure

Within Blacktail Ridge, there is a minor structure as seen on the radius and x-section map. This small "nose" exists throughout the section. This structural element most likely caused fracturing within the carbonates and sandstones but probably not in the shales due to rock properties.

CMS Downhole Well Profile

Bill Barrett Corporation

Well Name: 14-5-46 BTR

API/UWI	Field Name	Division	Ground Elevation (ft)	Orig KB Elev (ft)	KB-Grd (ft)	Total Depth (ftKB)
43-013-50307	Black Tail Ridge		5,838.00	5,854.00	16.00	7,680.0

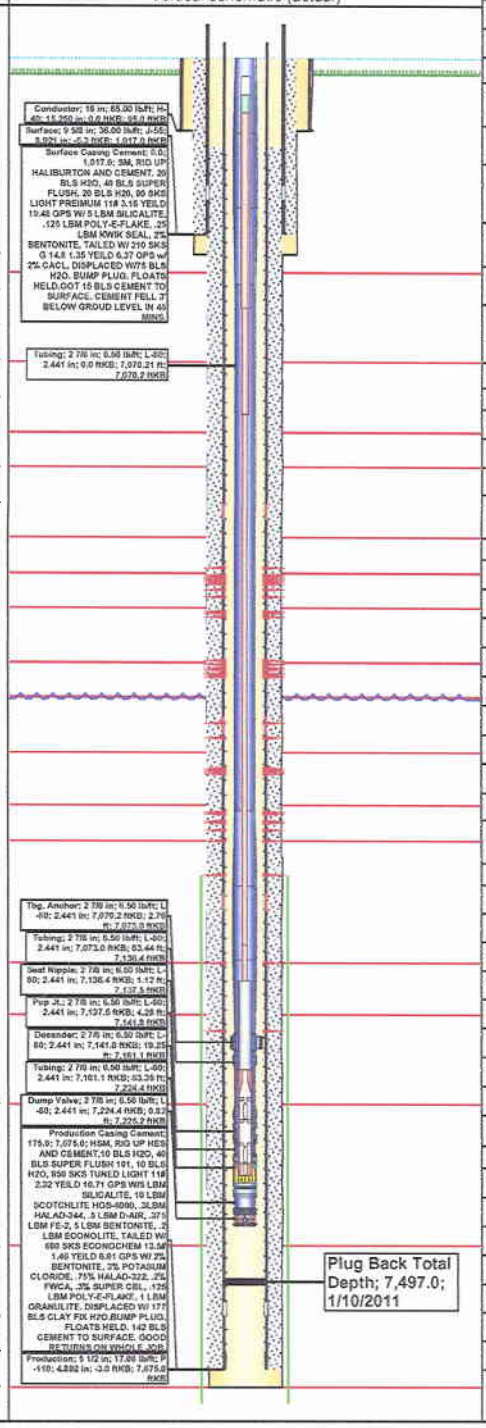
County	State/Prov	Surface Legal Location	E/W Dist (ft)	E/W Ref	N/S Dist (ft)	N/S Ref
Duchesne	Utah	SESW-Sec 5-T4S-R6W	1,567.0	FWL	930.0	FSL

Type	Working Pressure (psi)	Size (in)

Vertical - Original Hole, 3/28/2012 10:14:53 AM

MD (ftKB)	TVD (ftKB)
-3.0	-3.0
18.0	18.0
63.0	63.0
174.9	174.9
971.1	971.1
1,015.4	1,015.4
1,020.0	1,020.0
1,378.0	1,377.9
2,443.9	2,443.3
3,369.1	3,368.9
4,198.2	4,198.0
4,217.8	4,217.7
4,642.1	4,641.9
5,082.7	5,082.5
5,105.0	5,104.8
5,254.9	5,254.7
5,559.9	5,559.6
5,653.9	5,653.6
5,833.0	5,832.7
5,948.8	5,948.5
5,997.0	5,996.8
6,237.9	6,237.6
6,543.0	6,542.7
6,746.1	6,745.7
6,808.7	6,808.4
6,833.0	6,832.7
6,849.9	6,849.6
6,942.9	6,942.6
7,070.2	7,069.9
7,121.1	7,120.7
7,132.9	7,132.5
7,137.5	7,137.1
7,157.2	7,156.8
7,224.4	7,224.1
7,460.0	7,459.6
7,497.0	7,496.7
7,528.9	7,528.6
7,673.9	7,673.5
7,680.1	7,679.8

Vertical schematic (actual)



Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Set Depth (ftKB)
Conductor	16	65.00	H-40		95.0
Surface	9 5/8	36.00	J-55	ST&C	1,017.0
Production	5 1/2	17.00	P-110	LT&C	7,675.0

Cement Stages

String	Description	Top (ftKB)	Top Measurement Method
Surface, 1,017.0ftKB	Surface Casing Cement	0.0	Returns to Surface

Fluid	Amount (sacks)	Class	Dens (lb/gal)	Yield (ft³/sack)
Lead	90	G	11.00	3.16
Tail	210	G	14.80	1.35

String	Description	Top (ftKB)	Top Measurement Method
Production, 7,675.0ftKB	Production Casing Cement	175.0	Acoustic Log

Fluid	Amount (sacks)	Class	Dens (lb/gal)	Yield (ft³/sack)
Lead	950	G	11.00	2.32
Tail	600	G	13.50	1.42

Plug Back Total Depths

Date	Depth (ftKB)	Type	Method
8/19/2010	7,523.0	Fill	Wireline
1/10/2011	7,497.0	Fill	Tubing

Tubing/ Anchor set at 7,225.2ftKB on 1/11/2011 08:00

Tubing Description	Run Date	String Length (ft)	Set Depth (ftKB)
Tubing/ Anchor	1/11/2011	7,225.23	7,225.2

Item Des	Jts	OD (in)	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)
Tubing	223	2 7/8	2.441	6.50	L-80	7,070.21	0.0
Tbg. Anchor	1	2 7/8	2.441	6.50	L-80	2.76	7,070.2
Tubing	2	2 7/8	2.441	6.50	L-80	63.44	7,073.0
Seat Nipple	1	2 7/8	2.441	6.50	L-80	1.12	7,136.4
Pup Jt.	1	2 7/8	2.441	6.50	L-80	4.28	7,137.5
Desander	1	2 7/8	2.441	6.50	L-80	19.25	7,141.8
Tubing	2	2 7/8	2.441	6.50	L-80	63.35	7,161.1
Dump Valve	1	2 7/8	2.441	6.50	L-80	0.82	7,224.4

Rod on 5/19/2011 11:00

Rod Description	Run Date	String Length (ft)	Set Depth (ftKB)
Rod	5/19/2011	7,139.00	7,157.0

Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Top (ftKB)
Polished Rod	1	1 1/8			39.00	18.0
Pony Rod	1	1	2.90	D	6.00	57.0
81 Sucker Rod Guided	81	1	2.90	D	2,025.00	63.0
85 Sucker Rod Guided	85	7/8	2.22	D	2,125.00	2,088.0
105 Sucker Rod Guided	105	3/4	1.63	D	2,625.00	4,213.0
11 Pony Rod Guided	11	3/4	1.63	D	33.00	6,838.0
10 Sinker Bar	10	1 1/2	6.01	D	250.00	6,871.0
Rod Pump	1	1 3/4			36.00	7,121.0

Perforation Summary

Date	Top (ftKB)	Btm (ftKB)	Zone
7/29/2010	5,253.0	5,257.0	Castle Peak, Original Hole
7/29/2010	5,278.0	5,282.0	Castle Peak, Original Hole
7/29/2010	5,312.0	5,316.0	Castle Peak, Original Hole
7/29/2010	5,330.0	5,334.0	Castle Peak, Original Hole
7/29/2010	5,340.0	5,344.0	Castle Peak, Original Hole
7/29/2010	5,396.0	5,400.0	Castle Peak, Original Hole
7/29/2010	5,410.0	5,414.0	Castle Peak, Original Hole

Bill Barrett Corporation

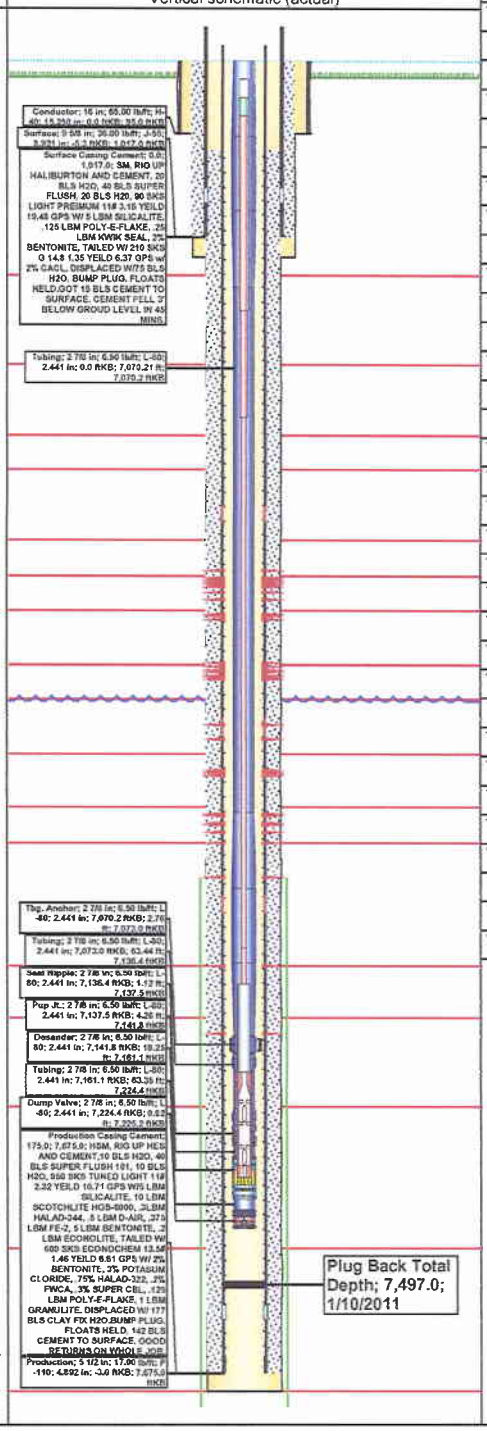
CMS Downhole Well Profile

Well Name: 14-5-46 BTR

Vertical - Original Hole, 3/28/2012 10:14:54 AM

MD (ftKB)	TVD (ftKB)
-3.0	-3.0
18.0	18.0
63.0	63.0
174.9	174.9
971.1	971.1
1,015.4	1,015.4
1,020.0	1,020.0
1,378.0	1,377.9
2,445.9	2,445.8
3,368.1	3,368.0
4,165.2	4,198.0
4,217.9	4,217.7
4,842.1	4,841.9
5,082.7	5,082.5
5,105.0	5,104.8
5,254.9	5,254.7
5,559.9	5,559.6
5,653.9	5,653.6
5,833.0	5,832.7
5,943.8	5,943.5
5,997.0	5,996.8
6,257.9	6,257.6
6,543.0	6,542.7
6,745.1	6,745.7
6,808.7	6,808.4
6,833.0	6,832.7
6,840.9	6,840.6
6,942.9	6,942.6
7,070.2	7,069.9
7,121.1	7,120.7
7,132.9	7,132.5
7,137.5	7,137.1
7,157.2	7,156.8
7,224.4	7,224.1
7,460.0	7,459.6
7,497.0	7,496.7
7,628.9	7,628.6
7,673.8	7,673.5
7,680.1	7,679.8

Vertical schematic (actual)



Perforation Summary

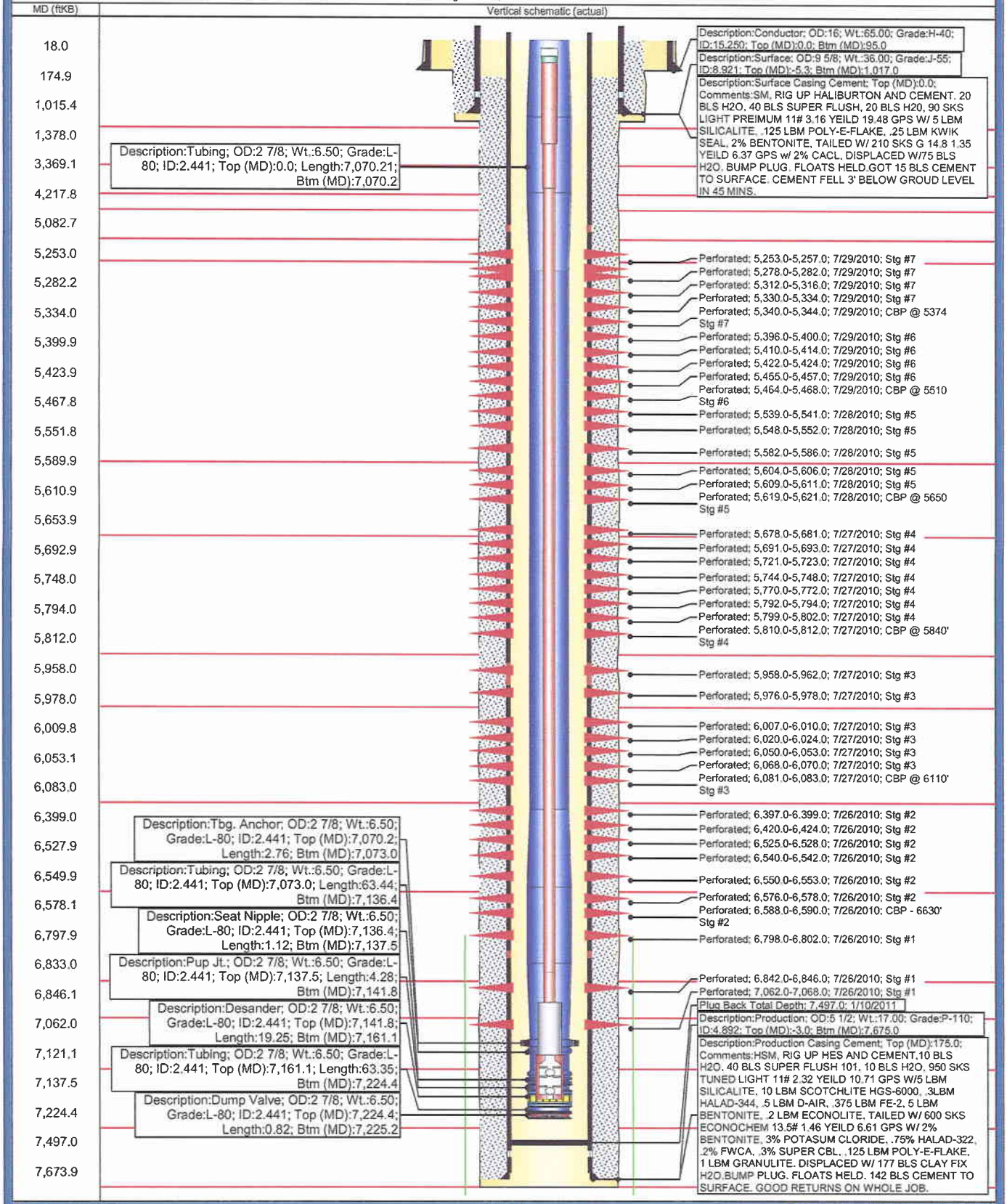
Date	Top (ftKB)	Btm (ftKB)	Zone
7/29/2010	5,422.0	5,424.0	Castle Peak, Original Hole
7/29/2010	5,455.0	5,457.0	Castle Peak, Original Hole
7/29/2010	5,464.0	5,468.0	Castle Peak, Original Hole
7/28/2010	5,539.0	5,541.0	Castle Peak, Original Hole
7/28/2010	5,548.0	5,552.0	Castle Peak, Original Hole
7/28/2010	5,582.0	5,586.0	Castle Peak, Original Hole
7/28/2010	5,604.0	5,606.0	Castle Peak, Original Hole
7/28/2010	5,609.0	5,611.0	Uteland Butte, Original Hole
7/28/2010	5,619.0	5,621.0	Uteland Butte, Original Hole
7/27/2010	5,678.0	5,681.0	CR-1, Original Hole
7/27/2010	5,691.0	5,693.0	CR-1, Original Hole
7/27/2010	5,721.0	5,723.0	CR-1, Original Hole
7/27/2010	5,744.0	5,748.0	CR-1, Original Hole
7/27/2010	5,770.0	5,772.0	CR-1, Original Hole
7/27/2010	5,792.0	5,794.0	CR-1, Original Hole
7/27/2010	5,799.0	5,802.0	CR-1, Original Hole
7/27/2010	5,810.0	5,812.0	CR-1, Original Hole
7/27/2010	5,958.0	5,962.0	Wasatch, Original Hole
7/27/2010	5,976.0	5,978.0	Wasatch, Original Hole
7/27/2010	6,007.0	6,010.0	CR-2, Original Hole
7/27/2010	6,020.0	6,024.0	CR-2, Original Hole
7/27/2010	6,050.0	6,053.0	CR-2, Original Hole
7/27/2010	6,068.0	6,070.0	CR-2, Original Hole
7/27/2010	6,081.0	6,083.0	CR-2, Original Hole
7/26/2010	6,397.0	6,399.0	CR-3, Original Hole
7/26/2010	6,420.0	6,424.0	CR-3, Original Hole
7/26/2010	6,525.0	6,528.0	CR-3, Original Hole
7/26/2010	6,540.0	6,542.0	CR-3, Original Hole
7/26/2010	6,550.0	6,553.0	CR-3, Original Hole
7/26/2010	6,576.0	6,578.0	CR-4, Original Hole
7/26/2010	6,588.0	6,590.0	CR-4, Original Hole
7/26/2010	6,798.0	6,802.0	CR-4, Original Hole
7/26/2010	6,842.0	6,846.0	CR-4A, Original Hole
7/26/2010	7,062.0	7,068.0	CR-5, Original Hole

Current Wellbore Schematic

Field: Black Tail Ridge Well Name: 14-5-46 BTR

State: Utah County: Duchesne Location: SESW-Sec 5-T4S-R6W API#: 43-013-50307

Vertical - Original Hole, 3/28/2012 10:16:35 AM



AOR Well Completion Data

	Cond Casing				Surface Casing				Production Casing			
Well	Size	Depth	Cement Amount	Cement Top	Size	Depth	Cement Amount	Cement Top	Size	Depth	Cement Amount	Cement Top
16-6D-46 BTR SWD	16	0 - 65'	0 sx	Surface	9.625	0 - 1009'	380 sx	Surface	5.5	0 - 5092'	830 sx	64'
14-5-46 BTR	16	0 - 95'	0 sx	Surface	9.625	0 - 1017'	300 sx	Surface	5.5	0 - 7675'	1550 sx	175'

Bill Barrett Corporation

AFFIDAVIT OF NOTICE

16-6D-46 BTR SWD
SESE Sec. 6, T4S, R6W
Duchesne County, UT
API #4301350781

I, David Watts, Landman with Bill Barrett Corporation (BBC) certify that a true and correct copy of UIC Form 1 Application for Injection Well with supplemental ownership information was provided, by certified mail, to the following operators, owners and surface owners located within a one-half (1/2) miles radius exposure of the location pursuant to R649-5-2.12 of the Oil and Gas Conservation, General Rules.

