



## **Drilling Services**

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## **Proposal**

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### **BERRY PETROLEUM COMPANY**

BERRY 1-31D

GARFIELD COUNTY, CO

WELL FILE:PLAN 1

DECEMBER 11, 2007

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**Weatherford International Ltd.**

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# Berry Petroleum Company

BERRY 1-31D  
3085' FNL, 1902' FWL  
SECTION 1 T6S R96W  
GARFIELD COUNTY, CO

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	234.69	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	234.69	250.00	0.00	0.00	0.00	234.69	0.00	
3	750.00	5.00	234.69	749.37	-12.60	-17.79	1.00	234.69	21.80	
4	800.00	5.00	234.69	799.18	-15.12	-21.35	0.00	0.00	26.16	
5	1386.90	16.74	234.69	1374.54	-78.98	-111.50	2.00	0.00	136.64	
6	5471.32	16.74	234.69	5285.91	-758.89	-1071.38	0.00	0.00	1312.93	
7	7145.12	0.00	234.69	6936.00	-899.21	-1269.48	1.00	180.00	1555.68	
8	10045.12	0.00	234.69	9836.00	-899.21	-1269.48	0.00	234.69	1555.68	PBHL 1-31D

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
BERRY 1-31D	-110.77	-123.37	1638455.38	2246900.88	39°33'21.376N	108°10'16.833W	N/A

TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	
PBHL 1-31D	9836.00	-899.21	-1269.48	1637593.89	2245605.52	Rectangle (100x200)	

## FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	3066.00	3153.20	WASATCH
2	3280.00	3376.66	FORT UNION
3	6536.00	6744.79	OHIO CREEK
4	6836.00	7045.11	MESAVERDE
5	6936.00	7145.12	APPROX TOP GAS
6	9261.00	9470.12	CAMEO
7	9736.00	9945.12	ROLLINS SS



Azimuths to True North  
Magnetic North: 10.92°

Magnetic Field  
Strength: 52669nT  
Dip Angle: 65.88°  
Date: 12/11/2007  
Model: bggm2006

TOTAL CORRECTION TO TRUE NORTH 10.92°

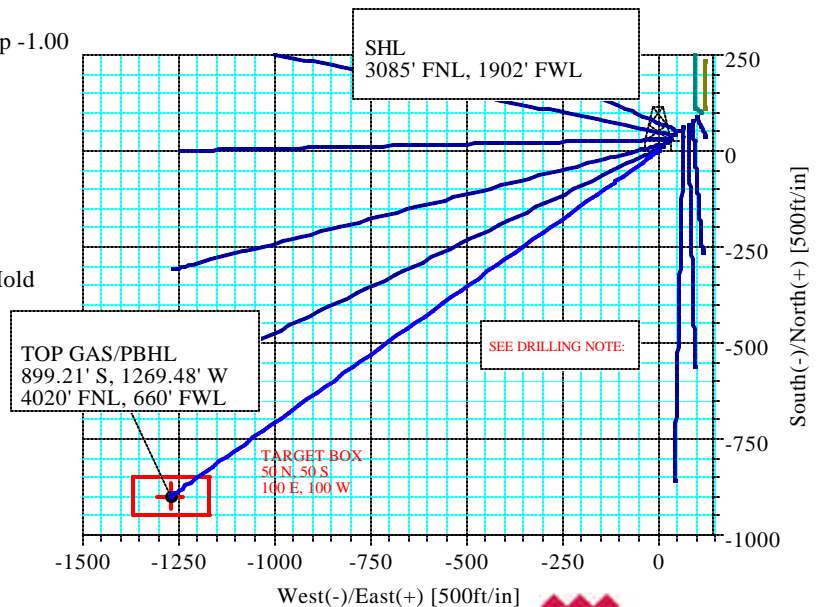
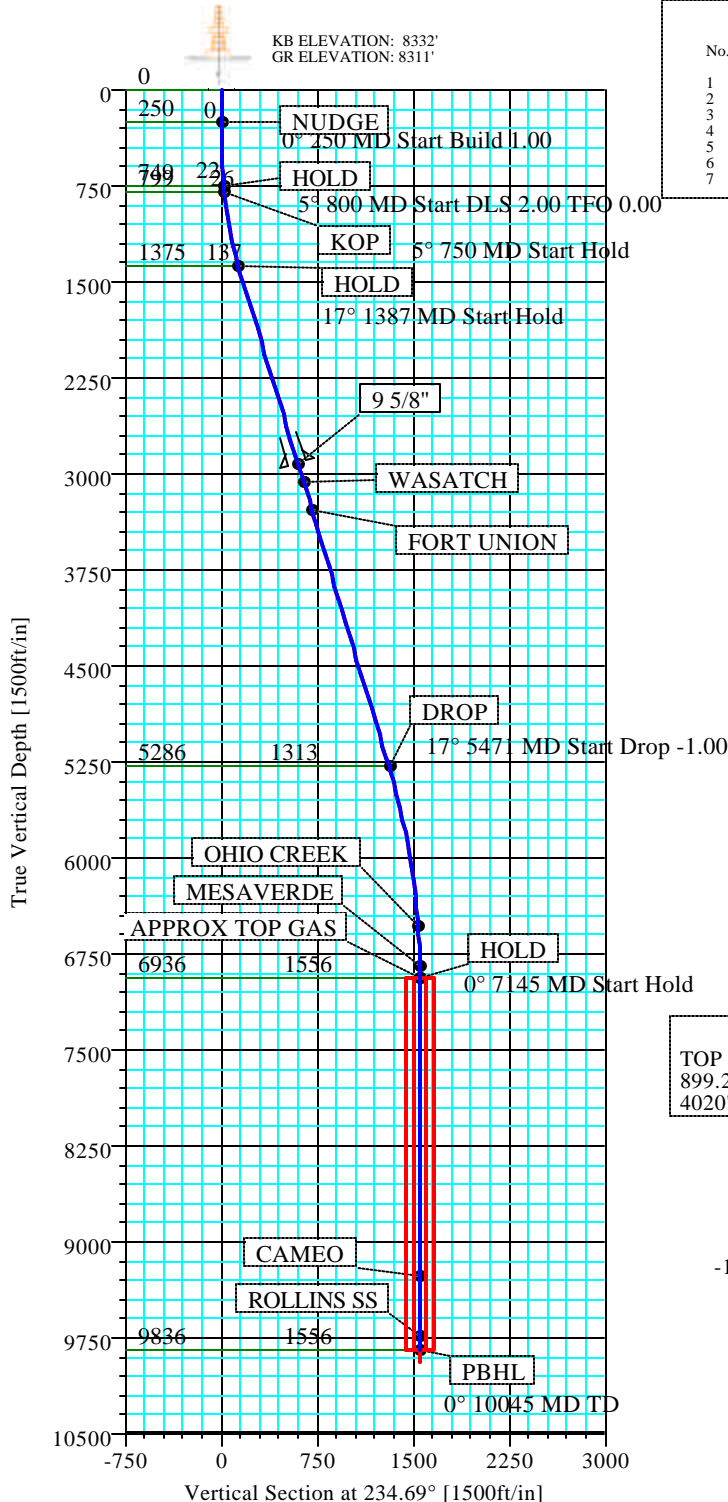
## FIELD DETAILS

