

# PETROLEUM DEVELOPMENT CORP Weld County CO

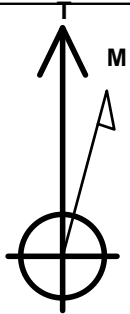
Well Name: **Stonebraker 28V-234**

Surface Location: Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4958.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1284791.88	3266355.64	40.111220	-104.547680	
RKB Ensign 32 - 15' WELL @ 4973.0ft (RKB Ensign 32 - 15')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 1800'FNL & 500'FWL	6898.0	204.4	-4486.5	Point



Azimuths to True North  
Magnetic North: 8.57°

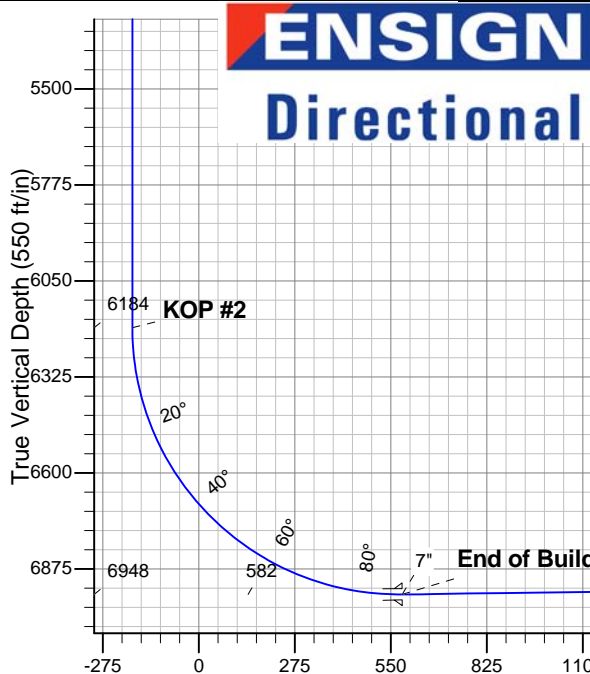
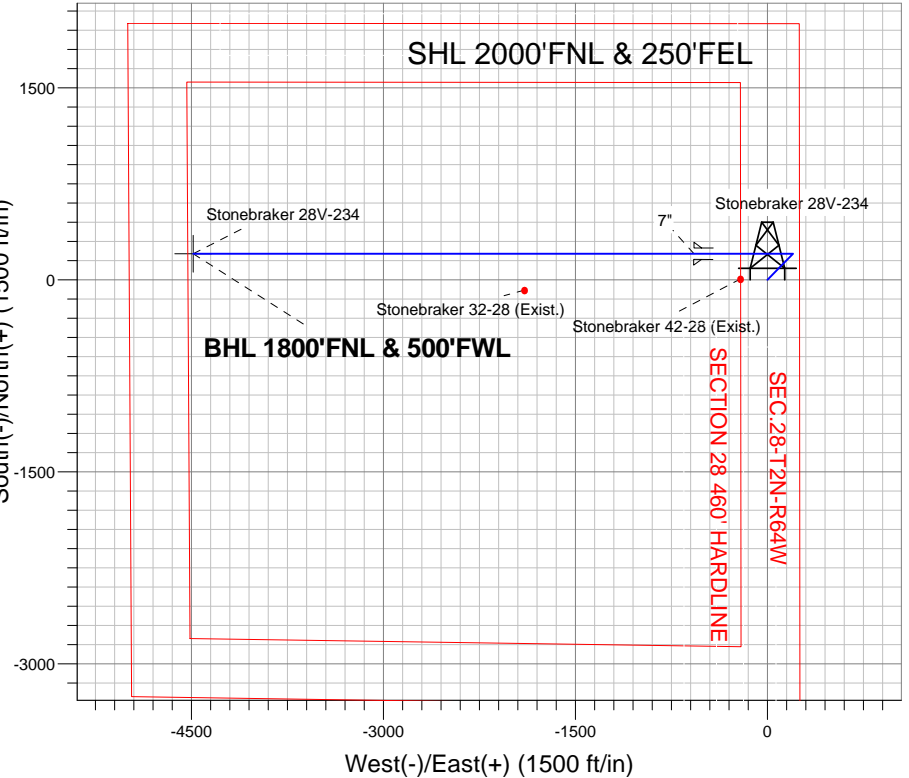
Magnetic Field  
Strength: 52884.9nT  
Dip Angle: 66.81°  
Date: 7/24/2012  
Model: IGRF2010

Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W  
Stonebraker 28V-234  
Plan #1 (7-24-12)  
9:06, July 31 2012

## ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
6184.0	6203.0	KOP #2
6947.9	7412.7	End of Build

South(-)/North(+) (1500 ft/in)



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2408.3	8.17	44.43	2406.9	20.7	20.3	2.00	44.43	-19.4	
4	4010.7	8.17	44.43	3993.1	183.3	179.7	0.00	0.00	-171.1	
5	4419.0	0.00	0.00	4400.0	204.0	200.0	2.00	180.00	-190.5	
6	6203.0	0.00	0.00	6184.0	204.0	200.0	0.00	0.00	-190.5	
7	7412.7	90.73	270.01	6947.9	204.1	-573.7	7.50	270.01	582.4	
8	811325.8	90.73	270.01	6898.0	204.4	-4486.5	0.00	0.00	4491.1	BHL 1800'FNL & 500'FWL

Vertical Section at 272.61° (550 ft/in)



