



Weatherford®

Drilling Services

Proposal



Berry Petroleum Company

BERRY PETROLEUM CO.

CHEVRON 31- 19D

GARFIELD COUNTY, COLORADO

WELL FILE: **PLAN 2**

JANUARY 25, 2008

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Berry Petroleum Company

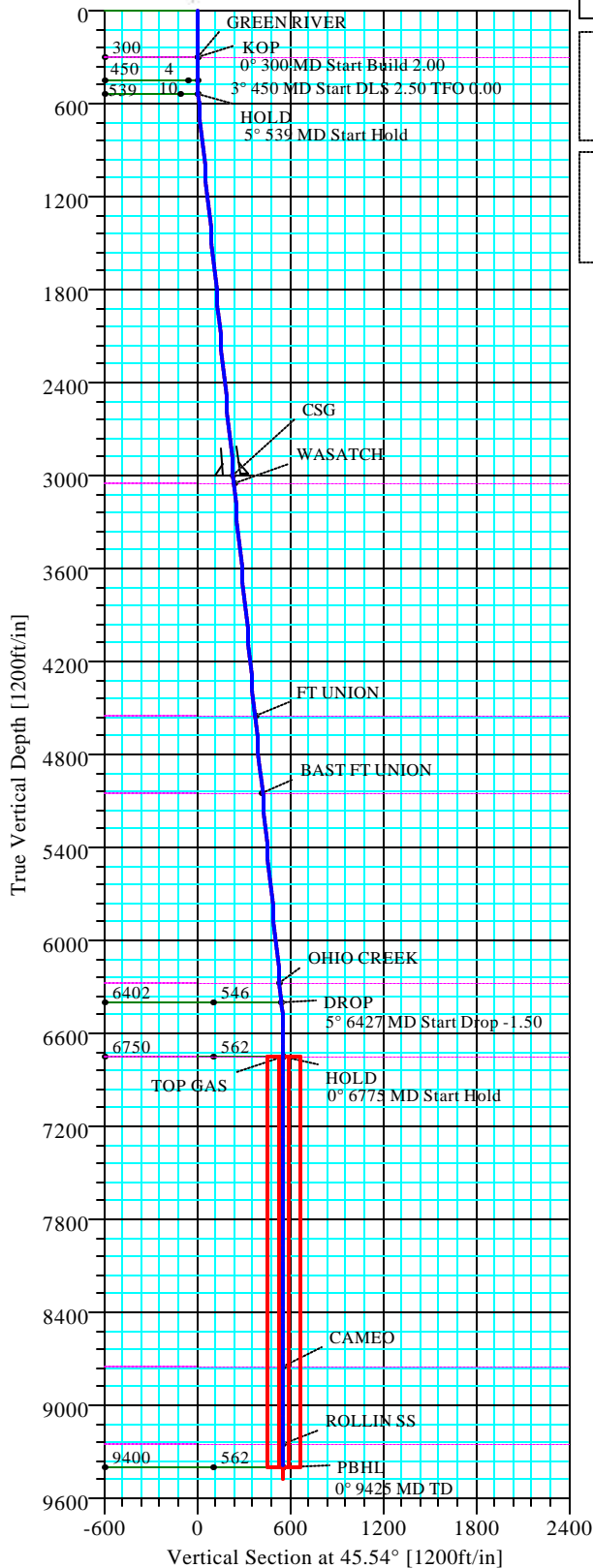
CHEVRON 31-19D
SEC 31-T5S-R96W
2296' FNL, 591' FWL
GARFIELD COUNTY, COLORADO



Weatherford®



KB ELEV: 8469'
GR ELEV: 8458'



SECTION DETAILS

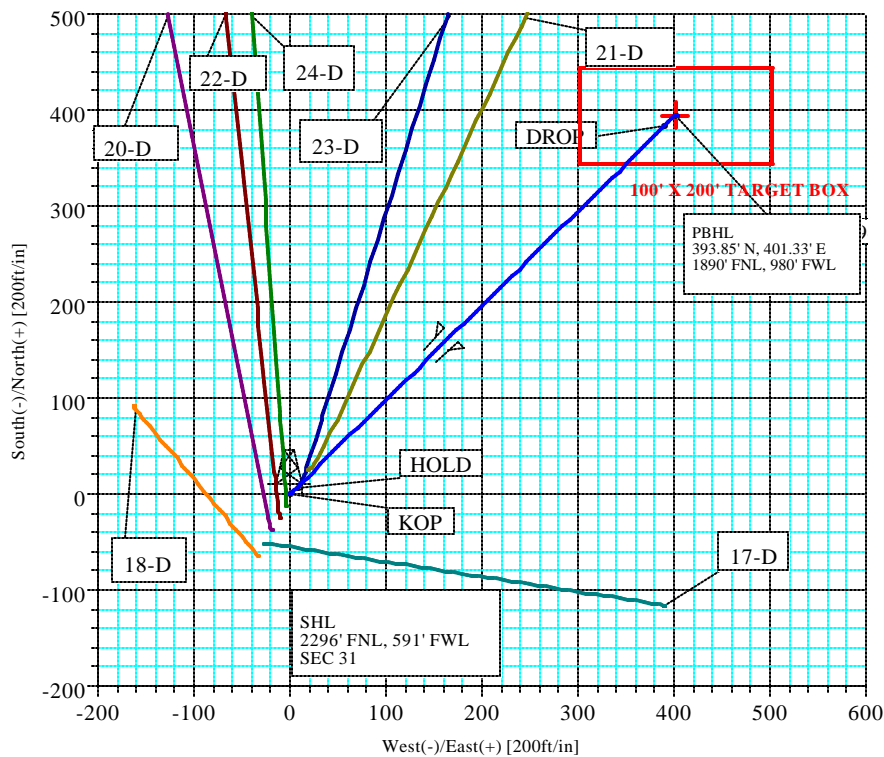
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	450.00	3.00	45.54	449.93	2.75	2.80	2.00	45.54	3.93	
4	538.97	5.22	45.54	538.67	7.22	7.36	2.50	0.00	10.31	
5	6426.96	5.22	45.54	6402.20	382.74	390.00	0.00	0.00	546.43	
6	6775.24	0.00	0.00	6750.00	393.85	401.33	1.50	180.00	562.30	
7	9425.24	0.00	0.00	9400.00	393.85	401.33	0.00	0.00	562.30	PBHL 19-D

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
31-19D	63.83	33.99	1644876.75	2234697.44	39°34'21.238N	108°12'55.024W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL 19-D	9400.00	393.85	401.33	1645258.43	2235110.36	Rectangle (100x200)



VERTICAL SECTION AZIMUTH 45.54°

FIELD DETAILS

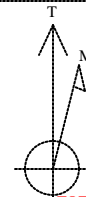
GARFIELD COUNTY (NAD 83)
COLORADO
Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: Colorado, Central Zone
Magnetic Model: bggm2007
System Datum: Mean Sea Level
Local North: True North

FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	300.00	300.00	GREEN RIVER
2	3050.00	3060.78	WASATCH
3	4550.00	4567.04	FT UNION
4	5050.00	5069.12	BAST FT UNION
5	6270.00	6294.21	OHIO CREEK
6	6750.00	6775.24	TOP GAS
7	8750.00	8775.24	CAMEO
8	9250.00	9275.24	ROLLIN 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: bggm2007

TOTAL CORRECTION TO TRUE NORTH: 10.93°

Plan: Plan #2 (31-19D/19D)

Created By: Mario Lainez

Date: 1/25/2008

Company: BERRY PETROLEUM COMPANY	Date: 1/24/2008	Time: 10:40:37	Page: 1
Field: GARFIELD COUNTY (NAD 83)	Co-ordinate(NE) Reference: Well: 31-19D, True North		
Site: CHEVRON 31-18D SENW SEC 31 PAD	Vertical (TVD) Reference: SITE 8469.0		
Well: 31-19D	Section (VS) Reference: Well (0.00N,0.00E,45.54Azi)		
Wellpath: 19D	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #2	Date Composed: 1/11/2008
Principal: Yes	Version: 1
	Tied-to: 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