GARFIELD COUNTY (NAD 83)  
COLORADO

Geodetic System: US State Plane Coordinate System 1983  
Ellipsoid: GRS 1980  
Zone: Colorado, Central Zone  
Magnetic Model: bggm2006

System Datum: Mean Sea Level  
Local North: True North

**-DRILLING NOTE-**  
TO ACCOUNT FOR THE 240° DRIFT IN AZIMUTH, AIM  
FOR THE NE SIDE OF PBHL, AND BE IN THE TARGET WINDOW  
BY THE TOP GAS AND STAY  
WITHIN THE WINDOW TO TD. DO NOT GO OUTSIDE THE  
WINDOW.



**Weatherford**

Plan: Plan #1 (BERRY 1-31D/1)

Created By: ROBERT SCOTT

Date: 12/11/2007

# Weatherford International, Ltd.

## PLAN REPORT

<b>Company:</b> BERRY PETROLEUM COMPANY				<b>Date:</b> 12/11/2007		<b>Time:</b> 14:49:16		<b>Page:</b> 1	
<b>Field:</b> GARFIELD COUNTY (NAD 83)				<b>Co-ordinate(NE) Reference:</b> Well: BERRY 1-31D, True North					
<b>Site:</b> BERRY 1-21D PAD				<b>Vertical (TVD) Reference:</b> KB 8332.0					
<b>Well:</b> BERRY 1-31D				<b>Section (VS) Reference:</b> Well (0.00N,0.00E,234.69Azi)					
<b>Wellpath:</b> 1				<b>Survey Calculation Method:</b> Minimum Curvature		<b>Db:</b> Sybase			

<b>Field:</b> GARFIELD COUNTY (NAD 83) COLORADO			
<b>Map System:</b> US State Plane Coordinate System 1983		<b>Map Zone:</b> Colorado, Central Zone	
<b>Geo Datum:</b> GRS 1980		<b>Coordinate System:</b> Well Centre	
<b>Sys Datum:</b> Mean Sea Level		<b>Geomagnetic Model:</b> bggm2006	

<b>Site:</b> BERRY 1-21D PAD SECTION 1 T6S R97W 2971' FNL, 2022' FWL			
<b>Site Position:</b>	<b>Northing:</b> 1638562.48 ft	<b>Latitude:</b> 39 33 22.471 N	
<b>From:</b> Geographic	<b>Easting:</b> 2247027.45 ft	<b>Longitude:</b> 108 10 15.258 W	
<b>Position Uncertainty:</b> 0.00 ft		<b>North Reference:</b> True	
<b>Ground Level:</b> 8311.00 ft		<b>Grid Convergence:</b> -1.68 deg	

<b>Well:</b> BERRY 1-31D 3085' FNL, 1902' FWL				<b>Slot Name:</b>			
<b>Well Position:</b> +N/-S -110.77 ft	<b>Northing:</b> 1638455.38 ft	<b>Latitude:</b> 39 33 21.376 N		<b>Well Position:</b> +E/-W -123.37 ft	<b>Easting:</b> 2246900.88 ft	<b>Longitude:</b> 108 10 16.833 W	
<b>Position Uncertainty:</b> 0.00 ft							