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.28-T2N-R64W**

**Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W**

**Stonebraker 28V-234**

**Wellbore #1**

**Plan: Plan #1 (7-24-12)**

## **Standard Planning Report**

**31 July, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

<b>Project</b>	SEC.28-T2N-R64W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W											
Site Position:						Northing:			1,284,762.75 ft			Latitude:			40.111140		
From:			Lat/Long			Easting:			3,266,355.95 ft			Longitude:			-104.547680		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.62 °		

Well	Stonebraker 28V-234					
Well Position	+N/-S	29.1 ft	Northing:	1,284,791.88 ft	Latitude:	40.111220
	+E/-W	0.0 ft	Easting:	3,266,355.64 ft	Longitude:	-104.547680
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,958.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/24/2012	8.57	66.81	52,885

<b>Design</b>	Plan #1 (7-24-12)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	272.61

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,408.3	8.17	44.43	2,406.9	20.7	20.3	2.00	2.00	0.00	44.43	
4,010.7	8.17	44.43	3,993.1	183.3	179.7	0.00	0.00	0.00	0.00	
4,419.0	0.00	0.00	4,400.0	204.0	200.0	2.00	-2.00	0.00	180.00	
6,203.0	0.00	0.00	6,184.0	204.0	200.0	0.00	0.00	0.00	0.00	
7,412.7	90.73	270.01	6,947.9	204.1	-573.7	7.50	7.50	0.00	270.01	
11,325.8	90.73	270.01	6,898.0	204.4	-4,486.5	0.00	0.00	0.00	0.00	BHL 1800'FNL & 5C