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

Well: 31-19D

Slot Name:

Well Position: +N/-S 63.83 ft	Northing: 1644876.75 ft	Latitude: 39 34 21.238 N
+E/-W 33.99 ft	Easting: 2234697.44 ft	Longitude: 108 12 55.024 W
Position Uncertainty: 0.00 ft		

Wellpath: 19D

Current Datum: SITE	Height 8469.00 ft	Drilled From: Surface
Magnetic Data: 1/10/2008		Tie-on Depth: 0.00 ft
Field Strength: 52652 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S	Declination: 10.93 deg
ft	ft	Mag Dip Angle: 65.86 deg
		+E/-W ft
		Direction deg
0.00	0.00	0.00 45.54

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
450.00	3.00	45.54	449.93	2.75	2.80	2.00	2.00	0.00	45.54	
538.97	5.22	45.54	538.67	7.22	7.36	2.50	2.50	0.00	0.00	
6426.96	5.22	45.54	6402.20	382.74	390.00	0.00	0.00	0.00	0.00	
6775.24	0.00	0.00	6750.00	393.85	401.33	1.50	-1.50	0.00	180.00	
9425.24	0.00	0.00	9400.00	393.85	401.33	0.00	0.00	0.00	0.00	PBHL 19-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	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	NUDGE
400.00	2.00	45.54	399.98	1.22	1.25	1.75	2.00	2.00	0.00	
450.00	3.00	45.54	449.93	2.75	2.80	3.93	2.00	2.00	0.00	
500.00	4.25	45.54	499.83	4.96	5.06	7.09	2.50	2.50	0.00	
538.97	5.22	45.54	538.67	7.22	7.36	10.31	2.50	2.50	0.00	HOLD
600.00	5.22	45.54	599.44	11.11	11.32	15.86	0.00	0.00	0.00	
700.00	5.22	45.54	699.03	17.49	17.82	24.97	0.00	0.00	0.00	
800.00	5.22	45.54	798.61	23.87	24.32	34.07	0.00	0.00	0.00	
900.00	5.22	45.54	898.20	30.24	30.82	43.18	0.00	0.00	0.00	
1000.00	5.22	45.54	997.78	36.62	37.32	52.28	0.00	0.00	0.00	
1100.00	5.22	45.54	1097.37	43.00	43.82	61.39	0.00	0.00	0.00	
1200.00	5.22	45.54	1196.95	49.38	50.31	70.50	0.00	0.00	0.00	
1300.00	5.22	45.54	1296.54	55.75	56.81	79.60	0.00	0.00	0.00	
1400.00	5.22	45.54	1396.12	62.13	63.31	88.71	0.00	0.00	0.00	
1500.00	5.22	45.54	1495.70	68.51	69.81	97.81	0.00	0.00	0.00	

Company: BERRY PETROLEUM COMPANY	Date: 1/24/2008	Time: 10:40:37	Page: 2
Field: GARFIELD COUNTY (NAD 83)	Co-ordinate(NE) Reference: Well: 31-19D, True North		
Site: CHEVRON 31-18D SENW SEC 31 PAD	Vertical (TVD) Reference: SITE 8469.0		
Well: 31-19D	Section (VS) Reference: Well (0.00N,0.00E,45.54Azi)		
Wellpath: 19D	Survey Calculation Method: Minimum Curvature	Db: 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	5.22	45.54	1595.29	74.89	76.31	106.92	0.00	0.00	0.00	
1700.00	5.22	45.54	1694.87	81.27	82.81	116.02	0.00	0.00	0.00	
1800.00	5.22	45.54	1794.46	87.64	89.31	125.13	0.00	0.00	0.00	
1900.00	5.22	45.54	1894.04	94.02	95.81	134.23	0.00	0.00	0.00	
2000.00	5.22	45.54	1993.63	100.40	102.30	143.34	0.00	0.00	0.00	
2100.00	5.22	45.54	2093.21	106.78	108.80	152.44	0.00	0.00	0.00	
2200.00	5.22	45.54	2192.80	113.15	115.30	161.55	0.00	0.00	0.00	
2300.00	5.22	45.54	2292.38	119.53	121.80	170.66	0.00	0.00	0.00	
2400.00	5.22	45.54	2391.97	125.91	128.30	179.76	0.00	0.00	0.00	
2500.00	5.22	45.54	2491.55	132.29	134.80	188.87	0.00	0.00	0.00	
2600.00	5.22	45.54	2591.14	138.66	141.30	197.97	0.00	0.00	0.00	
2700.00	5.22	45.54	2690.72	145.04	147.80	207.08	0.00	0.00	0.00	
2800.00	5.22	45.54	2790.30	151.42	154.30	216.18	0.00	0.00	0.00	
2900.00	5.22	45.54	2889.89	157.80	160.79	225.29	0.00	0.00	0.00	
3000.00	5.22	45.54	2989.47	164.18	167.29	234.39	0.00	0.00	0.00	
3060.78	5.22	45.54	3050.00	168.05	171.24	239.93	0.00	0.00	0.00	WASATCH
3100.00	5.22	45.54	3089.06	170.55	173.79	243.50	0.00	0.00	0.00	
3200.00	5.22	45.54	3188.64	176.93	180.29	252.60	0.00	0.00	0.00	
3300.00	5.22	45.54	3288.23	183.31	186.79	261.71	0.00	0.00	0.00	
3400.00	5.22	45.54	3387.81	189.69	193.29	270.82	0.00	0.00	0.00	
3500.00	5.22	45.54	3487.40	196.06	199.79	279.92	0.00	0.00	0.00	
3600.00	5.22	45.54	3586.98	202.44	206.29	289.03	0.00	0.00	0.00	
3700.00	5.22	45.54	3686.57	208.82	212.78	298.13	0.00	0.00	0.00	
3800.00	5.22	45.54	3786.15	215.20	219.28	307.24	0.00	0.00	0.00	
3900.00	5.22	45.54	3885.73	221.57	225.78	316.34	0.00	0.00	0.00	
4000.00	5.22	45.54	3985.32	227.95	232.28	325.45	0.00	0.00	0.00	
4100.00	5.22	45.54	4084.90	234.33	238.78	334.55	0.00	0.00	0.00	
4200.00	5.22	45.54	4184.49	240.71	245.28	343.66	0.00	0.00	0.00	
4300.00	5.22	45.54	4284.07	247.09	251.78	352.76	0.00	0.00	0.00	
4400.00	5.22	45.54	4383.66	253.46	258.28	361.87	0.00	0.00	0.00	
4500.00	5.22	45.54	4483.24	259.84	264.78	370.98	0.00	0.00	0.00	
4567.04	5.22	45.54	4550.00	264.12	269.13	377.08	0.00	0.00	0.00	FT UNION
4600.00	5.22	45.54	4582.83	266.22	271.27	380.08	0.00	0.00	0.00	
4700.00	5.22	45.54	4682.41	272.60	277.77	389.19	0.00	0.00	0.00	
4800.00	5.22	45.54	4782.00	278.97	284.27	398.29	0.00	0.00	0.00	
4900.00	5.22	45.54	4881.58	285.35	290.77	407.40	0.00	0.00	0.00	
5000.00	5.22	45.54	4981.17	291.73	297.27	416.50	0.00	0.00	0.00	
5069.12	5.22	45.54	5050.00	296.14	301.76	422.80	0.00	0.00	0.00	BAST FT UNION
5100.00	5.22	45.54	5080.75	298.11	303.77	425.61	0.00	0.00	0.00	
5200.00	5.22	45.54	5180.33	304.48	310.27	434.71	0.00	0.00	0.00	
5300.00	5.22	45.54	5279.92	310.86	316.77	443.82	0.00	0.00	0.00	
5400.00	5.22	45.54	5379.50	317.24	323.26	452.93	0.00	0.00	0.00	
5500.00	5.22	45.54	5479.09	323.62	329.76	462.03	0.00	0.00	0.00	
5600.00	5.22	45.54	5578.67	330.00	336.26	471.14	0.00	0.00	0.00	
5700.00	5.22	45.54	5678.26	336.37	342.76	480.24	0.00	0.00	0.00	
5800.00	5.22	45.54	5777.84	342.75	349.26	489.35	0.00	0.00	0.00	
5900.00	5.22	45.54	5877.43	349.13	355.76	498.45	0.00	0.00	0.00	
6000.00	5.22	45.54	5977.01	355.51	362.26	507.56	0.00	0.00	0.00	
6100.00	5.22	45.54	6076.60	361.88	368.76	516.66	0.00	0.00	0.00	
6200.00	5.22	45.54	6176.18	368.26	375.25	525.77	0.00	0.00	0.00	
6294.21	5.22	45.54	6270.00	374.27	381.38	534.35	0.00	0.00	0.00	OHIO CREEK
6300.00	5.22	45.54	6275.76	374.64	381.75	534.87	0.00	0.00	0.00	