<b>Wellpath:</b> 1				<b>Drilled From:</b> Surface			
<b>Current Datum:</b> KB				<b>Tie-on Depth:</b> 0.00 ft			
<b>Magnetic Data:</b> 12/11/2007				<b>Above System Datum:</b> Mean Sea Level			
<b>Field Strength:</b> 52669 nT				<b>Declination:</b> 10.92 deg			
<b>Vertical Section:</b> Depth From (TVD) ft				<b>Mag Dip Angle:</b> 65.88 deg			
				<b>+N/-S</b> ft			
				<b>+E/-W</b> ft			
				<b>Direction</b> deg			
0.00				0.00			
				0.00			
				234.69			

<b>Plan:</b> Plan #1		<b>Date Composed:</b> 5/24/2007	
<b>Principal:</b> Yes		<b>Version:</b> 1	
		<b>Tied-to:</b> From Surface	

Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	234.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	234.69	250.00	0.00	0.00	0.00	0.00	0.00	234.69	
750.00	5.00	234.69	749.37	-12.60	-17.79	1.00	1.00	0.00	234.69	
800.00	5.00	234.69	799.18	-15.12	-21.35	0.00	0.00	0.00	0.00	
1386.90	16.74	234.69	1374.54	-78.98	-111.50	2.00	2.00	0.00	0.00	
5471.32	16.74	234.69	5285.91	-758.89	-1071.38	0.00	0.00	0.00	0.00	
7145.12	0.00	234.69	6936.00	-899.21	-1269.48	1.00	-1.00	0.00	180.00	
10045.12	0.00	234.69	9836.00	-899.21	-1269.48	0.00	0.00	0.00	234.69	PBHL 1-31D

Survey										
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
250.00	0.00	234.69	250.00	0.00	0.00	0.00	0.00	0.00	0.00	NUDGE
350.00	1.00	234.69	349.99	-0.50	-0.71	0.87	1.00	1.00	0.00	
450.00	2.00	234.69	449.96	-2.02	-2.85	3.49	1.00	1.00	0.00	
550.00	3.00	234.69	549.86	-4.54	-6.41	7.85	1.00	1.00	0.00	
650.00	4.00	234.69	649.68	-8.07	-11.39	13.96	1.00	1.00	0.00	
750.00	5.00	234.69	749.37	-12.60	-17.79	21.80	1.00	1.00	0.00	HOLD
800.00	5.00	234.69	799.18	-15.12	-21.35	26.16	0.00	0.00	0.00	KOP
850.00	6.00	234.69	848.94	-17.89	-25.26	30.95	2.00	2.00	0.00	
950.00	8.00	234.69	948.19	-24.93	-35.20	43.14	2.00	2.00	0.00	
1050.00	10.00	234.69	1046.96	-33.98	-47.97	58.78	2.00	2.00	0.00	
1150.00	12.00	234.69	1145.12	-45.00	-63.54	77.86	2.00	2.00	0.00	
1250.00	14.00	234.69	1242.55	-58.01	-81.89	100.36	2.00	2.00	0.00	
1350.00	16.00	234.69	1339.14	-72.97	-103.01	126.24	2.00	2.00	0.00	
1386.90	16.74	234.69	1374.54	-78.98	-111.50	136.64	2.00	2.00	0.00	HOLD