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,040.0	0.80	44.43	2,040.0	0.2	0.2	-0.2	2.00	2.00	0.00
2,080.0	1.60	44.43	2,080.0	0.8	0.8	-0.7	2.00	2.00	0.00
2,120.0	2.40	44.43	2,120.0	1.8	1.8	-1.7	2.00	2.00	0.00
2,160.0	3.20	44.43	2,159.9	3.2	3.1	-3.0	2.00	2.00	0.00
2,200.0	4.00	44.43	2,199.8	5.0	4.9	-4.7	2.00	2.00	0.00
2,240.0	4.80	44.43	2,239.7	7.2	7.0	-6.7	2.00	2.00	0.00
2,280.0	5.60	44.43	2,279.6	9.8	9.6	-9.1	2.00	2.00	0.00
2,320.0	6.40	44.43	2,319.3	12.7	12.5	-11.9	2.00	2.00	0.00
2,360.0	7.20	44.43	2,359.1	16.1	15.8	-15.1	2.00	2.00	0.00
2,400.0	8.00	44.43	2,398.7	19.9	19.5	-18.6	2.00	2.00	0.00
2,408.3	8.17	44.43	2,406.9	20.7	20.3	-19.4	2.00	2.00	0.00
2,440.0	8.17	44.43	2,438.3	24.0	23.5	-22.4	0.00	0.00	0.00
2,480.0	8.17	44.43	2,477.9	28.0	27.5	-26.2	0.00	0.00	0.00
2,520.0	8.17	44.43	2,517.5	32.1	31.4	-29.9	0.00	0.00	0.00
2,560.0	8.17	44.43	2,557.1	36.1	35.4	-33.7	0.00	0.00	0.00
2,600.0	8.17	44.43	2,596.7	40.2	39.4	-37.5	0.00	0.00	0.00
2,640.0	8.17	44.43	2,636.3	44.2	43.4	-41.3	0.00	0.00	0.00
2,680.0	8.17	44.43	2,675.9	48.3	47.4	-45.1	0.00	0.00	0.00
2,720.0	8.17	44.43	2,715.5	52.4	51.3	-48.9	0.00	0.00	0.00
2,760.0	8.17	44.43	2,755.1	56.4	55.3	-52.7	0.00	0.00	0.00
2,800.0	8.17	44.43	2,794.6	60.5	59.3	-56.5	0.00	0.00	0.00
2,840.0	8.17	44.43	2,834.2	64.5	63.3	-60.3	0.00	0.00	0.00
2,880.0	8.17	44.43	2,873.8	68.6	67.2	-64.0	0.00	0.00	0.00
2,920.0	8.17	44.43	2,913.4	72.6	71.2	-67.8	0.00	0.00	0.00
2,960.0	8.17	44.43	2,953.0	76.7	75.2	-71.6	0.00	0.00	0.00
3,000.0	8.17	44.43	2,992.6	80.8	79.2	-75.4	0.00	0.00	0.00
3,040.0	8.17	44.43	3,032.2	84.8	83.1	-79.2	0.00	0.00	0.00
3,080.0	8.17	44.43	3,071.8	88.9	87.1	-83.0	0.00	0.00	0.00
3,120.0	8.17	44.43	3,111.4	92.9	91.1	-86.8	0.00	0.00	0.00
3,160.0	8.17	44.43	3,151.0	97.0	95.1	-90.6	0.00	0.00	0.00
3,200.0	8.17	44.43	3,190.6	101.0	99.1	-94.4	0.00	0.00	0.00
3,240.0	8.17	44.43	3,230.2	105.1	103.0	-98.1	0.00	0.00	0.00
3,280.0	8.17	44.43	3,269.8	109.1	107.0	-101.9	0.00	0.00	0.00
3,320.0	8.17	44.43	3,309.4	113.2	111.0	-105.7	0.00	0.00	0.00
3,360.0	8.17	44.43	3,349.0	117.3	115.0	-109.5	0.00	0.00	0.00
3,400.0	8.17	44.43	3,388.6	121.3	118.9	-113.3	0.00	0.00	0.00
3,440.0	8.17	44.43	3,428.2	125.4	122.9	-117.1	0.00	0.00	0.00
3,480.0	8.17	44.43	3,467.8	129.4	126.9	-120.9	0.00	0.00	0.00
3,520.0	8.17	44.43	3,507.3	133.5	130.9	-124.7	0.00	0.00	0.00
3,560.0	8.17	44.43	3,546.9	137.5	134.9	-128.5	0.00	0.00	0.00
3,600.0	8.17	44.43	3,586.5	141.6	138.8	-132.2	0.00	0.00	0.00
3,640.0	8.17	44.43	3,626.1	145.7	142.8	-136.0	0.00	0.00	0.00
3,680.0	8.17	44.43	3,665.7	149.7	146.8	-139.8	0.00	0.00	0.00
3,720.0	8.17	44.43	3,705.3	153.8	150.8	-143.6	0.00	0.00	0.00
3,760.0	8.17	44.43	3,744.9	157.8	154.7	-147.4	0.00	0.00	0.00
3,800.0	8.17	44.43	3,784.5	161.9	158.7	-151.2	0.00	0.00	0.00
3,840.0	8.17	44.43	3,824.1	165.9	162.7	-155.0	0.00	0.00	0.00
3,880.0	8.17	44.43	3,863.7	170.0	166.7	-158.8	0.00	0.00	0.00
3,920.0	8.17	44.43	3,903.3	174.1	170.6	-162.5	0.00	0.00	0.00
3,960.0	8.17	44.43	3,942.9	178.1	174.6	-166.3	0.00	0.00	0.00
4,000.0	8.17	44.43	3,982.5	182.2	178.6	-170.1	0.00	0.00	0.00
4,010.7	8.17	44.43	3,993.1	183.3	179.7	-171.1	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,040.0	7.58	44.43	4,022.1	186.1	182.5	-173.8	2.00	-2.00	0.00
4,080.0	6.78	44.43	4,061.8	189.7	186.0	-177.1	2.00	-2.00	0.00
4,120.0	5.98	44.43	4,101.5	192.9	189.1	-180.1	2.00	-2.00	0.00
4,160.0	5.18	44.43	4,141.3	195.6	191.8	-182.7	2.00	-2.00	0.00
4,200.0	4.38	44.43	4,181.2	198.0	194.1	-184.9	2.00	-2.00	0.00
4,240.0	3.58	44.43	4,221.1	200.0	196.1	-186.8	2.00	-2.00	0.00
4,280.0	2.78	44.43	4,261.0	201.6	197.6	-188.3	2.00	-2.00	0.00
4,320.0	1.98	44.43	4,301.0	202.8	198.8	-189.4	2.00	-2.00	0.00
4,360.0	1.18	44.43	4,341.0	203.6	199.6	-190.1	2.00	-2.00	0.00
4,400.0	0.38	44.43	4,381.0	204.0	200.0	-190.5	2.00	-2.00	0.00
4,419.0	0.00	44.43	4,400.0	204.0	200.0	-190.5	2.00	-2.00	0.00
<b>KOP #2</b>									