Carl Dean Peterson and Veva Pamela Peterson,
as Co-Trustees of the Circle 3 Ranch Property Trust
P.O. Box 93
Duchesne, UT 84032

BIA - Uintah & Ouray Agency
Minerals and Mining Office
Attention: Johnna Blackhair
P.O. Box 130
Fort Duchesne, UT 84026

Randy Wayne Ivie
P.O.Box 443
Duchesne, UT 80432

Corporation of the Presiding Bishop of the
Church Of Jesus Christ of LDS
50 East North Temple Street
Salt Lake City, UT 84150

Ute Energy Upstream Holdings LLC
Attn. Todd Kalstrom
1875 Lawrence Street, Suite 200
Denver, CO 80202

El Paso E&P Company, L.P.
Attn: Lauren Williams
P.O. Box 200861
Houston, TX 77216

Ute Indian Tribe
Energy and Mineral Department
Attn. Manuel Myore
P.O. Box 70
Fort Duchesne, UT 84026

Reimann Properties No.1
2178 Whitmore Way
Salt Lake City, UT 84121

Reimann Properties No.2
2178 Whitmore Way
Salt Lake City, UT 84121

Affiant

David Watts, Landman
April 3, 2012

State of Colorado)
)
County of Denver)

Before me, the undersigned, on the date as given above, personally appeared David Watts known to me to be the person whose name is subscribed to the foregoing instrument for the purpose and consideration therein expressed.

Given my hand seal.

Notary Public

My commission expires: _____

LEE VASKEY
NOTARY PUBLIC
STATE OF COLORADO
MY COMMISSION EXPIRES 10/16/2013

1099 18TH STREET
SUITE 2300
DENVER, CO 80202

16-6D-46 BTR SWD P&A PROCEDURE

WELL:	16-6D-46 BTR SWD	**DATE:**	March 26, 2012
API:	43013507810000	**FIELD:**	Blacktail Ridge

OBJECTIVE: Plug and abandon wellbore.

LOCATION: SESE-Sec 6-T4S-R6W, Duchesne County, UT

ELEVATION: 5,856' GL; 5,880' KB

DEPTH: 5,120' TD, 5,006' PBTD

CASING RECORD: 9-5/8", 36#, J-55 @ 1,009', Cmt'd to surface w/ 380 sx
5-1/2", 17#, P-110 @ 5,092', cmt'd w/ 835 sx. TOC @ 64' CBL

EXISTING PERFORATIONS:

Douglas Creek	3,828' – 4,022'	520 HOLES
Douglas Creek	4,122' – 4,338'	256 HOLES
Douglas Creek	4,494' – 4,718'	312 HOLES

Casing	5-1/2", 17#, P-110 Yield 80% = 6579 psi Capacity = 0.0232 bbl/ft	ID = 4.892", drift = 4.767" Yield 100% = 10,640 psi
Tubing		

RECOMMENDED PROCEDURE:

1) MIRU workover rig, kill well. ND tree, NU BOP and test to 250 psi and 4500 psi. Release 5-1/2" packer at 3,750' and pull 2-7/8" tubing out of hole.

2) Rig up wireline. Run in hole with 5-1/2" CIBP and set at 3,750'. Bail 20' of cement on top. RDMO wireline.

3) Pickup 2-7/8" workstring and run in hole. Tag cement top. Pull up and displace hole from 3,750' to surface with inhibited fluid.

4) Pull up hole to 1,100' and set balanced cement plug from 1,100' to 775' inside 5-1/2" casing.

5) Tag cement top.

6) Pull tubing out of hole and perforate 5-1/2" casing at 50' with 4 shots. Pump cement down 5-1/2" casing and out 9-5/8" casing until 5-1/2" casing and 5-1/2"– 9-5/8" annulas are full to surface.

7) Cut of casing head and install dry hole marker as per state specs.

8) Remove all surface equipment and reclaim location as per land owner or state requirements.

Proposed P & A Wellbore Schematic

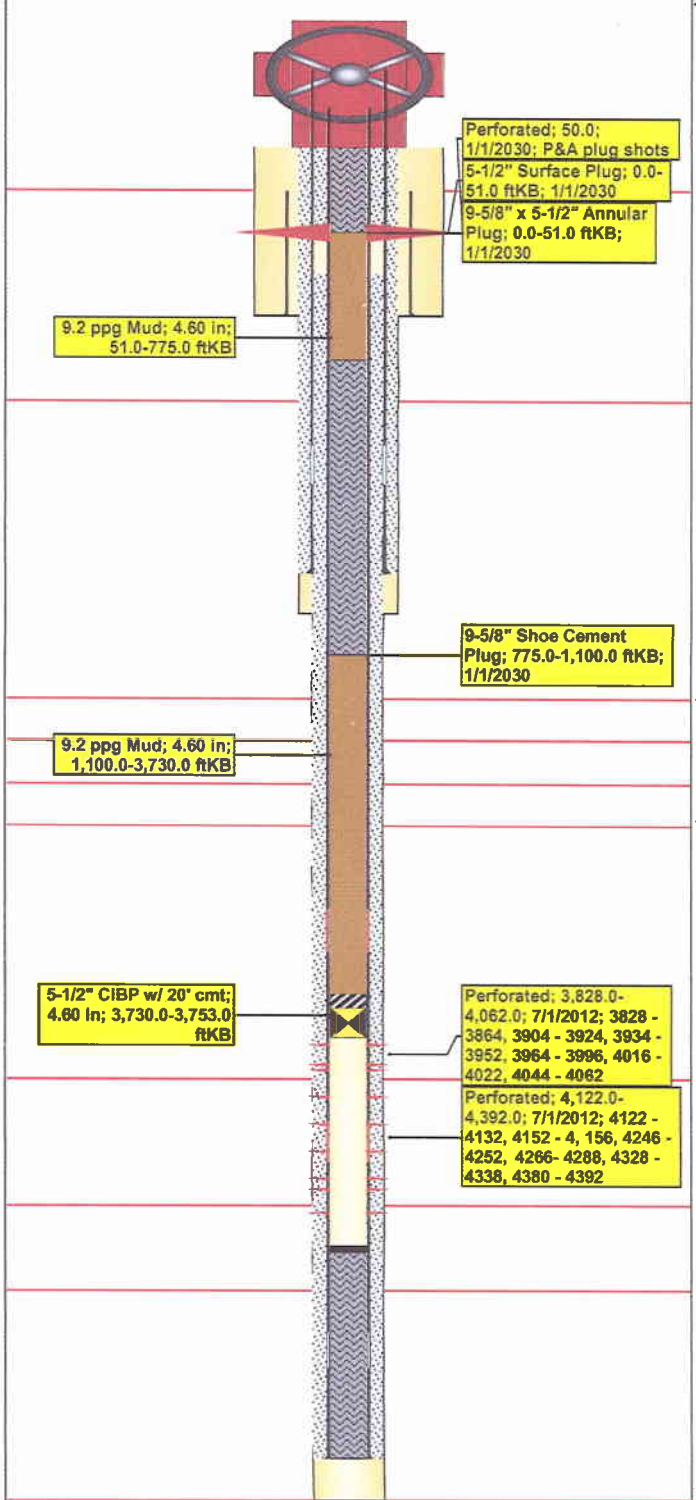
Field: Black Tail Ridge Well Name: SWD 16-6D-46 BTR

State: Utah County: Duchesne Location: SESE, Sec. 6, T4S, R6W API#: 4301350781

Deviated - Original Hole, 1/1/2030

MD (ft

Vertical schematic (proposed)



Column list (actual)

Description	Top (MD)	Btm (MD)
ELEV_GR	24.0	
BASE_MODERATELY_SALINE_WATER	833.0	
GREEN_RIVER *	1,341.0	
MAHOGANY	1,985.0	
TOP CONFINING BED	3,294.0	
TGR3 *	3,377.0	
DOUGLAS_CRK	4,244.0	
Perforated	4,494.0	4,718.0
3PT_MKR *	4,653.0	
Plug Back Total Depth	5,006.0	5,006.0
BOTTOM CONFINING BED	5,041.0	
TD *	5,120.0	

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 4/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No April 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 09, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Brady Riley	303 312-8115	Permit Analyst

SIGNATURE	DATE
N/A	5/3/2012

RECEIVED: May. 03, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 5/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No May 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
June 08, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	6/5/2012

RECEIVED: Jun. 05, 2012

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

June 11, 2012

Bill Barrett Corporation
C/O Tracey Fallang
1099 18th Street, Suite 2300
Denver, CO 80202

Subject: Bill Barrett Corp. Well: 16-6D-46 BTR SWD, Section 6, Township 4 South, Range 6 West, USM, Duchesne County, Utah, API Well # 43-013-50781

Dear Ms. Fallang:

Pursuant to Utah Admin. Code R649-5-3-3, the Division of Oil, Gas and Mining (the "Division") issues its administrative approval for conversion of the referenced well to a Class II injection well. Accordingly, the following stipulations shall apply for full compliance with this approval:

1. Compliance with all applicable requirements for the operation, maintenance and reporting for Underground Injection Control ("UIC") Class II injection wells pursuant to Utah Admin. Code R649-1 et seq.

2. Conformance with all conditions and requirements of the complete application submitted by Bill Barrett Corp.

3. A step-rate test and mechanical integrity test shall be conducted prior to commencing injection.

4. Pressure shall be monitored between the surface casing and the production casing on a regular basis. Any pressure changes observed shall be reported to the Division immediately.

A final approval to commence injection will be issued upon satisfactory completion of the listed stipulations. If you have any questions regarding this approval or the necessary requirements, please contact Ammon McDonald at 801-538-5337 or Brad Hill at 801-538-5315.

Sincerely,

for John Rogers
Associate Director

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County
Well File
N:\O&G Permits\Injection Permits\Bill Barrett Corp

Duchesne County Planning, Zoning
& Community Development
734 North Center Street
P.O. Box 317
Duchesne, Utah 84021
(435) 738-1152
Fax (435) 738-5522

RECEIVED
MAY 21 2012
DIV. OF OIL, GAS & MINING

May 18, 2012

Mr. Brad Hill, Permitting Manager
Division of Oil, Gas and Mining
PO Box 145801
Salt Lake City, UT 84114-5801

RE: Bill Barrett Corporation Injection Wells (Cause No UIC-391)

Dear Mr. Hill:

We are in receipt of your notice regarding Bill Barrett Corporation's request to convert 2 wells, located in Section 6, Township 4 South, Range 6 West and Section 32, Township 3 South, Range 6 West, Duchesne County, to Class II injection wells.

Duchesne County is supportive of this request and recommends approval under conditions that your agency deems appropriate.

Thank you for the opportunity to comment.

Sincerely,

Mike Hyde, AICP
Community Development Administrator

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

P:\Mike\DOGM Correspondence\BBC Injection Well.doc

Bill Barrett
Publish Dates:
SL Trib - 5/19/12
UB Standard - 5/22/12

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-391

IN THE MATTER OF THE APPLICATION OF BILL BARRETT CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE 16-6D-46 BTR SWD & 6-32-36 BTR SWD WELL CONVERSIONS LOCATED IN SECTIONS 6 & 32, TOWNSHIPS 4S & 3S, RANGE 6W, DUCHESNE COUNTY, UTAH, AS CLASS II INJECTION WELLS.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of the Bill Barrett Corporation (1099 18th Street, Suite 2300, Denver, Colorado, 80202, 303-293-9100) for administrative approval of the 16-6D-46 BTR SWD (43-013-50781) and 6-32-36 BTR SWD (43-013-50921) well conversions, located in SE/4 SE/4, Section 6, Township 4S, Range 6W, and SE/4 NW/4, Section 32, Township 3S, Range 6W, Uintah Baseline & Meridian, Duchesne County, Utah, for the conversion of production wells to Class II injection wells. The adjudicative proceedings will be conducted informally according to Utah Admin. Rule R649-10, Administrative Procedures.

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Dated this 15th day of May, 2012

STATE OF UTAH
DIVISION OF OIL, GAS & MINING

Brad Hill
Oil & Gas Permitting Manager

Bill Barrett Corporation
16-6D-46 BTR SWD
6-32-36 BTR SWD
Cause No. UIC 391

Publication Notices were sent to the following:

Bill Barrett Corporation
1099 18th St, Ste 2300
Denver, CO 80202

Uintah Basin Standard
268 South 200 East
Roosevelt, UT 84066
via e-mail legals@ubstandard.com

Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145
via e-mail naclegal@mediaoneutah.com

Vernal Office
Bureau of Land Management
170 South 500 East
Vernal, UT 84078

Duchesne County Planning
PO Box 317
Duchesne, UT 84021-0317

Bruce Suchomel
US EPA Region 8
MS 8P-W-GW
1595 Wynkoop St
Denver, CO 80202-1129

Ute Tribe
PO Box 190
Ft Duchesne, UT 84026

Circle 3 Ranch Property Trust
PO Box 93
Duchesne, UT 84032

Jean Sweet

Jean Sweet

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 16, 2012

Via e-mail legals@ubstandard.com

Uintah Basin Standard
268 South 200 East
Roosevelt, UT 84066

Subject: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

To Whom It May Concern:

Enclosed is a copy of the referenced Notice of Agency Action. Please publish the Notice, once only, as soon as possible. Please notify me via e-mail of the date it will be published. My e-mail address is: jsweet@utah.gov .

Please send proof of publication and billing to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet

Jean Sweet
Executive Secretary

Enclosure

Jean Sweet - Re: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

From: Cindy Kleinfelter <classifieds@ubstandard.com>
To: Jean Sweet <jsweet@utah.gov>
Date: 5/18/2012 10:19 AM
Subject: Re: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

On 5/16/2012 11:02 AM, Jean Sweet wrote:

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Please send proof of publication and billing to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet, Executive Secretary
Utah Div. of Oil, Gas & Mining
1594 West Temple, Suite 1210
Salt Lake City, UT
801-538-5329
jsweet@utah.gov

This will be published May 22, 2012. Thank you.
Cindy

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 16, 2012

Via e-mail naclegal@mediaoneutah.com

Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145

Subject: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

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Please send proof of publication and billing for **account #9001402352** to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet

Jean Sweet
Executive Secretary

Enclosure

From: "Fultz, Mark" <naclegal@mediaoneutah.com>
To: <jsweet@utah.gov>
Date: 5/16/2012 2:48 PM
Subject: Proof for Notice of Agency Action
Attachments: OrderConf.pdf

AD# 793164
Run SL Trib & Des News 5/19/12
Cost $169.64
Please advise of changes
Thank You
Ken

The Salt Lake Tribune WWW.SLTRIB.COM | MEDIAONE OF UTAH A NEWSPAPER AGENCY COMPANY WWW.MEDIAONEUTAH.COM | Deseret News WWW.DESERETNEWS.COM

Remit to: P.O. Box 704005
West Valley City, UT 84170

Order Confirmation for Ad #0000793164-01

Client	DIV OF OIL-GAS & MINING	**Payor Customer**	DIV OF OIL-GAS & MINING
Client Phone	801-538-5340	**Payor Phone**	801-538-5340
Account#	[redacted]	**Payor Account**	[redacted]
Address	1594 W NORTH TEMP #1210,P.O. BOX 145801 SALT LAKE CITY, UT 84114 USA	**Payor Address**	1594 W NORTH TEMP #1210,P.O. BO SALT LAKE CITY, UT 84114
Fax	801-359-3940	**Ordered By**	Jean
EMail	earlenerussell@utah.gov	**Acct. Exec**	kstowe

Total Amount	**$169.64**
Payment Amt	**$0.00**
Amount Due	**$169.64**

Tear Sheets	Proofs	Affidavits
0	0	1

Payment Method

PO Number Agency Action

Confirmation Notes:

Text: Jean

Ad Type	Ad Size	Color
Legal Liner	2.0 X 49 Li	<NONE>

Product	Placement	Position
Salt Lake Tribune::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
Deseret News::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
sltrib.com::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
utahlegals.com::	utahlegals.com	utahlegals.com
Scheduled Date(s):	05/19/2012	

Ad Content Proof Actual Size

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-391

IN THE MATTER OF THE APPLICATION OF BILL BARRETT CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE 16-6D-46 BTR SWD & 6-32-36 BTR SWD WELL CONVERSIONS LOCATED IN SECTIONS 6 & 32, TOWNSHIPS 4S & 3S, RANGE 6W, DUCHESNE COUNTY, UTAH, AS CLASS II INJECTION WELLS.

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Dated this 15th day of May, 2012
STATE OF UTAH
DIVISION OF OIL, GAS & MINING
/s/Brad Hill
Oil & Gas Permitting Manager
793164 **UPAXLP**

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-391

IN THE MATTER OF THE APPLICATION OF BILL BARRETT CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE 16-6D-46 BTR SWD & 6-32-36 BTR SWD WELL CONVERSIONS LOCATED IN SECTIONS 6 & 32, TOWNSHIPS 4S & 3S, RANGE 6W, DUCHESNE COUNTY, UTAH, AS CLASS II INJECTION WELLS.