Company: BERRY PETROLEUM COMPANY	Date: 1/24/2008	Time: 10:40:37	Page: 3
Field: GARFIELD COUNTY (NAD 83)	Co-ordinate(NE) Reference: Well: 31-19D, True North		
Site: CHEVRON 31-18D SENW SEC 31 PAD	Vertical (TVD) Reference: SITE 8469.0		
Well: 31-19D	Section (VS) Reference: Well (0.00N,0.00E,45.54Azi)		
Wellpath: 19D	Survey Calculation Method: Minimum Curvature	Db: 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
6400.00	5.22	45.54	6375.35	381.02	388.25	543.98	0.00	0.00	0.00	
6426.96	5.22	45.54	6402.20	382.74	390.00	546.43	0.00	0.00	0.00	DROP
6500.00	4.13	45.54	6474.99	386.91	394.25	552.39	1.50	-1.50	0.00	
6600.00	2.63	45.54	6574.82	391.04	398.46	558.28	1.50	-1.50	0.00	
6700.00	1.13	45.54	6674.76	393.33	400.80	561.56	1.50	-1.50	0.00	
6775.24	0.00	0.00	6750.00	393.85	401.33	562.30	1.50	-1.50	0.00	TOP GAS
6800.00	0.00	0.00	6774.76	393.85	401.33	562.30	0.00	0.00	0.00	
6900.00	0.00	0.00	6874.76	393.85	401.33	562.30	0.00	0.00	0.00	
7000.00	0.00	0.00	6974.76	393.85	401.33	562.30	0.00	0.00	0.00	
7100.00	0.00	0.00	7074.76	393.85	401.33	562.30	0.00	0.00	0.00	
7200.00	0.00	0.00	7174.76	393.85	401.33	562.30	0.00	0.00	0.00	
7300.00	0.00	0.00	7274.76	393.85	401.33	562.30	0.00	0.00	0.00	
7400.00	0.00	0.00	7374.76	393.85	401.33	562.30	0.00	0.00	0.00	
7500.00	0.00	0.00	7474.76	393.85	401.33	562.30	0.00	0.00	0.00	
7600.00	0.00	0.00	7574.76	393.85	401.33	562.30	0.00	0.00	0.00	
7700.00	0.00	0.00	7674.76	393.85	401.33	562.30	0.00	0.00	0.00	
7800.00	0.00	0.00	7774.76	393.85	401.33	562.30	0.00	0.00	0.00	
7900.00	0.00	0.00	7874.76	393.85	401.33	562.30	0.00	0.00	0.00	
8000.00	0.00	0.00	7974.76	393.85	401.33	562.30	0.00	0.00	0.00	
8100.00	0.00	0.00	8074.76	393.85	401.33	562.30	0.00	0.00	0.00	
8200.00	0.00	0.00	8174.76	393.85	401.33	562.30	0.00	0.00	0.00	
8300.00	0.00	0.00	8274.76	393.85	401.33	562.30	0.00	0.00	0.00	
8400.00	0.00	0.00	8374.76	393.85	401.33	562.30	0.00	0.00	0.00	
8500.00	0.00	0.00	8474.76	393.85	401.33	562.30	0.00	0.00	0.00	
8600.00	0.00	0.00	8574.76	393.85	401.33	562.30	0.00	0.00	0.00	
8700.00	0.00	0.00	8674.76	393.85	401.33	562.30	0.00	0.00	0.00	
8775.24	0.00	0.00	8750.00	393.85	401.33	562.30	0.00	0.00	0.00	CAMEO
8800.00	0.00	0.00	8774.76	393.85	401.33	562.30	0.00	0.00	0.00	
8900.00	0.00	0.00	8874.76	393.85	401.33	562.30	0.00	0.00	0.00	
9000.00	0.00	0.00	8974.76	393.85	401.33	562.30	0.00	0.00	0.00	
9100.00	0.00	0.00	9074.76	393.85	401.33	562.30	0.00	0.00	0.00	
9200.00	0.00	0.00	9174.76	393.85	401.33	562.30	0.00	0.00	0.00	
9275.24	0.00	0.00	9250.00	393.85	401.33	562.30	0.00	0.00	0.00	ROLLIN SS
9300.00	0.00	0.00	9274.76	393.85	401.33	562.30	0.00	0.00	0.00	
9400.00	0.00	0.00	9374.76	393.85	401.33	562.30	0.00	0.00	0.00	
9425.24	0.00	0.00	9400.00	393.85	401.33	562.30	0.00	0.00	0.00	PBHL 19-D

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec	<--- Longitude ---> Deg Min Sec
PBHL 19-D			9400.00	393.85	401.33	1645258.43	2235110.36	39 34 25.130 N	108 12 49.899 W
-Rectangle (100x200)									
-Plan hit target									

Casing Points

MD	TVD	Diameter	Hole Size	Name

Company: BERRY PETROLEUM COMPANY	Date: 1/24/2008	Time: 10:40:37	Page: 4
Field: GARFIELD COUNTY (NAD 83)	Co-ordinate(NE) Reference: Well: 31-19D, True North		
Site: CHEVRON 31-18D SENW SEC 31 PAD	Vertical (TVD) Reference: SITE 8469.0		
Well: 31-19D	Section (VS) Reference: Well (0.00N,0.00E,45.54Azi)		
Wellpath: 19D	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Annotation

MD ft	TVD ft	
300.00	300.00	KOP
538.97	538.67	HOLD
6426.96	6402.20	DROP
6775.24	6750.00	HOLD
9425.24	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
3060.78	3050.00	WASATCH		0.00	0.00
4567.04	4550.00	FT UNION		0.00	0.00
5069.12	5050.00	BAST FT UNION		0.00	0.00
6294.21	6270.00	OHIO CREEK		0.00	0.00
6775.24	6750.00	TOP GAS		0.00	0.00
8775.24	8750.00	CAMEO		0.00	0.00
9275.24	9250.00	ROLLIN SS		0.00	0.00

Company: BERRY PETROLEUM COMPANY **Date:** 1/24/2008 **Time:** 14:34:12 **Page:** 1
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD **Co-ordinate(NE) Reference:** Well: 31-19D, True North
Reference Well: 31-19D **Vertical (TVD) Reference:** SITE 8469.0
Reference Wellpath: 19D **Db:** Sybase

NO GLOBAL SCAN: Using user defined selection & scan criteria
Interpolation Method: TVD **Interval:** 100.00 ft
Depth Range: 0.00 to 9425.24 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:** 1/11/2008
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	31-21D	21-D V0 Plan: Plan #2	9425.24	9471.72	480.19	435.58	10.76	
CHEVRON 31-18D	31-23D	23-D V0 Plan: Plan #2	600.56	598.64	17.63	15.18	7.19	
CHEVRON 31-18D	31-24D	24-D V0 Plan: Plan #2	500.17	500.91	13.90	11.90	6.95	

