



**Weatherford®**

## **Drilling Services**

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## **Proposal**

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**Berry Petroleum Company**

### **BERRY PETROLEUM CO.**

CHEVRON 31- 20D

GARFIELD COUNTY, COLORADO

WELL FILE: **PLAN 2**

JANUARY 25, 2008

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**Weatherford International, Ltd.**

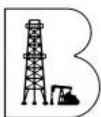
15710 John F. Kennedy Blvd., Suite 700

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Berry Petroleum Company

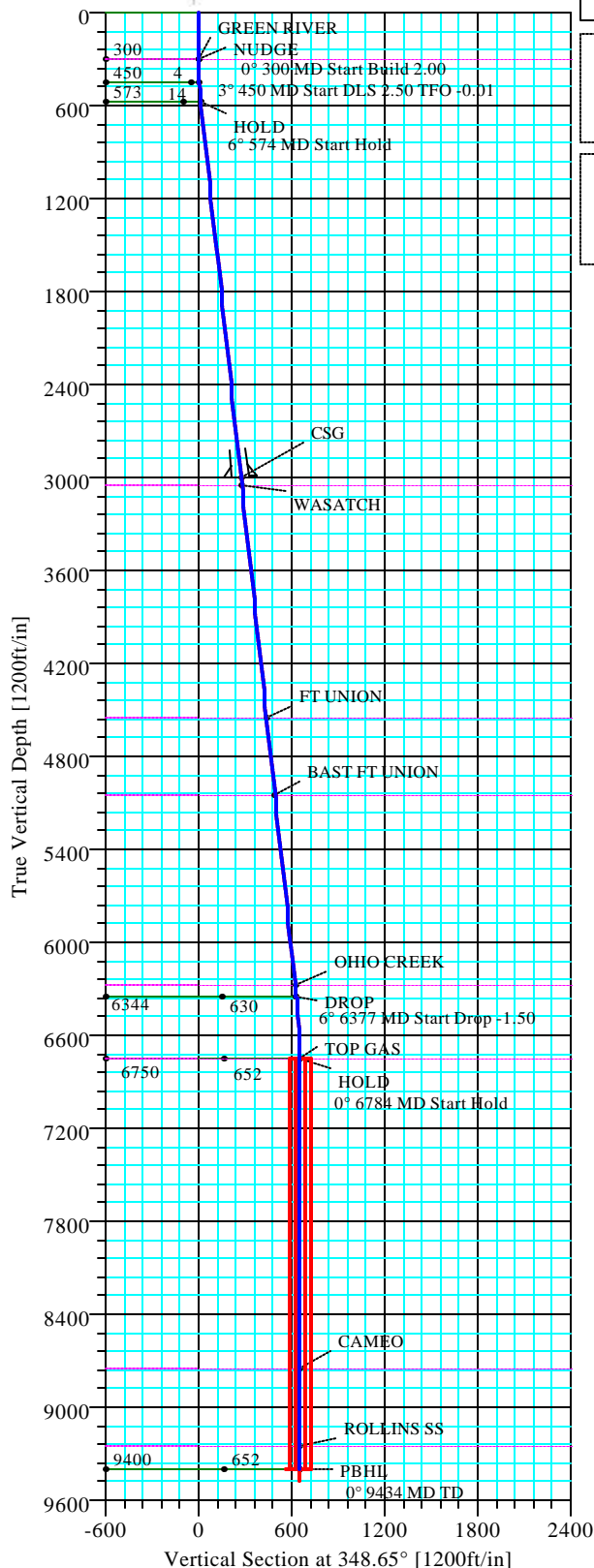
CHEVRON 31-20D  
SEC 31-T5S-R96W  
2335' FNL, 568' FWL  
GARFIELD COUNTY, COLORADO



Weatherford®



KB ELEV: 8469'  
GR ELEV: 8458'



#### SECTION DETAILS

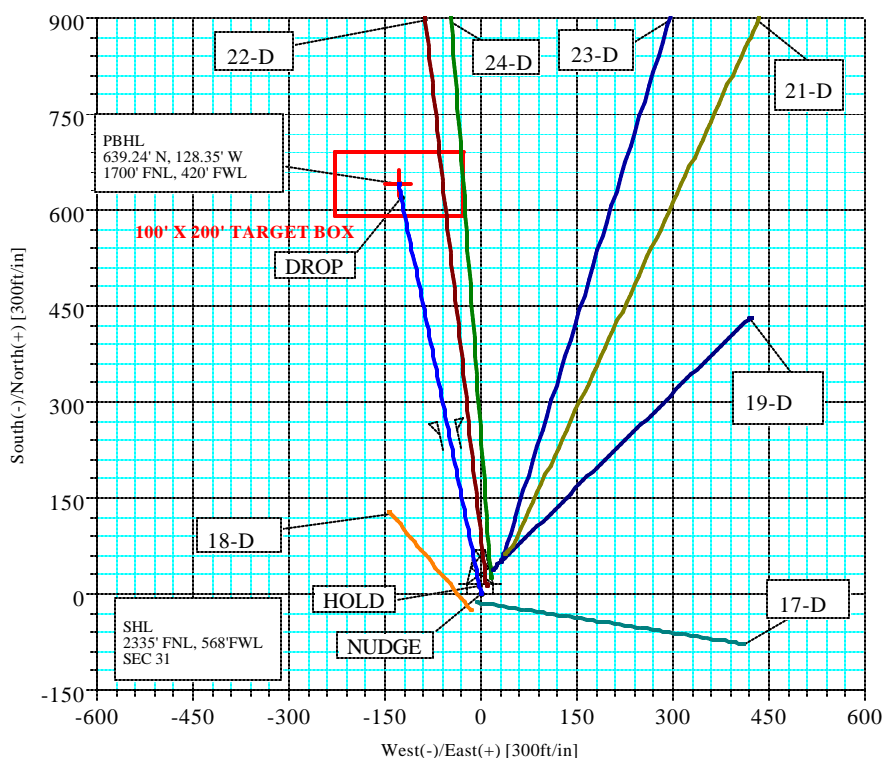
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	348.65	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	348.65	300.00	0.00	0.00	0.00	348.65	0.00	
3	450.00	3.00	348.65	449.93	3.85	-0.77	2.00	348.65	3.93	
4	573.97	6.10	348.65	573.49	13.49	-2.71	2.50	-0.01	13.76	
5	6377.48	6.10	348.65	6344.16	618.04	-124.10	0.00	0.00	630.38	
6	6784.09	0.00	0.00	6750.00	639.24	-128.35	1.50	180.00	652.00	
7	9434.09	0.00	0.00	9400.00	639.24	-128.35	0.00	0.00	652.00	PBHL 20-D

#### WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
31-20D	25.56	14.79	1644839.07	2234677.11	39°34'20.860N	108°12'55.269W	N/A

#### TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL 20-D	9400.00	639.24	-128.35	1645481.86	2234567.92	Rectangle (100x200)



VERTICAL SECTION AZIMUTH 348.65°

#### FIELD DETAILS

GARFIELD COUNTY (NAD 83)  
COLORADO  
Geodetic System: US State Plane Coordinate System 1983  
Ellipsoid: GRS 1980  
Zone: Colorado, Central Zone  
Magnetic Model: bgm2007  
System Datum: Mean Sea Level  
Local North: True North

#### FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	300.00	300.00	GREEN RIVER
2	3050.00	3064.57	WASATCH
3	4550.00	4573.11	FT UNION
4	5050.00	5075.96	BAST FT UNION
5	6270.00	6302.90	OHIO CREEK
6	6750.00	6784.09	TOP GAS
7	8750.00	8784.09	CAMEO
8	9250.00	9284.09	ROLLINS SS

#### SITE DETAILS

CHEVRON 31-18D SENW SEC 31 PAD  
SECTION 31  
Site Centre Latitude: 39°34'20.607N  
Longitude: 108°12'55.458W  
Ground Level: 8458.00  
Positional Uncertainty: 0.00  
Convergence: -1.71



Azimuths to True North  
Magnetic North: 10.93°

Magnetic Field  
Strength: 52652nT  
Dip Angle: 65.86°  
Date: 1/10/2008  
Model: bgm2007

TOTAL CORRECTION TO TRUE NORTH: 10.93°

Plan: Plan #2 (31-20D/20-D)