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Dated this 15th day of May, 2012

STATE OF UTAH
DIVISION OF OIL, GAS & MINING

Brad Hill
Oil & Gas Permitting Manager

Bill Barrett Corporation
16-6D-46 BTR SWD
6-32-36 BTR SWD
Cause No. UIC 391

Publication Notices were sent to the following:

Bill Barrett Corporation
1099 18th St, Ste 2300
Denver, CO 80202

Uintah Basin Standard
268 South 200 East
Roosevelt, UT 84066
via e-mail legals@ubstandard.com

Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145
via e-mail naclegal@mediaoneutah.com

Vernal Office
Bureau of Land Management
170 South 500 East
Vernal, UT 84078

Duchesne County Planning
PO Box 317
Duchesne, UT 84021-0317

Bruce Suchomel
US EPA Region 8
MS 8P-W-GW
1595 Wynkoop St
Denver, CO 80202-1129

Ute Tribe
PO Box 190
Ft Duchesne, UT 84026

Circle 3 Ranch Property Trust
PO Box 93
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Jean Sweet

Jean Sweet

GARY R. HERBERT
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State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

May 16, 2012

Via e-mail legals@ubstandard.com

Uintah Basin Standard
268 South 200 East
Roosevelt, UT 84066

Subject: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

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Please send proof of publication and billing to:

Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet

Jean Sweet
Executive Secretary

Enclosure

Jean Sweet - Re: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

From: Cindy Kleinfelter <classifieds@ubstandard.com>
To: Jean Sweet <jsweet@utah.gov>
Date: 5/18/2012 10:19 AM
Subject: Re: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

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Division of Oil, Gas and Mining
Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet, Executive Secretary
Utah Div. of Oil, Gas & Mining
1594 West Temple, Suite 1210
Salt Lake City, UT
801-538-5329
jsweet@utah.gov

This will be published May 22, 2012. Thank you.
Cindy

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 16, 2012

Via e-mail naclegal@mediaoneutah.com

Salt Lake Tribune
PO Box 45838
Salt Lake City, UT 84145

Subject: Notice of Agency Action – Bill Barrett Corporation Cause No. UIC-391

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Suite 1210
PO Box 145801
Salt Lake City, UT 84114-5801

Sincerely,

Jean Sweet

Jean Sweet
Executive Secretary

Enclosure

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To: <jsweet@utah.gov>
Date: 5/16/2012 2:48 PM
Subject: Proof for Notice of Agency Action
Attachments: OrderConf.pdf

AD# 793164
Run SL Trib & Des News 5/19/12
Cost $169.64
Please advise of changes
Thank You
Ken

The Salt Lake Tribune WWW.SLTRIB.COM | MEDIAONE OF UTAH A NEWSPAPER AGENCY COMPANY WWW.MEDIAONEUTAH.COM | Deseret News WWW.DESERETNEWS.COM

Remit to: P.O. Box 704005
West Valley City, UT 84170

Order Confirmation for Ad #0000793164-01

Client	DIV OF OIL-GAS & MINING	**Payor Customer**	DIV OF OIL-GAS & MINING
Client Phone	801-538-5340	**Payor Phone**	801-538-5340
Account#	[redacted]	**Payor Account**	[redacted]
Address	1594 W NORTH TEMP #1210,P.O. BOX 145801 SALT LAKE CITY, UT 84114 USA	**Payor Address**	1594 W NORTH TEMP #1210,P.O. BO) SALT LAKE CITY, UT 84114
Fax	801-359-3940	**Ordered By**	**Acct. Exec**
EMail	earlenerussell@utah.gov	Jean	kstowe

Total Amount	**$169.64**
Payment Amt	**$0.00**
Amount Due	**$169.64**

Tear Sheets	Proofs	Affidavits
0	0	1

Payment Method

PO Number Agency Action

Confirmation Notes:

Text: Jean

Ad Type	Ad Size	Color
Legal Liner	2.0 X 49 Li	<NONE>

Product	Placement	Position
Salt Lake Tribune::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
Product	**Placement**	**Position**
Deseret News::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
Product	**Placement**	**Position**
sltrib.com::	Legal Liner Notice - 0998	Public Meeting/Hear-ing Notices
Scheduled Date(s):	05/19/2012	
Product	**Placement**	**Position**
utahlegals.com::	utahlegals.com	utahlegals.com
Scheduled Date(s):	05/19/2012	

Ad Content Proof Actual Size

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-391

IN THE MATTER OF THE APPLICATION OF BILL BARRETT CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE 16-6D-46 BTR SWD & 6-32-36 BTR SWD WELL CONVERSIONS LOCATED IN SECTIONS 6 & 32, TOWNSHIPS 4S & 3S, RANGE 6W, DUCHESNE COUNTY, UTAH, AS CLASS II INJECTION WELLS.

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Dated this 15th day of May, 2012
STATE OF UTAH
DIVISION OF OIL, GAS & MINING
/s/Brad Hill
Oil & Gas Permitting Manager
793164 UPAXLP

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 6/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No June 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
July 03, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	7/3/2012

RECEIVED: Jul. 03, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

SUNDRY NOTICES AND REPORTS ON WELLS

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3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
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	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 7/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No July 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
August 02, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	8/2/2012

RECEIVED: Aug. 02, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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4. LOCATION OF WELL
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QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 8/31/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No August 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
September 06, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	9/4/2012

RECEIVED: Sep. 04, 2012

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8164 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
✓ DRILLING REPORT Report Date: 9/30/2012	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

No September 2012 monthly drilling activity to report.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
October 05, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Megan Finnegan	303 299-9949	Permit Analyst

SIGNATURE	DATE
N/A	10/5/2012

RECEIVED: Oct. 05, 2012

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

UNDERGROUND INJECTION CONTROL PERMIT
Cause No. UIC-391.1

Operator: Bill Barrett Corporation

Well: 16-6D-46 BTR SWD

Location: Section 6, Township 4 South, Range 6 West, USM

County: Duchesne

API No.: 43-013-50781

Well Type: Saltwater Disposal Well

Stipulations of Permit Approval

1. Approval for conversion to Injection Well issued on June 11, 2012.
2. Maximum Allowable Injection Pressure: 2,000 psig
3. Maximum Allowable Injection Rate: (restricted by pressure limitation)
4. Injection Interval: Lower Green River Formation (3,828' – 4,718')
5. A Monthly Injection Report shall be filed as required by R649-8-20.

Approved by: John Rogers
Associate Director

12-11-2012
Date

JR/AM/js
cc: Bruce Suchomel, Environmental Protection Agency
Duchesne County Planning
BLM - Vernal
Well File
N:\O&G Permits\Injection Permits\Bill Barrett Corp

Current Wellbore Schematic

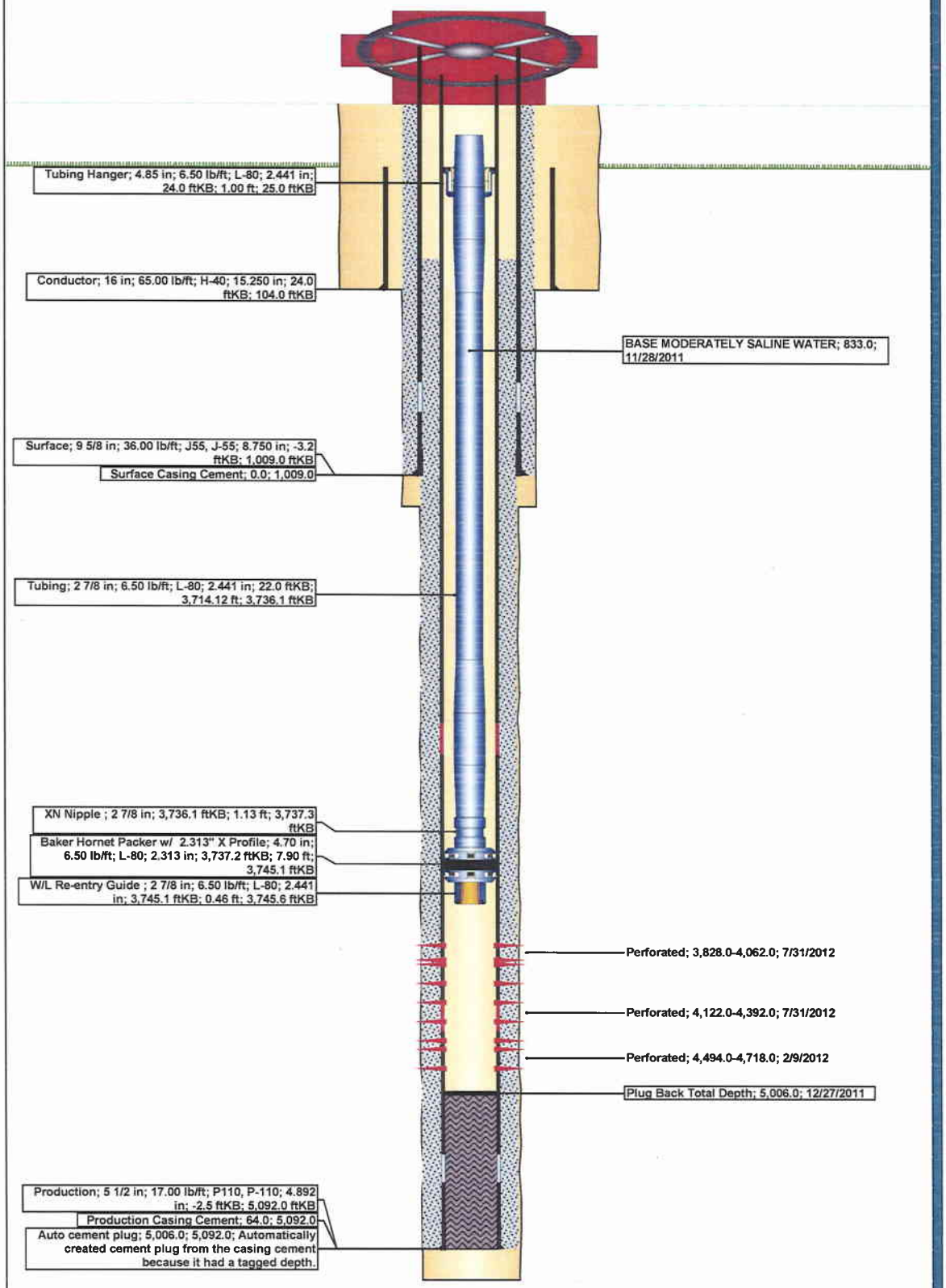
Field: Black Tail Ridge Well Name: SWD 16-6D-46 BTR

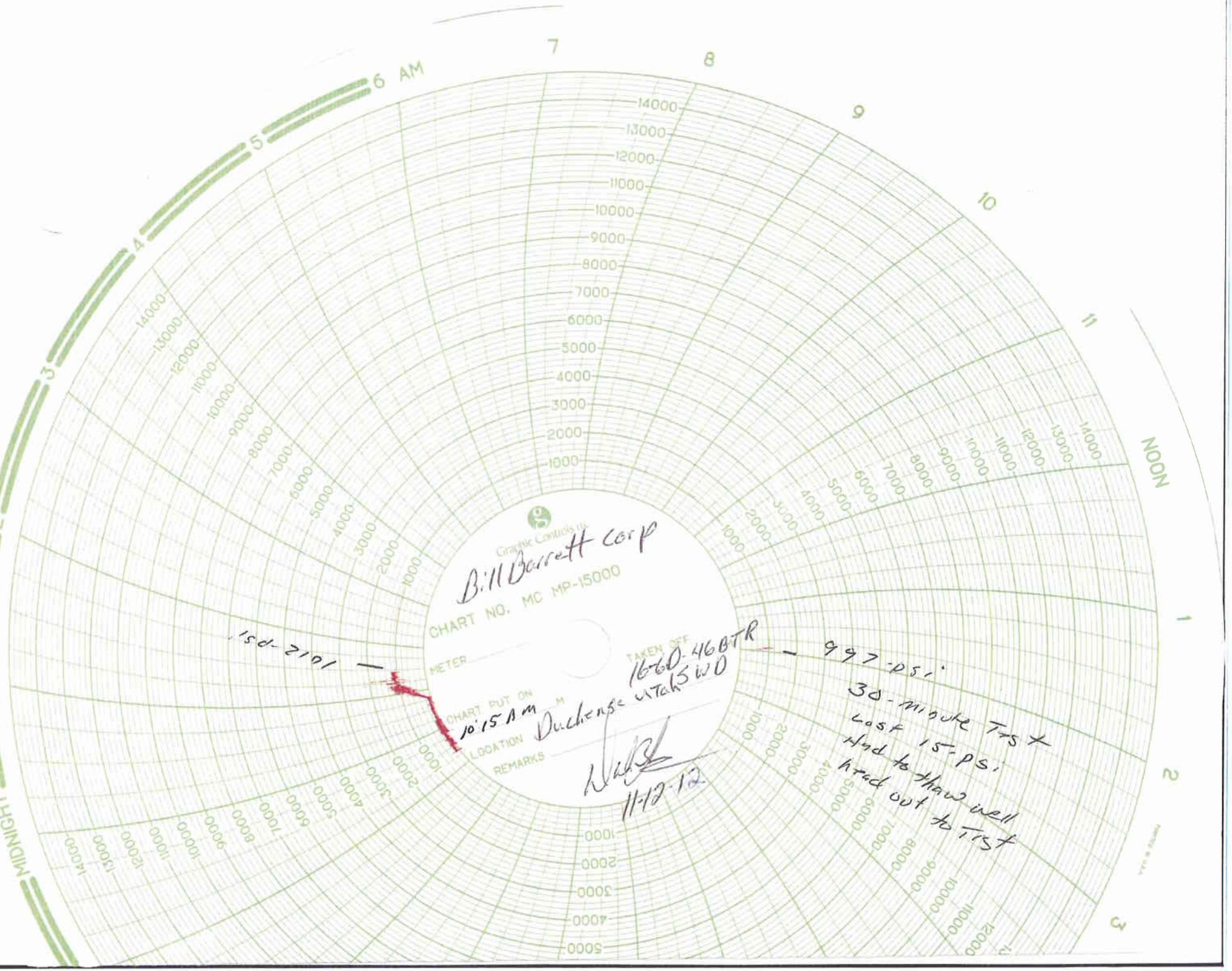
State: Utah County: Duchesne Location: SESE, Sec. 6, T4S, R6W API#: 4301350781

Deviated - Original Hole, 1/1/2030

MD (ftKB)	TVD (ftKB)
-5.9	
-3.3	
-2.6	
0.0	
22.0	
24.0	
24.9	
50.9	
64.0	
104.0	
774.9	
833.0	
963.9	
964.9	
1,007.9	
1,008.9	
1,015.1	
1,100.1	
1,340.9	
1,984.9	
3,294.0	
3,377.0	
3,389.1	
3,396.7	
3,417.7	
3,730.0	
3,736.2	
3,737.2	
3,745.1	
3,745.7	
3,753.0	
4,244.1	
4,248.7	
4,269.7	
4,652.9	
5,005.9	
5,041.0	
5,046.6	
5,047.6	
5,090.9	
5,091.9	
5,120.1	

Vertical schematic (actual)




Graphic Controls
Bill Barrett Corp
CHART NO. MC MP-15000
METER
CHART PUT ON 10:15 AM
LOCATION Duchense Utah SWD
REMARKS
TAKEN OFF 1660-46BTR
11-12-12
1012-psi
997-psi
30-minute Test
Lost 15-psi
Had to thaw well
Had out to Test
MIDNIGHT
NOON