4,440.0	0.00	0.00	4,421.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,480.0	0.00	0.00	4,461.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,520.0	0.00	0.00	4,501.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,560.0	0.00	0.00	4,541.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,600.0	0.00	0.00	4,581.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,640.0	0.00	0.00	4,621.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,680.0	0.00	0.00	4,661.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,720.0	0.00	0.00	4,701.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,760.0	0.00	0.00	4,741.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,800.0	0.00	0.00	4,781.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,840.0	0.00	0.00	4,821.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,880.0	0.00	0.00	4,861.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,920.0	0.00	0.00	4,901.0	204.0	200.0	-190.5	0.00	0.00	0.00
4,960.0	0.00	0.00	4,941.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,981.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,040.0	0.00	0.00	5,021.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,080.0	0.00	0.00	5,061.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,120.0	0.00	0.00	5,101.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,160.0	0.00	0.00	5,141.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,181.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,240.0	0.00	0.00	5,221.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,280.0	0.00	0.00	5,261.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,320.0	0.00	0.00	5,301.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,360.0	0.00	0.00	5,341.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,381.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,440.0	0.00	0.00	5,421.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,480.0	0.00	0.00	5,461.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,520.0	0.00	0.00	5,501.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,560.0	0.00	0.00	5,541.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,581.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,640.0	0.00	0.00	5,621.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,680.0	0.00	0.00	5,661.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,720.0	0.00	0.00	5,701.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,760.0	0.00	0.00	5,741.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,781.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,840.0	0.00	0.00	5,821.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,861.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,920.0	0.00	0.00	5,901.0	204.0	200.0	-190.5	0.00	0.00	0.00
5,960.0	0.00	0.00	5,941.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,981.0	204.0	200.0	-190.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,040.0	0.00	0.00	6,021.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,080.0	0.00	0.00	6,061.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,120.0	0.00	0.00	6,101.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,160.0	0.00	0.00	6,141.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,181.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,203.0	0.00	0.00	6,184.0	204.0	200.0	-190.5	0.00	0.00	0.00
6,240.0	2.78	270.01	6,221.0	204.0	199.1	-189.6	7.50	7.50	0.00
6,280.0	5.78	270.01	6,260.9	204.0	196.1	-186.6	7.50	7.50	0.00
6,320.0	8.78	270.01	6,300.5	204.0	191.1	-181.6	7.50	7.50	0.00
6,360.0	11.78	270.01	6,339.9	204.0	183.9	-174.4	7.50	7.50	0.00
6,400.0	14.78	270.01	6,378.8	204.0	174.7	-165.3	7.50	7.50	0.00
6,440.0	17.78	270.01	6,417.2	204.0	163.5	-154.1	7.50	7.50	0.00
6,480.0	20.78	270.01	6,455.0	204.0	150.3	-140.9	7.50	7.50	0.00
6,520.0	23.78	270.01	6,492.0	204.0	135.2	-125.7	7.50	7.50	0.00
6,560.0	26.78	270.01	6,528.1	204.0	118.1	-108.7	7.50	7.50	0.00
6,600.0	29.78	270.01	6,563.4	204.0	99.1	-89.7	7.50	7.50	0.00
6,640.0	32.78	270.01	6,597.5	204.0	78.4	-69.0	7.50	7.50	0.00
6,680.0	35.78	270.01	6,630.6	204.0	55.8	-46.5	7.50	7.50	0.00