Created By: Mario Lainez

Date: 1/25/2008

<b>Company:</b> BERRY PETROLEUM COMPANY	<b>Date:</b> 1/24/2008	<b>Time:</b> 10:38:22	<b>Page:</b> 1
<b>Field:</b> GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: 31-20D, True North		
<b>Site:</b> CHEVRON 31-18D SENW SEC 31 PAD	<b>Vertical (TVD) Reference:</b> SITE 8469.0		
<b>Well:</b> 31-20D	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,348.65Azi)		
<b>Wellpath:</b> 20-D	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

<b>Plan:</b> Plan #2	<b>Date Composed:</b> 1/10/2008
<b>Principal:</b> Yes	<b>Version:</b> 1
	<b>Tied-to:</b> From Surface

**Field:** GARFIELD COUNTY (NAD 83)  
COLORADO

**Map System:** US State Plane Coordinate System 1983  
**Geo Datum:** GRS 1980  
**Sys Datum:** Mean Sea Level

**Map Zone:** Colorado, Central Zone  
**Coordinate System:** Well Centre  
**Geomagnetic Model:** bggm2007

**Site:** CHEVRON 31-18D SENW SEC 31 PAD

SECTION 31

<b>Site Position:</b>	<b>From:</b> Geographic	<b>Northing:</b> 1644813.96 ft	<b>Latitude:</b> 39 34 20.607 N
<b>Position Uncertainty:</b> 0.00 ft		<b>Easting:</b> 2234661.56 ft	<b>Longitude:</b> 108 12 55.458 W
<b>Ground Level:</b> 8458.00 ft			<b>North Reference:</b> True
			<b>Grid Convergence:</b> -1.71 deg

**Well:** 31-20D

**Slot Name:**

<b>Well Position:</b> +N/-S 25.56 ft	<b>Northing:</b> 1644839.07 ft	<b>Latitude:</b> 39 34 20.860 N
+E/-W 14.79 ft	<b>Easting:</b> 2234677.11 ft	<b>Longitude:</b> 108 12 55.269 W
<b>Position Uncertainty:</b> 0.00 ft		

**Wellpath:** 20-D

<b>Current Datum:</b> SITE	<b>Height</b> 8469.00 ft	<b>Drilled From:</b> Surface
<b>Magnetic Data:</b> 1/10/2008		<b>Tie-on Depth:</b> 0.00 ft
<b>Field Strength:</b> 52652 nT		<b>Above System Datum:</b> Mean Sea Level
<b>Vertical Section:</b> Depth From (TVD)	+N/-S	<b>Declination:</b> 10.93 deg
ft	ft	<b>Mag Dip Angle:</b> 65.86 deg
		<b>+E/-W</b> ft
		<b>Direction</b> deg
0.00	0.00	0.00 348.65

### 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	348.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	348.65	300.00	0.00	0.00	0.00	0.00	0.00	348.65	
450.00	3.00	348.65	449.93	3.85	-0.77	2.00	2.00	0.00	348.65	
573.97	6.10	348.65	573.49	13.49	-2.71	2.50	2.50	0.00	-0.01	
6377.48	6.10	348.65	6344.16	618.04	-124.10	0.00	0.00	0.00	0.00	
6784.09	0.00	0.00	6750.00	639.24	-128.35	1.50	-1.50	0.00	180.00	
9434.09	0.00	0.00	9400.00	639.24	-128.35	0.00	0.00	0.00	0.00	PBHL 20-D

### 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
300.00	0.00	348.65	300.00	0.00	0.00	0.00	0.00	0.00	0.00	NUDGE
400.00	2.00	348.65	399.98	1.71	-0.34	1.75	2.00	2.00	0.00	
450.00	3.00	348.65	449.93	3.85	-0.77	3.93	2.00	2.00	0.00	
500.00	4.25	348.65	499.83	6.95	-1.39	7.09	2.50	2.50	0.00	
573.97	6.10	348.65	573.49	13.49	-2.71	13.76	2.50	2.50	0.00	HOLD
600.00	6.10	348.65	599.38	16.20	-3.25	16.52	0.00	0.00	0.00	
700.00	6.10	348.65	698.81	26.62	-5.34	27.15	0.00	0.00	0.00	
800.00	6.10	348.65	798.25	37.03	-7.44	37.77	0.00	0.00	0.00	
900.00	6.10	348.65	897.68	47.45	-9.53	48.40	0.00	0.00	0.00	
1000.00	6.10	348.65	997.11	57.87	-11.62	59.02	0.00	0.00	0.00	
1100.00	6.10	348.65	1096.55	68.29	-13.71	69.65	0.00	0.00	0.00	
1200.00	6.10	348.65	1195.98	78.70	-15.80	80.27	0.00	0.00	0.00	
1300.00	6.10	348.65	1295.42	89.12	-17.89	90.90	0.00	0.00	0.00	
1400.00	6.10	348.65	1394.85	99.54	-19.99	101.52	0.00	0.00	0.00	
1500.00	6.10	348.65	1494.28	109.95	-22.08	112.15	0.00	0.00	0.00	

# Weatherford International, Ltd.

## WELL PLAN REPORT

<b>Company:</b> BERRY PETROLEUM COMPANY	<b>Date:</b> 1/24/2008	<b>Time:</b> 10:38:22	<b>Page:</b> 2
<b>Field:</b> GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: 31-20D, True North		
<b>Site:</b> CHEVRON 31-18D SENW SEC 31 PAD	<b>Vertical (TVD) Reference:</b> SITE 8469.0		
<b>Well:</b> 31-20D	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,348.65Azi)		
<b>Wellpath:</b> 20-D	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

### 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
1600.00	6.10	348.65	1593.72	120.37	-24.17	122.77	0.00	0.00	0.00	
1700.00	6.10	348.65	1693.15	130.79	-26.26	133.40	0.00	0.00	0.00	
1800.00	6.10	348.65	1792.59	141.20	-28.35	144.02	0.00	0.00	0.00	
1900.00	6.10	348.65	1892.02	151.62	-30.44	154.65	0.00	0.00	0.00	
2000.00	6.10	348.65	1991.45	162.04	-32.54	165.27	0.00	0.00	0.00	
2100.00	6.10	348.65	2090.89	172.46	-34.63	175.90	0.00	0.00	0.00	
2200.00	6.10	348.65	2190.32	182.87	-36.72	186.52	0.00	0.00	0.00	
2300.00	6.10	348.65	2289.76	193.29	-38.81	197.15	0.00	0.00	0.00	
2400.00	6.10	348.65	2389.19	203.71	-40.90	207.77	0.00	0.00	0.00	
2500.00	6.10	348.65	2488.62	214.12	-42.99	218.40	0.00	0.00	0.00	
2600.00	6.10	348.65	2588.06	224.54	-45.09	229.02	0.00	0.00	0.00	
2700.00	6.10	348.65	2687.49	234.96	-47.18	239.65	0.00	0.00	0.00	
2800.00	6.10	348.65	2786.93	245.38	-49.27	250.27	0.00	0.00	0.00	
2900.00	6.10	348.65	2886.36	255.79	-51.36	260.90	0.00	0.00	0.00	
3000.00	6.10	348.65	2985.79	266.21	-53.45	271.52	0.00	0.00	0.00	
3064.57	6.10	348.65	3050.00	272.94	-54.80	278.38	0.00	0.00	0.00	WASATCH
3100.00	6.10	348.65	3085.23	276.63	-55.54	282.15	0.00	0.00	0.00	
3200.00	6.10	348.65	3184.66	287.04	-57.64	292.77	0.00	0.00	0.00	
3300.00	6.10	348.65	3284.10	297.46	-59.73	303.40	0.00	0.00	0.00	
3400.00	6.10	348.65	3383.53	307.88	-61.82	314.02	0.00	0.00	0.00	
3500.00	6.10	348.65	3482.96	318.29	-63.91	324.65	0.00	0.00	0.00	
3600.00	6.10	348.65	3582.40	328.71	-66.00	335.27	0.00	0.00	0.00	
3700.00	6.10	348.65	3681.83	339.13	-68.09	345.90	0.00	0.00	0.00	
3800.00	6.10	348.65	3781.26	349.55	-70.19	356.52	0.00	0.00	0.00	
3900.00	6.10	348.65	3880.70	359.96	-72.28	367.15	0.00	0.00	0.00	
4000.00	6.10	348.65	3980.13	370.38	-74.37	377.77	0.00	0.00	0.00	
4100.00	6.10	348.65	4079.57	380.80	-76.46	388.40	0.00	0.00	0.00	
4200.00	6.10	348.65	4179.00	391.21	-78.55	399.02	0.00	0.00	0.00	
4300.00	6.10	348.65	4278.43	401.63	-80.64	409.65	0.00	0.00	0.00	
4400.00	6.10	348.65	4377.87	412.05	-82.74	420.27	0.00	0.00	0.00	
4500.00	6.10	348.65	4477.30	422.46	-84.83	430.90	0.00	0.00	0.00	
4573.11	6.10	348.65	4550.00	430.08	-86.36	438.66	0.00	0.00	0.00	FT UNION
4600.00	6.10	348.65	4576.74	432.88	-86.92	441.52	0.00	0.00	0.00	
4700.00	6.10	348.65	4676.17	443.30	-89.01	452.15	0.00	0.00	0.00	
4800.00	6.10	348.65	4775.60	453.72	-91.10	462.77	0.00	0.00	0.00	
4900.00	6.10	348.65	4875.04	464.13	-93.19	473.40	0.00	0.00	0.00	
5000.00	6.10	348.65	4974.47	474.55	-95.29	484.02	0.00	0.00	0.00	
5075.96	6.10	348.65	5050.00	482.46	-96.87	492.09	0.00	0.00	0.00	BAST FT UNION
5100.00	6.10	348.65	5073.91	484.97	-97.38	494.65	0.00	0.00	0.00	
5200.00	6.10	348.65	5173.34	495.38	-99.47	505.27	0.00	0.00	0.00	
5300.00	6.10	348.65	5272.77	505.80	-101.56	515.90	0.00	0.00	0.00	
5400.00	6.10	348.65	5372.21	516.22	-103.65	526.52	0.00	0.00	0.00	
5500.00	6.10	348.65	5471.64	526.63	-105.74	537.15	0.00	0.00	0.00	
5600.00	6.10	348.65	5571.08	537.05	-107.84	547.77	0.00	0.00	0.00	
5700.00	6.10	348.65	5670.51	547.47	-109.93	558.40	0.00	0.00	0.00	
5800.00	6.10	348.65	5769.94	557.89	-112.02	569.02	0.00	0.00	0.00	
5900.00	6.10	348.65	5869.38	568.30	-114.11	579.65	0.00	0.00	0.00	
6000.00	6.10	348.65	5968.81	578.72	-116.20	590.27	0.00	0.00	0.00	
6100.00	6.10	348.65	6068.25	589.14	-118.29	600.90	0.00	0.00	0.00	
6200.00	6.10	348.65	6167.68	599.55	-120.39	611.52	0.00	0.00	0.00	
6300.00	6.10	348.65	6267.11	609.97	-122.48	622.14	0.00	0.00	0.00	
6302.90	6.10	348.65	6270.00	610.27	-122.54	622.45	0.00	0.00	0.00	OHIO CREEK