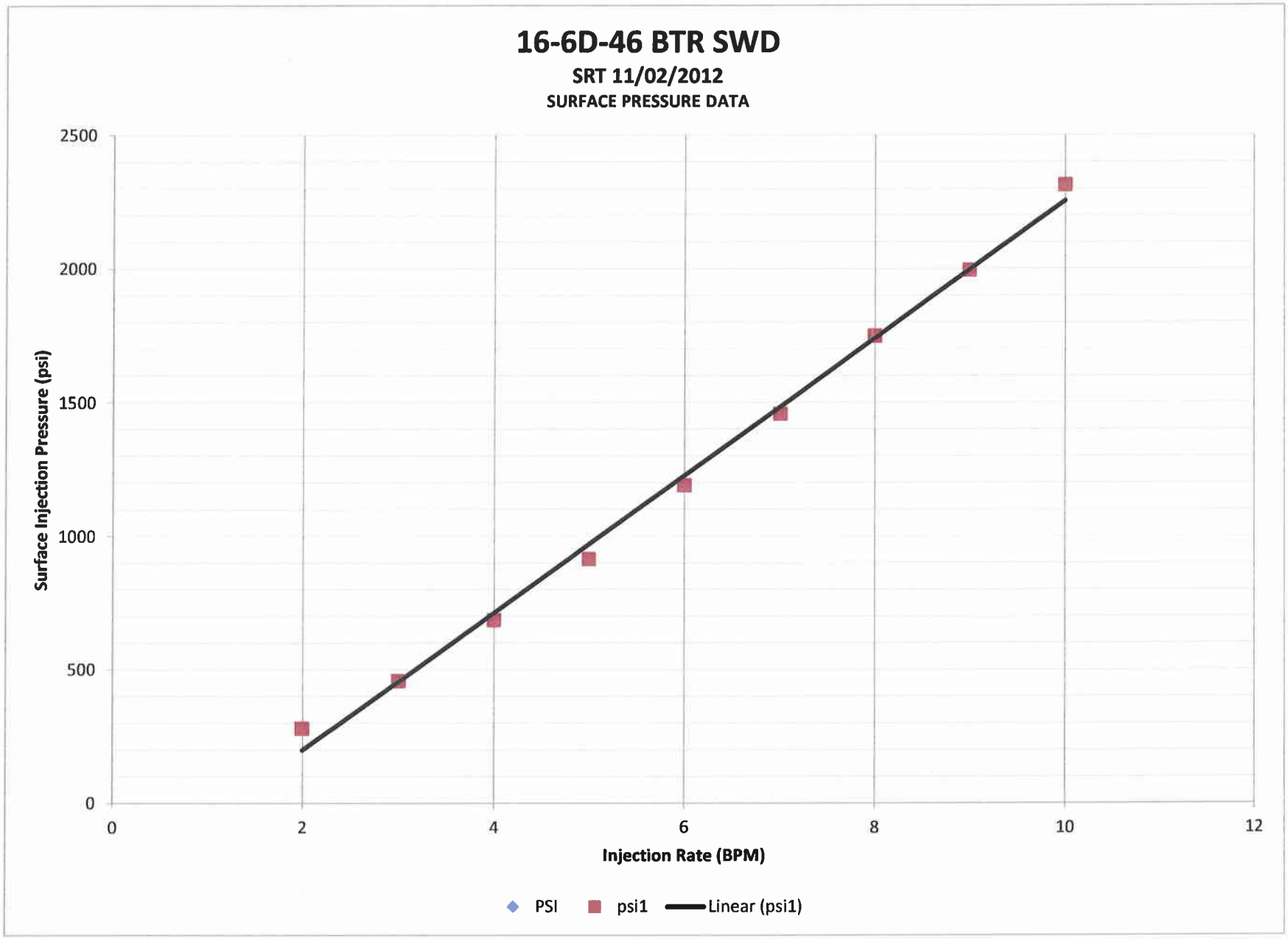
16-6D-46 BTR SWD SRT 11/2/2012

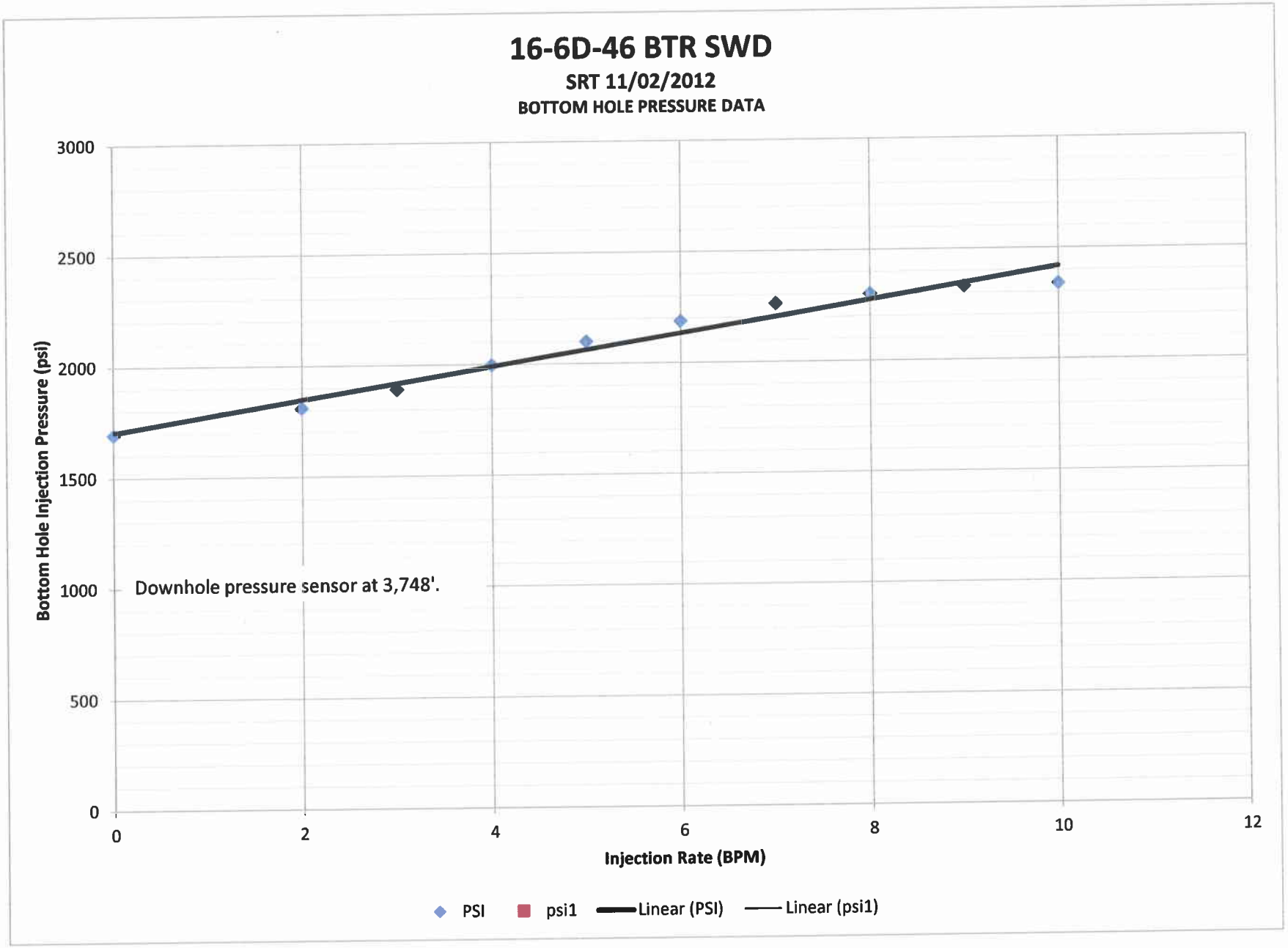
Minutes	BPM 9:56 AM	Surface Pressure	DHP Sensor	BPM 10:27 AM	Surface Pressure	DHP Sensor	BPM 10:58 AM	Surface Pressure	DHP Sensor	BPM 11:29 AM	Surface Pressure	DHP Sensor	BPM 12:00 PM	Surface Pressure	DHP Sensor	BPM 12:31 PM	Surface Pressure	DHP Sensor	BPM 1:03 PM	Surface Pressure	DHP Sensor	BPM 1:34 PM	Surface Pressure	DHP Sensor	BPM 2:06 PM	Surface Pressure	DHP Sensor
0	2	235	1767	3	335	1820	4	593	1907	5	825	2009	6	1093	2107	7	1326	2175	8	1647	2266	9	1979	2306	10	2278	2335
5	2	268	1805	3	426	1864	4	659	1956	5	878	2054	6	1155	2149	7	1407	2220	8	1716	2285	9	1969	2323	10	2301	2338
10	2	278	1814	3	438	1875	4	669	1974	5	889	2075	6	1171	2166	7	1414	2233	5	1005	2237	9	2000	2325	10	2315	2340
15	2	284	1817	3	445	1882	4	668	1983	5	909	2081	6	1160	2166	7	1429	2244	8	1740	2290	9	1985	2328	10	2300	2339
20	2	278	1810	3	450	1887	4	685	1990	5	906	2086	6	1175	2172	7	1424	2253	8	1752	2299	9	2001	2330	10	2309	2340
25	2	279	1809	3	453	1890	4	685	1991	5	918	2093	6	1177	2176	7	1431	2246	8	1758	2298	9	1976	2329	10	2307	2338
30	2	279	1810	3	457	1892	4	685	1996	5	914	2099	6	1191	2187	7	1457	2262	8	1748	2301	9	1994	2331	10	2313	2339
	10:26 AM			10:57 AM			11:28 AM			11:59 AM			12:30 PM			1:01 PM			1:33 PM			2:04 PM			2:36 PM		

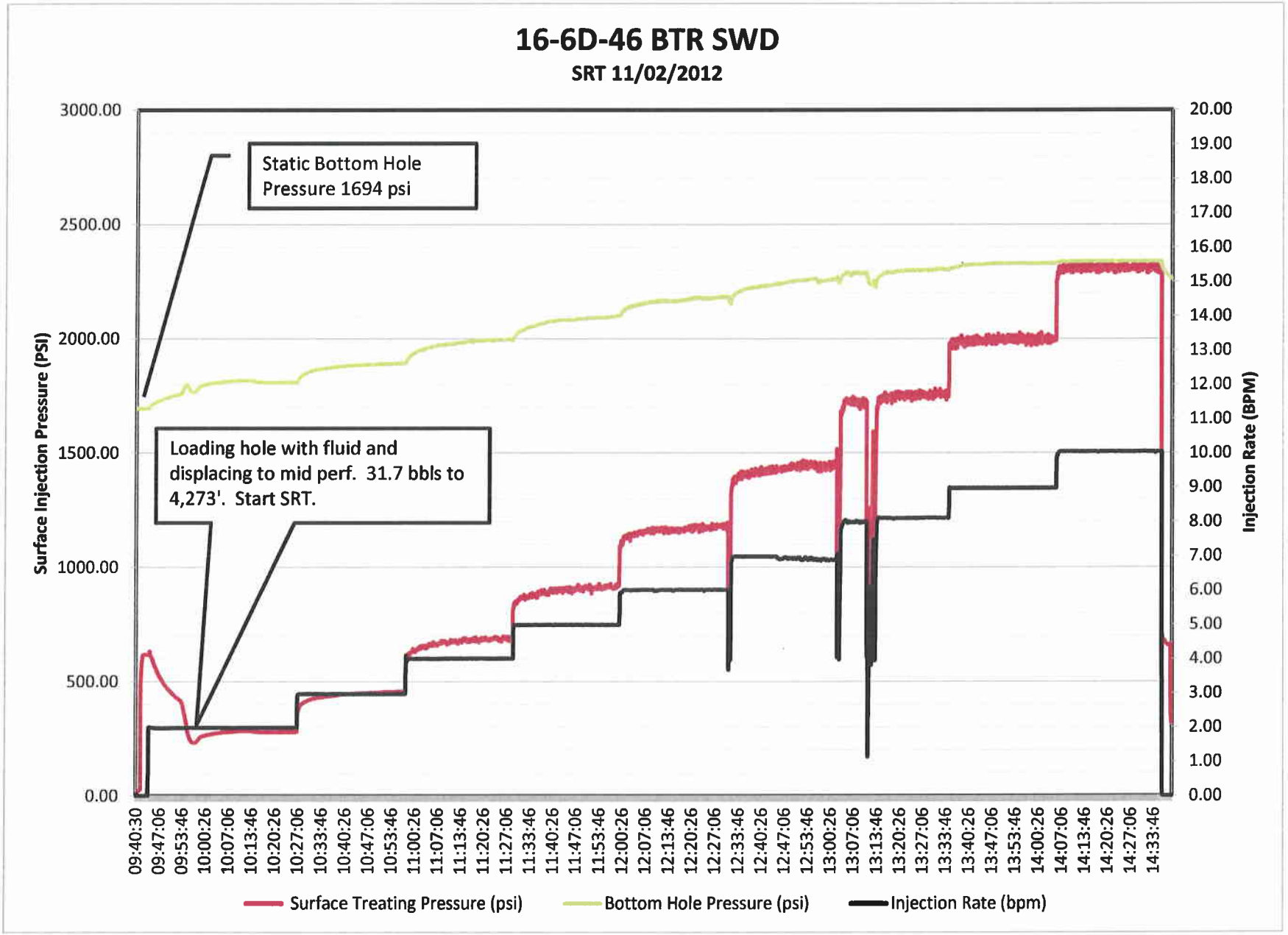
Surface pressure before test	619 psi
Packer and EOT	3,746 feet
Down hole pressure Bombs @	3,748 feet
2-7/8 N-80 6.5# (2.441" ID) with XN on bottom (2.205"]	

	Hydrostatic Pressure Ph (psi)	Last Surf Pressure Of Each SRT	DHP Bomb @ 3748'	Sand Face Pressure	Friction Pressure @ EOT f/ DHP Bomb
2	1694	279	1810	116	163
3	1694	457	1892	198	259
4	1694	685	1996	302	383
5	1694	914	2099	405	509
6	1694	1191	2187	493	698
7	1694	1457	2262	568	889
8	1694	1748	2301	607	1141
9	1694	1994	2331	637	1357
10	1694	2313	2339	645	1668

Final ISIP =	686 psi
FG = (from ISIP)	0.62
FG = (From SRT plot	N/A
Breakover Pressure from SRT =	N/A


16-6D-46 BTR SWD
SRT 11/02/2012
SURFACE PRESSURE DATA
Surface Injection Pressure (psi)
2500
2000
1500
1000
500
0
0
2
4
6
8
10
12
Injection Rate (BPM)
PSI
psi1
Linear (psi1)

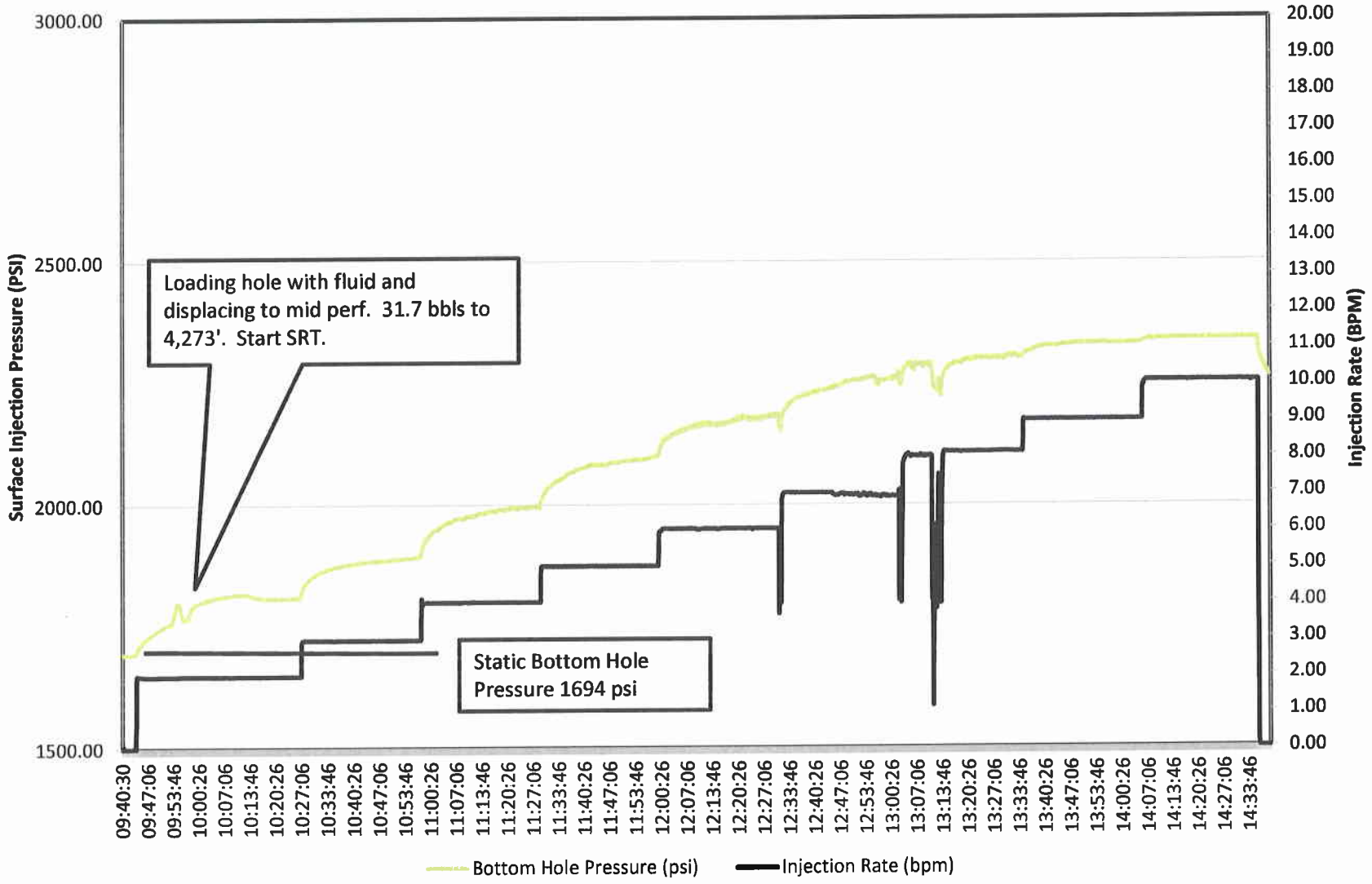

16-6D-46 BTR SWD
SRT 11/02/2012
BOTTOM HOLE PRESSURE DATA
Bottom Hole Injection Pressure (psi)
3000
2500
2000
1500
1000
500
0
0
2
4
6
8
10
12
Injection Rate (BPM)
Downhole pressure sensor at 3,748'.
PSI
psi1
Linear (PSI)
Linear (psi1)