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-21D
Wellpath: 21-D V0 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	37.75	25.56	19.79	32.33			No Data
100.00	100.00	100.00	100.00	0.10	0.10	37.75	25.56	19.79	32.33	32.13	161.60	
200.00	200.00	200.00	200.00	0.32	0.32	37.75	25.56	19.79	32.33	31.68	49.76	
300.00	300.00	300.00	300.00	0.55	0.55	37.75	25.56	19.79	32.33	31.23	29.41	
400.00	399.98	398.91	398.89	0.77	0.77	352.44	26.66	21.10	32.28	30.74	20.96	
500.17	500.00	497.90	497.75	1.00	0.99	352.58	30.18	24.84	32.11	30.13	16.19	
600.56	600.00	597.00	596.43	1.24	1.24	349.41	37.60	29.80	32.45	30.01	13.32	
700.98	700.00	695.86	694.43	1.50	1.51	344.11	49.13	35.75	36.71	33.81	12.67	
801.39	800.00	795.82	793.17	1.77	1.82	339.22	63.25	42.35	43.74	40.36	12.96	
901.81	900.00	895.93	892.05	2.04	2.15	335.68	77.42	48.98	51.02	47.16	13.21	
1002.23	1000.00	996.05	990.93	2.31	2.48	333.04	91.59	55.60	58.45	54.09	13.41	
1102.64	1100.00	1096.16	1089.81	2.58	2.83	331.00	105.75	62.22	65.98	61.11	13.57	
1203.06	1200.00	1196.27	1188.70	2.85	3.17	329.37	119.92	68.84	73.57	68.20	13.70	
1303.48	1300.00	1296.38	1287.58	3.13	3.52	328.05	134.08	75.46	81.20	75.32	13.81	
1403.90	1400.00	1396.49	1386.46	3.40	3.88	326.96	148.25	82.08	88.88	82.48	13.90	
1504.31	1500.00	1496.60	1485.34	3.68	4.23	326.04	162.41	88.70	96.58	89.67	13.97	
1604.73	1600.00	1596.71	1584.22	3.96	4.59	325.26	176.58	95.32	104.30	96.87	14.03	
1705.15	1700.00	1696.82	1683.10	4.23	4.94	324.58	190.75	101.94	112.04	104.09	14.09	
1805.56	1800.00	1796.93	1781.99	4.51	5.30	324.00	204.91	108.56	119.79	111.32	14.14	
1905.98	1900.00	1897.04	1880.87	4.79	5.66	323.48	219.08	115.18	127.56	118.56	14.18	
2006.40	2000.00	1997.15	1979.75	5.07	6.01	323.02	233.24	121.81	135.33	125.81	14.21	
2106.82	2100.00	2097.26	2078.63	5.34	6.37	322.62	247.41	128.43	143.11	133.06	14.24	
2207.23	2200.00	2197.37	2177.51	5.62	6.73	322.25	261.58	135.05	150.90	140.32	14.27	
2307.65	2300.00	2297.48	2276.39	5.90	7.09	321.92	275.74	141.67	158.69	147.59	14.30	
2408.07	2400.00	2397.59	2375.28	6.18	7.45	321.62	289.91	148.29	166.48	154.86	14.32	
2508.48	2500.00	2497.70	2474.16	6.46	7.81	321.35	304.07	154.91	174.28	162.13	14.34	
2608.90	2600.00	2597.81	2573.04	6.73	8.17	321.10	318.24	161.53	182.09	169.41	14.36	
2709.32	2700.00	2697.92	2671.92	7.01	8.53	320.87	332.40	168.15	189.90	176.69	14.38	
2809.74	2800.00	2798.03	2770.80	7.29	8.89	320.66	346.57	174.77	197.71	183.97	14.39	
2910.15	2900.00	2898.14	2869.68	7.57	9.25	320.47	360.74	181.39	205.52	191.25	14.41	
3010.57	3000.00	2998.25	2968.57	7.85	9.61	320.29	374.90	188.02	213.33	198.54	14.42	
3110.99	3100.00	3098.36	3067.45	8.13	9.97	320.12	389.07	194.64	221.15	205.83	14.43	
3211.40	3200.00	3198.47	3166.33	8.41	10.33	319.97	403.23	201.26	228.97	213.12	14.44	
3311.82	3300.00	3298.59	3265.21	8.68	10.69	319.82	417.40	207.88	236.79	220.41	14.45	
3412.24	3400.00	3398.70	3364.09	8.96	11.05	319.69	431.56	214.50	244.61	227.70	14.46	
3512.66	3500.00	3498.81	3462.97	9.24	11.41	319.56	445.73	221.12	252.43	234.99	14.47	

Company: BERRY PETROLEUM COMPANY
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD
Reference Well: 31-19D
Reference Wellpath: 19D

Date: 1/24/2008
Time: 14:34:12
Page: 2

Co-ordinate(NE) Reference: Well: 31-19D, True North
Vertical (TVD) Reference: SITE 8469.0
Db: Sybase

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-21D
Wellpath: 21-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					
3613.07	3600.00	3598.92	3561.86	9.52	11.77	319.44	459.90	227.74	260.26	242.29	14.48				
3713.49	3700.00	3699.03	3660.74	9.80	12.13	319.32	474.06	234.36	268.08	249.58	14.49				
3813.91	3800.00	3799.14	3759.62	10.08	12.49	319.22	488.23	240.98	275.91	256.88	14.50				
3914.32	3900.00	3899.25	3858.50	10.36	12.85	319.12	502.39	247.60	283.74	264.17	14.50				
4014.74	4000.00	3999.36	3957.38	10.64	13.22	319.02	516.56	254.23	291.56	271.47	14.51				
4115.16	4100.00	4099.47	4056.27	10.91	13.58	318.93	530.73	260.85	299.39	278.77	14.52				
4215.58	4200.00	4199.58	4155.15	11.19	13.94	318.85	544.89	267.47	307.22	286.07	14.52				
4315.99	4300.00	4299.69	4254.03	11.47	14.30	318.76	559.06	274.09	315.05	293.36	14.53				
4416.41	4400.00	4399.80	4352.91	11.75	14.66	318.69	573.22	280.71	322.88	300.66	14.53				
4516.83	4500.00	4499.91	4451.79	12.03	15.02	318.61	587.39	287.33	330.71	307.96	14.54				
4617.24	4600.00	4600.02	4550.67	12.31	15.38	318.54	601.55	293.95	338.54	315.26	14.54				
4717.66	4700.00	4700.13	4649.56	12.59	15.74	318.48	615.72	300.57	346.38	322.56	14.55				
4818.08	4800.00	4800.24	4748.44	12.87	16.10	318.41	629.89	307.19	354.21	329.87	14.55				
4918.50	4900.00	4900.35	4847.32	13.15	16.47	318.35	644.05	313.81	362.04	337.17	14.56				
5018.91	5000.00	5000.46	4946.20	13.43	16.83	318.29	658.22	320.44	369.87	344.47	14.56				
5119.33	5100.00	5100.57	5045.08	13.70	17.19	318.23	672.38	327.06	377.71	351.77	14.56				
5219.75	5200.00	5200.68	5143.96	13.98	17.55	318.18	686.55	333.68	385.54	359.07	14.57				
5320.16	5300.00	5300.79	5242.85	14.26	17.91	318.13	700.72	340.30	393.38	366.38	14.57				
5420.58	5400.00	5400.90	5341.73	14.54	18.27	318.08	714.88	346.92	401.21	373.68	14.57				
5521.00	5500.00	5501.02	5440.61	14.82	18.63	318.03	729.05	353.54	409.05	380.98	14.58				
5621.42	5600.00	5601.13	5539.49	15.10	19.00	317.98	743.21	360.16	416.88	388.29	14.58				
5721.83	5700.00	5701.24	5638.37	15.38	19.36	317.94	757.38	366.78	424.72	395.59	14.58				
5822.25	5800.00	5801.35	5737.25	15.66	19.72	317.90	771.54	373.40	432.55	402.90	14.59				
5922.67	5900.00	5901.46	5836.14	15.94	20.08	317.86	785.71	380.02	440.39	410.20	14.59				
6023.08	6000.00	6001.57	5935.02	16.22	20.44	317.82	799.88	386.65	448.22	417.50	14.59				
6123.50	6100.00	6101.68	6033.90	16.49	20.80	317.78	814.04	393.27	456.06	424.81	14.59				
6223.92	6200.00	6201.79	6132.78	16.77	21.16	317.74	828.21	399.89	463.90	432.11	14.60				
6324.34	6300.00	6312.13	6241.93	17.05	21.51	317.65	842.88	406.75	470.87	438.56	14.57				
6424.75	6400.00	6425.45	6354.44	17.33	21.79	317.42	855.03	412.42	475.16	442.35	14.48				
6525.07	6500.00	6538.79	6467.33	17.56	22.04	317.12	864.14	416.68	477.62	444.37	14.37				
6625.21	6600.00	6652.01	6580.35	17.75	22.24	316.93	870.22	419.52	479.26	445.65	14.26				
6725.24	6700.00	6765.16	6693.44	17.92	22.42	316.84	873.25	420.94	480.09	446.16	14.15				
6825.24	6800.00	6871.72	6800.00	18.08	22.56	2.36	873.63	421.12	480.19	445.95	14.02				
6925.24	6900.00	6971.72	6900.00	18.26	22.70	2.36	873.63	421.12	480.19	445.57	13.87				
7025.24	7000.00	7071.72	7000.00	18.44	22.84	2.36	873.63	421.12	480.19	445.19	13.72				
7125.24	7100.00	7171.72	7100.00	18.62	22.99	2.36	873.63	421.12	480.19	444.80	13.57				
7225.24	7200.00	7271.72	7200.00	18.80	23.13	2.36	873.63	421.12	480.19	444.41	13.42				
7325.24	7300.00	7371.72	7300.00	18.99	23.28	2.36	873.63	421.12	480.19	444.02	13.28				
7425.24	7400.00	7471.72	7400.00	19.17	23.43	2.36	873.63	421.12	480.19	443.63	13.14				
7525.24	7500.00	7571.72	7500.00	19.36	23.58	2.36	873.63	421.12	480.19	443.24	13.00				
7625.24	7600.00	7671.72	7600.00	19.54	23.73	2.36	873.63	421.12	480.19	442.85	12.86				
7725.24	7700.00	7771.72	7700.00	19.73	23.88	2.36	873.63	421.12	480.19	442.45	12.72				
7825.24	7800.00	7871.72	7800.00	19.92	24.03	2.36	873.63	421.12	480.19	442.05	12.59				
7925.24	7900.00	7971.72	7900.00	20.10	24.19	2.36	873.63	421.12	480.19	441.66	12.46				
8025.24	8000.00	8071.72	8000.00	20.29	24.34	2.36	873.63	421.12	480.19	441.26	12.33				
8125.24	8100.00	8171.72	8100.00	20.48	24.50	2.36	873.63	421.12	480.19	440.86	12.21				
8225.24	8200.00	8271.72	8200.00	20.67	24.66	2.36	873.63	421.12	480.19	440.46	12.09				
8325.24	8300.00	8371.72	8300.00	20.87	24.82	2.36	873.63	421.12	480.19	440.06	11.97				
8425.24	8400.00	8471.72	8400.00	21.06	24.98	2.36	873.63	421.12	480.19	439.65	11.85				
8525.24	8500.00	8571.72	8500.00	21.25	25.14	2.36	873.63	421.12	480.19	439.25	11.73				
8625.24	8600.00	8671.72	8600.00	21.44	25.30	2.36	873.63	421.12	480.19	438.85	11.62				