<b>Company:</b> BERRY PETROLEUM COMPANY	<b>Date:</b> 1/24/2008	<b>Time:</b> 10:38:22	<b>Page:</b> 3
<b>Field:</b> GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: 31-20D, True North		
<b>Site:</b> CHEVRON 31-18D SENW SEC 31 PAD	<b>Vertical (TVD) Reference:</b> SITE 8469.0		
<b>Well:</b> 31-20D	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,348.65Azi)		
<b>Wellpath:</b> 20-D	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

### 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
6377.48	6.10	348.65	6344.16	618.04	-124.10	630.38	0.00	0.00	0.00	DROP
6400.00	5.76	348.65	6366.55	620.32	-124.56	632.70	1.50	-1.50	0.00	
6500.00	4.26	348.65	6466.17	628.89	-126.28	641.44	1.50	-1.50	0.00	
6600.00	2.76	348.65	6565.98	634.89	-127.48	647.56	1.50	-1.50	0.00	TOP GAS
6700.00	1.26	348.65	6665.91	638.33	-128.17	651.07	1.50	-1.50	0.00	
6784.09	0.00	0.00	6750.00	639.24	-128.35	652.00	1.50	-1.50	0.00	
6800.00	0.00	0.00	6765.91	639.24	-128.35	652.00	0.00	0.00	0.00	
6900.00	0.00	0.00	6865.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7000.00	0.00	0.00	6965.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7100.00	0.00	0.00	7065.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7200.00	0.00	0.00	7165.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7300.00	0.00	0.00	7265.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7400.00	0.00	0.00	7365.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7500.00	0.00	0.00	7465.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7600.00	0.00	0.00	7565.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7700.00	0.00	0.00	7665.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7800.00	0.00	0.00	7765.91	639.24	-128.35	652.00	0.00	0.00	0.00	
7900.00	0.00	0.00	7865.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8000.00	0.00	0.00	7965.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8100.00	0.00	0.00	8065.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8200.00	0.00	0.00	8165.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8300.00	0.00	0.00	8265.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8400.00	0.00	0.00	8365.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8500.00	0.00	0.00	8465.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8600.00	0.00	0.00	8565.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8700.00	0.00	0.00	8665.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8784.09	0.00	0.00	8750.00	639.24	-128.35	652.00	0.00	0.00	0.00	CAMEO
8800.00	0.00	0.00	8765.91	639.24	-128.35	652.00	0.00	0.00	0.00	
8900.00	0.00	0.00	8865.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9000.00	0.00	0.00	8965.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9100.00	0.00	0.00	9065.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9200.00	0.00	0.00	9165.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9284.09	0.00	0.00	9250.00	639.24	-128.35	652.00	0.00	0.00	0.00	ROLLINS SS
9300.00	0.00	0.00	9265.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9400.00	0.00	0.00	9365.91	639.24	-128.35	652.00	0.00	0.00	0.00	
9434.09	0.00	0.00	9400.00	639.24	-128.35	652.00	0.00	0.00	0.00	PBHL 20-D

### Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude --->			<--- Longitude --->				
	Dip.							Deg	Min	Sec	Deg	Min	Sec		
PBHL 20-D			9400.00	639.24	-128.35	1645481.86	2234567.92	39	34	27.177	N	108	12	56.908	W
-Rectangle (100x200)															
-Plan hit target															

### Casing Points

MD	TVD	Diameter	Hole Size	Name

<b>Company:</b> BERRY PETROLEUM COMPANY	<b>Date:</b> 1/24/2008	<b>Time:</b> 10:38:22	<b>Page:</b> 4
<b>Field:</b> GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b> Well: 31-20D, True North		
<b>Site:</b> CHEVRON 31-18D SENW SEC 31 PAD	<b>Vertical (TVD) Reference:</b> SITE 8469.0		
<b>Well:</b> 31-20D	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,348.65Azi)		
<b>Wellpath:</b> 20-D	<b>Survey Calculation Method:</b> Minimum Curvature	<b>Db:</b> Sybase	

### Annotation

MD ft	TVD ft	
300.00	300.00	NUDGE
573.97	573.50	HOLD
6377.48	6344.16	DROP
6784.09	6750.00	HOLD
9434.09	9400.00	PBHL

### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
300.00	300.00	GREEN RIVER		0.00	0.00
3064.57	3050.00	WASATCH		0.00	0.00
4573.11	4550.00	FT UNION		0.00	0.00
5075.96	5050.00	BAST FT UNION		0.00	0.00
6302.90	6270.00	OHIO CREEK		0.00	0.00
6784.09	6750.00	TOP GAS		0.00	0.00
8784.09	8750.00	CAMEO		0.00	0.00
9284.09	9250.00	ROLLINS SS		0.00	0.00

**Company:** BERRY PETROLEUM COMPANY **Date:** 1/24/2008 **Time:** 13:50:45 **Page:** 1  
**Field:** GARFIELD COUNTY (NAD 83)  
**Reference Site:** CHEVRON 31-18D SENW SEC 31 PAD **Co-ordinate(NE) Reference:** Well: 31-20D, True North  
**Reference Well:** 31-20D **Vertical (TVD) Reference:** SITE 8469.0  
**Reference Wellpath:** 20-D **Db:** Sybase

**NO GLOBAL SCAN: Using user defined selection & scan criteria**  
**Interpolation Method:** TVD **Interval:** 100.00 ft  
**Depth Range:** 0.00 to 9434.09 ft  
**Maximum Radius:** 10000.00 ft

**Reference:** Plan: Plan #2  
**Error Model:** ISCWSA Ellipse  
**Scan Method:** Closest Approach 3D  
**Error Surface:** Ellipse

**Plan:** Plan #2 **Date Composed:** 1/10/2008  
**Principal:** Yes **Version:** 1  
**Tied-to:** From Surface

### Summary

Site	Well	Wellpath	Reference MD ft	Offset MD ft	Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
CHEVRON 31-18D	31-17D	17-D V1 Plan: Plan #2	400.00	400.12	15.61	14.06	10.06	
CHEVRON 31-18D	31-18D	18-D V0 Plan: Plan #2	2612.01	2609.71	139.04	125.65	10.39	
CHEVRON 31-18D	31-22D	22-D V0 Plan: Plan #2	701.19	699.16	19.53	16.55	6.54	