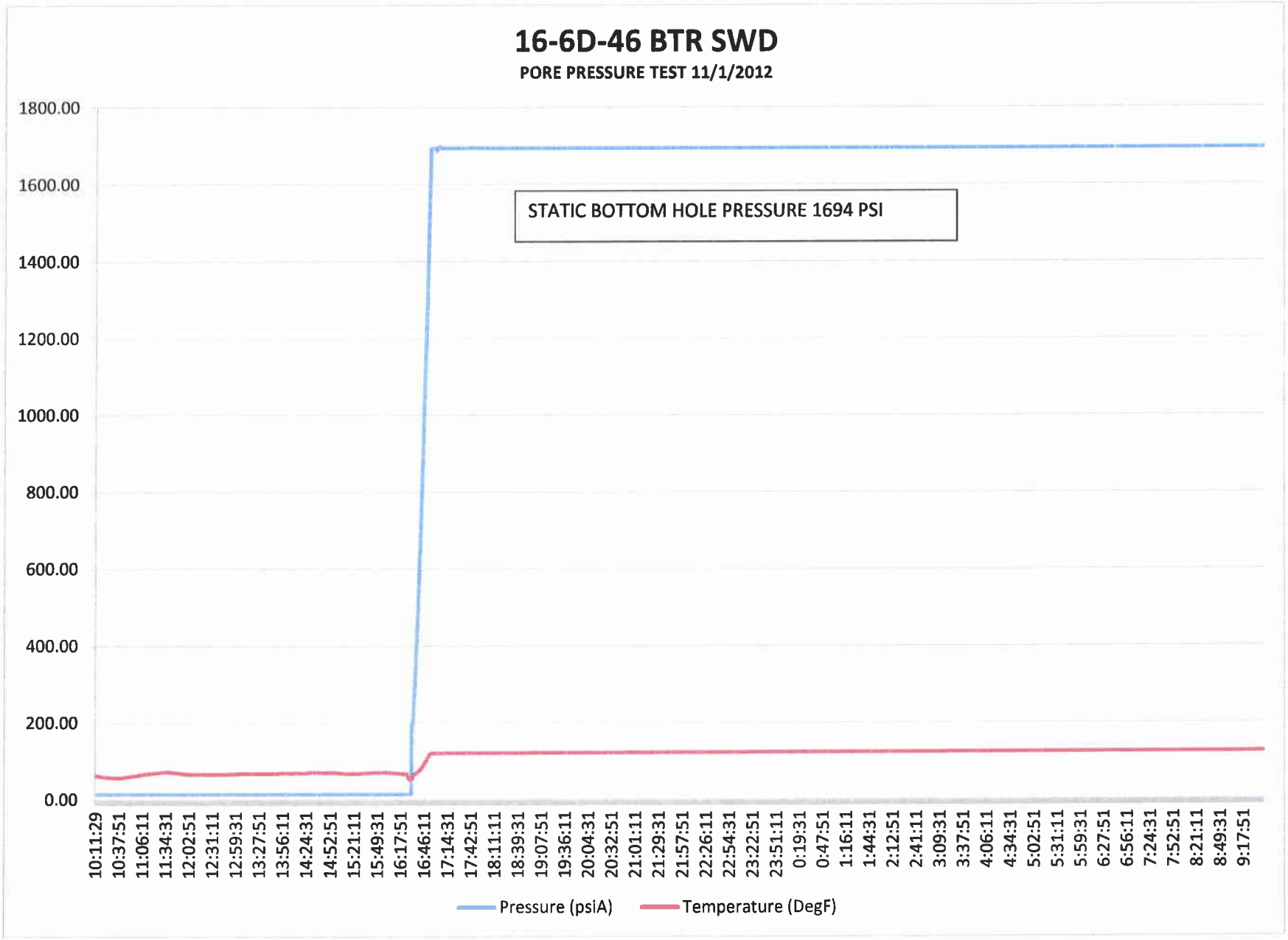

16-6D-46 BTR SWD
SRT 11/02/2012
Static Bottom Hole Pressure 1694 psi
Loading hole with fluid and displacing to mid perf. 31.7 bbls to 4,273'. Start SRT.
Surface Injection Pressure (PSI)
Injection Rate (BPM)
3000.00
2500.00
2000.00
1500.00
1000.00
500.00
0.00
20.00
19.00
18.00
17.00
16.00
15.00
14.00
13.00
12.00
11.00
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
09:40:30
09:47:06
09:53:46
10:00:26
10:07:06
10:13:46
10:20:26
10:27:06
10:33:46
10:40:26
10:47:06
10:53:46
11:00:26
11:07:06
11:13:46
11:20:26
11:27:06
11:33:46
11:40:26
11:47:06
11:53:46
12:00:26
12:07:06
12:13:46
12:20:26
12:27:06
12:33:46
12:40:26
12:47:06
12:53:46
13:00:26
13:07:06
13:13:46
13:20:26
13:27:06
13:33:46
13:40:26
13:47:06
13:53:46
14:00:26
14:07:06
14:13:46
14:20:26
14:27:06
14:33:46
Surface Treating Pressure (psi)
Bottom Hole Pressure (psi)
Injection Rate (bpm)

16-6D-46 BTR SWD

SRT 11/02/2012

Bottom Hole Pressure




16-6D-46 BTR SWD
PORE PRESSURE TEST 11/1/2012
STATIC BOTTOM HOLE PRESSURE 1694 PSI
1800.00
1600.00
1400.00
1200.00
1000.00
800.00
600.00
400.00
200.00
0.00
10:11:29
10:37:51
11:06:11
11:34:31
12:02:51
12:31:11
12:59:31
13:27:51
13:56:11
14:24:31
14:52:51
15:21:11
15:49:31
16:17:51
16:46:11
17:14:31
17:42:51
18:11:11
18:39:31
19:07:51
19:36:11
20:04:31
20:32:51
21:01:11
21:29:31
21:57:51
22:26:11
22:54:31
23:22:51
23:51:11
0:19:31
0:47:51
1:16:11
1:44:31
2:12:51
2:41:11
3:09:31
3:37:51
4:06:11
4:34:31
5:02:51
5:31:11
5:59:31
6:27:51
6:56:11
7:24:31
7:52:51
8:21:11
8:49:31
9:17:51
Pressure (psiA)
Temperature (DegF)

RECEIVED

MAY 0 3 2012

DIV. OF OIL, GAS & MINING

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

AMENDED REPORT ☐ (highlight changes)

FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Uintah and Ouray

7. UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

9. API NUMBER: 4301350781

10 FIELD AND POOL, OR WILDCAT: Altamont

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☐ OTHER Water Disposal W

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR: Bill Barrett Corporation

3. ADDRESS OF OPERATOR: 1099 18th St ste 2300 CITY Denver STATE CO ZIP 80208 PHONE NUMBER: (303) 293-9100

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 200 FSL 99 FEL
AT TOP PRODUCING INTERVAL REPORTED BELOW: 559 FSL 545 FEL
AT TOTAL DEPTH: 567 FSL 643 FEL

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 6 4S 6W U

12. COUNTY: Duchesne

13. STATE: UTAH

14. DATE SPUDDED: 11/9/2011

15. DATE T.D. REACHED: 12/5/2011

16. DATE COMPLETED: 2/9/2012 ABANDONED ☐ READY TO PRODUCE ☐

17. ELEVATIONS (DF, RKB, RT, GL): 5857 GL

18. TOTAL DEPTH: MD 5,120 TVD 5,064

19. PLUG BACK T.D.: MD 5,046 TVD 5,005

20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL, Gamma, Mud

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
26	16 cond	65#	0	104	104			0	
12 1/4	9 5/8 J55	36#	0	1,015	1,009	HCL 100	56	0	
						230	54	0	
8 3/4	5 1/2 P110	17#	0	5,120	5,092	385	159	64	
						450	114		

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	3,750							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) Green River	3,828	4,718	3,764	4,651
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
3,828 4,718	.44	1,088	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
3828' to 4718'	Green River: See Treatment Stages 1 - 3

29. ENCLOSED ATTACHMENTS:
☑ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS:
SWD well
SIOW until SWD permit issued

(5/2000)

(CONTINUED ON BACK)

31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.

34. FORMATION (Log) MARKERS:

Name	Top (Measured Depth)
Green River	1,341
Mahogany	1,985
Douglas Creek	4,244
TD	5,120

35. ADDITIONAL REMARKS (Include plugging procedure)

TOC was calculated by CBL. Attached is Treatment Data.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Julie Webb TITLE Premit Analyst

SIGNATURE Julie Webb DATE 5/3/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

#16-6D-46 BTR SWD Report

44. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. (cont.)		
AMOUNT AND TYPE OF MATERIAL		
Stage	***Gallons Slurry***	***Gallons 15 % HCl Acid***
1	8,976	6,240
2	8,296	5,120
3	7,688	7,800

*Depth intervals for frac information same as perforation record intervals.

RECEIVED
MAY 03 2012
DIV. OF OIL, GAS & MINING

Bill Barrett Corp

Duchesne County, UT (NAD 1927)
Sec. 6-T4S-R6W
#16-6D-46 BTR SWD

Plan A Rev 1

Survey: Sperry MWD Surveys

Sperry Drilling Services

Standard Report

12 December, 2011

Well Coordinates: 664,862.95 N, 2,252,666.70 E (40° 09' 18.81" N, 110° 35' 45.69" W)
Ground Level: 5,856.00 ft

Local Coordinate Origin:	Centered on Well #16-6D-46 BTR SWD
Viewing Datum:	RKB 24' @ 5880.00ft (H&P 319)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

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DIV. OF OIL, GAS & MINING

HALLIBURTON

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DIV. OF OIL, GAS & MINING

Survey Report for #16-6D-46 BTR SWD - Sperry MWD Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tie-On to Surface @ 0.00 ft							
122.00	0.47	174.56	122.00	-0.50	0.05	-0.35	0.39
First Sperry MWD Survey @ 122.00 ft							
184.00	0.35	189.82	184.00	-0.94	0.04	-0.63	0.26
246.00	0.29	287.96	246.00	-1.08	-0.14	-0.57	0.78
286.00	0.65	284.99	286.00	-0.99	-0.46	-0.27	0.90
330.00	1.48	291.00	329.99	-0.72	-1.23	0.49	1.90
377.00	2.24	298.65	376.96	-0.06	-2.60	1.97	1.70
421.00	2.91	306.42	420.92	1.02	-4.26	3.93	1.71
468.00	4.43	311.32	467.82	2.92	-6.58	6.93	3.30
512.00	5.10	315.68	511.67	5.44	-9.22	10.58	1.73
559.00	6.24	316.73	558.44	8.80	-12.43	15.19	2.44
605.00	6.71	316.91	604.14	12.58	-15.98	20.33	1.02
652.00	7.05	312.63	650.81	16.54	-19.98	25.94	1.31
696.00	7.37	307.42	694.46	20.08	-24.21	31.45	1.65
743.00	8.12	304.93	741.03	23.82	-29.32	37.77	1.75
787.00	9.07	302.02	784.53	27.43	-34.81	44.31	2.37
834.00	9.56	302.46	830.91	31.49	-41.25	51.86	1.05
879.00	9.47	303.44	875.30	35.54	-47.49	59.25	0.41
926.00	9.39	305.07	921.66	39.87	-53.85	66.91	0.59
952.00	9.41	304.32	947.31	42.29	-57.34	71.15	0.48
1,016.00	9.44	305.84	1,010.45	48.31	-65.92	81.59	0.39
1,079.00	9.65	307.76	1,072.58	54.57	-74.28	92.03	0.61
1,126.00	9.76	307.35	1,118.90	59.40	-80.56	99.95	0.28
1,173.00	10.03	306.49	1,165.20	64.25	-87.02	108.01	0.65
1,220.00	10.68	308.91	1,211.44	69.42	-93.70	116.46	1.66
1,267.00	10.79	309.93	1,257.62	74.98	-100.46	125.21	0.47
1,314.00	10.69	313.03	1,303.79	80.78	-107.02	133.96	1.25
1,361.00	10.46	312.11	1,349.99	86.61	-113.37	142.57	0.61
1,408.00	9.93	309.01	1,396.25	92.02	-119.69	150.89	1.62
1,456.00	9.48	307.09	1,443.57	97.01	-126.06	158.98	1.15
1,503.00	10.02	307.29	1,489.89	101.83	-132.40	166.93	1.15
1,550.00	10.40	310.10	1,536.14	107.04	-138.90	175.26	1.33
1,597.00	10.59	312.17	1,582.36	112.67	-145.34	183.81	0.90
1,644.00	10.30	311.10	1,628.58	118.33	-151.71	192.33	0.74
1,691.00	9.89	308.59	1,674.85	123.61	-158.03	200.56	1.28
1,739.00	10.06	306.47	1,722.12	128.67	-164.62	208.87	0.84
1,786.00	9.67	305.31	1,768.43	133.39	-171.15	216.91	0.93
1,833.00	9.87	306.50	1,814.75	138.07	-177.61	224.87	0.60
1,880.00	10.28	307.37	1,861.02	143.01	-184.18	233.08	0.93
1,927.00	11.32	308.52	1,907.19	148.43	-191.12	241.88	2.26
1,974.00	10.86	307.38	1,953.31	153.99	-198.25	250.92	1.08
2,021.00	10.62	310.70	1,999.49	159.50	-205.05	259.67	1.41
2,068.00	10.24	309.54	2,045.71	164.99	-211.55	268.18	0.92
2,116.00	9.80	312.50	2,092.98	170.46	-217.85	276.53	1.41
2,163.00	9.49	310.40	2,139.32	175.68	-223.75	284.40	1.00
2,210.00	9.88	309.47	2,185.65	180.75	-229.82	292.30	0.89
2,257.00	9.66	308.47	2,231.96	185.77	-236.02	300.28	0.59
2,304.00	9.82	310.08	2,278.29	190.80	-242.17	308.23	0.67

Survey Report for #16-6D-46 BTR SWD - Sperry MWD Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
2,351.00	10.31	309.49	2,324.56	196.06	-248.48	316.44	1.07
2,399.00	9.72	305.95	2,371.83	201.17	-255.08	324.78	1.78
2,446.00	10.04	305.39	2,418.14	205.87	-261.63	332.83	0.71
2,493.00	10.98	306.66	2,464.35	210.91	-268.56	341.39	2.06
2,540.00	11.32	310.40	2,510.46	216.58	-275.67	350.47	1.70
2,588.00	11.29	313.12	2,557.53	222.84	-282.68	359.87	1.11
2,635.00	10.98	312.63	2,603.64	229.02	-289.33	368.93	0.69
2,682.00	10.94	311.90	2,649.79	235.03	-295.95	377.85	0.31
2,729.00	11.13	313.99	2,695.92	241.16	-302.53	386.83	0.94
2,776.00	10.76	312.88	2,742.06	247.29	-309.01	395.74	0.91
2,823.00	10.38	311.36	2,788.27	253.08	-315.40	404.35	1.00
2,871.00	9.90	309.67	2,835.52	258.57	-321.82	412.80	1.18
2,918.00	10.03	309.50	2,881.81	263.75	-328.09	420.93	0.28
2,965.00	9.63	308.09	2,928.12	268.78	-334.34	428.95	0.99
3,012.00	9.80	307.23	2,974.44	273.62	-340.62	436.88	0.48
3,059.00	9.84	307.28	3,020.75	278.48	-347.00	444.89	0.09
3,106.00	10.20	306.70	3,067.04	283.40	-353.54	453.06	0.80
3,153.00	10.48	307.38	3,113.27	288.48	-360.27	461.49	0.65
3,200.00	9.88	308.67	3,159.53	293.59	-366.81	469.79	1.37
3,247.00	9.52	307.58	3,205.86	298.48	-373.04	477.71	0.86
3,294.00	9.51	307.28	3,252.22	303.20	-379.21	485.47	0.11
3,342.00	9.79	308.15	3,299.54	308.13	-385.58	493.51	0.66
3,389.00	10.09	308.64	3,345.83	313.17	-391.93	501.62	0.66
3,436.00	10.58	310.47	3,392.07	318.54	-398.43	510.05	1.25
3,483.00	10.24	314.44	3,438.29	324.26	-404.70	518.53	1.69
3,530.00	9.50	312.25	3,484.60	329.80	-410.55	526.57	1.77
3,577.00	8.99	310.02	3,530.99	334.77	-416.24	534.11	1.33
3,624.00	8.98	309.87	3,577.41	339.48	-421.86	541.45	0.05
3,671.00	9.51	309.77	3,623.80	344.31	-427.66	549.00	1.13
3,719.00	9.87	309.02	3,671.12	349.44	-433.91	557.08	0.79
3,766.00	9.71	309.93	3,717.43	354.52	-440.08	565.07	0.47
3,813.00	9.30	309.06	3,763.79	359.46	-446.06	572.84	0.92
3,860.00	9.42	310.39	3,810.16	364.34	-451.94	580.48	0.53
3,907.00	9.85	311.29	3,856.50	369.49	-457.89	588.34	0.97
3,954.00	9.72	312.11	3,902.81	374.80	-463.86	596.32	0.41
4,001.00	9.86	311.87	3,949.13	380.15	-469.80	604.31	0.31
4,048.00	9.65	308.91	3,995.45	385.31	-475.86	612.27	1.16
4,095.00	8.46	304.68	4,041.86	389.75	-481.77	619.65	2.90
4,142.00	7.37	298.82	4,088.42	393.17	-487.25	626.06	2.88
4,190.00	6.34	291.91	4,136.07	395.64	-492.41	631.61	2.75
4,237.00	5.63	285.68	4,182.82	397.24	-497.03	636.19	2.05
4,284.00	5.21	278.84	4,229.61	398.19	-501.36	640.14	1.64
4,331.00	4.86	273.40	4,276.43	398.63	-505.46	643.58	1.26
4,378.00	4.51	266.18	4,323.27	398.63	-509.29	646.54	1.46
4,425.00	4.29	260.05	4,370.13	398.20	-512.87	649.02	1.10
4,472.00	4.16	252.47	4,417.00	397.38	-516.22	651.09	1.22
4,519.00	3.99	245.69	4,463.89	396.20	-519.34	652.74	1.09
4,566.00	4.13	242.44	4,510.77	394.74	-522.33	654.12	0.57
4,613.00	4.13	236.10	4,557.65	393.01	-525.23	655.26	0.97
4,660.00	4.12	230.22	4,604.52	390.99	-527.94	656.06	0.90
4,707.00	4.11	225.24	4,651.40	388.72	-530.43	656.54	0.76

Survey Report for #16-6D-46 BTR SWD - Sperry MWD Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,755.00	3.91	222.70	4,699.29	386.31	-532.76	656.80	0.56
4,802.00	3.77	220.21	4,746.18	383.95	-534.85	656.91	0.46
4,849.00	3.15	218.08	4,793.09	381.75	-536.64	656.90	1.35
4,943.00	3.03	213.01	4,886.96	377.64	-539.59	656.55	0.32
5,061.00	3.86	197.00	5,004.75	371.22	-542.45	654.68	1.07
Final Sperry MWD Survey @ 5061.00 ft							
5,120.00	3.86	197.00	5,063.61	367.43	-543.61	653.16	0.00
Straight Line Projection to TD @ 5120.00							

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
0.00	0.00	0.00	0.00	Tie-On to Surface @ 0.00 ft
122.00	122.00	-0.50	0.05	First Sperry MWD Survey @ 122.00 ft
5,061.00	5,004.75	371.22	-542.45	Final Sperry MWD Survey @ 5061.00 ft
5,120.00	5,063.61	367.43	-543.61	Straight Line Projection to TD @ 5120.00

Vertical Section Information

	Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target		#16-6D-46 BTR SWD_Plan A-1_BHL Tgt	309.51	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
122.00	5,120.00	Sperry MWD Surveys	MWD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
#16-6D-46 BTR SWD_	0.00	0.00	0.00	0.00	0.00	664,862.95	2,252,666.70	40° 9' 18.810 N	110° 35' 45.690 W
- survey hits target center - Polygon									
#16-6D-46 BTR SWD_	0.00	0.00	0.00	0.00	0.00	664,862.95	2,252,666.70	40° 9' 18.810 N	110° 35' 45.690 W
- survey hits target center - Point									
#16-6D-46 BTR SWD_	0.00	0.00	0.00	0.00	0.00	664,862.95	2,252,666.70	40° 9' 18.810 N	110° 35' 45.690 W
- survey hits target center - Polygon									
#16-6D-46 BTR SWD_	0.00	0.00	5,050.00	445.17	-539.77	665,302.61	2,252,122.50	40° 9' 23.209 N	110° 35' 52.642 W
- survey misses target center by 76.78ft at 5101.34ft MD (5044.99 TVD, 368.63 N, -543.24 E) - Rectangle (sides W200.00 H200.00 D0.00)									

4770 S. 5600 W.
P.O. BOX 704005
WEST VALLEY CITY, UTAH 84170
FED.TAX I.D.# 87-0217663

The Salt Lake Tribune MEDIAone Deseret News

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CUSTOMER'S COPY

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL-GAS & MINING, 1594 W NORTH TEMP #1210 P.O. BOX 145801 SALT LAKE CITY, UT 84114	9001402352	5/21/2012

43 013 50781
16-6D-46-BTR SWD
4S 6W 6

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MAY 28 2012
DIV. OF OIL, GAS & MINING

ACCOUNT NAME	
DIV OF OIL-GAS & MINING,	
TELEPHONE	ADORDER# / INVOICE NUMBER
8015385340	0000793164 /
SCHEDULE	
Start 05/19/2012	End 05/19/2012
CUST. REF. NO.	
Agency Action	
CAPTION	
BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATUR	
SIZE	
49 Lines	2.00 COLUMN
TIMES	RATE
4	
MISC. CHARGES	AD CHARGES
	TOTAL COST
	169.64

BEFORE THE DIVISION OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH
NOTICE OF AGENCY ACTION
CAUSE NO. UIC-391

IN THE MATTER OF THE APPLICATION OF BILL BARRETT CORPORATION FOR ADMINISTRATIVE APPROVAL OF THE 16-6D-46 BTR SWD & 6-32-36 BTR SWD WELL CONVERSIONS LOCATED IN SECTIONS 6 & 32, TOWNSHIPS 4S & 3S, RANGE 6W, DUCHESNE COUNTY, UTAH, AS CLASS II INJECTION WELLS.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Division of Oil, Gas and Mining (the "Division") is commencing an informal adjudicative proceeding to consider the application of the Bill Barrett Corporation (1099 18th Street, Suite 2300, Denver, Colorado, 80202, 303-293-9100) for administrative approval of the 16-6D-46 BTR SWD (43-013-50781) and 6-32-36 BTR SWD (43-013-50921) well conversions, located in SE/4 SE/4, Section 6, Township 4S, Range 6W, and SE/4 NW/4, Section 32, Township 3S, Range 6W, Uintah Baseline & Meridian, Duchesne County, Utah, for the conversion of production wells to Class II injection wells. The adjudicative proceedings will be conducted informally according to Utah Admin. Rule R649-10, Administrative Procedures.