6,720.0	38.78	270.01	6,662.4	204.0	31.6	-22.3	7.50	7.50	0.00
6,760.0	41.78	270.01	6,692.9	204.0	5.8	3.5	7.50	7.50	0.00
6,800.0	44.78	270.01	6,722.1	204.0	-21.7	30.9	7.50	7.50	0.00
6,840.0	47.78	270.01	6,749.7	204.0	-50.6	59.8	7.50	7.50	0.00
6,880.0	50.78	270.01	6,775.8	204.0	-80.9	90.1	7.50	7.50	0.00
6,920.0	53.78	270.01	6,800.3	204.0	-112.5	121.7	7.50	7.50	0.00
6,960.0	56.78	270.01	6,823.0	204.0	-145.4	154.5	7.50	7.50	0.00
7,000.0	59.78	270.01	6,844.1	204.0	-179.4	188.5	7.50	7.50	0.00
7,040.0	62.78	270.01	6,863.3	204.0	-214.5	223.5	7.50	7.50	0.00
7,080.0	65.78	270.01	6,880.7	204.0	-250.5	259.5	7.50	7.50	0.00
7,120.0	68.78	270.01	6,896.1	204.0	-287.4	296.4	7.50	7.50	0.00
7,160.0	71.78	270.01	6,909.6	204.0	-325.0	334.0	7.50	7.50	0.00
7,200.0	74.78	270.01	6,921.1	204.1	-363.3	372.3	7.50	7.50	0.00
7,240.0	77.78	270.01	6,930.6	204.1	-402.2	411.1	7.50	7.50	0.00
7,280.0	80.78	270.01	6,938.0	204.1	-441.5	450.3	7.50	7.50	0.00
7,320.0	83.78	270.01	6,943.4	204.1	-481.1	489.9	7.50	7.50	0.00
7,360.0	86.78	270.01	6,946.7	204.1	-521.0	529.7	7.50	7.50	0.00
7,400.0	89.78	270.01	6,947.9	204.1	-561.0	569.7	7.50	7.50	0.00
7,412.7	90.73	270.01	6,947.9	204.1	-573.7	582.4	7.50	7.50	0.00
End of Build - 7"									
7,440.0	90.73	270.01	6,947.5	204.1	-601.0	609.6	0.00	0.00	0.00
7,480.0	90.73	270.01	6,947.0	204.1	-641.0	649.6	0.00	0.00	0.00
7,520.0	90.73	270.01	6,946.5	204.1	-681.0	689.5	0.00	0.00	0.00
7,560.0	90.73	270.01	6,946.0	204.1	-721.0	729.5	0.00	0.00	0.00
7,600.0	90.73	270.01	6,945.5	204.1	-760.9	769.4	0.00	0.00	0.00
7,640.0	90.73	270.01	6,945.0	204.1	-800.9	809.4	0.00	0.00	0.00
7,680.0	90.73	270.01	6,944.5	204.1	-840.9	849.4	0.00	0.00	0.00
7,720.0	90.73	270.01	6,943.9	204.1	-880.9	889.3	0.00	0.00	0.00
7,760.0	90.73	270.01	6,943.4	204.1	-920.9	929.3	0.00	0.00	0.00
7,800.0	90.73	270.01	6,942.9	204.1	-960.9	969.2	0.00	0.00	0.00
7,840.0	90.73	270.01	6,942.4	204.1	-1,000.9	1,009.2	0.00	0.00	0.00
7,880.0	90.73	270.01	6,941.9	204.1	-1,040.9	1,049.1	0.00	0.00	0.00
7,920.0	90.73	270.01	6,941.4	204.1	-1,080.9	1,089.1	0.00	0.00	0.00
7,960.0	90.73	270.01	6,940.9	204.1	-1,120.9	1,129.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,000.0	90.73	270.01	6,940.4	204.1	-1,160.9	1,169.0	0.00	0.00	0.00
8,040.0	90.73	270.01	6,939.9	204.1	-1,200.9	1,209.0	0.00	0.00	0.00
8,080.0	90.73	270.01	6,939.4	204.1	-1,240.9	1,248.9	0.00	0.00	0.00
8,120.0	90.73	270.01	6,938.8	204.1	-1,280.9	1,288.9	0.00	0.00	0.00
8,160.0	90.73	270.01	6,938.3	204.1	-1,320.9	1,328.8	0.00	0.00	0.00
8,200.0	90.73	270.01	6,937.8	204.1	-1,360.9	1,368.8	0.00	0.00	0.00
8,240.0	90.73	270.01	6,937.3	204.1	-1,400.9	1,408.7	0.00	0.00	0.00
8,280.0	90.73	270.01	6,936.8	204.1	-1,440.9	1,448.7	0.00	0.00	0.00
8,320.0	90.73	270.01	6,936.3	204.2	-1,480.9	1,488.6	0.00	0.00	0.00
8,360.0	90.73	270.01	6,935.8	204.2	-1,520.9	1,528.6	0.00	0.00	0.00
8,400.0	90.73	270.01	6,935.3	204.2	-1,560.9	1,568.6	0.00	0.00	0.00
8,440.0	90.73	270.01	6,934.8	204.2	-1,600.9	1,608.5	0.00	0.00	0.00
8,480.0	90.73	270.01	6,934.3	204.2	-1,640.9	1,648.5	0.00	0.00	0.00
8,520.0	90.73	270.01	6,933.7	204.2	-1,680.9	1,688.4	0.00	0.00	0.00
8,560.0	90.73	270.01	6,933.2	204.2	-1,720.9	1,728.4	0.00	0.00	0.00
8,600.0	90.73	270.01	6,932.7	204.2	-1,760.9	1,768.3	0.00	0.00	0.00
8,640.0	90.73	270.01	6,932.2	204.2	-1,800.9	1,808.3	0.00	0.00	0.00
8,680.0	90.73	270.01	6,931.7	204.2	-1,840.9	1,848.2	0.00	0.00	0.00
8,720.0	90.73	270.01	6,931.2	204.2	-1,880.9	1,888.2	0.00	0.00	0.00
8,760.0	90.73	270.01	6,930.7	204.2	-1,920.9	1,928.2	0.00	0.00	0.00
8,800.0	90.73	270.01	6,930.2	204.2	-1,960.9	1,968.1	0.00	0.00	0.00
8,840.0	90.73	270.01	6,929.7	204.2	-2,000.8	2,008.1	0.00	0.00	0.00
8,880.0	90.73	270.01	6,929.2	204.2	-2,040.8	2,048.0	0.00	0.00	0.00
8,920.0	90.73	270.01	6,928.7	204.2	-2,080.8	2,088.0	0.00	0.00	0.00
8,960.0	90.73	270.01	6,928.1	204.2	-2,120.8	2,127.9	0.00	0.00	0.00
9,000.0	90.73	270.01	6,927.6	204.2	-2,160.8	2,167.9	0.00	0.00	0.00
9,040.0	90.73	270.01	6,927.1	204.2	-2,200.8	2,207.8	0.00	0.00	0.00