# Weatherford International, Ltd.

## PLAN REPORT

<b>Company:</b> BERRY PETROLEUM COMPANY <b>Field:</b> GARFIELD COUNTY (NAD 83) <b>Site:</b> BERRY 1-21D PAD <b>Well:</b> BERRY 1-31D <b>Wellpath:</b> 1	<b>Date:</b> 12/11/2007 <b>Time:</b> 14:49:16 <b>Page:</b> 2 <b>Co-ordinate(NE) Reference:</b> Well: BERRY 1-31D, True North <b>Vertical (TVD) Reference:</b> KB 8332.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,234.69Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
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### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
1450.00	16.74	234.69	1434.97	-89.48	-126.33	154.81	0.00	0.00	0.00	
1550.00	16.74	234.69	1530.73	-106.13	-149.83	183.61	0.00	0.00	0.00	
1650.00	16.74	234.69	1626.49	-122.77	-173.33	212.41	0.00	0.00	0.00	
1750.00	16.74	234.69	1722.26	-139.42	-196.83	241.21	0.00	0.00	0.00	
1850.00	16.74	234.69	1818.02	-156.07	-220.33	270.01	0.00	0.00	0.00	
1950.00	16.74	234.69	1913.78	-172.71	-243.83	298.81	0.00	0.00	0.00	
2050.00	16.74	234.69	2009.55	-189.36	-267.33	327.61	0.00	0.00	0.00	
2150.00	16.74	234.69	2105.31	-206.01	-290.84	356.40	0.00	0.00	0.00	
2250.00	16.74	234.69	2201.07	-222.65	-314.34	385.20	0.00	0.00	0.00	
2350.00	16.74	234.69	2296.83	-239.30	-337.84	414.00	0.00	0.00	0.00	
2450.00	16.74	234.69	2392.60	-255.95	-361.34	442.80	0.00	0.00	0.00	
2550.00	16.74	234.69	2488.36	-272.59	-384.84	471.60	0.00	0.00	0.00	
2650.00	16.74	234.69	2584.12	-289.24	-408.34	500.40	0.00	0.00	0.00	
2750.00	16.74	234.69	2679.89	-305.89	-431.84	529.20	0.00	0.00	0.00	
2850.00	16.74	234.69	2775.65	-322.53	-455.34	558.00	0.00	0.00	0.00	
2950.00	16.74	234.69	2871.41	-339.18	-478.85	586.80	0.00	0.00	0.00	
3000.00	16.74	234.69	2919.30	-347.50	-490.60	601.20	0.00	0.00	0.00	9 5/8"
3050.00	16.74	234.69	2967.18	-355.83	-502.35	615.60	0.00	0.00	0.00	
3150.00	16.74	234.69	3062.94	-372.47	-525.85	644.40	0.00	0.00	0.00	
3153.20	16.74	234.69	3066.00	-373.00	-526.60	645.32	0.00	0.00	0.00	WASATCH
3250.00	16.74	234.69	3158.70	-389.12	-549.35	673.20	0.00	0.00	0.00	
3350.00	16.74	234.69	3254.47	-405.77	-572.85	702.00	0.00	0.00	0.00	
3376.66	16.74	234.69	3280.00	-410.20	-579.12	709.68	0.00	0.00	0.00	FORT UNION
3450.00	16.74	234.69	3350.23	-422.41	-596.35	730.80	0.00	0.00	0.00	
3550.00	16.74	234.69	3445.99	-439.06	-619.85	759.60	0.00	0.00	0.00	
3650.00	16.74	234.69	3541.76	-455.71	-643.35	788.40	0.00	0.00	0.00	
3750.00	16.74	234.69	3637.52	-472.35	-666.85	817.20	0.00	0.00	0.00	
3850.00	16.74	234.69	3733.28	-489.00	-690.36	846.00	0.00	0.00	0.00	
3950.00	16.74	234.69	3829.05	-505.65	-713.86	874.80	0.00	0.00	0.00	
4050.00	16.74	234.69	3924.81	-522.29	-737.36	903.60	0.00	0.00	0.00	
4150.00	16.74	234.69	4020.57	-538.94	-760.86	932.40	0.00	0.00	0.00	
4250.00	16.74	234.69	4116.34	-555.59	-784.36	961.20	0.00	0.00	0.00	
4350.00	16.74	234.69	4212.10	-572.23	-807.86	989.99	0.00	0.00	0.00	
4450.00	16.74	234.69	4307.86	-588.88	-831.36	1018.79	0.00	0.00	0.00	
4550.00	16.74	234.69	4403.62	-605.53	-854.86	1047.59	0.00	0.00	0.00	
4650.00	16.74	234.69	4499.39	-622.17	-878.36	1076.39	0.00	0.00	0.00	
4750.00	16.74	234.69	4595.15	-638.82	-901.87	1105.19	0.00	0.00	0.00	
4850.00	16.74	234.69	4690.91	-655.47	-925.37	1133.99	0.00	0.00	0.00	
4950.00	16.74	234.69	4786.68	-672.11	-948.87	1162.79	0.00	0.00	0.00	
5050.00	16.74	234.69	4882.44	-688.76	-972.37	1191.59	0.00	0.00	0.00	
5150.00	16.74	234.69	4978.20	-705.41	-995.87	1220.39	0.00	0.00	0.00	
5250.00	16.74	234.69	5073.97	-722.05	-1019.37	1249.19	0.00	0.00	0.00	
5350.00	16.74	234.69	5169.73	-738.70	-1042.87	1277.99	0.00	0.00	0.00	
5450.00	16.74	234.69	5265.49	-755.35	-1066.37	1306.79	0.00	0.00	0.00	
5471.32	16.74	234.69	5285.91	-758.89	-1071.38	1312.93	0.00	0.00	0.00	DROP
5550.00	15.95	234.69	5361.41	-771.69	-1089.45	1335.07	1.00	-1.00	0.00	
5650.00	14.95	234.69	5457.79	-787.09	-1111.19	1361.71	1.00	-1.00	0.00	
5750.00	13.95	234.69	5554.63	-801.52	-1131.56	1386.67	1.00	-1.00	0.00	
5850.00	12.95	234.69	5651.88	-814.96	-1150.54	1409.93	1.00	-1.00	0.00	
5950.00	11.95	234.69	5749.53	-827.42	-1168.13	1431.49	1.00	-1.00	0.00	
6050.00	10.95	234.69	5847.54	-838.90	-1184.33	1451.34	1.00	-1.00	0.00	
6150.00	9.95	234.69	5945.88	-849.38	-1199.13	1469.48	1.00	-1.00	0.00	