Company: BERRY PETROLEUM COMPANY
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD
Reference Well: 31-19D
Reference Wellpath: 19D

Date: 1/24/2008
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Co-ordinate(NE) Reference: Well: 31-19D, True North
Vertical (TVD) Reference: SITE 8469.0
Db: Sybase

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-21D
Wellpath: 21-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		
8725.24	8700.00	8771.72	8700.00	21.64	25.46	2.36	873.63	421.12	480.19	438.44	11.50	
8825.24	8800.00	8871.72	8800.00	21.83	25.63	2.36	873.63	421.12	480.19	438.04	11.39	
8925.24	8900.00	8971.72	8900.00	22.03	25.79	2.36	873.63	421.12	480.19	437.63	11.28	
9025.24	9000.00	9071.72	9000.00	22.22	25.96	2.36	873.63	421.12	480.19	437.22	11.18	
9125.24	9100.00	9171.72	9100.00	22.42	26.12	2.36	873.63	421.12	480.19	436.81	11.07	
9225.24	9200.00	9271.72	9200.00	22.61	26.29	2.36	873.63	421.12	480.19	436.40	10.97	
9325.24	9300.00	9371.72	9300.00	22.81	26.46	2.36	873.63	421.12	480.19	435.99	10.86	
9425.24	9400.00	9471.72	9400.00	23.01	26.63	2.36	873.63	421.12	480.19	435.58	10.76	

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-23D
Wellpath: 23-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	44.11	12.78	12.39	17.80			No Data
100.00	100.00	100.00	100.00	0.10	0.10	44.11	12.78	12.39	17.80	17.60	88.98	
200.00	200.00	200.00	200.00	0.32	0.32	44.11	12.78	12.39	17.80	17.15	27.40	
300.00	300.00	300.00	300.00	0.55	0.55	44.11	12.78	12.39	17.80	16.70	16.19	
400.00	399.98	399.44	399.42	0.77	0.77	355.90	14.43	12.90	17.62	16.08	11.41	
500.17	500.00	499.01	498.85	1.00	1.00	347.56	19.38	14.45	17.23	15.23	8.63	
600.56	600.00	598.64	598.09	1.24	1.24	333.56	27.73	17.05	17.63	15.18	7.19	
700.98	700.00	697.98	696.58	1.50	1.52	322.43	40.03	20.88	22.94	20.01	7.83	
801.39	800.00	796.70	793.81	1.77	1.84	317.74	56.29	25.95	32.96	29.54	9.63	
901.81	900.00	894.46	889.29	2.04	2.21	316.74	76.31	32.19	47.20	43.28	12.03	
1002.23	1000.00	992.96	984.82	2.31	2.64	316.93	99.22	39.33	64.30	59.86	14.47	
1102.64	1100.00	1091.89	1080.75	2.58	3.09	317.05	122.32	46.53	81.50	76.53	16.39	
1203.06	1200.00	1190.82	1176.67	2.85	3.56	317.13	145.42	53.74	98.70	93.19	17.92	
1303.48	1300.00	1289.75	1272.60	3.13	4.03	317.19	168.52	60.94	115.90	109.85	19.16	
1403.90	1400.00	1388.69	1368.53	3.40	4.50	317.23	191.63	68.14	133.10	126.51	20.19	
1504.31	1500.00	1487.62	1464.46	3.68	4.98	317.27	214.73	75.34	150.30	143.16	21.06	
1604.73	1600.00	1586.55	1560.39	3.96	5.46	317.29	237.83	82.54	167.50	159.82	21.80	
1705.15	1700.00	1685.49	1656.32	4.23	5.95	317.31	260.93	89.74	184.70	176.47	22.44	
1805.56	1800.00	1784.42	1752.24	4.51	6.43	317.33	284.03	96.95	201.90	193.12	22.99	
1905.98	1900.00	1883.35	1848.17	4.79	6.92	317.35	307.14	104.15	219.10	209.77	23.48	
2006.40	2000.00	1982.29	1944.10	5.07	7.41	317.36	330.24	111.35	236.30	226.42	23.91	
2106.82	2100.00	2081.22	2040.03	5.34	7.90	317.37	353.34	118.55	253.50	243.07	24.30	
2207.23	2200.00	2180.15	2135.96	5.62	8.39	317.38	376.44	125.75	270.70	259.71	24.64	
2307.65	2300.00	2279.09	2231.88	5.90	8.88	317.39	399.54	132.95	287.90	276.36	24.95	
2408.07	2400.00	2378.02	2327.81	6.18	9.37	317.39	422.65	140.15	305.10	293.01	25.23	
2508.48	2500.00	2476.95	2423.74	6.46	9.86	317.40	445.75	147.36	322.30	309.66	25.49	
2608.90	2600.00	2575.88	2519.67	6.73	10.35	317.41	468.85	154.56	339.50	326.30	25.72	
2709.32	2700.00	2674.82	2615.60	7.01	10.84	317.41	491.95	161.76	356.70	342.95	25.93	
2809.74	2800.00	2773.75	2711.52	7.29	11.33	317.42	515.05	168.96	373.90	359.59	26.13	
2910.15	2900.00	2872.68	2807.45	7.57	11.83	317.42	538.16	176.16	391.10	376.24	26.31	
3010.57	3000.00	2971.62	2903.38	7.85	12.32	317.43	561.26	183.36	408.30	392.89	26.48	
3110.99	3100.00	3070.55	2999.31	8.13	12.81	317.43	584.36	190.57	425.50	409.53	26.64	
3211.40	3200.00	3169.48	3095.24	8.41	13.30	317.43	607.46	197.77	442.70	426.18	26.78	
3311.82	3300.00	3268.42	3191.16	8.68	13.80	317.44	630.56	204.97	459.90	442.82	26.92	
3412.24	3400.00	3367.35	3287.09	8.96	14.29	317.44	653.67	212.17	477.10	459.47	27.05	
3512.66	3500.00	3466.28	3383.02	9.24	14.78	317.44	676.77	219.37	494.30	476.11	27.17	
3613.07	3600.00	3565.22	3478.95	9.52	15.28	317.44	699.87	226.57	511.51	492.75	27.28	