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-17D  
**Wellpath:** 17-D V1 Plan: Plan #2 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	210.04	-12.78	-7.39	14.76			No Data
100.00	100.00	100.00	100.00	0.10	0.10	210.04	-12.78	-7.39	14.76	14.56	73.80	
200.00	200.00	200.00	200.00	0.32	0.32	210.04	-12.78	-7.39	14.76	14.11	22.73	
300.00	300.00	300.00	300.00	0.55	0.55	210.04	-12.78	-7.39	14.76	13.66	13.43	
400.00	399.98	400.12	400.09	0.78	0.78	209.60	-13.12	-5.23	15.61	14.06	10.06	
500.17	500.00	499.75	499.49	1.00	1.01	184.33	-14.12	1.21	21.24	19.23	10.56	
600.63	600.00	599.08	598.45	1.25	1.26	168.91	-15.45	9.76	34.32	31.84	13.84	
701.19	700.00	698.38	697.37	1.52	1.52	162.61	-16.78	18.31	49.61	46.66	16.78	
801.76	800.00	797.67	796.29	1.80	1.79	159.30	-18.10	26.86	65.22	61.78	18.96	
902.33	900.00	896.97	895.21	2.08	2.06	157.27	-19.43	35.42	80.95	77.03	20.61	
1002.90	1000.00	996.27	994.13	2.37	2.33	155.90	-20.76	43.97	96.76	92.34	21.90	
1103.47	1100.00	1095.57	1093.05	2.65	2.60	154.91	-22.09	52.52	112.60	107.68	22.92	
1204.04	1200.00	1194.87	1191.97	2.94	2.87	154.17	-23.42	61.07	128.46	123.06	23.76	
1304.61	1300.00	1294.17	1290.89	3.23	3.14	153.59	-24.75	69.62	144.34	138.44	24.46	
1405.18	1400.00	1393.46	1389.81	3.53	3.41	153.13	-26.08	78.17	160.24	153.84	25.04	
1505.75	1500.00	1492.76	1488.73	3.82	3.69	152.75	-27.41	86.73	176.14	169.24	25.54	
1606.32	1600.00	1592.06	1587.65	4.11	3.96	152.43	-28.74	95.28	192.05	184.65	25.98	
1706.89	1700.00	1691.36	1686.57	4.40	4.23	152.17	-30.07	103.83	207.96	200.07	26.35	
1807.46	1800.00	1790.66	1785.49	4.70	4.51	151.93	-31.40	112.38	223.88	215.49	26.68	
1908.03	1900.00	1889.95	1884.41	4.99	4.78	151.74	-32.73	120.93	239.80	230.91	26.98	
2008.59	2000.00	1989.25	1983.33	5.29	5.06	151.56	-34.06	129.48	255.72	246.33	27.24	
2109.16	2100.00	2088.55	2082.25	5.58	5.33	151.41	-35.38	138.04	271.64	261.75	27.47	
2209.73	2200.00	2187.85	2181.17	5.88	5.60	151.27	-36.71	146.59	287.57	277.18	27.69	
2310.30	2300.00	2287.15	2280.09	6.17	5.88	151.15	-38.04	155.14	303.50	292.61	27.88	
2410.87	2400.00	2386.44	2379.01	6.47	6.15	151.03	-39.37	163.69	319.42	308.04	28.05	
2511.44	2500.00	2485.74	2477.93	6.76	6.43	150.93	-40.70	172.24	335.35	323.47	28.21	
2612.01	2600.00	2585.04	2576.85	7.06	6.70	150.84	-42.03	180.79	351.28	338.90	28.36	
2712.58	2700.00	2684.34	2675.77	7.35	6.98	150.76	-43.36	189.35	367.22	354.33	28.50	
2813.15	2800.00	2783.64	2774.69	7.65	7.25	150.68	-44.69	197.90	383.15	369.76	28.62	
2913.72	2900.00	2882.93	2873.61	7.94	7.53	150.61	-46.02	206.45	399.08	385.19	28.74	
3014.29	3000.00	2982.23	2972.53	8.24	7.80	150.55	-47.35	215.00	415.01	400.62	28.84	
3114.86	3100.00	3081.53	3071.45	8.53	8.08	150.49	-48.68	223.55	430.95	416.06	28.94	
3215.43	3200.00	3180.83	3170.37	8.83	8.35	150.43	-50.01	232.10	446.88	431.49	29.04	
3316.00	3300.00	3280.13	3269.29	9.13	8.63	150.38	-51.34	240.66	462.82	446.93	29.13	
3416.56	3400.00	3379.42	3368.21	9.42	8.90	150.33	-52.66	249.21	478.75	462.36	29.21	
3517.13	3500.00	3478.72	3467.13	9.72	9.18	150.29	-53.99	257.76	494.69	477.79	29.29	



**Company:** BERRY PETROLEUM COMPANY  
**Field:** GARFIELD COUNTY (NAD 83)  
**Reference Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Reference Well:** 31-20D  
**Reference Wellpath:** 20-D