# Weatherford International, Ltd.

## PLAN REPORT

<b>Company:</b> BERRY PETROLEUM COMPANY <b>Field:</b> GARFIELD COUNTY (NAD 83) <b>Site:</b> BERRY 1-21D PAD <b>Well:</b> BERRY 1-31D <b>Wellpath:</b> 1	<b>Date:</b> 12/11/2007 <b>Co-ordinate(NE) Reference:</b> Well: BERRY 1-31D, True North <b>Vertical (TVD) Reference:</b> KB 8332.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,234.69Azi) <b>Survey Calculation Method:</b> Minimum Curvature <b>Db:</b> Sybase
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### Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
6250.00	8.95	234.69	6044.52	-858.88	-1212.53	1485.90	1.00	-1.00	0.00	
6350.00	7.95	234.69	6143.43	-867.37	-1224.53	1500.60	1.00	-1.00	0.00	
6450.00	6.95	234.69	6242.59	-874.87	-1235.11	1513.57	1.00	-1.00	0.00	
6550.00	5.95	234.69	6341.95	-881.36	-1244.28	1524.80	1.00	-1.00	0.00	
6650.00	4.95	234.69	6441.50	-886.85	-1252.03	1534.30	1.00	-1.00	0.00	
6744.79	4.00	234.69	6536.00	-891.13	-1258.07	1541.70	1.00	-1.00	0.00	OHIO CREEK
6750.00	3.95	234.69	6541.20	-891.34	-1258.36	1542.06	1.00	-1.00	0.00	
6850.00	2.95	234.69	6641.01	-894.82	-1263.27	1548.08	1.00	-1.00	0.00	
6950.00	1.95	234.69	6740.92	-897.29	-1266.76	1552.36	1.00	-1.00	0.00	
7045.11	1.00	234.69	6836.00	-898.70	-1268.76	1554.81	1.00	-1.00	0.00	MESAVERDE
7050.00	0.95	234.69	6840.89	-898.75	-1268.83	1554.89	1.00	-1.00	0.00	
7145.12	0.00	234.69	6936.00	-899.21	-1269.48	1555.68	1.00	-1.00	0.00	APPROX TOP GAS
7150.00	0.00	234.69	6940.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7250.00	0.00	234.69	7040.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7350.00	0.00	234.69	7140.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7450.00	0.00	234.69	7240.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7550.00	0.00	234.69	7340.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7650.00	0.00	234.69	7440.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7750.00	0.00	234.69	7540.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7850.00	0.00	234.69	7640.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
7950.00	0.00	234.69	7740.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8050.00	0.00	234.69	7840.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8150.00	0.00	234.69	7940.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8250.00	0.00	234.69	8040.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8350.00	0.00	234.69	8140.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8450.00	0.00	234.69	8240.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8550.00	0.00	234.69	8340.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8650.00	0.00	234.69	8440.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8750.00	0.00	234.69	8540.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8850.00	0.00	234.69	8640.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
8950.00	0.00	234.69	8740.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9050.00	0.00	234.69	8840.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9150.00	0.00	234.69	8940.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9250.00	0.00	234.69	9040.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9350.00	0.00	234.69	9140.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9450.00	0.00	234.69	9240.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9470.12	0.00	234.69	9261.00	-899.21	-1269.48	1555.68	0.00	0.00	0.00	CAMEO
9550.00	0.00	234.69	9340.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9650.00	0.00	234.69	9440.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9750.00	0.00	234.69	9540.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9850.00	0.00	234.69	9640.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
9945.12	0.00	234.69	9736.00	-899.21	-1269.48	1555.68	0.00	0.00	0.00	ROLLINS SS
9950.00	0.00	234.69	9740.88	-899.21	-1269.48	1555.68	0.00	0.00	0.00	
10045.12	0.00	234.69	9836.00	-899.21	-1269.48	1555.68	0.00	0.00	0.00	PBHL 1-31D

### Annotation

MD ft	TVD ft	
250.00	250.00	NUDGE
750.00	749.37	HOLD
800.00	799.18	KOP
1386.90	1374.54	HOLD
5471.32	5285.91	DROP



# Weatherford International, Ltd.

## Anticollision Report

<b>Company:</b>	BERRY PETROLEUM COMPANY	<b>Date:</b>	5/25/2007	<b>Time:</b>	12:03:17	<b>Page:</b>	1
<b>Field:</b>	GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b>		Well: BERRY 1-31D, True North			
<b>Reference Site:</b>	BERRY 1-21D PAD	<b>Vertical (TVD) Reference:</b>		KB 8332.0			
<b>Reference Well:</b>	BERRY 1-31D						
<b>Reference Wellpath:</b>	1	<b>Db:</b> Sybase					

<b>NO GLOBAL SCAN: Using user defined selection &amp; scan criteria</b>				<b>Reference:</b>	Plan: Plan #1
<b>Interpolation Method:</b>	MD	<b>Interval:</b>	100.00 ft	<b>Error Model:</b>	ISCWSA Ellipse
<b>Depth Range:</b>	0.00 to	10667.13 ft		<b>Scan Method:</b>	Closest Approach 3D
<b>Maximum Radius:</b>	10000.00 ft			<b>Error Surface:</b>	Ellipse

<b>Plan:</b> Plan #1	<b>Date Composed:</b>	5/24/2007
<b>Principal:</b> Yes	<b>Version:</b>	1
	<b>Tied-to:</b>	From Surface

**Summary**

<----- Offset Wellpath ----->	Reference	Offset	Ctr-Ctr	Edge	Separation	Warning	
Site	Well	Wellpath	MD ft	MD ft	Distance ft	Distance ft	Factor
BERRY 1-21D PAD	BERRY 1-32D	1 V0 Plan: Plan #1 V1	900.00	901.23	19.37	15.53	5.04