9,080.0	90.73	270.01	6,926.6	204.2	-2,240.8	2,247.8	0.00	0.00	0.00
9,120.0	90.73	270.01	6,926.1	204.2	-2,280.8	2,287.8	0.00	0.00	0.00
9,160.0	90.73	270.01	6,925.6	204.2	-2,320.8	2,327.7	0.00	0.00	0.00
9,200.0	90.73	270.01	6,925.1	204.2	-2,360.8	2,367.7	0.00	0.00	0.00
9,240.0	90.73	270.01	6,924.6	204.2	-2,400.8	2,407.6	0.00	0.00	0.00
9,280.0	90.73	270.01	6,924.1	204.2	-2,440.8	2,447.6	0.00	0.00	0.00
9,320.0	90.73	270.01	6,923.6	204.2	-2,480.8	2,487.5	0.00	0.00	0.00
9,360.0	90.73	270.01	6,923.0	204.2	-2,520.8	2,527.5	0.00	0.00	0.00
9,400.0	90.73	270.01	6,922.5	204.2	-2,560.8	2,567.4	0.00	0.00	0.00
9,440.0	90.73	270.01	6,922.0	204.3	-2,600.8	2,607.4	0.00	0.00	0.00
9,480.0	90.73	270.01	6,921.5	204.3	-2,640.8	2,647.4	0.00	0.00	0.00
9,520.0	90.73	270.01	6,921.0	204.3	-2,680.8	2,687.3	0.00	0.00	0.00
9,560.0	90.73	270.01	6,920.5	204.3	-2,720.8	2,727.3	0.00	0.00	0.00
9,600.0	90.73	270.01	6,920.0	204.3	-2,760.8	2,767.2	0.00	0.00	0.00
9,640.0	90.73	270.01	6,919.5	204.3	-2,800.8	2,807.2	0.00	0.00	0.00
9,680.0	90.73	270.01	6,919.0	204.3	-2,840.8	2,847.1	0.00	0.00	0.00
9,720.0	90.73	270.01	6,918.5	204.3	-2,880.8	2,887.1	0.00	0.00	0.00
9,760.0	90.73	270.01	6,917.9	204.3	-2,920.8	2,927.0	0.00	0.00	0.00
9,800.0	90.73	270.01	6,917.4	204.3	-2,960.8	2,967.0	0.00	0.00	0.00
9,840.0	90.73	270.01	6,916.9	204.3	-3,000.8	3,007.0	0.00	0.00	0.00
9,880.0	90.73	270.01	6,916.4	204.3	-3,040.8	3,046.9	0.00	0.00	0.00
9,920.0	90.73	270.01	6,915.9	204.3	-3,080.8	3,086.9	0.00	0.00	0.00
9,960.0	90.73	270.01	6,915.4	204.3	-3,120.8	3,126.8	0.00	0.00	0.00
10,000.0	90.73	270.01	6,914.9	204.3	-3,160.8	3,166.8	0.00	0.00	0.00
10,040.0	90.73	270.01	6,914.4	204.3	-3,200.8	3,206.7	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,080.0	90.73	270.01	6,913.9	204.3	-3,240.7	3,246.7	0.00	0.00	0.00
10,120.0	90.73	270.01	6,913.4	204.3	-3,280.7	3,286.6	0.00	0.00	0.00
10,160.0	90.73	270.01	6,912.9	204.3	-3,320.7	3,326.6	0.00	0.00	0.00
10,200.0	90.73	270.01	6,912.3	204.3	-3,360.7	3,366.6	0.00	0.00	0.00
10,240.0	90.73	270.01	6,911.8	204.3	-3,400.7	3,406.5	0.00	0.00	0.00
10,280.0	90.73	270.01	6,911.3	204.3	-3,440.7	3,446.5	0.00	0.00	0.00
10,320.0	90.73	270.01	6,910.8	204.3	-3,480.7	3,486.4	0.00	0.00	0.00
10,360.0	90.73	270.01	6,910.3	204.3	-3,520.7	3,526.4	0.00	0.00	0.00
10,400.0	90.73	270.01	6,909.8	204.3	-3,560.7	3,566.3	0.00	0.00	0.00
10,440.0	90.73	270.01	6,909.3	204.3	-3,600.7	3,606.3	0.00	0.00	0.00
10,480.0	90.73	270.01	6,908.8	204.3	-3,640.7	3,646.2	0.00	0.00	0.00
10,520.0	90.73	270.01	6,908.3	204.3	-3,680.7	3,686.2	0.00	0.00	0.00
10,560.0	90.73	270.01	6,907.8	204.4	-3,720.7	3,726.2	0.00	0.00	0.00
10,600.0	90.73	270.01	6,907.2	204.4	-3,760.7	3,766.1	0.00	0.00	0.00
10,640.0	90.73	270.01	6,906.7	204.4	-3,800.7	3,806.1	0.00	0.00	0.00
10,680.0	90.73	270.01	6,906.2	204.4	-3,840.7	3,846.0	0.00	0.00	0.00
10,720.0	90.73	270.01	6,905.7	204.4	-3,880.7	3,886.0	0.00	0.00	0.00
10,760.0	90.73	270.01	6,905.2	204.4	-3,920.7	3,925.9	0.00	0.00	0.00
10,800.0	90.73	270.01	6,904.7	204.4	-3,960.7	3,965.9	0.00	0.00	0.00
10,840.0	90.73	270.01	6,904.2	204.4	-4,000.7	4,005.8	0.00	0.00	0.00
10,880.0	90.73	270.01	6,903.7	204.4	-4,040.7	4,045.8	0.00	0.00	0.00
10,920.0	90.73	270.01	6,903.2	204.4	-4,080.7	4,085.8	0.00	0.00	0.00
10,960.0	90.73	270.01	6,902.7	204.4	-4,120.7	4,125.7	0.00	0.00	0.00
11,000.0	90.73	270.01	6,902.2	204.4	-4,160.7	4,165.7	0.00	0.00	0.00
11,040.0	90.73	270.01	6,901.6	204.4	-4,200.7	4,205.6	0.00	0.00	0.00
11,080.0	90.73	270.01	6,901.1	204.4	-4,240.7	4,245.6	0.00	0.00	0.00
11,120.0	90.73	270.01	6,900.6	204.4	-4,280.7	4,285.5	0.00	0.00	0.00
11,160.0	90.73	270.01	6,900.1	204.4	-4,320.7	4,325.5	0.00	0.00	0.00
11,200.0	90.73	270.01	6,899.6	204.4	-4,360.7	4,365.4	0.00	0.00	0.00
11,240.0	90.73	270.01	6,899.1	204.4	-4,400.7	4,405.4	0.00	0.00	0.00
11,280.0	90.73	270.01	6,898.6	204.4	-4,440.6	4,445.4	0.00	0.00	0.00
11,320.0	90.73	270.01	6,898.1	204.4	-4,480.6	4,485.3	0.00	0.00	0.00
11,325.8	90.73	270.01	6,898.0	204.4	-4,486.5	4,491.1	0.00	0.00	0.00
BHL 1800'FNL & 500'FWL									