Selected zones in the Green River Formation are proposed for water disposal by injection. The maximum requested injection pressure and rate for this well will be determined based on fracture gradient information submitted by Bill Barrett Corporation.

Any person desiring to object to the proposed application or otherwise intervene in the proceeding must file a written protest or notice of intervention with the Division within fifteen days following publication of this notice. The Division's Presiding Officer for the proceeding is Brad Hill, Oil & Gas Permitting Manager, at P.O. Box 145801, Salt Lake City, Utah 84114-5801, phone number (801) 538-5340. If such a protest or notice of intervention is received, a hearing will be scheduled in accordance with the aforementioned administrative procedure rule. Protestants and/or interveners should be prepared to demonstrate at the hearing how this matter affects their interests.

Dated this 15th day of May, 2012
STATE OF UTAH
DIVISION OF OIL, GAS & MINING

UPAXLP

AFFIDAVIT OF PUBLICATION

AS NEWSPAPER AGENCY COMPANY, LLC dba MEDIAONE OF UTAH LEGAL BOOKER, I CERTIFY THAT THE ATTACHED ADVERTISEMENT OF **BEFORE THE DIVISION OF OIL, GAS AND MINING DEPARTMENT OF NATURAL RESOURCES STATE OF UTAH NOTICE OF AGENCY ACTION CAUSE NO. UIC-391 IN THE MATTER OF THE APPLIC** FOR **DIV OF OIL-GAS & MINING,** WAS PUBLISHED BY THE NEWSPAPER AGENCY COMPANY, LLC dba MEDIAONE OF UTAH, AGENT FOR THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS PRINTED IN THE ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH, AND PUBLISHED IN SALT LAKE CITY, SALT LAKE COUNTY IN THE STATE OF UTAH. NOTICE IS ALSO POSTED ON UTAHLEGALS.COM ON THE SAME DAY AS THE FIRST NEWSPAPER PUBLICATION DATE AND REMAINS ON UTAHLEGALS COM INDEFINATELY.

PUBLISHED ON Start 05/19/2012 End 05/19/2012

SIGNATURE

5/21/2012

VIRGINIA CRAFT
Notary Public, State of Utah
Commission # 581469
My Commission Expires
January 12, 2014

THIS IS NOT A STATEMENT BUT A "PROOF OF PUBLICATION"
PLEASE PAY FROM BILLING STATEMENT

Send Payments to:
Uintah Basin Standard
268 S 200 E
Roosevelt, Utah 84066

Phone: 435-722-5131
Fax: 435-722-4140

Uintah Basin Standard
www.ubstandard.com

Vernal Express
www.vernalexpress.com

Invoice Number	Invoice Date
30873	5/22/2012

Advertiser No.	Invoice Amount	Due Date
2080	$106.65	6/21/2012

RECEIVED
MAY 25 2012
DIV. OF OIL, GAS & MINING

DIVISION OF OIL GAS & MINING
Rose Nolton
1594 W. N.TEMPLE STE 121
PO BOX 145801
SALT LAKE CITY, UT 84114-5801

1 1/2% fee will be charged to all past due balances.

Amount Enclosed

Please detach top portion and return with your payment.

INVOICE

Uintah Basin Standard **DIVISION OF OIL GAS & MINING** **Invoice No. 30873** **5/22/2012**

Date	Order	Description	Ad Size	SubTotal	Sales Tax	Amount
5/22/2012	15461 UBS	UBS Legal Notice: Notice of Agency Action, Cause No. UIC-391 Pub. May 22, 2012				$106.65
					Sub Total:	$106.65
			Total Transactions:	1	Total:	$106.65

SUMMARY **Advertiser No.** 2080 **Invoice No.** 30873

1 1/2% fee will be charged to all past due balances.

Thank You for your business!

Thank you for advertising with us, we appreciate your business!

AFFIDAVIT OF PUBLICATION

County of Duchesne,
STATE OF UTAH

I, Kevin Ashby on oath, say that I am the PUBLISHER of the Uintah Basin Standard, a weekly newspaper of general circulation, published at Roosevelt, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue such newspaper for 1 consecutive issues, and that the first publication was on the 22 day of May, 2012, and that the last publication of such notice was in the issue of such newspaper dated the 22 day of May, 2012, and that said notice was published on Utahlegals.com on the same day as the first newspaper publication and the notice remained on Utahlegals.com until the end of the scheduled run.

Kevin Ashby
Publisher

Subscribed and sworn to before me on this

23 day of May, 2012

by Kevin Ashby.

Bonnie Parrish
Notary Public

Notary Public
BONNIE PARRISH
Commission #653427
My Commission Expires
February 23, 2016
State of Utah

NOTICE OF AGENCY ACTION CAUSE NO. UIC-391

BEFORE THE DIVISION OF OIL, GAS

IELE, UINTAH BASIN STANDARD

owell dashes down
k in a long distance

ourth, 11.87; 4x100
Union, sixth, 47.38;
) – Caity Beddes,
ifth, 1:02.90.
300 hurdles – Har-
ray, Uintah, sec-
14; Dani Heaton,
third, 48.28; girls
ibrey Rust, Uintah,
:41.66; boys 800 –
ghton, Union, fifth,
(Park City's Colter
first at 2:04.84);
– Betty Orr, Uintah,
7.14 (Sarah Palmer,
rst, 26.66); boys 200
fa Lapuaho, Union,
39 (Christian Weidle,
rst, 21.91).
shot put – Cierra
d, Union, fifth, 30-
Mackenzie Calder,
sixth, 30-00 (Megan
n, Park City, first,
); girls javelin – Man-
Union, sixth, 88-03
n, first at 137-08);
; jump – Kenny Har-
ah, fourth, 20-01.25;
ee, Wasatch, first,
); girls 1600 – Rust,
-2nd, 5:59.20; (Sophie
d, Park City, first,

1600 relay – Union
ooper, Erika Willard,
Narren, Monica Wil-

Bill Barrett Corporation

43 013 50781 4S 6W 6

16-6D-46BTR SWD

From: Tracey Fallang
Sent: Wednesday, August 07, 2013 12:39 PM
To: Venessa Langmacher; Chris Stevenson
Subject: 16-6D-46 BTR

Carol Daniels called me and apparently we need to send in a start-up sundry once we begin injecting on new SWDs. Can you please send a sundry on this well? Will need the exact date we started injecting for it....

Thanks.

FW: 16-6D-46 BTR

Tracey Fallang <tfallang@billbarrettcorp.com> Wed, Aug 7, 2013 at 1:14 PM
To: "caroldaniels@utah.gov" <caroldaniels@utah.gov>

Carol – FYI that Sarah already contacted Venessa this a.m. and it's been submitted.

Thanks.

From: Venessa Langmacher
Sent: Wednesday, August 07, 2013 1:03 PM
To: Tracey Fallang; Chris Stevenson
Subject: RE: 16-6D-46 BTR

Sarah asked me to do this morning. The sundry has been submitted with the first injection date of 1/18/13.

Thanks,

Venessa Langmacher

Senior Permit Analyst

BILL BARRETT CORPORATION

1099 18th Street | Suite 2300

Denver, CO 80202

D 303.312.8172 | F 303.291.0420

vlangmacher@billbarrettcorp.com

www.billbarrettcorp.com

To well file
1st injection date

UCI Form 3

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

MONTHLY INJECTION REPORT

Operator: Bill Barrett Corp
Address: 1099 18th Street, Suite 2300
City Denver
state CO zip 80202

Report Per Jan-2013
Phone Number: (303) 312-8129
Amended Report ☐ **(highlight changes)**

Well Name and Number			**API Number**
16-6D-46 BTR SWD			4301350781
Location of Well			**Field or Unit Name**
Footage:		County: DUCHESNE	16-6D-46 SWD
QQ, Section, Township, Range:	SESE 06 4S 6W	State: UTAH	**Lease Designation and Number**
			18327

Date	Volume Disposed	Hours in Service	Maximum Pressure	Average Operating Pressure	Tubing / Casing Annulus Pressure
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
5	0	0	0	0	0
6	0	0	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	0	0	0	0	0
10	0	0	0	0	2
11	0	0	0	0	2
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	403	24	4	7	706
19	443	24	168	513	876
20	0	0	400	639	60
21	0	0	325	433	46
22	0	0	453	651	45
23	0	0	565	921	45
24	0	0	585	990	48
25	0	0	745	1327	48
26	0	0	1350	1397	41
27	0	0	1407	1485	30
28	0	0	1402	1513	30
29	208	24	986	2065	20
30	772	24	435	576	0
31	1585	24	242	532	0

Total volume injected for mont 3,411 All time cumulative volume injecte 3,411

I hereby certify that this report is true and complete to the best of my knowledge.

Name (Please Print) Sarah Barkman Title Production Technician

Signature _____ Date 2/18/2013

(5/2000)

RECEIVED
AUG 07 2013
DIV. OF OIL, GAS & MINING

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER: 2OG0005608

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

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Water Disposal Well

8. WELL NAME and NUMBER: 16-6D-46 BTR SWD

2. NAME OF OPERATOR: BILL BARRETT CORP

9. API NUMBER: 43013507810000

3. ADDRESS OF OPERATOR: 1099 18th Street Ste 2300 , Denver, CO, 80202

PHONE NUMBER: 303 312-8134 Ext

9. FIELD and POOL or WILDCAT: ALTAMONT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0200 FSL 0099 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESE Section: 06 Township: 04.0S Range: 06.0W Meridian: U

COUNTY: DUCHESNE

STATE: UTAH

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

TYPE OF SUBMISSION

- ☐ NOTICE OF INTENT — Approximate date work will start:
- ✓ SUBSEQUENT REPORT — Date of Work Completion: 1/18/2013
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Injection

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

The first date of injection was 01/18/2013.

Accepted by the Utah Division of Oil, Gas and Mining

Date: September 12, 2013

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Venessa Langmacher	303 312-8172	Senior Permit Analyst

SIGNATURE	DATE
N/A	8/7/2013

RECEIVED: Aug. 07, 2013

Division of Oil, Gas and Mining
Operator Change/Name Change Worksheet-for State use only

Effective Date: 11/1/2016

FORMER OPERATOR:	NEW OPERATOR:
Bill Barrett Corporation 1099 18th Street, Suite 2300 Denver, CO 80202	Rig II, LLC 1582 West 2600 South Woods Cross, UT 84087
CA Number(s):	Unit(s):

WELL INFORMATION:

Well Name	Sec	TWN	RNG	API	Entity	Mineral	Surface	Type	Status
See Attached List									

OPERATOR CHANGES DOCUMENTATION:

1. Sundry or legal documentation was received from the **FORMER** operator on: 10/21/2016
2. Sundry or legal documentation was received from the **NEW** operator on: 10/21/2016
3. New operator Division of Corporations Business Number: 8256968-0160

REVIEW:

1. Surface Agreement Sundry from **NEW** operator on Fee Surface wells received on: N/A
2. Receipt of Acceptance of Drilling Procedures for APD on: 10/21/2016
3. Reports current for Production/Disposition & Sundries: 11/2/2016
4. OPS/SI/TA well(s) reviewed for full cost bonding: 11/3/2016
5. UIC5 on all disposal/injection/storage well(s) approved on: 11/3/2016
6. Surface Facility(s) included in operator change: None
7. Inspections of PA state/fee well sites complete on (only upon operators request): 11/3/2016

NEW OPERATOR BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UTB000712
2. Indian well(s) covered by Bond Number: LPM 922467
3.State/fee well(s) covered by Bond Number(s): 9219529

DATA ENTRY:

1. Well(s) update in the **OGIS** on: 11/7/2016
2. Entity Number(s) updated in **OGIS** on: 11/7/2016
3. Unit(s) operator number update in **OGIS** on: N/A
4. Surface Facilities update in **OGIS** on: N/A
5. State/Fee well(s) attached to bond(s) in **RBDMS** on: 11/7/2016
6. Surface Facilities update in **RBDMS** on: N/A

COMMENTS:

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

Well Name	Sec	TWN	RNG	API Number	Entity	Mineral	Surface	Type	Status
SWD 9-36 BTR	9	030S	060W	4301350646	18077	Indian	Fee	WD	A
16-6D-46 BTR SWD	6	040S	060W	4301350781	18327	Indian	Fee	WD	A
6-32-36 BTR SWD	32	030S	060W	4301350921	18329	Indian	Fee	WD	A
LC TRIBAL 8-26D-47	26	040S	070W	4301334024		Indian	Indian	OW	APD
16-21D-37 BTR	21	030S	070W	4301350758		Indian	Fee	OW	APD
14-11D-37 BTR	11	030S	070W	4301350862		Indian	Fee	OW	APD
7-17D-46 BTR	17	040S	060W	4301350883		Indian	Indian	OW	APD
14-12D-37 BTR	12	030S	070W	4301350894		Indian	Fee	OW	APD
1-18D-36 BTR	18	030S	060W	4301350922		Indian	Fee	OW	APD
13-2D-45 BTR	2	040S	050W	4301350931		Indian	Indian	OW	APD
5H-16-46 BTR	16	040S	060W	4301350992		Indian	Indian	OW	APD
9H-17-45 BTR	17	040S	050W	4301351098		Indian	Indian	OW	APD
13H-8-46 BTR UB	8	040S	060W	4301351124		Indian	Indian	OW	APD
8H-9-46 BTR	9	040S	060W	4301351140		Indian	Indian	OW	APD
LC TRIBAL 7-31D-37	31	030S	070W	4301351147		Indian	Fee	OW	APD
14-16D-45 BTR	16	040S	050W	4301351178		Indian	Indian	OW	APD
16-19D-37 BTR	19	030S	070W	4301351179		Indian	Fee	OW	APD
6-2D-45 BTR	2	040S	050W	4301351234		Indian	Indian	OW	APD
2-2D-45 BTR	2	040S	050W	4301351235		Indian	Indian	OW	APD
10-26-35 BTR	26	030S	050W	4301351248		Indian	Fee	OW	APD
LC TRIBAL 1H-33-46	33	040S	060W	4301351257		Indian	Fee	OW	APD
LC TRIBAL 9-25D-46	25	040S	060W	4301351276		Indian	Indian	OW	APD
LC TRIBAL 8H-30-45	30	040S	050W	4301351277		Indian	Indian	OW	APD
LC TRIBAL 16H-30-45	30	040S	050W	4301351279		Indian	Indian	OW	APD
LC TRIBAL 13-30D-45	30	040S	050W	4301351282		Indian	Indian	OW	APD
LC TRIBAL 16H-36-46	36	040S	060W	4301351291		Indian	Indian	OW	APD
LC TRIBAL 13H-30-46	30	040S	060W	4301351321		Indian	Indian	OW	APD
LC TRIBAL 13H-31-46	31	040S	060W	4301351326		Indian	Indian	OW	APD
LC TRIBAL 16-31D-46	31	040S	060W	4301351328		Indian	Indian	OW	APD
LC TRIBAL 5H-26-47	26	040S	070W	4301351337		Indian	Indian	OW	APD
LC TRIBAL 5H-19-45	20	040S	050W	4301351349		Indian	Indian	OW	APD
LC TRIBAL 16-36D-47	36	040S	070W	4301351363		Indian	Indian	OW	APD
15-4D-47 BTR	4	040S	070W	4301351377		Indian	Fee	OW	APD
16-23D-46 LC TRIBAL	23	040S	060W	4301351396		Indian	Fee	OW	APD
15-2D-36 BTR	2	030S	060W	4301351419		Indian	Fee	OW	APD
16-23D-37 BTR	23	030S	070W	4301351420		Indian	Fee	OW	APD
11-9D-47 BTR	9	040S	070W	4301351422		Indian	Fee	OW	APD
15-13D-47 BTR	13	040S	070W	4301351424		Indian	Indian	OW	APD
LC TRIBAL 15-19D-46	19	040S	060W	4301351426		Indian	Indian	OW	APD
16-13D-45 BTR	13	040S	050W	4301351428		Indian	Indian	OW	APD