**Date:** 1/24/2008  
**Time:** 13:50:45  
**Page:** 2

**Co-ordinate(NE) Reference:** Well: 31-20D, True North  
**Vertical (TVD) Reference:** SITE 8469.0  
**Db:** Sybase

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-17D  
**Wellpath:** 17-D V1 Plan: Plan #2 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	Factor	Factor	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft					
3617.70	3600.00	3578.02	3566.05	10.01	9.45	150.25	-55.32	266.31	510.62	493.23			29.36		
3718.27	3700.00	3677.32	3664.97	10.31	9.73	150.21	-56.65	274.86	526.56	508.66			29.43		
3818.84	3800.00	3776.62	3763.89	10.61	10.01	150.17	-57.98	283.42	542.49	524.10			29.49		
3919.41	3900.00	3875.91	3862.81	10.90	10.28	150.13	-59.31	291.97	558.43	539.53			29.56		
4019.98	4000.00	3975.21	3961.73	11.20	10.56	150.10	-60.64	300.52	574.36	554.97			29.61		
4120.55	4100.00	4074.51	4060.66	11.49	10.83	150.07	-61.97	309.07	590.30	570.40			29.67		
4221.12	4200.00	4173.81	4159.58	11.79	11.11	150.04	-63.30	317.62	606.24	585.84			29.72		
4321.69	4300.00	4273.11	4258.50	12.09	11.38	150.01	-64.63	326.17	622.17	601.28			29.77		
4422.26	4400.00	4372.41	4357.42	12.38	11.66	149.98	-65.96	334.73	638.11	616.71			29.82		
4522.83	4500.00	4471.70	4456.34	12.68	11.93	149.96	-67.29	343.28	654.05	632.15			29.87		
4623.40	4600.00	4571.00	4555.26	12.97	12.21	149.93	-68.62	351.83	669.99	647.58			29.91		
4723.97	4700.00	4670.30	4654.18	13.27	12.48	149.91	-69.94	360.38	685.92	663.02			29.95		
4824.53	4800.00	4769.60	4753.10	13.57	12.76	149.89	-71.27	368.93	701.86	678.46			29.99		
4925.10	4900.00	4868.90	4852.02	13.86	13.03	149.87	-72.60	377.48	717.80	693.89			30.03		
5025.67	5000.00	4968.19	4950.94	14.16	13.31	149.85	-73.93	386.04	733.74	709.33			30.06		
5126.24	5100.00	5067.49	5049.86	14.45	13.58	149.83	-75.26	394.59	749.67	724.77			30.10		
5226.81	5200.00	5183.01	5165.04	14.75	13.82	149.87	-76.59	403.10	764.66	739.28			30.12		
5327.38	5300.00	5300.99	5282.91	15.05	14.03	150.09	-77.39	408.25	777.32	751.48			30.08		
5427.95	5400.00	5418.10	5400.00	15.34	14.21	150.47	-77.63	409.81	787.63	761.13			29.72		
5528.52	5500.00	5518.10	5500.00	15.64	14.38	150.85	-77.63	409.81	796.96	770.05			29.62		
5629.09	5600.00	5618.10	5600.00	15.93	14.57	151.22	-77.63	409.81	806.32	778.99			29.50		
5729.66	5700.00	5718.10	5700.00	16.23	14.76	151.58	-77.63	409.81	815.71	787.95			29.38		
5830.23	5800.00	5818.10	5800.00	16.53	14.95	151.93	-77.63	409.81	825.14	796.95			29.27		
5930.80	5900.00	5918.10	5900.00	16.82	15.14	152.28	-77.63	409.81	834.59	805.97			29.16		
6031.37	6000.00	6018.10	6000.00	17.12	15.33	152.62	-77.63	409.81	844.08	815.02			29.05		
6131.93	6100.00	6118.10	6100.00	17.42	15.53	152.94	-77.63	409.81	853.59	824.10			28.95		
6232.50	6200.00	6218.10	6200.00	17.71	15.72	153.27	-77.63	409.81	863.13	833.21			28.85		
6333.07	6300.00	6318.10	6300.00	18.01	15.91	153.58	-77.63	409.81	872.70	842.34			28.75		
6433.60	6400.00	6418.10	6400.00	18.27	16.11	153.91	-77.63	409.81	881.92	851.16			28.67		
6533.91	6500.00	6518.10	6500.00	18.48	16.31	154.18	-77.63	409.81	889.01	857.87			28.55		
6634.05	6600.00	6618.10	6600.00	18.67	16.50	154.36	-77.63	409.81	893.73	862.23			28.37		
6734.09	6700.00	6718.10	6700.00	18.83	16.70	154.45	-77.63	409.81	896.10	864.24			28.13		
6834.09	6800.00	6818.10	6800.00	18.99	16.90	143.10	-77.63	409.81	896.39	864.16			27.81		
6934.09	6900.00	6918.10	6900.00	19.16	17.10	143.10	-77.63	409.81	896.39	863.74			27.46		
7034.09	7000.00	7018.10	7000.00	19.34	17.30	143.10	-77.63	409.81	896.39	863.33			27.11		
7134.09	7100.00	7118.10	7100.00	19.51	17.50	143.10	-77.63	409.81	896.39	862.91			26.77		
7234.09	7200.00	7218.10	7200.00	19.69	17.70	143.10	-77.63	409.81	896.39	862.49			26.44		
7334.09	7300.00	7318.10	7300.00	19.86	17.90	143.10	-77.63	409.81	896.39	862.08			26.12		
7434.09	7400.00	7418.10	7400.00	20.04	18.10	143.10	-77.63	409.81	896.39	861.66			25.81		
7534.09	7500.00	7518.10	7500.00	20.22	18.31	143.10	-77.63	409.81	896.39	861.24			25.50		
7634.09	7600.00	7618.10	7600.00	20.40	18.51	143.10	-77.63	409.81	896.39	860.82			25.20		
7734.09	7700.00	7718.10	7700.00	20.58	18.71	143.10	-77.63	409.81	896.39	860.39			24.90		
7834.09	7800.00	7818.10	7800.00	20.76	18.92	143.10	-77.63	409.81	896.39	859.97			24.61		
7934.09	7900.00	7918.10	7900.00	20.94	19.12	143.10	-77.63	409.81	896.39	859.55			24.33		
8034.09	8000.00	8018.10	8000.00	21.13	19.33	143.10	-77.63	409.81	896.39	859.13			24.05		
8134.09	8100.00	8118.10	8100.00	21.31	19.53	143.10	-77.63	409.81	896.39	858.70			23.78		
8234.09	8200.00	8218.10	8200.00	21.50	19.74	143.10	-77.63	409.81	896.39	858.28			23.52		
8334.09	8300.00	8318.10	8300.00	21.68	19.95	143.10	-77.63	409.81	896.39	857.85			23.26		
8434.09	8400.00	8418.10	8400.00	21.87	20.15	143.10	-77.63	409.81	896.39	857.43			23.01		
8534.09	8500.00	8518.10	8500.00	22.05	20.36	143.10	-77.63	409.81	896.39	857.00			22.76		
8634.09	8600.00	8618.10	8600.00	22.24	20.57	143.10	-77.63	409.81	896.39	856.58			22.51		



**Company:** BERRY PETROLEUM COMPANY  
**Field:** GARFIELD COUNTY (NAD 83)  
**Reference Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Reference Well:** 31-20D  
**Reference Wellpath:** 20-D

**Date:** 1/24/2008  
**Time:** 13:50:45  
**Page:** 3

**Co-ordinate(NE) Reference:** Well: 31-20D, True North  
**Vertical (TVD) Reference:** SITE 8469.0  
**Db:** Sybase

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-17D  
**Wellpath:** 17-D V1 Plan: Plan #2 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		
8734.09	8700.00	8718.10	8700.00	22.43	20.77	143.10	-77.63	409.81	896.39	856.15	22.27	
8834.09	8800.00	8818.10	8800.00	22.62	20.98	143.10	-77.63	409.81	896.39	855.72	22.04	
8934.09	8900.00	8918.10	8900.00	22.81	21.19	143.10	-77.63	409.81	896.39	855.29	21.81	
9034.09	9000.00	9018.10	9000.00	23.00	21.40	143.10	-77.63	409.81	896.39	854.86	21.59	
9134.09	9100.00	9118.10	9100.00	23.19	21.61	143.10	-77.63	409.81	896.39	854.44	21.36	
9234.09	9200.00	9218.10	9200.00	23.38	21.82	143.10	-77.63	409.81	896.39	854.01	21.15	
9334.09	9300.00	9318.10	9300.00	23.57	22.03	143.10	-77.63	409.81	896.39	853.58	20.94	
9434.09	9400.00	9418.10	9400.00	23.77	22.24	143.10	-77.63	409.81	896.39	853.15	20.73	

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-18D  
**Wellpath:** 18-D V0 Plan: Plan #2 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		
0.00	0.00	0.00	0.00	0.00	0.00	210.06	-25.56	-14.79	29.53			No Data
100.00	100.00	100.00	100.00	0.10	0.10	210.06	-25.56	-14.79	29.53	29.33	147.62	
200.00	200.00	200.00	200.00	0.32	0.32	210.06	-25.56	-14.79	29.53	28.88	45.46	
300.00	300.00	300.00	300.00	0.55	0.55	210.06	-25.56	-14.79	29.53	28.43	26.87	
400.00	399.98	400.43	400.40	0.78	0.78	223.14	-23.87	-16.20	30.10	28.55	19.40	
500.17	500.00	500.92	500.66	1.00	1.01	227.82	-18.80	-20.43	32.03	30.02	15.89	
600.63	600.00	601.27	600.63	1.25	1.26	230.19	-12.09	-26.03	36.36	33.85	14.49	
701.19	700.00	701.71	700.69	1.52	1.52	230.71	-5.36	-31.63	41.48	38.46	13.72	
801.76	800.00	802.14	800.74	1.80	1.79	231.12	1.36	-37.23	46.61	43.06	13.13	
902.33	900.00	902.58	900.80	2.08	2.06	231.45	8.08	-42.84	51.74	47.65	12.67	
1002.90	1000.00	1003.02	1000.85	2.37	2.33	231.72	14.80	-48.44	56.86	52.24	12.30	
1103.47	1100.00	1103.46	1100.91	2.65	2.60	231.95	21.52	-54.05	61.99	56.83	12.01	
1204.04	1200.00	1203.90	1200.97	2.94	2.87	232.14	28.24	-59.65	67.12	61.41	11.76	
1304.61	1300.00	1304.34	1301.02	3.23	3.14	232.30	34.96	-65.25	72.25	66.00	11.55	
1405.18	1400.00	1404.77	1401.08	3.53	3.41	232.44	41.68	-70.86	77.38	70.58	11.38	
1505.75	1500.00	1505.21	1501.14	3.82	3.69	232.57	48.40	-76.46	82.51	75.16	11.23	
1606.32	1600.00	1605.65	1601.19	4.11	3.96	232.68	55.12	-82.07	87.65	79.75	11.09	
1706.89	1700.00	1706.09	1701.25	4.40	4.24	232.77	61.84	-87.67	92.78	84.33	10.98	
1807.46	1800.00	1806.53	1801.30	4.70	4.51	232.86	68.56	-93.27	97.91	88.91	10.88	
1908.03	1900.00	1906.96	1901.36	4.99	4.79	232.94	75.28	-98.88	103.04	93.49	10.79	
2008.59	2000.00	2007.40	2001.42	5.29	5.06	233.01	82.00	-104.48	108.18	98.07	10.71	
2109.16	2100.00	2107.84	2101.47	5.58	5.34	233.08	88.73	-110.08	113.31	102.65	10.63	
2209.73	2200.00	2208.28	2201.53	5.88	5.61	233.14	95.45	-115.69	118.44	107.23	10.57	
2310.30	2300.00	2308.72	2301.59	6.17	5.89	233.19	102.17	-121.29	123.57	111.81	10.51	
2410.87	2400.00	2409.15	2401.64	6.47	6.16	233.24	108.89	-126.90	128.71	116.39	10.45	
2511.44	2500.00	2509.59	2501.70	6.76	6.44	233.29	115.61	-132.50	133.84	120.97	10.40	
2612.01	2600.00	2609.71	2601.47	7.06	6.69	233.14	121.95	-137.79	139.04	125.65	10.39	
2712.58	2700.00	2709.51	2701.10	7.35	6.88	232.06	126.44	-141.54	144.63	130.79	10.45	
2813.15	2800.00	2809.06	2800.59	7.65	7.05	230.10	128.93	-143.61	150.76	136.52	10.59	
2913.72	2900.00	2908.47	2900.00	7.94	7.22	227.40	129.49	-144.07	157.67	143.53	11.15	
3014.29	3000.00	3008.47	3000.00	8.24	7.41	224.68	129.49	-144.07	165.11	150.59	11.37	
3114.86	3100.00	3108.47	3100.00	8.53	7.60	222.20	129.49	-144.07	172.89	157.98	11.60	
3215.43	3200.00	3208.47	3200.00	8.83	7.80	219.93	129.49	-144.07	180.97	165.66	11.83	
3316.00	3300.00	3308.47	3300.00	9.13	8.00	217.86	129.49	-144.07	189.30	173.60	12.05	
3416.56	3400.00	3408.47	3400.00	9.42	8.19	215.96	129.49	-144.07	197.87	181.75	12.28	
3517.13	3500.00	3508.47	3500.00	9.72	8.39	214.22	129.49	-144.07	206.63	190.10	12.51	
3617.70	3600.00	3608.47	3600.00	10.01	8.60	212.63	129.49	-144.07	215.56	198.62	12.72	