Company: BERRY PETROLEUM COMPANY **Date:** 1/24/2008 **Time:** 14:34:12 **Page:** 4
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD **Co-ordinate(NE) Reference:** Well: 31-19D, True North
Reference Well: 31-19D **Vertical (TVD) Reference:** SITE 8469.0
Reference Wellpath: 19D **Db:** Sybase

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-23D
Wellpath: 23-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					
3713.49	3700.00	3664.15	3574.88	9.80	15.77	317.45	722.97	233.77	528.71	509.40			27.39		
3813.91	3800.00	3763.08	3670.80	10.08	16.26	317.45	746.07	240.98	545.91	526.04			27.49		
3914.32	3900.00	3862.01	3766.73	10.36	16.76	317.45	769.18	248.18	563.11	542.69			27.58		
4014.74	4000.00	3960.95	3862.66	10.64	17.25	317.45	792.28	255.38	580.31	559.33			27.67		
4115.16	4100.00	4059.88	3958.59	10.91	17.74	317.46	815.38	262.58	597.51	575.98			27.75		
4215.58	4200.00	4158.81	4054.52	11.19	18.24	317.46	838.48	269.78	614.71	592.62			27.83		
4315.99	4300.00	4257.75	4150.44	11.47	18.73	317.46	861.58	276.98	631.91	609.27			27.91		
4416.41	4400.00	4356.68	4246.37	11.75	19.22	317.46	884.69	284.18	649.11	625.91			27.98		
4516.83	4500.00	4455.61	4342.30	12.03	19.72	317.46	907.79	291.39	666.31	642.55			28.05		
4617.24	4600.00	4554.55	4438.23	12.31	20.21	317.46	930.89	298.59	683.51	659.20			28.12		
4717.66	4700.00	4653.48	4534.16	12.59	20.71	317.47	953.99	305.79	700.71	675.84			28.18		
4818.08	4800.00	4752.41	4630.08	12.87	21.20	317.47	977.09	312.99	717.91	692.49			28.24		
4918.50	4900.00	4851.35	4726.01	13.15	21.69	317.47	1000.20	320.19	735.11	709.13			28.30		
5018.91	5000.00	4950.28	4821.94	13.43	22.19	317.47	1023.30	327.39	752.31	725.77			28.35		
5119.33	5100.00	5049.21	4917.87	13.70	22.68	317.47	1046.40	334.60	769.51	742.42			28.40		
5219.75	5200.00	5148.14	5013.80	13.98	23.18	317.47	1069.50	341.80	786.71	759.06			28.45		
5320.16	5300.00	5247.08	5109.72	14.26	23.67	317.47	1092.60	349.00	803.91	775.70			28.50		
5420.58	5400.00	5346.01	5205.65	14.54	24.16	317.47	1115.71	356.20	821.11	792.35			28.55		
5521.00	5500.00	5444.94	5301.58	14.82	24.66	317.47	1138.81	363.40	838.31	808.99			28.59		
5621.42	5600.00	5543.88	5397.51	15.10	25.15	317.47	1161.91	370.60	855.51	825.64			28.64		
5721.83	5700.00	5642.81	5493.44	15.38	25.65	317.48	1185.01	377.80	872.71	842.28			28.68		
5822.25	5800.00	5741.74	5589.36	15.66	26.14	317.48	1208.11	385.01	889.91	858.92			28.72		
5922.67	5900.00	5840.68	5685.29	15.94	26.64	317.48	1231.22	392.21	907.11	875.57			28.76		
6023.08	6000.00	5939.61	5781.22	16.22	27.13	317.48	1254.32	399.41	924.31	892.21			28.79		
6123.50	6100.00	6058.37	5896.59	16.49	27.64	317.47	1281.21	407.79	940.84	908.17			28.79		
6223.92	6200.00	6189.31	6024.70	16.77	28.10	317.39	1307.05	415.85	954.31	921.07			28.71		
6324.34	6300.00	6321.26	6154.65	17.05	28.50	317.25	1328.82	422.63	964.46	930.67			28.55		
6424.75	6400.00	6453.90	6286.00	17.33	28.86	317.04	1346.39	428.11	971.26	936.96			28.32		
6525.07	6500.00	6586.79	6418.17	17.56	29.16	316.78	1359.60	432.23	975.62	940.89			28.09		
6625.21	6600.00	6719.69	6550.74	17.75	29.40	316.61	1368.43	434.98	978.53	943.45			27.89		
6725.24	6700.00	6852.59	6683.55	17.92	29.58	316.53	1372.84	436.36	979.99	944.63			27.71		
6825.24	6800.00	6969.05	6800.00	18.08	29.71	2.06	1373.39	436.53	980.17	944.52			27.49		
6925.24	6900.00	7069.05	6900.00	18.26	29.81	2.06	1373.39	436.53	980.17	944.16			27.22		
7025.24	7000.00	7169.05	7000.00	18.44	29.92	2.06	1373.39	436.53	980.17	943.79			26.94		
7125.24	7100.00	7269.05	7100.00	18.62	30.02	2.06	1373.39	436.53	980.17	943.42			26.67		
7225.24	7200.00	7369.05	7200.00	18.80	30.13	2.06	1373.39	436.53	980.17	943.05			26.40		
7325.24	7300.00	7469.05	7300.00	18.99	30.24	2.06	1373.39	436.53	980.17	942.68			26.14		
7425.24	7400.00	7569.05	7400.00	19.17	30.35	2.06	1373.39	436.53	980.17	942.30			25.88		
7525.24	7500.00	7669.05	7500.00	19.36	30.47	2.06	1373.39	436.53	980.17	941.93			25.63		
7625.24	7600.00	7769.05	7600.00	19.54	30.58	2.06	1373.39	436.53	980.17	941.55			25.38		
7725.24	7700.00	7869.05	7700.00	19.73	30.70	2.06	1373.39	436.53	980.17	941.17			25.13		
7825.24	7800.00	7969.05	7800.00	19.92	30.81	2.06	1373.39	436.53	980.17	940.79			24.89		
7925.24	7900.00	8069.05	7900.00	20.10	30.93	2.06	1373.39	436.53	980.17	940.41			24.65		
8025.24	8000.00	8169.05	8000.00	20.29	31.05	2.06	1373.39	436.53	980.17	940.03			24.42		
8125.24	8100.00	8269.05	8100.00	20.48	31.17	2.06	1373.39	436.53	980.17	939.64			24.19		
8225.24	8200.00	8369.05	8200.00	20.67	31.29	2.06	1373.39	436.53	980.17	939.26			23.96		
8325.24	8300.00	8469.05	8300.00	20.87	31.41	2.06	1373.39	436.53	980.17	938.87			23.73		
8425.24	8400.00	8569.05	8400.00	21.06	31.54	2.06	1373.39	436.53	980.17	938.48			23.51		
8525.24	8500.00	8669.05	8500.00	21.25	31.66	2.06	1373.39	436.53	980.17	938.10			23.29		
8625.24	8600.00	8769.05	8600.00	21.44	31.79	2.06	1373.39	436.53	980.17	937.70			23.08		
8725.24	8700.00	8869.05	8700.00	21.64	31.91	2.06	1373.39	436.53	980.17	937.31			22.87		