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

14-12D-45 BTR	12	040S	050W	4301351444		Indian	Indian	OW	APD
16-14D-45 BTR	14	040S	050W	4301351445		Indian	Indian	OW	APD
5-13D-45 BTR	13	040S	050W	4301351446		Indian	Indian	OW	APD
LC TRIBAL 16-26D-46	26	040S	060W	4301351450		Indian	State	OW	APD
LC TRIBAL 16-34D-46	34	040S	060W	4301351451		Indian	State	OW	APD
16-12D-45 BTR	12	040S	050W	4301351452		Indian	Indian	OW	APD
8-12D-45 BTR	12	040S	050W	4301351453		Indian	Indian	OW	APD
LC TRIBAL 1-35D-46	35	040S	060W	4301351454		Indian	Fee	OW	APD
16-25D-37 BTR	25	030S	070W	4301351455		Indian	Fee	OW	APD
LC TRIBAL 13H-29-46	28	040S	060W	4301351462		Indian	Fee	OW	APD
LC TRIBAL 14-30D-37	30	030S	070W	4301351494		Indian	Fee	OW	APD
7-13D-45 BTR	13	040S	050W	4301351497		Indian	Indian	OW	APD
LC TRIBAL 4H-35-46	35	040S	060W	4301351515		Indian	Fee	OW	APD
LC TRIBAL 13H-19-46	19	040S	060W	4301351543		Indian	Indian	OW	APD
16-26D-37 BTR	26	030S	070W	4301351598		Indian	Fee	OW	APD
LC TRIBAL 16-31D-37	31	030S	070W	4301351610		Indian	Fee	OW	APD
5-4-35 BTR	4	030S	050W	4301351613		Indian	Fee	OW	APD
LC TRIBAL 16-31D-47	31	040S	070W	4301351616		Indian	Indian	OW	APD
LC TRIBAL 13H-31-47	31	040S	070W	4301351617		Indian	Indian	OW	APD
LC TRIBAL 13-32D-47	32	040S	070W	4301351619		Indian	Indian	OW	APD
LC TRIBAL 16H-32-47	32	040S	070W	4301351620		Indian	Indian	OW	APD
LC TRIBAL 1-32D-47	32	040S	070W	4301351624		Indian	Indian	OW	APD
LC TRIBAL 4H-32-47	32	040S	070W	4301351625		Indian	Indian	OW	APD
LC TRIBAL 13-28D-47	28	040S	070W	4301351627		Indian	Indian	OW	APD
LC TRIBAL 13H-29-47	28	040S	070W	4301351628		Indian	Indian	OW	APD
LC TRIBAL 16H-28-47	28	040S	070W	4301351629		Indian	Indian	OW	APD
LC TRIBAL 1-28D-47	28	040S	070W	4301351639		Indian	Indian	OW	APD
LC TRIBAL 1H-27-47	28	040S	070W	4301351640		Indian	Indian	OW	APD
LC TRIBAL 4H-28-47	28	040S	070W	4301351641		Indian	Indian	OW	APD
LC TRIBAL 7-25D-58	25	050S	080W	4301351643		Indian	Indian	OW	APD
LC TRIBAL 6-25D-58	25	050S	080W	4301351644		Indian	Indian	OW	APD
LC TRIBAL 13H-24-58	24	050S	080W	4301351645		Indian	Indian	OW	APD
LC TRIBAL 16-24D-58	24	050S	080W	4301351646		Indian	Indian	OW	APD
LC Tribal 8-23D-46	23	040S	060W	4301351654		Indian	Fee	OW	APD
LC Tribal 16-35D-45	35	040S	050W	4301351656		Indian	Fee	OW	APD
LC Tribal 13H-35-45	35	040S	050W	4301351657		Indian	Fee	OW	APD
LC Tribal 16-36D-45	36	040S	050W	4301351658		Indian	Fee	OW	APD
LC Tribal 13H-36-45	36	040S	050W	4301351659		Indian	Fee	OW	APD
LC Tribal 5-36D-45	36	040S	050W	4301351661		Indian	Fee	OW	APD
LC Tribal 8-26D-46	26	040S	060W	4301351663		Indian	Fee	OW	APD
3-29D-36 BTR	29	030S	060W	4301351665		Indian	Fee	OW	APD

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

LC Tribal 5-35D-45	35	040S	050W	4301351666		Indian	Fee	OW	APD
LC Tribal 5-24D-46	24	040S	060W	4301351668		Indian	Indian	OW	APD
LC TRIBAL 6-12D-58	12	050S	080W	4301351696		Indian	Indian	OW	APD
LC TRIBAL 8-12D-58	12	050S	080W	4301351697		Indian	Indian	OW	APD
LC TRIBAL 16H-22-47	21	040S	070W	4301351700		Indian	Indian	OW	APD
5-25D-37 BTR	25	030S	070W	4301351803		Indian	Fee	OW	APD
8-3D-36 BTR	3	030S	060W	4301351804		Indian	Fee	OW	APD
14-26D-37 BTR	26	030S	070W	4301351805		Indian	Fee	OW	APD
9-4-35 BTR	4	030S	050W	4301351806		Indian	Fee	OW	APD
11-4D-35 BTR	4	030S	050W	4301351807		Indian	Fee	OW	APD
16-27D-37 BTR	27	030S	070W	4301351808		Indian	Fee	OW	APD
14-27D-37 BTR	27	030S	070W	4301351809		Indian	Fee	OW	APD
14-16D-46 BTR	16	040S	060W	4301351812		Indian	Indian	OW	APD
LC Tribal 16-35D-48	35	040S	080W	4301351847		Indian	Indian	OW	APD
LC Tribal 13H-35-48	35	040S	080W	4301351848		Indian	Indian	OW	APD
LC Tribal 13-2D-58	11	050S	080W	4301351850		Indian	Indian	OW	APD
5-13D-36 BTR	13	030S	060W	4301351862		Indian	Fee	OW	APD
5-8D-36 BTR	8	030S	060W	4301351871		Indian	Fee	OW	APD
16-1D-36 BTR	1	030S	060W	4301351872		Indian	Fee	OW	APD
8-18D-46 BTR	18	040S	060W	4301351897		Indian	Fee	OW	APD
LC Tribal 5-36D-46	36	040S	060W	4301351905		Indian	Indian	OW	APD
LC Tribal 5-26D-45	26	040S	050W	4301351907		Indian	Indian	OW	APD
14-13D-45 BTR	13	040S	050W	4301351974		Indian	Indian	OW	APD
14-34D-46 DLB	34	040S	060W	4301351975		Indian	Fee	OW	APD
LC Tribal 5-21D-45	21	040S	050W	4301352001		Indian	Indian	OW	APD
LC Tribal 8-22D-45	22	040S	050W	4301352002		Indian	Indian	OW	APD
LC Tribal 8-25D-45	25	040S	050W	4301352007		Indian	Indian	OW	APD
LC Tribal 16-25D-45	25	040S	050W	4301352008		Indian	Indian	OW	APD
LC Tribal 16-22D-45	22	040S	050W	4301352009		Indian	Indian	OW	APD
LC Tribal 16-26D-45	26	040S	050W	4301352010		Indian	Indian	OW	APD
LC Tribal 14-31D-37	31	030S	070W	4301352016		Indian	Fee	OW	APD
5-12D-45 BTR	12	040S	050W	4301352030		Indian	Indian	OW	APD
LC Tribal 9-20D-45	20	040S	050W	4301352031		Indian	Indian	OW	APD
LC Tribal 13-35D-47	35	040S	070W	4301352055		Indian	Indian	OW	APD
LC Tribal 1-23D-47	23	040S	070W	4301352057		Indian	Indian	OW	APD
9-17D-46 BTR	17	040S	060W	4301352059		Indian	Indian	OW	APD
11-18D-46 BTR	18	040S	060W	4301352060		Indian	Indian	OW	APD
9-10D-47 BTR	10	040S	070W	4301352092		Indian	Fee	OW	APD
LC Tribal 1-17D-47	17	040S	070W	4301352096		Indian	Fee	OW	APD
7-35D-37 BTR	35	030S	070W	4301352115		Indian	Fee	OW	APD
14-25D-37 BTR	25	030S	070W	4301352116		Indian	Fee	OW	APD

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

LC Tribal 5-25-46	25	040S	060W	4301352126		Indian	Indian	OW	APD
8-33D-35 BTR	33	030S	050W	4301352161		Indian	Fee	OW	APD
5-4D-36 BTR	4	030S	060W	4301352175		Indian	Fee	OW	APD
7-4D-36 BTR	4	030S	060W	4301352176		Indian	Fee	OW	APD
LC Tribal 4-36D-47	36	040S	070W	4301352186		Indian	Indian	OW	APD
LC Tribal 4-22D-46	22	040S	060W	4301352944		Indian	Indian	OW	APD
LC Tribal 16-22D-46	22	040S	060W	4301352945		Indian	Indian	OW	APD
LC Tribal 11-19D-46	19	040S	060W	4301352946		Indian	Indian	OW	APD
LC Tribal 7-20D-45	20	040S	050W	4301352947		Indian	Indian	OW	APD
15-11D-35 BTR	11	030S	050W	4301353056		Indian	Fee	OW	APD
13-11D-35 BTR	11	030S	050W	4301353057		Indian	Fee	OW	APD
BTR 16-36D-37	36	030S	070W	4301353059		Indian	Fee	OW	APD
4-29D-35 BTR	30	030S	050W	4301353060		Indian	Fee	OW	APD
1-30D-35 BTR	30	030S	050W	4301353061		Fee	Fee	OW	APD
LC TRIBAL 3-23D-46	23	040S	060W	4301353066		Indian	State	OW	APD
LC Tribal 14-23D-46	23	040S	060W	4301353067		Indian	State	OW	APD
LC Tribal 13-25D-46	25	040S	060W	4301353068		Indian	Indian	OW	APD
LC Tribal 14-26D-46	26	040S	060W	4301353069		Indian	State	OW	APD
LC Tribal 5-26D-46	26	040S	060W	4301353070		Indian	State	OW	APD
LC Tribal 11-35D-45	35	040S	050W	4301353071		Indian	State	OW	APD
LC Tribal 7-35D-45	35	040S	050W	4301353072		Indian	State	OW	APD
LC Tribal 3-35D-45	35	040S	050W	4301353075		Indian	State	OW	APD
LC Tribal 14-36D-45	36	040S	050W	4301353076		Indian	State	OW	APD
LC Tribal 13-36D-45	36	040S	050W	4301353077		Indian	State	OW	APD
LC Tribal 10-36D-45	36	040S	050W	4301353078		Indian	State	OW	APD
LC Tribal 8-36D-45	36	040S	050W	4301353079		Indian	State	OW	APD
LC Tribal 6-36D-45	36	040S	050W	4301353080		Indian	State	OW	APD
LC Tribal 1-34D-46	34	040S	060W	4301353081		Indian	State	OW	APD
LC Tribal 9-27D-46	27	040S	060W	4301353082		Indian	State	OW	APD
LC Tribal 13-35D-45	35	040S	050W	4301353083		Indian	State	OW	APD
LC Tribal 8-35D-45	35	040S	050W	4301353084		Indian	State	OW	APD
LC Tribal 15-35D-45	35	040S	050W	4301353085		Indian	State	OW	APD
LC Tribal 12-25D-45	25	040S	050W	4301353122		Indian	Indian	OW	APD
LC Tribal 14-25D-45	25	040S	050W	4301353123		Indian	Indian	OW	APD
LC Tribal 10-25D-45	25	040S	050W	4301353124		Indian	Indian	OW	APD
LC Tribal 11-26-45	26	040S	050W	4301353125		Indian	Indian	OW	APD
LC Tribal 13-26D-45	26	040S	050W	4301353126		Indian	Indian	OW	APD
LC Tribal 7-31D-46	31	040S	060W	4301353127		Indian	Indian	OW	APD
LC Tribal 7-19D-45	19	040S	050W	4301353128		Indian	Indian	OW	APD
LC Tribal 5-19D-45	19	040S	050W	4301353130		Indian	Indian	OW	APD
LC Tribal 7-25D-46	25	040S	060W	4301353132		Indian	Indian	OW	APD

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

LC Tribal 7-24D-46	24	040S	060W	4301353134		Indian	Indian	OW	APD
LC Tribal 14-31D-46	31	040S	060W	4301353135		Indian	Indian	OW	APD
LC Tribal 14-30D-46	30	040S	060W	4301353136		Indian	Indian	OW	APD
13-4-35 BTR SWD	4	030S	050W	4301353293		Fee	Fee	OW	APD
LC FEE 14-26D-47	26	040S	070W	4301353294		Fee	Indian	OW	APD
LC Fee 5-25D-47	25	040S	070W	4301353295		Fee	Indian	OW	APD
7-35-46 LC SWD	35	040S	060W	4301353296		Fee	Fee	OW	APD
LC Fee 1H-33-47	32	040S	070W	4301353309		Fee	Indian	OW	APD
LC FEE 14-2D-58	2	050S	080W	4301353312		Fee	Indian	OW	APD
LC FEE 13H-21-47	21	040S	070W	4301353313		Fee	Indian	OW	APD
LC Fee 16-21D-47	21	040S	070W	4301353326		Fee	Indian	OW	APD
16-7D-46 BTR	7	040S	060W	4301353328		Fee	Indian	OW	APD
LC Fee 15-26D-47	26	040S	070W	4301353331		Fee	Indian	OW	APD
LC Fee 4-24D-47	23	040S	070W	4301353332		Fee	Indian	OW	APD
LC Fee 5-34D-47	34	040S	070W	4301353333		Fee	Indian	OW	APD
LC Fee 5-35D-47	35	040S	070W	4301353334		Fee	Indian	OW	APD
13-34D-47 LC Fee	34	040S	070W	4301353337		Fee	Indian	OW	APD
14-35D-35 BTR	35	030S	050W	4301352120		Fee	Fee	OW	DRL
6-17D-46 BTR	17	040S	060W	4301351078		Indian	Indian	OW	OPS
5-34D-35 BTR	34	030S	050W	4301351187		Indian	Fee	OW	OPS
5-10D-45 BTR	10	040S	050W	4301351221		Indian	Indian	OW	OPS
5-3D-45 BTR	3	040S	050W	4301351810		Indian	Indian	OW	OPS
9-34D-35 BTR	34	030S	050W	4301352117		Fee	Fee	OW	OPS
5-35D-35 BTR	35	030S	050W	4301352118		Fee	Fee	OW	OPS
1-2D-46 BTR	2	040S	060W	4301353086		Indian	Fee	OW	OPS
7-21-46 DLB	21	040S	060W	4301333567	16526	Indian	Indian	OW	P
LC TRIBAL 1H-27-46	27	040S	060W	4301333568	18175	Indian	Fee	GW	P
7-29-46 DLB	29	040S	060W	4301333584	17603	Indian	Fee	GW	P
LC TRIBAL 12H-28-46	28	040S	060W	4301333631	18132	Indian	Indian	GW	P
LC TRIBAL 13H-21-46	21	040S	060W	4301333632	18107	Indian	Indian	GW	P
12-36-36 BTR	36	030S	060W	4301333638	16336	Indian	Fee	GW	P
5-5-46 BTR	5	040S	060W	4301333639	16542	Indian	Fee	OW	P
5-23-36 BTR	23	030S	060W	4301333642	16675	Indian	Fee	GW	P
14-29-36 BTR	29	030S	060W	4301333643	16725	Indian	Fee	OW	P
14-30-36 BTR	30	030S	060W	4301333644	16701	Indian	Fee	GW	P
7-20-46 DLB	20	040S	060W	4301333657	16584	Indian	Indian	OW	P
LC TRIBAL 5-21D-46	21	040S	060W	4301333658	18887	Indian	Indian	OW	P
5-20-46 DLB	20	040S	060W	4301333659	18750	Indian	Indian	GW	P
LC TRIBAL 13H-20-46	20	040S	060W	4301333678	17979	Indian	Indian	GW	P
14-7-46 BTR	7	040S	060W	4301333806	16890	Indian	Indian	GW	P
7-8-45 BTR	8	040S	050W	4301333820	16974	Indian	Indian	OW	P

From: Bill Barrett Corporation
To: Rig II, LLC
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1-5-45 BTR	5	040S	050W	4301333868	16931	Indian	Indian	OW	P
5-16-36 BTR	16	030S	060W	4301333970	17195	Indian	Fee	OW	P
5-29-36 BTR	29	030S	060W	4301333972	17557	Indian	Fee	OW	P
4-30-36 BTR	30	030S	060W	4301333973	17249	Indian	Fee	OW	P
7-19-46 DLB	19	040S	060W	4301334004	19018	Indian	Indian	OW	P
5-25-36 BTR	25	030S	060W	4301334021	17126	Fee	Fee	OW	P
5-4-45 BTR	4	040S	050W	4301334089	17507	Indian	Indian	OW	P
13-2-46 BTR	2	040S	060W	4301334090	18618	Indian	Indian	OW	P
2-3-45 BTR	3	040S	050W	4301334099	17932	Indian	Indian	OW	P
7-6-45 BTR	6	040S	050W	4301334100	17653	Indian	Indian	OW	P
1-9-45 BTR	9	040S	050W	4301334101	17910	Indian	Indian	OW	P
8-10-45 BTR	10	040S	050W	4301334102	17530	Indian	Indian	OW	P
7-17-45 BTR	17	040S	050W	4301334104	17933	Indian	Indian	OW	P
16-7-45 BTR	7	040S	050W	4301334111	17665	Indian	Indian	OW	P
15-18-45 BTR	18	040S	050W	4301334112	17832	Indian	Indian	OW	P
6-12-46 BTR	12	040S	060W	4301334114	17964	Indian	Indian	OW	P
5-13-46 BTR	13	040S	060W	4301334115	17833	Indian	Indian	OW	P
16-26-36 BTR	26	030S	060W	4301334132	18028	Indian	Fee	OW	P
1-23-36 BTR	23	030S	060W	4301334136	17722	Indian	Fee	OW	P
15-10-36 BTR	10	030S	060W	4301334277	17419	Indian	Fee	OW	P
14-5-46 BTR	5	040S	060W	4301350307	17624	Fee	Fee	OW	P
14X-22-46 DLB	22	040S	060W	4301350351	17604	Indian	Indian	OW	P
16-13-36 BTR	13	030S	060W	4301350372	17853	Indian	Fee	OW	P
5-33-46 DLB	33	040S	060W	4301350397	17765	Indian	Fee	OW	P
5-34-46 DLB	34	040S	060W	4301350415	17801	Indian	State	GW	P
LC FEE 12H-32-46	32	040S	060W	4301350431	18003	Fee	Fee	OW	P
1-13D-47 BTR	13	040S	070W	4301350445	18205	Indian	Fee	OW	P
16-8D-45 BTR	8	040S	050W	4301350466	18799	Indian	Indian	OW	P
7-13D-46 BTR	13	040S	060W	4301350470	18076	Indian	Indian	OW	P
14-8D-45 BTR	8	040S	050W	4301350567	18207	Indian	Indian	OW	P
14-5D-45 BTR	5	040S	050W	4301350568	18108	Indian	Indian	OW	P
16-31D-36 BTR	31	030S	060W	4301350573	18004	Indian	Fee	OW	P
5-7D-46 BTR	7	040S	060W	4301350574	18176	Indian	Indian	OW	P
LC TRIBAL 13H-33-46	34	040S	060W	4301350575	18223	Indian	State	OW	P
5-8-45 BTR	8	040S	050W	4301350607	18279	Indian	Indian	OW	P
16-6D-45 BTR	6	040S	050W	4301350610	18177	Indian	Indian	OW	P
5-18D-45 BTR	18	040S	050W	4301350611	18300	Indian	Indian	OW	P
7-26-37 BTR	26	030S	070W	4301350641	18131	Indian	Fee	OW	P
3-11D-36 BTR	11	030S	060W	4301350642	18299	Indian	Fee	OW	P
16-1D-46 BTR	1	040S	060W	4301350675	18525	Indian	Indian	OW	P
14-3-45 BTR	3	040S	050W	4301350676	18363	Indian	Indian	OW	P