## Targets

### Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
BHL 1800'FNL & 500'	0.00	0.00	6,898.0	204.4	-4,486.5	1,284,948.10	3,261,867.41	40.111780	-104.563720
- plan hits target center									
- Point									

## Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,412.7	6,947.9	7"	7	7-1/2

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Project:</b>	SEC.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (7-24-12)		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
2,000.0	2,000.0	0.0	0.0	KOP #1	
4,419.0	4,400.0	204.0	200.0	KOP #2	
7,412.7	6,947.9	204.1	-573.7	End of Build	



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.28-T2N-R64W**

**Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W**

**Stonebraker 28V-234**

**Wellbore #1**

**Plan #1 (7-24-12)**

## **Anticollision Report**

**31 July, 2012**



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (7-24-12)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 7/31/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,324.9	Plan #1 (7-24-12) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Stonebraker 28U-HZ Pad Sec.28-T2N-R64W						
Stonebraker 32-28 (Exist.) - Wellbore #1 - Design #1	8,735.7	6,900.0	284.6	212.9	3.969	CC, ES, SF
Stonebraker 42-28 (Exist.) - Wellbore #1 - Design #1	7,034.7	6,856.9	196.7	164.4	6.083	CC, ES
Stonebraker 42-28 (Exist.) - Wellbore #1 - Design #1	7,050.0	6,863.8	197.2	164.7	6.063	SF
Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W						
Stonebraker 28V-214 - Wellbore #1 - Plan #1 (7-24-12)	800.0	799.0	61.9	58.6	18.381	CC, ES
Stonebraker 28V-214 - Wellbore #1 - Plan #1 (7-24-12)	11,325.8	11,386.0	732.2	477.1	2.869	SF
Stonebraker 28V-404 - Wellbore #1 - Plan #1 (7-24-12)	1,000.0	999.0	29.1	24.9	6.828	CC, ES
Stonebraker 28V-404 - Wellbore #1 - Plan #1 (7-24-12)	11,325.8	11,491.9	446.3	225.9	2.025	SF
Stonebraker 28W-204 - Wellbore #1 - Plan #1 (7-24-12)	1,000.0	1,000.0	29.1	24.9	6.824	CC, ES
Stonebraker 28W-204 - Wellbore #1 - Plan #1 (7-24-12)	11,325.8	11,309.7	630.2	375.2	2.472	SF

<b>Offset Design</b> Stonebraker 28U-HZ Pad Sec.28-T2N-R64W - Stonebraker 32-28 (Exist.) - Wellbore #1 - Design #1												
Survey Program: 0-MWD												
Reference												
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
7,800.0	6,942.9	6,900.0	6,900.0	32.1	15.4	-87.38	-80.1	-1,896.4	978.0	930.6	47.42	20.625
7,900.0	6,941.6	6,900.0	6,900.0	34.6	15.4	-87.38	-80.1	-1,896.4	882.8	833.0	49.88	17.700
8,000.0	6,940.4	6,900.0	6,900.0	37.1	15.4	-87.38	-80.1	-1,896.4	788.8	736.4	52.38	15.058
8,100.0	6,939.1	6,900.0	6,900.0	39.7	15.4	-87.38	-80.1	-1,896.4	696.5	641.6	54.93	12.679
8,200.0	6,937.8	6,900.0	6,900.0	42.2	15.4	-87.38	-80.1	-1,896.4	606.6	549.1	57.51	10.548
8,300.0	6,936.6	6,900.0	6,900.0	44.8	15.4	-87.38	-80.1	-1,896.4	520.4	460.3	60.12	8.656
8,400.0	6,935.3	6,900.0	6,900.0	47.5	15.4	-87.38	-80.1	-1,896.4	440.1	377.3	62.75	7.014
8,500.0	6,934.0	6,900.0	6,900.0	50.1	15.4	-87.38	-80.1	-1,896.4	369.5	304.1	65.39	5.651
8,600.0	6,932.7	6,900.0	6,900.0	52.8	15.4	-87.38	-80.1	-1,896.4	315.3	247.2	68.06	4.632
8,700.0	6,931.5	6,900.0	6,900.0	55.5	15.4	-87.38	-80.1	-1,896.4	286.8	216.1	70.73	4.055
8,735.7	6,931.0	6,900.0	6,900.0	56.4	15.4	-87.38	-80.1	-1,896.4	284.6	212.9	71.69	3.969 CC, ES, SF
8,800.0	6,930.2	6,900.0	6,900.0	58.2	15.4	-87.38	-80.1	-1,896.4	291.7	218.3	73.42	3.973
8,900.0	6,928.9	6,900.0	6,900.0	60.9	15.4	-87.38	-80.1	-1,896.4	328.6	252.5	76.12	4.316
9,000.0	6,927.6	6,900.0	6,900.0	63.6	15.4	-87.38	-80.1	-1,896.4	388.4	309.5	78.83	4.927
9,100.0	6,926.4	6,900.0	6,900.0	66.3	15.4	-87.38	-80.1	-1,896.4	462.3	380.7	81.55	5.669