Company: BERRY PETROLEUM COMPANY
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD
Reference Well: 31-19D
Reference Wellpath: 19D

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Co-ordinate(NE) Reference: Well: 31-19D, True North
Vertical (TVD) Reference: SITE 8469.0
Db: Sybase

Site: CHEVRON 31-18D SENW SEC 31 PAD

Well: 31-23D

Wellpath: 23-D V0 Plan: Plan #2 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		TFO-HS deg	Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft		North ft	East ft				
8825.24	8800.00	8969.05	8800.00	21.83	32.04	2.06	1373.39	436.53	980.17	936.92	22.66	
8925.24	8900.00	9069.05	8900.00	22.03	32.17	2.06	1373.39	436.53	980.17	936.53	22.46	
9025.24	9000.00	9169.05	9000.00	22.22	32.30	2.06	1373.39	436.53	980.17	936.13	22.26	
9125.24	9100.00	9269.05	9100.00	22.42	32.43	2.06	1373.39	436.53	980.17	935.74	22.06	
9225.24	9200.00	9369.05	9200.00	22.61	32.56	2.06	1373.39	436.53	980.17	935.34	21.86	
9325.24	9300.00	9469.05	9300.00	22.81	32.70	2.06	1373.39	436.53	980.17	934.94	21.67	
9425.24	9400.00	9569.05	9400.00	23.01	32.83	2.06	1373.39	436.53	980.17	934.54	21.48	

Site: CHEVRON 31-18D SENW SEC 31 PAD

Well: 31-24D

Wellpath: 24-D V0 Plan: Plan #2 V1

Inter-Site Error: 0.00 ft

Reference		Offset		Semi-Major Axis		TFO-HS deg	Offset Location		Ctr-Ctr Distance ft	Edge Distance ft	Separation Factor	Warning
MD ft	TVD ft	MD ft	TVD ft	Ref ft	Offset ft		North ft	East ft				
0.00	0.00	0.00	0.00	0.00	0.00	194.93	-12.75	-3.40	13.20			No Data
100.00	100.00	100.00	100.00	0.10	0.10	194.93	-12.75	-3.40	13.20	13.00	65.96	
200.00	200.00	200.00	200.00	0.32	0.32	194.93	-12.75	-3.40	13.20	12.55	20.31	
300.00	300.00	300.00	300.00	0.55	0.55	194.93	-12.75	-3.40	13.20	12.10	12.01	
400.00	399.98	400.42	400.40	0.77	0.78	155.80	-10.99	-3.52	13.12	11.57	8.48	
500.17	500.00	500.91	500.74	1.00	1.01	174.75	-5.61	-3.91	13.90	11.90	6.95	
600.56	600.00	601.36	600.71	1.24	1.26	200.44	4.04	-4.59	17.47	15.00	7.07	
700.98	700.00	701.30	699.66	1.50	1.54	225.66	17.97	-5.58	23.47	20.46	7.80	
801.39	800.00	800.35	797.04	1.77	1.87	246.05	36.01	-6.86	33.64	30.05	9.38	
901.81	900.00	898.15	892.34	2.04	2.27	260.34	57.92	-8.41	48.65	44.49	11.70	
1002.23	1000.00	994.82	985.55	2.31	2.72	270.00	83.47	-10.22	68.29	63.57	14.47	
1102.64	1100.00	1092.53	1079.41	2.58	3.21	275.87	110.55	-12.14	90.08	84.79	17.03	
1203.06	1200.00	1190.24	1173.27	2.85	3.72	279.44	137.63	-14.06	112.42	106.56	19.18	
1303.48	1300.00	1287.95	1267.13	3.13	4.24	281.82	164.71	-15.98	135.04	128.60	20.97	
1403.90	1400.00	1385.66	1360.99	3.40	4.76	283.52	191.79	-17.90	157.81	150.80	22.49	
1504.31	1500.00	1483.37	1454.86	3.68	5.29	284.79	218.88	-19.82	180.69	173.09	23.77	
1604.73	1600.00	1581.08	1548.72	3.96	6.82	285.77	245.96	-21.73	203.63	195.45	24.88	
1705.15	1700.00	1678.79	1642.58	4.23	6.35	286.56	273.04	-23.65	226.62	217.85	25.84	
1805.56	1800.00	1776.50	1736.44	4.51	6.89	287.20	300.12	-25.57	249.63	240.28	26.68	
1905.98	1900.00	1874.21	1830.30	4.79	7.43	287.73	327.20	-27.49	272.68	262.73	27.42	
2006.40	2000.00	1971.91	1924.16	5.07	7.96	288.18	354.28	-29.41	295.74	285.20	28.07	
2106.82	2100.00	2069.62	2018.02	5.34	8.50	288.56	381.37	-31.33	318.82	307.69	28.66	
2207.23	2200.00	2167.33	2111.88	5.62	9.04	288.90	408.45	-33.25	341.90	330.19	29.18	
2307.65	2300.00	2265.04	2205.75	5.90	9.58	289.19	435.53	-35.17	365.00	352.70	29.66	
2408.07	2400.00	2362.75	2299.61	6.18	10.12	289.44	462.61	-37.09	388.11	375.21	30.09	
2508.48	2500.00	2460.46	2393.47	6.46	10.67	289.67	489.69	-39.01	411.22	397.73	30.48	
2608.90	2600.00	2558.17	2487.33	6.73	11.21	289.87	516.78	-40.93	434.34	420.26	30.84	
2709.32	2700.00	2655.88	2581.19	7.01	11.75	290.05	543.86	-42.85	457.46	442.79	31.17	
2809.74	2800.00	2753.59	2675.05	7.29	12.29	290.22	570.94	-44.77	480.59	465.32	31.48	
2910.15	2900.00	2851.30	2768.91	7.57	12.83	290.37	598.02	-46.69	503.72	487.86	31.76	
3010.57	3000.00	2949.00	2862.77	7.85	13.38	290.51	625.10	-48.60	526.85	510.40	32.02	
3110.99	3100.00	3046.71	2956.64	8.13	13.92	290.63	652.18	-50.52	549.99	532.94	32.26	
3211.40	3200.00	3144.42	3050.50	8.41	14.46	290.75	679.27	-52.44	573.12	555.48	32.49	
3311.82	3300.00	3242.13	3144.36	8.68	15.01	290.85	706.35	-54.36	596.26	578.03	32.70	
3412.24	3400.00	3339.84	3238.22	8.96	15.55	290.95	733.43	-56.28	619.41	600.58	32.89	
3512.66	3500.00	3437.55	3332.08	9.24	16.09	291.04	760.51	-58.20	642.55	623.13	33.08	
3613.07	3600.00	3535.26	3425.94	9.52	16.64	291.13	787.59	-60.12	665.69	645.68	33.25	
3713.49	3700.00	3632.97	3519.80	9.80	17.18	291.20	814.67	-62.04	688.84	668.23	33.42	

Company: BERRY PETROLEUM COMPANY
Field: GARFIELD COUNTY (NAD 83)
Reference Site: CHEVRON 31-18D SENW SEC 31 PAD
Reference Well: 31-19D
Reference Wellpath: 19D

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Time: 14:34:12
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Co-ordinate(NE) Reference: Well: 31-19D, True North
Vertical (TVD) Reference: SITE 8469.0
Db: Sybase