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4-17D-45 BTR	17	040S	050W	4301350687	18517	Indian	Indian	OW	P
5-6D-45 BTR	6	040S	050W	4301350688	18726	Indian	Indian	OW	P
7-7D-45 BTR	7	040S	050W	4301350689	18380	Indian	Indian	OW	P
14-10D-45 BTR	10	040S	050W	4301350754	18447	Indian	Indian	OW	P
14-9D-45 BTR	9	040S	050W	4301350755	18379	Indian	Indian	OW	P
13-16D-36 BTR	16	030S	060W	4301350757	18206	Indian	State	OW	P
5-9D-36 BTR	9	030S	060W	4301350843	18381	Indian	Fee	OW	P
16-5D-46 BTR	5	040S	060W	4301350844	18280	Fee	Fee	OW	P
5-27D-37 BTR	27	030S	070W	4301350847	18526	Indian	Fee	OW	P
7-4D-45 BTR	4	040S	050W	4301350884	18562	Indian	Indian	OW	P
2-16D-45 BTR	16	040S	050W	4301350899	18619	Indian	Indian	OW	P
16-10D-45 BTR	10	040S	050W	4301350902	18725	Indian	Indian	OW	P
5-2D-36 BTR	2	030S	060W	4301350913	18886	Indian	Fee	OW	P
13H-27-36 BTR	27	030S	060W	4301350918	18445	Indian	State	OW	P
8-16D-46 BTR	16	040S	060W	4301350953	19027	Indian	Indian	OW	P
16-16D-46 BTR	16	040S	060W	4301350956	19028	Indian	Indian	OW	P
16-9D-45 BTR	9	040S	050W	4301350962	18662	Indian	Indian	OW	P
14-31D-36 BTR	31	030S	060W	4301350973	18524	Indian	Fee	OW	P
5-10D-36 BTR	10	030S	060W	4301350978	18989	Indian	Fee	OW	P
1-32D-36 BTR	32	030S	060W	4301350979	18648	Indian	Fee	OW	P
16-12D-36 BTR	12	030S	060W	4301350980	18748	Indian	Fee	OW	P
2-18D-45 BTR	18	040S	050W	4301350991	18776	Indian	Indian	OW	P
3-1-46 BTR	1	040S	060W	4301351017	18777	Indian	Fee	OW	P
10-5-45 BTR	5	040S	050W	4301351062	18724	Indian	Indian	OW	P
12-4D-45 BTR	4	040S	050W	4301351063	18813	Indian	Indian	OW	P
1-10D-45 BTR	10	040S	050W	4301351064	18966	Indian	Indian	OW	P
16-2D-46 BTR	2	040S	060W	4301351079	18830	Indian	Indian	OW	P
9H-4-45 BTR	4	040S	050W	4301351092	18814	Indian	Indian	OW	P
12-17-45 BTR	17	040S	050W	4301351097	18984	Indian	Indian	OW	P
5-9D-46 BTR	9	040S	060W	4301351109	19313	Indian	Fee	OW	P
14-9D-36 BTR	9	030S	060W	4301351144	19004	Indian	Fee	OW	P
5-31D-36 BTR	31	030S	060W	4301351146	18691	Indian	Fee	OW	P
4-9D-45 BTR	9	040S	050W	4301351157	18883	Indian	Indian	OW	P
8-12D-46 BTR	12	040S	060W	4301351159	18911	Indian	Indian	OW	P
LC TRIBAL 16-23D-47	23	040S	070W	4301351180	18617	Indian	Indian	OW	P
14-7D-45 BTR	7	040S	050W	4301351222	18949	Indian	Indian	OW	P
5-16D-45 BTR	16	040S	050W	4301351223	18987	Indian	Indian	OW	P
4-5D-45 BTR	5	040S	050W	4301351242	18882	Indian	Indian	OW	P
LC TRIBAL 16H-19-45	19	040S	050W	4301351278	18627	Indian	Indian	OW	P
LC TRIBAL 13-19D-45	19	040S	050W	4301351280	18628	Indian	Indian	OW	P
LC TRIBAL 5-30D-45	30	040S	050W	4301351281	19448	Indian	Indian	OW	P

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LC TRIBAL 15-24D-46	24	040S	060W	4301351283	18626	Indian	Indian	OW	P
LC TRIBAL 13H-24-46	19	040S	050W	4301351289	18629	Indian	Indian	OW	P
7-16-47 BTR	16	040S	070W	4301351296	18950	Indian	Fee	OW	P
14-18D-45 BTR	18	040S	050W	4301351313	19005	Indian	Indian	OW	P
LC TRIBAL 16-30D-46	30	040S	060W	4301351320	19006	Indian	Indian	OW	P
LC TRIBAL 5-20D-45	20	040S	050W	4301351331	19449	Indian	Indian	OW	P
11-8D-46 BTR	8	040S	060W	4301351336	19314	Indian	Indian	OW	P
5-7D-45 BTR	7	040S	050W	4301351350	18951	Indian	Indian	OW	P
7-5-35 BTR	5	030S	050W	4301351599	19078	Indian	Fee	OW	P
13-5D-35 BTR	5	030S	050W	4301351600	18996	Indian	Fee	OW	P
11-5D-35 BTR	5	030S	050W	4301351601	19061	Fee	Fee	OW	P
15-5D-35 BTR	5	030S	050W	4301351602	19062	Fee	Fee	OW	P
9-5D-35 BTR	5	030S	050W	4301351609	19029	Indian	Fee	OW	P
3-5D-35 BTR	5	030S	050W	4301351638	19079	Indian	Fee	OW	P
7-8-46 BTR	8	040S	060W	4301351702	19315	Indian	Indian	OW	P
7-30-46 DLB	30	040S	060W	4301351703	18997	Fee	Indian	OW	P
3-13D-46 BTR	13	040S	060W	4301351718	18881	Indian	Indian	OW	P
2-13D-46 BTR	13	040S	060W	4301351719	18885	Indian	Indian	OW	P
12-12D-46 BTR	12	040S	060W	4301351720	18867	Indian	Indian	OW	P
10-12D-46 BTR	12	040S	060W	4301351721	18856	Indian	Indian	OW	P
11-11D-47 BTR	11	040S	070W	4301352091	19633	Fee	Fee	OW	P
7-12D-47 BTR	12	040S	070W	4301352094	19600	Indian	Fee	OW	P
5-12D-47 BTR	12	040S	070W	4301352095	19634	Indian	Fee	OW	P
14-33D-35 BTR	33	030S	050W	4301352162	19450	Indian	Fee	OW	P
16-33D-35 BTR	33	030S	050W	4301352163	19451	Indian	Fee	OW	P
14-22-46 DLB	22	040S	060W	4301333660	17604	Indian	Indian	D	PA
13H-31-36 BTR	31	030S	060W	4301350465	18485	Indian	Fee	OW	PA
16X-23D-36 BTR	23	030S	060W	4301350623	18007	Indian	State	OW	PA
8-6-45 BTR	6	040S	050W	4301350900	18561	Indian	Indian	OW	PA
13-13-36 BTR	13	030S	060W	4301350919	18364	Indian	Fee	OW	PA
7-28-46 DLB	28	040S	060W	4301333569	16460	Indian	Indian	OW	S
5-21-36 BTR	21	030S	060W	4301333641	16674	Indian	Fee	GW	S
13-26-36 BTR	26	030S	060W	4301333980	17569	Indian	Fee	OW	S
14-1-46 BTR	1	040S	060W	4301334113	18516	Indian	Indian	OW	S
16-21-36 BTR	21	030S	060W	4301334130	17721	Indian	Fee	OW	S
14-21-36 BTR	21	030S	060W	4301334131	18006	Indian	Fee	OW	S
7-16-36 BTR	16	030S	060W	4301334133	17834	Indian	Fee	OW	S
1-30-36 BTR	30	030S	060W	4301334134	17905	Indian	Fee	OW	S
16-30-36 BTR	30	030S	060W	4301334135	18005	Indian	Fee	OW	S
3-23-36 BTR	23	030S	060W	4301334137	17860	Indian	Fee	OW	S
16-16-36 BTR	16	030S	060W	4301334138	17666	Indian	Fee	OW	S

From: Bill Barrett Corporation
To: Rig II, LLC
Effective 11/1/2016

4-26-36 BTR	26	030S	060W	4301334139	17620	Fee	Fee	OW	S
9-11-36 BTR	11	030S	060W	4301334276	17451	Indian	Fee	OW	S
3-36-36 BTR	36	030S	060W	4301350398	17955	Indian	Fee	OW	S
7-10-36 BTR	10	030S	060W	4301350437	18052	Indian	Fee	OW	S
16-12D-46 BTR	12	040S	060W	4301350467	18051	Indian	Indian	OW	S
13H-13-46 BTR	13	040S	060W	4301350468	18208	Indian	Indian	OW	S
13-12-46 BTR	12	040S	060W	4301350469	18233	Indian	Indian	OW	S
14-8D-36 BTR	8	030S	060W	4301350612	18163	Indian	Fee	OW	S
14-7D-36 BTR	7	030S	060W	4301350613	18330	Indian	Fee	OW	S
16-9-36 BTR	9	030S	060W	4301350645	18078	Indian	Fee	OW	S
7-27-37 BTR	27	030S	070W	4301350647	18090	Indian	Fee	OW	S
16-12D-37 BTR	12	030S	070W	4301350785	18446	Indian	Fee	OW	S
14-21D-37 BTR	21	030S	070W	4301350859	18548	Indian	Fee	OW	S
10-18D-36 BTR	18	030S	060W	4301350915	18884	Indian	Fee	OW	S
5-27D-36	27	030S	060W	4301350917	18482	Indian	State	OW	S
10-36D-36 BTR	36	030S	060W	4301351005	18523	Indian	Fee	OW	S
14-6D-45 BTR	6	040S	050W	4301351158	18967	Indian	Indian	OW	S
5H-1-46 BTR UTELAND BUTTE	6	040S	050W	4301351215	18728	Indian	Indian	OW	S
5H-1-46 BTR WASATCH	6	040S	050W	4301351216	18727	Indian	Indian	OW	S
1-25D-36 BTR	25	030S	060W	4301351294	18798	Indian	Fee	OW	S
5-5D-35 BTR	5	030S	050W	4301351605	19055	Indian	Fee	OW	S
16-23-36 BTR	23	030S	060W	4301333971	17182	Indian	Fee	OW	TA
LC TRIBAL 14-23D-47	23	040S	070W	4301334022	18616	Indian	Indian	OW	TA
5-32D-36 BTR	32	030S	060W	4301350756	18328	Indian	Fee	OW	TA

Bill Barrett Corporation

October 20, 2016

RECEIVED
OCT 21 2016
DIV. OF OIL, GAS & MINING

Re: Bill Barrett Corporation Transfer to New Operator

Dear Ms. Medina:

Attached please find the change of operation Form 9, Form 5's and Request to Transfer APD formchanging the operator from Bill Barrett Corporation to RIG II, LLC, effective 11/1/2016. Badlands Energy – Utah, LLC will be a sub-operator.

New Operator Contact information:
RIG II, LLC
1582 West 2600 South
Woods Cross, Utah 84087-0298
Telephone:(801) 683-4245
Fax:(801) 298-9889

Upon reviewing the attached, please contact myself with any questions at 303-312-8115.

Sincerely,

Bill Barrett Corporation

Brady Riley

Brady Riley
Permit Analyst

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: (see attached well list)

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: (see attached well list)

2. NAME OF OPERATOR: RIG II, LLC N4055

9. API NUMBER:

3. ADDRESS OF OPERATOR: 1582 West 2600 South CITY Wood Cross STATE UT ZIP 84087 PHONE NUMBER: (801) 683-4245

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL

FOOTAGES AT SURFACE: (see attached well list)

COUNTY:

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit In Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
11/1/2016	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

RIG II, LLC IS SUBMITTING THIS SUNDRY AS NOTIFICATION THAT THE WELLS LISTED ON THE ATTACHED LIST HAVE BEEN SOLD TO Rig II, LLC BY BILL BILL BARRETT CORPORATION EFFECTIVE 11/1/2016. PLEASE REFER ALL FUTURE CORRESPONDENCE TO THE ADDRESS BELOW.

RIG II, LLC
1582 West 2600 South
Woods Cross, Utah 84087-0298
801-683-4245
(STATE/FEE BOND # 9219529/ BLM BOND # UTB000712/ BIA BOND # LPM9224670)

BILL BARRETT CORPORATION N2165

Duane Zavadil NAME (PLEASE PRINT)

SIGNATURE

Senior Vice President - EH&S, Government and Regulatory Affairs

RIG II, LLC

Jesse McSwain NAME (PLEASE PRINT)

SIGNATURE

Manager

NAME (PLEASE PRINT) Jesse McSwain TITLE Manager

SIGNATURE DATE 10/20/16

(This space for State use only)

APPROVED

NOV 07 2016

DIV. OIL GAS & MINING

BY: Rachel Medina

(5/2000) (See Instructions on Reverse Side)

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

Request to Transfer Application or Permit to Drill

(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

Well name:	(See attached list)
API number:	
Location:	Qtr-Qtr: Section: Township: Range:
Company that filed original application:	Bill Barrett Corporation
Date original permit was issued:	
Company that permit was issued to:	Bill Barrett Corporation

Check one	Desired Action:
	Transfer pending (unapproved) Application for Permit to Drill to new operator
	The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application.
✓	**Transfer approved Application for Permit to Drill to new operator**
	The undersigned as owner with legal rights to drill on the property as permitted, 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.	Yes	No
If located on private land, has the ownership changed?	✓	
If so, has the surface agreement been updated?		✓
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?		✓
Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?		✓
Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location?		✓
Has the approved source of water for drilling changed?		✓
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?		✓
Is bonding still in place, which covers this proposed well? Bond No. 9219529-UDOGM / UTB000712-BLM / LPM92246/0-BIA	✓	

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

Name (please print) Jesse McSwain Title Manager

Signature Jesse McSwain Date 10/20/16

Representing (company name) RIG II, LLC

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator on the Application for Permit to Drill.

(3/2004)

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number 6-32-36 BTR SWD	API Number 4301350921
Location of Well Footage : 1628 FNL 1553 FWL QQ, Section, Township, Range: SENW 32 3S 6W County : DUCHENSE State : UTAH	Field or Unit Name CEDAR RIM Lease Designation and Number 2OG0005608

EFFECTIVE DATE OF TRANSFER: 11/1/2016

CURRENT OPERATOR

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature:
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

NEW OPERATOR

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature:
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by:
Title: UIC Program
Approval Date: 11/3/16

Comments:

(5/2000)

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number 16-6D-46 BTR SWD	API Number 4301350781
Location of Well Footage : 0200 FSL 0099 FEL County : DUCHESNE QQ, Section, Township, Range: SESE 6 4S 6W State : UTAH	Field or Unit Name ALTAMONT Lease Designation and Number 2OG0005608

EFFECTIVE DATE OF TRANSFER: 11/1/2016

CURRENT OPERATOR

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature: Dwn Zavadil
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

NEW OPERATOR

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature: Jesse McSwain
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by: Dan Jarvis
Title: UIC

Approval Date: 11/3/16

Comments:

(5/2000)

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

UIC FORM 5

TRANSFER OF AUTHORITY TO INJECT

Well Name and Number SWD 9-36 BTR	API Number 4301350646
Location of Well Footage : 0539 FSL 0704 FEL County : DUCHESNE QQ, Section, Township, Range: SESE 9 3S 6W State : UTAH	Field or Unit Name CEDAR RIM Lease Designation and Number 2OG0005608

EFFECTIVE DATE OF TRANSFER: 11/1/2016

CURRENT OPERATOR

Company: BILL BARRETT CORPORATION
Address: 1099 18th Street Ste 2300
city DENVER state CO zip 80202
Phone: (303) 293-9100
Comments:

Name: Duane Zavadil
Signature: [signature]
Title: Senior Vice President - EH&S, Government and Regulatory Affairs
Date: 10/20/16

NEW OPERATOR

Company: RIG II, LLC
Address: 1582 West 2600 South
city Wood Cross state UT zip 84087
Phone: (801) 683-4245
Comments:

Name: Jesse McSwain
Signature: [signature]
Title: Manager
Date: 10/20/16

(This space for State use only)

Transfer approved by: _____ Approval Date: _____

Title: _____

Comments: This well was approved by US EPA. EPA approval will be required.

(5/2000)