**Site:** BERRY 1-21D PAD  
**Well:** BERRY 1-32D  
**Wellpath:** 1 V0 Plan: Plan #1 V1

**Inter-Site Error:** 0.00 ft

Reference MD ft	TVD ft	Offset MD ft	TVD ft	Semi-Major Axis Ref ft	Offset ft	TFO-HS deg	Offset Location North ft	East ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	46.62	10.70	11.33	15.58			No Data
100.00	100.00	100.00	100.00	0.09	0.09	46.62	10.70	11.33	15.58	15.41	87.76	
200.00	200.00	200.00	200.00	0.31	0.31	46.62	10.70	11.33	15.58	14.96	24.85	
300.00	300.00	300.13	300.13	0.54	0.54	171.79	10.61	11.13	15.59	14.51	14.47	
400.00	399.98	400.39	400.37	0.76	0.77	170.73	9.85	9.55	15.66	14.13	10.24	
500.00	499.92	500.65	500.57	1.00	1.00	168.65	8.33	6.38	15.80	13.82	7.98	
600.00	599.78	600.90	600.68	1.23	1.24	165.59	6.06	1.64	16.06	13.62	6.60	
700.00	699.54	701.15	700.68	1.48	1.48	161.68	3.03	-4.68	16.47	13.57	5.69	
800.00	799.18	801.26	800.43	1.74	1.75	157.23	-0.66	-12.36	17.07	13.71	5.07	
900.00	898.62	901.23	900.02	2.02	2.01	155.35	-4.43	-20.22	19.37	15.53	5.04	
1000.00	997.64	1001.07	999.48	2.34	2.28	157.39	-8.19	-28.06	24.87	20.55	5.76	
1100.00	1096.12	1100.66	1098.69	2.69	2.55	160.82	-11.94	-35.89	33.66	28.86	7.02	
1200.00	1193.93	1199.88	1197.54	3.09	2.83	164.08	-15.68	-43.69	45.84	40.58	8.71	
1300.00	1290.95	1300.57	1297.66	3.55	3.12	166.12	-20.24	-53.18	59.88	54.14	10.43	
1400.00	1387.08	1401.73	1397.83	4.06	3.45	166.92	-26.34	-65.91	74.08	67.83	11.85	
1500.00	1482.85	1503.62	1498.15	4.61	3.82	166.81	-34.04	-81.95	86.32	79.52	12.69	
1600.00	1578.61	1606.20	1598.45	5.17	4.24	165.87	-43.33	-101.33	95.29	87.91	12.90	
1700.00	1674.37	1709.22	1698.33	5.74	4.71	164.22	-54.23	-124.04	101.04	93.01	12.59	
1800.00	1770.14	1810.16	1795.49	6.32	5.23	162.11	-66.07	-148.73	104.38	95.65	11.95	
1900.00	1865.90	1910.03	1891.57	6.90	5.75	160.09	-77.87	-173.33	107.69	98.20	11.36	
2000.00	1961.66	2009.91	1987.64	7.49	6.28	158.21	-89.67	-197.92	111.12	100.85	10.81	
2100.00	2057.43	2109.79	2083.72	8.08	6.83	156.43	-101.46	-222.52	114.67	103.56	10.33	
2200.00	2153.19	2209.66	2179.80	8.67	7.37	154.76	-113.26	-247.12	118.32	106.35	9.89	
2300.00	2248.95	2309.54	2275.88	9.26	7.92	153.20	-125.06	-271.71	122.07	109.20	9.49	
2400.00	2344.72	2409.41	2371.96	9.86	8.48	151.73	-136.86	-296.31	125.90	112.11	9.13	
2500.00	2440.48	2509.29	2468.04	10.45	9.04	150.34	-148.65	-320.90	129.81	115.07	8.81	
2600.00	2536.24	2609.17	2564.11	11.05	9.60	149.04	-160.45	-345.50	133.79	118.09	8.52	
2700.00	2632.01	2709.04	2660.19	11.65	10.17	147.81	-172.25	-370.09	137.83	121.14	8.26	
2800.00	2727.77	2808.92	2756.27	12.25	10.73	146.66	-184.05	-394.69	141.94	124.25	8.02	
2900.00	2823.53	2908.79	2852.35	12.85	11.30	145.57	-195.85	-419.29	146.10	127.39	7.81	
3000.00	2919.30	3008.67	2948.43	13.45	11.87	144.54	-207.64	-443.88	150.31	130.56	7.61	
3100.00	3015.06	3108.54	3044.51	14.05	12.44	143.56	-219.44	-468.48	154.56	133.77	7.44	
3200.00	3110.82	3208.42	3140.58	14.65	13.01	142.64	-231.24	-493.07	158.86	137.02	7.27	
3300.00	3206.58	3308.30	3236.66	15.25	13.58	141.77	-243.04	-517.67	163.19	140.29	7.12	
3400.00	3302.35	3408.17	3332.74	15.85	14.15	140.94	-254.83	-542.26	167.57	143.59	6.99	
3500.00	3398.11	3508.05	3428.82	16.45	14.72	140.16	-266.63	-566.86	171.97	146.91	6.86	

# Weatherford International, Ltd.

## Anticollision Report

<b>Company:</b>	BERRY PETROLEUM COMPANY	<b>Date:</b> 5/25/2007	<b>Time:</b> 12:03:17	<b>Page:</b> 2
<b>Field:</b>	GARFIELD COUNTY (NAD 83)			
<b>Reference Site:</b>	BERRY 1-21D PAD	<b>Co-ordinate(NE) Reference:</b>	Well: BERRY 1-31D, True North	
<b>Reference Well:</b>	BERRY 1-31D	<b>Vertical (TVD) Reference:</b>	KB 8332.0	
<b>Reference Wellpath:</b>	1	<b>Db:</b> Sybase		