Site: CHEVRON 31-18D SENW SEC 31 PAD
Well: 31-24D
Wellpath: 24-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		
3813.91	3800.00	3730.68	3613.66	10.08	17.73	291.28	841.76	-63.96	711.99	690.78	33.57	
3914.32	3900.00	3828.38	3707.53	10.36	18.27	291.35	868.84	-65.88	735.14	713.33	33.72	
4014.74	4000.00	3926.09	3801.39	10.64	18.81	291.41	895.92	-67.80	758.28	735.89	33.86	
4115.16	4100.00	4023.80	3895.25	10.91	19.36	291.47	923.00	-69.72	781.43	758.44	33.99	
4215.58	4200.00	4121.51	3989.11	11.19	19.90	291.53	950.08	-71.64	804.59	781.00	34.11	
4315.99	4300.00	4219.22	4082.97	11.47	20.45	291.59	977.17	-73.56	827.74	803.56	34.23	
4416.41	4400.00	4316.93	4176.83	11.75	20.99	291.64	1004.25	-75.47	850.89	826.11	34.34	
4516.83	4500.00	4414.64	4270.69	12.03	21.54	291.69	1031.33	-77.39	874.04	848.67	34.45	
4617.24	4600.00	4512.35	4364.55	12.31	22.08	291.73	1058.41	-79.31	897.20	871.23	34.55	
4717.66	4700.00	4610.06	4458.42	12.59	22.63	291.78	1085.49	-81.23	920.35	893.79	34.65	
4818.08	4800.00	4707.77	4552.28	12.87	23.17	291.82	1112.57	-83.15	943.50	916.35	34.74	
4918.50	4900.00	4805.47	4646.14	13.15	23.71	291.86	1139.66	-85.07	966.66	938.91	34.83	
5018.91	5000.00	4903.18	4740.00	13.43	24.26	291.90	1166.74	-86.99	989.81	961.47	34.92	
5119.33	5100.00	5000.89	4833.86	13.70	24.80	291.93	1193.82	-88.91	1012.97	984.03	35.00	
5219.75	5200.00	5098.60	4927.72	13.98	25.35	291.97	1220.90	-90.83	1036.13	1006.59	35.08	
5320.16	5300.00	5196.31	5021.58	14.26	25.89	292.00	1247.98	-92.75	1059.28	1029.15	35.15	
5420.58	5400.00	5294.02	5115.44	14.54	26.44	292.03	1275.06	-94.67	1082.44	1051.71	35.23	
5521.00	5500.00	5391.73	5209.31	14.82	26.98	292.06	1302.15	-96.59	1105.60	1074.27	35.30	
5621.42	5600.00	5489.44	5303.17	15.10	27.53	292.09	1329.23	-98.51	1128.75	1096.83	35.36	
5721.83	5700.00	5587.15	5397.03	15.38	28.07	292.12	1356.31	-100.43	1151.91	1119.40	35.43	
5822.25	5800.00	5684.85	5490.89	15.66	28.62	292.15	1383.39	-102.34	1175.07	1141.96	35.49	
5922.67	5900.00	5782.56	5584.75	15.94	29.16	292.17	1410.47	-104.26	1198.23	1164.52	35.55	
6023.08	6000.00	5880.27	5678.61	16.22	29.71	292.20	1437.55	-106.18	1221.38	1187.08	35.61	
6123.50	6100.00	6016.89	5810.40	16.49	30.30	292.20	1473.42	-108.72	1243.18	1208.22	35.56	
6223.92	6200.00	6160.06	5949.80	16.77	30.84	292.12	1505.94	-111.03	1261.52	1225.93	35.44	
6324.34	6300.00	6304.89	6091.97	17.05	31.33	291.97	1533.53	-112.98	1276.34	1240.13	35.26	
6424.75	6400.00	6451.00	6236.33	17.33	31.74	291.74	1555.88	-114.57	1287.57	1250.80	35.01	
6525.07	6500.00	6597.84	6382.18	17.56	32.09	291.40	1572.78	-115.77	1295.65	1258.39	34.78	
6625.21	6600.00	6745.04	6528.94	17.75	32.36	291.17	1584.10	-116.57	1301.04	1263.42	34.58	
6725.24	6700.00	6892.47	6676.25	17.92	32.57	291.05	1589.78	-116.97	1303.75	1265.83	34.38	
6825.24	6800.00	7016.23	6800.00	18.08	32.69	336.58	1590.49	-117.02	1304.08	1265.89	34.14	
6925.24	6900.00	7116.23	6900.00	18.26	32.78	336.58	1590.49	-117.02	1304.08	1265.55	33.84	
7025.24	7000.00	7216.23	7000.00	18.44	32.88	336.58	1590.49	-117.02	1304.08	1265.21	33.55	
7125.24	7100.00	7316.23	7100.00	18.62	32.97	336.58	1590.49	-117.02	1304.08	1264.87	33.25	
7225.24	7200.00	7416.23	7200.00	18.80	33.07	336.58	1590.49	-117.02	1304.08	1264.52	32.97	
7325.24	7300.00	7516.23	7300.00	18.99	33.17	336.58	1590.49	-117.02	1304.08	1264.18	32.68	
7425.24	7400.00	7616.23	7400.00	19.17	33.27	336.58	1590.49	-117.02	1304.08	1263.83	32.40	
7525.24	7500.00	7716.23	7500.00	19.36	33.38	336.58	1590.49	-117.02	1304.08	1263.48	32.12	
7625.24	7600.00	7816.23	7600.00	19.54	33.48	336.58	1590.49	-117.02	1304.08	1263.13	31.84	
7725.24	7700.00	7916.23	7700.00	19.73	33.58	336.58	1590.49	-117.02	1304.08	1262.77	31.57	
7825.24	7800.00	8016.23	7800.00	19.92	33.69	336.58	1590.49	-117.02	1304.08	1262.42	31.30	
7925.24	7900.00	8116.23	7900.00	20.10	33.80	336.58	1590.49	-117.02	1304.08	1262.06	31.03	
8025.24	8000.00	8216.23	8000.00	20.29	33.90	336.58	1590.49	-117.02	1304.08	1261.70	30.77	
8125.24	8100.00	8316.23	8100.00	20.48	34.01	336.58	1590.49	-117.02	1304.08	1261.34	30.51	
8225.24	8200.00	8416.23	8200.00	20.67	34.12	336.58	1590.49	-117.02	1304.08	1260.98	30.25	
8325.24	8300.00	8516.23	8300.00	20.87	34.24	336.58	1590.49	-117.02	1304.08	1260.61	30.00	
8425.24	8400.00	8616.23	8400.00	21.06	34.35	336.58	1590.49	-117.02	1304.08	1260.25	29.75	
8525.24	8500.00	8716.23	8500.00	21.25	34.46	336.58	1590.49	-117.02	1304.08	1259.88	29.50	
8625.24	8600.00	8816.23	8600.00	21.44	34.58	336.58	1590.49	-117.02	1304.08	1259.51	29.26	
8725.24	8700.00	8916.23	8700.00	21.64	34.69	336.58	1590.49	-117.02	1304.08	1259.14	29.02	
8825.24	8800.00	9016.23	8800.00	21.83	34.81	336.58	1590.49	-117.02	1304.08	1258.77	28.78	

Company:	BERRY PETROLEUM COMPANY	Date:	1/24/2008	Time:	14:34:12	Page:	7
Field:	GARFIELD COUNTY (NAD 83)	Co-ordinate(NE) Reference:	Well: 31-19D, True North				
Reference Site:	CHEVRON 31-18D SENW SEC 31 PAD	Vertical (TVD) Reference:	SITE 8469.0				
Reference Well:	31-19D	Db:	Sybase				
Reference Wellpath:	19D						

Site: CHEVRON 31-18D SENW SEC 31 PAD

Well: 31-24D

Wellpath: 24-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		
8925.24	8900.00	9116.23	8900.00	22.03	34.93	336.58	1590.49	-117.02	1304.08	1258.39	28.54	
9025.24	9000.00	9216.23	9000.00	22.22	35.05	336.58	1590.49	-117.02	1304.08	1258.02	28.31	
9125.24	9100.00	9316.23	9100.00	22.42	35.17	336.58	1590.49	-117.02	1304.08	1257.64	28.08	
9225.24	9200.00	9416.23	9200.00	22.61	35.29	336.58	1590.49	-117.02	1304.08	1257.27	27.86	
9325.24	9300.00	9516.23	9300.00	22.81	35.41	336.58	1590.49	-117.02	1304.08	1256.89	27.63	
9425.24	9400.00	9616.23	9400.00	23.01	35.53	336.58	1590.49	-117.02	1304.08	1256.51	27.41	