**Company:** BERRY PETROLEUM COMPANY  
**Field:** GARFIELD COUNTY (NAD 83)  
**Reference Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Reference Well:** 31-20D  
**Reference Wellpath:** 20-D

**Date:** 1/24/2008  
**Time:** 13:50:45  
**Page:** 4

**Co-ordinate(NE) Reference:** Well: 31-20D, True North  
**Vertical (TVD) Reference:** SITE 8469.0  
**Db:** Sybase

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-18D  
**Wellpath:** 18-D V0 Plan: Plan #2 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	Factor	Factor	Factor	
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft					
3718.27	3700.00	3708.47	3700.00	10.31	8.80	211.16	129.49	-144.07	224.65	207.29	12.94				
3818.84	3800.00	3808.47	3800.00	10.61	9.00	209.81	129.49	-144.07	233.87	216.08	13.15				
3919.41	3900.00	3908.47	3900.00	10.90	9.21	208.56	129.49	-144.07	243.21	225.00	13.35				
4019.98	4000.00	4008.47	4000.00	11.20	9.41	207.40	129.49	-144.07	252.66	234.02	13.55				
4120.55	4100.00	4108.47	4100.00	11.49	9.62	206.33	129.49	-144.07	262.20	243.13	13.74				
4221.12	4200.00	4208.47	4200.00	11.79	9.82	205.33	129.49	-144.07	271.83	252.32	13.93				
4321.69	4300.00	4308.47	4300.00	12.09	10.03	204.40	129.49	-144.07	281.54	261.58	14.11				
4422.26	4400.00	4408.47	4400.00	12.38	10.24	203.53	129.49	-144.07	291.31	270.92	14.28				
4522.83	4500.00	4508.47	4500.00	12.68	10.45	202.72	129.49	-144.07	301.15	280.31	14.45				
4623.40	4600.00	4608.47	4600.00	12.97	10.66	201.96	129.49	-144.07	311.04	289.76	14.62				
4723.97	4700.00	4708.47	4700.00	13.27	10.87	201.25	129.49	-144.07	320.98	299.26	14.78				
4824.53	4800.00	4808.47	4800.00	13.57	11.08	200.58	129.49	-144.07	330.97	308.80	14.93				
4925.10	4900.00	4908.47	4900.00	13.86	11.29	199.95	129.49	-144.07	341.00	318.38	15.08				
5025.67	5000.00	5008.47	5000.00	14.16	11.50	199.35	129.49	-144.07	351.07	328.01	15.22				
5126.24	5100.00	5108.47	5100.00	14.45	11.72	198.79	129.49	-144.07	361.17	337.66	15.36				
5226.81	5200.00	5208.47	5200.00	14.75	11.93	198.26	129.49	-144.07	371.31	347.35	15.49				
5327.38	5300.00	5308.47	5300.00	15.05	12.14	197.76	129.49	-144.07	381.48	357.07	15.63				
5427.95	5400.00	5408.47	5400.00	15.34	12.36	197.28	129.49	-144.07	391.67	366.81	15.75				
5528.52	5500.00	5508.47	5500.00	15.64	12.57	196.83	129.49	-144.07	401.90	376.58	15.87				
5629.09	5600.00	5608.47	5600.00	15.93	12.78	196.40	129.49	-144.07	412.14	386.37	15.99				
5729.66	5700.00	5708.47	5700.00	16.23	13.00	195.99	129.49	-144.07	422.41	396.18	16.11				
5830.23	5800.00	5808.47	5800.00	16.53	13.21	195.60	129.49	-144.07	432.69	406.01	16.22				
5930.80	5900.00	5908.47	5900.00	16.82	13.43	195.23	129.49	-144.07	443.00	415.86	16.33				
6031.37	6000.00	6008.47	6000.00	17.12	13.65	194.88	129.49	-144.07	453.32	425.73	16.43				
6131.93	6100.00	6108.47	6100.00	17.42	13.86	194.54	129.49	-144.07	463.66	435.62	16.53				
6232.50	6200.00	6208.47	6200.00	17.71	14.08	194.21	129.49	-144.07	474.01	445.52	16.63				
6333.07	6300.00	6308.47	6300.00	18.01	14.29	193.90	129.49	-144.07	484.38	455.43	16.73				
6433.60	6400.00	6408.47	6400.00	18.27	14.51	193.60	129.49	-144.07	494.36	464.98	16.83				
6533.91	6500.00	6508.47	6500.00	18.48	14.73	193.36	129.49	-144.07	502.02	472.26	16.86				
6634.05	6600.00	6608.47	6600.00	18.67	14.95	193.21	129.49	-144.07	507.13	476.98	16.82				
6734.09	6700.00	6708.47	6700.00	18.83	15.16	193.13	129.49	-144.07	509.68	479.17	16.71				
6834.09	6800.00	6808.47	6800.00	18.99	15.38	181.77	129.49	-144.07	510.00	479.10	16.50				
6934.09	6900.00	6908.47	6900.00	19.16	15.60	181.77	129.49	-144.07	510.00	478.66	16.28				
7034.09	7000.00	7008.47	7000.00	19.34	15.82	181.77	129.49	-144.07	510.00	478.23	16.05				
7134.09	7100.00	7108.47	7100.00	19.51	16.04	181.77	129.49	-144.07	510.00	477.79	15.84				
7234.09	7200.00	7208.47	7200.00	19.69	16.25	181.77	129.49	-144.07	510.00	477.36	15.62				
7334.09	7300.00	7308.47	7300.00	19.86	16.47	181.77	129.49	-144.07	510.00	476.92	15.42				
7434.09	7400.00	7408.47	7400.00	20.04	16.69	181.77	129.49	-144.07	510.00	476.48	15.22				
7534.09	7500.00	7508.47	7500.00	20.22	16.91	181.77	129.49	-144.07	510.00	476.05	15.02				
7634.09	7600.00	7608.47	7600.00	20.40	17.13	181.77	129.49	-144.07	510.00	475.61	14.83				
7734.09	7700.00	7708.47	7700.00	20.58	17.35	181.77	129.49	-144.07	510.00	475.17	14.65				
7834.09	7800.00	7808.47	7800.00	20.76	17.57	181.77	129.49	-144.07	510.00	474.74	14.46				
7934.09	7900.00	7908.47	7900.00	20.94	17.79	181.77	129.49	-144.07	510.00	474.30	14.29				
8034.09	8000.00	8008.47	8000.00	21.13	18.01	181.77	129.49	-144.07	510.00	473.86	14.11				
8134.09	8100.00	8108.47	8100.00	21.31	18.23	181.77	129.49	-144.07	510.00	473.42	13.94				
8234.09	8200.00	8208.47	8200.00	21.50	18.45	181.77	129.49	-144.07	510.00	472.99	13.78				
8334.09	8300.00	8308.47	8300.00	21.68	18.67	181.77	129.49	-144.07	510.00	472.55	13.62				
8434.09	8400.00	8408.47	8400.00	21.87	18.89	181.77	129.49	-144.07	510.00	472.11	13.46				
8534.09	8500.00	8508.47	8500.00	22.05	19.11	181.77	129.49	-144.07	510.00	471.67	13.31				
8634.09	8600.00	8608.47	8600.00	22.24	19.33	181.77	129.49	-144.07	510.00	471.23	13.16				
8734.09	8700.00	8708.47	8700.00	22.43	19.55	181.77	129.49	-144.07	510.00	470.79	13.01				