**Site:** BERRY 1-21D PAD  
**Well:** BERRY 1-32D  
**Wellpath:** 1 V0 Plan: Plan #1 V1

**Inter-Site Error:** 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr	Edge	Separation	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3600.00	3493.87	3607.92	3524.90	17.06	15.30	139.41	-278.43	-591.46	176.41	150.27	6.75	
3700.00	3589.64	3707.80	3620.98	17.66	15.87	138.70	-290.23	-616.05	180.87	153.64	6.64	
3800.00	3685.40	3807.68	3717.05	18.26	16.45	138.03	-302.02	-640.65	185.36	157.03	6.54	
3900.00	3781.16	3907.55	3813.13	18.87	17.02	137.38	-313.82	-665.24	189.88	160.45	6.45	
4000.00	3876.93	4007.43	3909.21	19.47	17.60	136.77	-325.62	-689.84	194.42	163.88	6.37	
4100.00	3972.69	4107.30	4005.29	20.07	18.17	136.18	-337.42	-714.43	198.97	167.33	6.29	
4200.00	4068.45	4207.18	4101.37	20.68	18.75	135.63	-349.21	-739.03	203.55	170.80	6.21	
4300.00	4164.22	4307.05	4197.45	21.28	19.32	135.09	-361.01	-763.63	208.15	174.28	6.15	
4400.00	4259.98	4406.93	4293.53	21.88	19.90	134.58	-372.81	-788.22	212.77	177.78	6.08	
4500.00	4355.74	4506.81	4389.60	22.49	20.48	134.09	-384.61	-812.82	217.40	181.29	6.02	
4600.00	4451.51	4606.68	4485.68	23.09	21.05	133.62	-396.40	-837.41	222.04	184.82	5.97	
4700.00	4547.27	4706.56	4581.76	23.69	21.63	133.17	-408.20	-862.01	226.70	188.36	5.91	
4800.00	4643.03	4806.43	4677.84	24.30	22.21	132.74	-420.00	-886.60	231.38	191.91	5.86	
4900.00	4738.80	4906.31	4773.92	24.90	22.79	132.33	-431.80	-911.20	236.06	195.47	5.82	
5000.00	4834.56	5006.19	4870.00	25.51	23.36	131.93	-443.60	-935.80	240.76	199.04	5.77	
5100.00	4930.32	5106.06	4966.07	26.11	23.94	131.55	-455.39	-960.39	245.47	202.62	5.73	
5200.00	5026.09	5205.94	5062.15	26.72	24.52	131.18	-467.19	-984.99	250.19	206.21	5.69	
5300.00	5121.85	5305.81	5158.23	27.32	25.10	130.82	-478.99	-1009.58	254.92	209.81	5.65	
5400.00	5217.61	5405.69	5254.31	27.93	25.67	130.48	-490.79	-1034.18	259.66	213.42	5.62	
5500.00	5313.40	5505.57	5350.39	28.51	26.25	130.15	-502.58	-1058.77	264.36	217.00	5.58	
5600.00	5409.54	5603.65	5444.88	28.93	26.75	129.74	-513.96	-1082.48	268.50	220.16	5.55	
5700.00	5506.16	5701.24	5539.32	29.34	27.15	129.37	-524.59	-1104.66	272.39	223.17	5.53	
5800.00	5603.21	5798.84	5634.17	29.73	27.52	129.03	-534.53	-1125.38	276.03	225.99	5.52	
5900.00	5700.66	5896.44	5729.41	30.10	27.88	128.72	-543.77	-1144.65	279.42	228.61	5.50	
6000.00	5798.49	5994.05	5825.00	30.45	28.21	128.44	-552.31	-1162.45	282.57	231.02	5.48	
6100.00	5896.67	6091.67	5920.92	30.77	28.52	128.19	-560.15	-1178.78	285.46	233.22	5.47	
6200.00	5995.16	6189.29	6017.14	31.08	28.82	127.97	-567.27	-1193.63	288.09	235.22	5.45	
6300.00	6093.94	6286.92	6113.64	31.36	29.09	127.78	-573.69	-1207.01	290.47	237.01	5.43	
6400.00	6192.98	6384.56	6210.37	31.62	29.34	127.61	-579.39	-1218.90	292.58	238.58	5.42	
6500.00	6292.25	6482.20	6307.33	31.85	29.57	127.46	-584.38	-1229.31	294.43	239.94	5.40	
6600.00	6391.71	6579.84	6404.47	32.07	29.78	127.33	-588.66	-1238.22	296.02	241.08	5.39	
6700.00	6491.33	6677.48	6501.76	32.26	29.97	127.23	-592.22	-1245.64	297.35	242.01	5.37	
6800.00	6591.09	6775.13	6599.19	32.43	30.14	127.15	-595.06	-1251.56	298.40	242.71	5.36	
6900.00	6690.96	6872.78	6696.71	32.57	30.28	127.09	-597.18	-1255.99	299.19	243.20	5.34	
7000.00	6790.90	6970.43	6794.31	32.70	30.41	127.05	-598.59	-1258.92	299.72	243.47	5.33	
7100.00	6890.88	7068.08	6891.94	32.80	30.51	127.03	-599.27	-1260.35	299.97	243.51	5.31	
7200.00	6990.88	7167.02	6990.88	32.89	30.61	1.71	-599.34	-1260.50	300.00	263.90	8.31	
7300.00	7090.88	7267.02	7090.88	32.99	30.71	1.71	-599.34	-1260.50	300.00	263.55	8.23	
7400.00	7190.88	7367.02	7190.88	33.10	30.83	1.71	-599.34	-1260.50	300.00	263.19	8.15	
7500.00	7290.88	7467.02	7290.88	33.20	30.94	1.71	-599.34	-1260.50	300.00	262.83	8.07	
7600.00	7390.88	7567.02	7390.88	33.31	31.06	1.71	-599.34	-1260.50	300.00	262.47	7.99	
7700.00	7490.88	7667.02	7490.88	33.42	31.17	1.71	-599.34	-1260.50	300.00	262.11	7.92	
7800.00	7590.88	7767.02	7590.88	33.53	31.29	1.71	-599.34	-1260.50	300.00	261.74	7.84	
7900.00	7690.88	7867.02	7690.88	33.64	31.41	1.71	-599.34	-1260.50	300.00	261.38	7.77	
8000.00	7790.88	7967.02	7790.88	33.75	31.53	1.71	-599.34	-1260.50	300.00	261.01	7.69	
8100.00	7890.88	8067.02	7890.88	33.87	31.65	1.71	-599.34	-1260.50	300.00	260.64	7.62	
8200.00	7990.88	8167.02	7990.88	33.98	31.77	1.71	-599.34	-1260.50	300.00	260.26	7.55	
8300.00	8090.88	8267.02	8090.88	34.10	31.89	1.71	-599.34	-1260.50	300.00	259.89	7.48	
8400.00	8190.88	8367.02	8190.88	34.21	32.02	1.71	-599.34	-1260.50	300.00	259.52	7.41	
8500.00	8290.88	8467.02	8290.88	34.33	32.14	1.71	-599.34	-1260.50	300.00	259.14	7.34	
8600.00	8390.88	8567.02	8390.88	34.45	32.27	1.71	-599.34	-1260.50	300.00	258.76	7.27	