**Company:** BERRY PETROLEUM COMPANY  
**Field:** GARFIELD COUNTY (NAD 83)  
**Reference Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Reference Well:** 31-20D  
**Reference Wellpath:** 20-D

**Date:** 1/24/2008  
**Time:** 13:50:45  
**Page:** 5

**Co-ordinate(NE) Reference:** Well: 31-20D, True North  
**Vertical (TVD) Reference:** SITE 8469.0  
**Db:** Sybase

**Site:** CHEVRON 31-18D SENW SEC 31 PAD

**Well:** 31-18D

**Wellpath:** 18-D V0 Plan: Plan #2 V1

**Inter-Site Error:** 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
8834.09	8800.00	8808.47	8800.00	22.62	19.77	181.77	129.49	-144.07	510.00	470.35	12.86	
8934.09	8900.00	8908.47	8900.00	22.81	19.99	181.77	129.49	-144.07	510.00	469.91	12.72	
9034.09	9000.00	9008.47	9000.00	23.00	20.21	181.77	129.49	-144.07	510.00	469.47	12.58	
9134.09	9100.00	9108.47	9100.00	23.19	20.43	181.77	129.49	-144.07	510.00	469.03	12.45	
9234.09	9200.00	9208.47	9200.00	23.38	20.65	181.77	129.49	-144.07	510.00	468.59	12.32	
9334.09	9300.00	9308.47	9300.00	23.57	20.87	181.77	129.49	-144.07	510.00	468.15	12.19	
9434.09	9400.00	9408.47	9400.00	23.77	21.10	181.77	129.49	-144.07	510.00	467.71	12.06	

**Site:** CHEVRON 31-18D SENW SEC 31 PAD

**Well:** 31-22D

**Wellpath:** 22-D V0 Plan: Plan #2 V1

**Inter-Site Error:** 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
0.00	0.00	0.00	0.00	0.00	0.00	33.38	12.75	8.40	15.27			No Data
100.00	100.00	100.00	100.00	0.10	0.10	33.38	12.75	8.40	15.27	15.07	76.33	
200.00	200.00	200.00	200.00	0.32	0.32	33.38	12.75	8.40	15.27	14.62	23.51	
300.00	300.00	300.00	300.00	0.55	0.55	33.38	12.75	8.40	15.27	14.17	13.89	
400.00	399.98	399.59	399.57	0.78	0.77	45.18	14.47	8.21	15.37	13.82	9.92	
500.17	500.00	499.30	499.13	1.00	1.00	46.54	19.74	7.65	15.68	13.68	7.82	
600.63	600.00	599.24	598.60	1.25	1.25	48.45	29.24	6.62	16.37	13.88	6.59	
701.19	700.00	699.16	697.55	1.52	1.53	43.81	43.03	5.14	19.53	16.55	6.54	
801.76	800.00	798.90	795.66	1.80	1.87	35.24	60.87	3.22	26.32	22.84	7.56	
902.33	900.00	899.09	894.02	2.08	2.24	29.44	79.85	1.17	34.43	30.45	8.66	
1002.90	1000.00	999.29	992.38	2.37	2.62	25.88	98.83	-0.87	42.76	38.29	9.57	
1103.47	1100.00	1099.49	1090.74	2.65	3.01	23.49	117.81	-2.92	51.19	46.23	10.31	
1204.04	1200.00	1199.68	1189.10	2.94	3.40	21.77	136.79	-4.96	59.70	54.23	10.93	
1304.61	1300.00	1299.88	1287.46	3.23	3.80	20.48	155.77	-7.01	68.24	62.28	11.44	
1405.18	1400.00	1400.07	1385.82	3.53	4.20	19.48	174.75	-9.05	76.81	70.34	11.88	
1505.75	1500.00	1500.27	1484.18	3.82	4.61	18.69	193.73	-11.10	85.40	78.43	12.26	
1606.32	1600.00	1600.46	1582.54	4.11	5.02	18.03	212.71	-13.14	94.00	86.53	12.59	
1706.89	1700.00	1700.66	1680.90	4.40	5.42	17.49	231.69	-15.19	102.61	94.64	12.87	
1807.46	1800.00	1800.86	1779.26	4.70	5.83	17.03	250.67	-17.23	111.23	102.75	13.12	
1908.03	1900.00	1901.05	1877.62	4.99	6.24	16.64	269.65	-19.28	119.85	110.87	13.35	
2008.59	2000.00	2001.25	1975.98	5.29	6.65	16.30	288.63	-21.32	128.48	119.00	13.55	
2109.16	2100.00	2101.44	2074.34	5.58	7.06	16.00	307.61	-23.37	137.11	127.13	13.73	
2209.73	2200.00	2201.64	2172.70	5.88	7.47	15.74	326.60	-25.41	145.75	135.26	13.89	
2310.30	2300.00	2301.83	2271.06	6.17	7.89	15.50	345.58	-27.46	154.39	143.39	14.04	
2410.87	2400.00	2402.03	2369.42	6.47	8.30	15.29	364.56	-29.50	163.03	151.53	14.17	
2511.44	2500.00	2502.23	2467.78	6.76	8.71	15.11	383.54	-31.55	171.68	159.67	14.30	
2612.01	2600.00	2602.42	2566.14	7.06	9.12	14.94	402.52	-33.59	180.32	167.81	14.41	
2712.58	2700.00	2702.62	2664.50	7.35	9.53	14.78	421.50	-35.63	188.97	175.95	14.51	
2813.15	2800.00	2802.81	2762.86	7.65	9.95	14.64	440.48	-37.68	197.62	184.09	14.61	
2913.72	2900.00	2903.01	2861.22	7.94	10.36	14.51	459.46	-39.72	206.27	192.23	14.70	
3014.29	3000.00	3003.20	2959.58	8.24	10.77	14.40	478.44	-41.77	214.92	200.38	14.78	
3114.86	3100.00	3103.40	3057.94	8.53	11.19	14.29	497.42	-43.81	223.57	208.52	14.86	
3215.43	3200.00	3203.59	3156.30	8.83	11.60	14.19	516.40	-45.86	232.22	216.67	14.93	
3316.00	3300.00	3303.79	3254.66	9.13	12.01	14.09	535.38	-47.90	240.87	224.81	15.00	
3416.56	3400.00	3403.99	3353.02	9.42	12.43	14.00	554.36	-49.95	249.52	232.96	15.06	
3517.13	3500.00	3504.18	3451.38	9.72	12.84	13.92	573.34	-51.99	258.18	241.11	15.12	
3617.70	3600.00	3604.38	3549.74	10.01	13.25	13.85	592.32	-54.04	266.83	249.25	15.18	
3718.27	3700.00	3704.57	3648.10	10.31	13.67	13.78	611.30	-56.08	275.49	257.40	15.23	

<b>Company:</b>	BERRY PETROLEUM COMPANY	<b>Date:</b>	1/24/2008	<b>Time:</b>	13:50:45	<b>Page:</b>	6
<b>Field:</b>	GARFIELD COUNTY (NAD 83)						
<b>Reference Site:</b>	CHEVRON 31-18D SENW SEC 31 PAD	<b>Co-ordinate(NE) Reference:</b>	Well: 31-20D, True North				
<b>Reference Well:</b>	31-20D	<b>Vertical (TVD) Reference:</b>	SITE 8469.0				
<b>Reference Wellpath:</b>	20-D	<b>Db:</b> Sybase					