# Weatherford International, Ltd.

## Anticollision Report

<b>Company:</b> BERRY PETROLEUM COMPANY	<b>Date:</b> 5/25/2007	<b>Time:</b> 12:03:17	<b>Page:</b> 3
<b>Field:</b> GARFIELD COUNTY (NAD 83)			
<b>Reference Site:</b> BERRY 1-21D PAD	<b>Co-ordinate(NE) Reference:</b> Well: BERRY 1-31D, True North		
<b>Reference Well:</b> BERRY 1-31D	<b>Vertical (TVD) Reference:</b> KB 8332.0		
<b>Reference Wellpath:</b> 1	<b>Db:</b> Sybase		

**Site:** BERRY 1-21D PAD  
**Well:** BERRY 1-32D  
**Wellpath:** 1 V0 Plan: Plan #1 V1

**Inter-Site Error:** 0.00 ft

Reference		Offset		Semi-Major Axis		Offset Location			Ctr-Ctr		Edge		Separation		Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East	Distance	Distance	Distance	Distance	Factor		
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft	ft	ft			
8700.00	8490.88	8667.02	8490.88	34.57	32.39	1.71	-599.34	-1260.50	300.00	258.38			7.21		
8800.00	8590.88	8767.02	8590.88	34.69	32.52	1.71	-599.34	-1260.50	300.00	258.00			7.14		
8900.00	8690.88	8867.02	8690.88	34.81	32.65	1.71	-599.34	-1260.50	300.00	257.62			7.08		
9000.00	8790.88	8967.02	8790.88	34.93	32.78	1.71	-599.34	-1260.50	300.00	257.23			7.01		
9100.00	8890.88	9067.02	8890.88	35.06	32.91	1.71	-599.34	-1260.50	300.00	256.85			6.95		
9200.00	8990.88	9167.02	8990.88	35.18	33.05	1.71	-599.34	-1260.50	300.00	256.46			6.89		
9300.00	9090.88	9267.02	9090.88	35.31	33.18	1.71	-599.34	-1260.50	300.00	256.08			6.83		
9400.00	9190.88	9367.02	9190.88	35.43	33.31	1.71	-599.34	-1260.50	300.00	255.69			6.77		
9500.00	9290.88	9467.02	9290.88	35.56	33.45	1.71	-599.34	-1260.50	300.00	255.30			6.71		
9600.00	9390.88	9567.02	9390.88	35.69	33.59	1.71	-599.34	-1260.50	300.00	254.91			6.65		
9700.00	9490.88	9667.02	9490.88	35.82	33.72	1.71	-599.34	-1260.50	300.00	254.52			6.60		
9800.00	9590.88	9767.02	9590.88	35.95	33.86	1.71	-599.34	-1260.50	300.00	254.12			6.54		
9900.00	9690.88	9867.02	9690.88	36.08	34.00	1.71	-599.34	-1260.50	300.00	253.73			6.48		
10000.00	9790.88	9967.02	9790.88	36.22	34.14	1.71	-599.34	-1260.50	300.00	253.33			6.43		