**Site:** CHEVRON 31-18D SENW SEC 31 PAD  
**Well:** 31-22D  
**Wellpath:** 22-D V0 Plan: Plan #2 V1

**Inter-Site Error:** 0.00 ft

Reference		Offset		Semi-Major Axis			Offset Location		Ctr-Ctr Distance	Edge Distance	Separation Factor	Warning
MD	TVD	MD	TVD	Ref	Offset	TFO-HS	North	East				
ft	ft	ft	ft	ft	ft	deg	ft	ft	ft	ft		
3818.84	3800.00	3804.77	3746.46	10.61	14.08	13.71	630.28	-58.13	284.14	265.55	15.28	
3919.41	3900.00	3904.96	3844.82	10.90	14.49	13.65	649.26	-60.17	292.80	273.70	15.33	
4019.98	4000.00	4005.16	3943.19	11.20	14.91	13.59	668.24	-62.22	301.45	281.85	15.38	
4120.55	4100.00	4105.36	4041.55	11.49	15.32	13.53	687.22	-64.26	310.11	290.00	15.42	
4221.12	4200.00	4205.55	4139.91	11.79	15.74	13.48	706.20	-66.31	318.76	298.15	15.46	
4321.69	4300.00	4305.75	4238.27	12.09	16.15	13.43	725.18	-68.35	327.42	306.30	15.50	
4422.26	4400.00	4405.94	4336.63	12.38	16.56	13.38	744.16	-70.40	336.08	314.45	15.54	
4522.83	4500.00	4506.14	4434.99	12.68	16.98	13.33	763.14	-72.44	344.73	322.59	15.57	
4623.40	4600.00	4606.33	4533.35	12.97	17.39	13.29	782.12	-74.48	353.39	330.74	15.61	
4723.97	4700.00	4706.53	4631.71	13.27	17.81	13.25	801.10	-76.53	362.05	338.90	15.64	
4824.53	4800.00	4806.72	4730.07	13.57	18.22	13.21	820.08	-78.57	370.70	347.05	15.67	
4925.10	4900.00	4906.92	4828.43	13.86	18.63	13.17	839.06	-80.62	379.36	355.20	15.70	
5025.67	5000.00	5007.12	4926.79	14.16	19.05	13.14	858.05	-82.66	388.02	363.35	15.73	
5126.24	5100.00	5107.31	5025.15	14.45	19.46	13.10	877.03	-84.71	396.68	371.50	15.75	
5226.81	5200.00	5207.51	5123.51	14.75	19.88	13.07	896.01	-86.75	405.33	379.65	15.78	
5327.38	5300.00	5307.70	5221.87	15.05	20.29	13.04	914.99	-88.80	413.99	387.80	15.81	
5427.95	5400.00	5407.90	5320.23	15.34	20.71	13.01	933.97	-90.84	422.65	395.95	15.83	
5528.52	5500.00	5508.09	5418.59	15.64	21.12	12.98	952.95	-92.89	431.31	404.10	15.85	
5629.09	5600.00	5608.29	5516.95	15.93	21.53	12.95	971.93	-94.93	439.97	412.25	15.87	
5729.66	5700.00	5708.49	5615.31	16.23	21.95	12.93	990.91	-96.98	448.63	420.40	15.90	
5830.23	5800.00	5808.68	5713.67	16.53	22.36	12.90	1009.89	-99.02	457.28	428.56	15.92	
5930.80	5900.00	5908.88	5812.03	16.82	22.78	12.88	1028.87	-101.07	465.94	436.71	15.94	
6031.37	6000.00	6009.07	5910.39	17.12	23.19	12.85	1047.85	-103.11	474.60	444.86	15.96	
6131.93	6100.00	6109.27	6008.75	17.42	23.61	12.83	1066.83	-105.16	483.26	453.01	15.98	
6232.50	6200.00	6222.09	6119.74	17.71	24.00	12.83	1086.95	-107.32	490.81	460.05	15.96	
6333.07	6300.00	6337.30	6233.64	18.01	24.33	12.87	1104.14	-109.18	495.39	464.17	15.87	
6433.60	6400.00	6452.66	6348.16	18.27	24.61	12.97	1117.93	-110.66	497.36	465.73	15.72	
6533.91	6500.00	6567.84	6462.87	18.48	24.86	13.04	1128.25	-111.77	498.65	466.67	15.59	
6634.05	6600.00	6682.87	6577.68	18.67	25.07	13.09	1135.13	-112.51	499.51	467.22	15.47	
6734.09	6700.00	6797.80	6692.55	18.83	25.23	13.12	1138.57	-112.88	499.94	467.37	15.35	
6834.09	6800.00	6905.25	6800.00	18.99	25.36	1.77	1139.00	-112.93	500.00	467.12	15.21	
6934.09	6900.00	7005.25	6900.00	19.16	25.48	1.77	1139.00	-112.93	500.00	466.71	15.02	
7034.09	7000.00	7105.25	7000.00	19.34	25.61	1.77	1139.00	-112.93	500.00	466.31	14.84	
7134.09	7100.00	7205.25	7100.00	19.51	25.74	1.77	1139.00	-112.93	500.00	465.90	14.67	
7234.09	7200.00	7305.25	7200.00	19.69	25.87	1.77	1139.00	-112.93	500.00	465.50	14.49	
7334.09	7300.00	7405.25	7300.00	19.86	26.00	1.77	1139.00	-112.93	500.00	465.09	14.32	
7434.09	7400.00	7505.25	7400.00	20.04	26.13	1.77	1139.00	-112.93	500.00	464.68	14.16	
7534.09	7500.00	7605.25	7500.00	20.22	26.27	1.77	1139.00	-112.93	500.00	464.27	14.00	
7634.09	7600.00	7705.25	7600.00	20.40	26.40	1.77	1139.00	-112.93	500.00	463.86	13.84	
7734.09	7700.00	7805.25	7700.00	20.58	26.54	1.77	1139.00	-112.93	500.00	463.45	13.68	
7834.09	7800.00	7905.25	7800.00	20.76	26.68	1.77	1139.00	-112.93	500.00	463.04	13.53	
7934.09	7900.00	8005.25	7900.00	20.94	26.81	1.77	1139.00	-112.93	500.00	462.63	13.38	
8034.09	8000.00	8105.25	8000.00	21.13	26.95	1.77	1139.00	-112.93	500.00	462.21	13.23	
8134.09	8100.00	8205.25	8100.00	21.31	27.09	1.77	1139.00	-112.93	500.00	461.80	13.09	
8234.09	8200.00	8305.25	8200.00	21.50	27.24	1.77	1139.00	-112.93	500.00	461.38	12.95	
8334.09	8300.00	8405.25	8300.00	21.68	27.38	1.77	1139.00	-112.93	500.00	460.97	12.81	
8434.09	8400.00	8505.25	8400.00	21.87	27.52	1.77	1139.00	-112.93	500.00	460.55	12.68	
8534.09	8500.00	8605.25	8500.00	22.05	27.67	1.77	1139.00	-112.93	500.00	460.13	12.54	
8634.09	8600.00	8705.25	8600.00	22.24	27.81	1.77	1139.00	-112.93	500.00	459.72	12.41	
8734.09	8700.00	8805.25	8700.00	22.43	27.96	1.77	1139.00	-112.93	500.00	459.30	12.29	
8834.09	8800.00	8905.25	8800.00	22.62	28.11	1.77	1139.00	-112.93	500.00	458.88	12.16	

<b>Company:</b>	BERRY PETROLEUM COMPANY	<b>Date:</b>	1/24/2008	<b>Time:</b>	13:50:45	<b>Page:</b>	7
<b>Field:</b>	GARFIELD COUNTY (NAD 83)	<b>Co-ordinate(NE) Reference:</b>	Well: 31-20D, True North				
<b>Reference Site:</b>	CHEVRON 31-18D SENW SEC 31 PAD	<b>Vertical (TVD) Reference:</b>	SITE 8469.0				
<b>Reference Well:</b>	31-20D	<b>Db:</b>	Sybase				
<b>Reference Wellpath:</b>	20-D						

**Site:** CHEVRON 31-18D SENW SEC 31 PAD

**Well:** 31-22D

**Wellpath:** 22-D V0 Plan: Plan #2 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		
8934.09	8900.00	9005.25	8900.00	22.81	28.26	1.77	1139.00	-112.93	500.00	458.46	12.04	
9034.09	9000.00	9105.25	9000.00	23.00	28.41	1.77	1139.00	-112.93	500.00	458.04	11.92	
9134.09	9100.00	9205.25	9100.00	23.19	28.56	1.77	1139.00	-112.93	500.00	457.62	11.80	
9234.09	9200.00	9305.25	9200.00	23.38	28.71	1.77	1139.00	-112.93	500.00	457.20	11.68	
9334.09	9300.00	9405.25	9300.00	23.57	28.87	1.77	1139.00	-112.93	500.00	456.77	11.57	
9434.09	9400.00	9505.25	9400.00	23.77	29.02	1.77	1139.00	-112.93	500.00	456.35	11.46	