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Stonebraker 28U-HZ Pad Sec.28-T2N-R64W - Stonebraker 32-28 (Exist.) - Wellbore #1 - Design #1										Offset Site Error:		0.0 ft	
Survey Program:		0-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
9,200.0	6,925.1	6,900.0	6,900.0	69.0	15.4	-87.38	-80.1	-1,896.4	544.5	460.3	84.27	6.462			
9,300.0	6,923.8	6,900.0	6,900.0	71.7	15.4	-87.38	-80.1	-1,896.4	632.0	545.0	87.00	7.264			
9,400.0	6,922.5	6,900.0	6,900.0	74.5	15.4	-87.38	-80.1	-1,896.4	722.7	632.9	89.73	8.054			
9,500.0	6,921.3	6,900.0	6,900.0	77.2	15.4	-87.38	-80.1	-1,896.4	815.5	723.1	92.47	8.819			
9,600.0	6,920.0	6,900.0	6,900.0	80.0	15.4	-87.38	-80.1	-1,896.4	909.9	814.7	95.21	9.557			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Stonebraker 28U-HZ Pad Sec.28-T2N-R64W - Stonebraker 42-28 (Exist.) - Wellbore #1 - Design #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-88.01	7.3	-209.8	209.9							
100.0	100.0	96.0	96.0	0.1	0.1	-88.01	7.3	-209.8	209.9	209.7	0.22	952.919				
200.0	200.0	196.0	196.0	0.3	0.3	-88.01	7.3	-209.8	209.9	209.2	0.67	315.505				
300.0	300.0	296.0	296.0	0.6	0.6	-88.01	7.3	-209.8	209.9	208.8	1.11	188.285				
400.0	400.0	396.0	396.0	0.8	0.8	-88.01	7.3	-209.8	209.9	208.3	1.56	134.180				
500.0	500.0	496.0	496.0	1.0	1.0	-88.01	7.3	-209.8	209.9	207.9	2.01	104.229				
600.0	600.0	596.0	596.0	1.2	1.2	-88.01	7.3	-209.8	209.9	207.4	2.46	85.209				
700.0	700.0	696.0	696.0	1.5	1.5	-88.01	7.3	-209.8	209.9	207.0	2.91	72.060				
800.0	800.0	796.0	796.0	1.7	1.7	-88.01	7.3	-209.8	209.9	206.5	3.36	62.426				
900.0	900.0	896.0	896.0	1.9	1.9	-88.01	7.3	-209.8	209.9	206.1	3.81	55.065				
1,000.0	1,000.0	996.0	996.0	2.1	2.1	-88.01	7.3	-209.8	209.9	205.6	4.26	49.256				
1,100.0	1,100.0	1,096.0	1,096.0	2.4	2.4	-88.01	7.3	-209.8	209.9	205.2	4.71	44.556				
1,200.0	1,200.0	1,196.0	1,196.0	2.6	2.6	-88.01	7.3	-209.8	209.9	204.7	5.16	40.675				
1,300.0	1,300.0	1,296.0	1,296.0	2.8	2.8	-88.01	7.3	-209.8	209.9	204.3	5.61	37.416				
1,400.0	1,400.0	1,396.0	1,396.0	3.0	3.0	-88.01	7.3	-209.8	209.9	203.8	6.06	34.640				
1,500.0	1,500.0	1,496.0	1,496.0	3.3	3.3	-88.01	7.3	-209.8	209.9	203.4	6.51	32.248				
1,600.0	1,600.0	1,596.0	1,596.0	3.5	3.5	-88.01	7.3	-209.8	209.9	202.9	6.96	30.165				
1,700.0	1,700.0	1,696.0	1,696.0	3.7	3.7	-88.01	7.3	-209.8	209.9	202.5	7.41	28.334				
1,800.0	1,800.0	1,796.0	1,796.0	3.9	3.9	-88.01	7.3	-209.8	209.9	202.1	7.86	26.713				
1,900.0	1,900.0	1,896.0	1,896.0	4.2	4.1	-88.01	7.3	-209.8	209.9	201.6	8.31	25.268				
2,000.0	2,000.0	1,996.0	1,996.0	4.4	4.4	-88.01	7.3	-209.8	209.9	201.2	8.76	23.971				
2,100.0	2,100.0	2,096.0	2,096.0	4.6	4.6	-132.78	7.3	-209.8	211.1	201.9	9.20	22.945				
2,200.0	2,199.8	2,195.8	2,195.8	4.8	4.8	-133.75	7.3	-209.8	214.7	205.0	9.63	22.286				
2,300.0	2,299.5	2,295.5	2,295.5	5.0	5.0	-135.29	7.3	-209.8	220.8	210.7	10.06	21.945				
2,408.3	2,406.9	2,402.9	2,402.9	5.3	5.3	-137.49	7.3	-209.8	230.5	220.0	10.52	21.912				
2,500.0	2,497.7	2,493.7	2,493.7	5.5	5.5	-139.58	7.3	-209.8	240.3	229.4	10.93	21.992				
2,600.0	2,596.7	2,592.7	2,592.7	5.8	5.7	-141.67	7.3	-209.8	251.3	240.0	11.38	22.095				
2,700.0	2,695.7	2,691.7	2,691.7	6.0	5.9	-143.58	7.3	-209.8	262.7	250.8	11.83	22.210				
2,800.0	2,794.6	2,790.6	2,790.6	6.3	6.2	-145.34	7.3	-209.8	274.3	262.0	12.28	22.334				
2,900.0	2,893.6	2,889.6	2,889.6	6.6	6.4	-146.95	7.3	-209.8	286.1	273.4	12.74	22.465				
3,000.0	2,992.6	2,988.6	2,988.6	6.9	6.6	-148.44	7.3	-209.8	298.1	285.0	13.19	22.601				
3,100.0	3,091.6	3,087.6	3,087.6	7.2	6.8	-149.81	7.3	-209.8	310.4	296.7	13.65	22.739				
3,200.0	3,190.6	3,186.6	3,186.6	7.5	7.0	-151.07	7.3	-209.8	322.8	308.6	14.11	22.880				
3,300.0	3,289.6	3,285.6	3,285.6	7.8	7.3	-152.24	7.3	-209.8	335.3	320.7	14.56	23.020				
3,400.0	3,388.6	3,384.6	3,384.6	8.1	7.5	-153.33	7.3	-209.8	347.9	332.9	15.02	23.160				
3,500.0	3,487.6	3,483.6	3,483.6	8.4	7.7	-154.34	7.3	-209.8	360.7	345.2	15.48	23.299				
3,600.0	3,586.5	3,582.5	3,582.5	8.7	7.9	-155.28	7.3	-209.8	373.6	357.6	15.94	23.435				
3,700.0	3,685.5	3,681.5	3,681.5	9.0	8.2	-156.16	7.3	-209.8	386.6	370.2	16.40	23.570				
3,800.0	3,784.5	3,780.5	3,780.5	9.3	8.4	-156.98	7.3	-209.8	399.6	382.8	16.86	23.702				
3,900.0	3,883.5	3,879.5	3,879.5	9.6	8.6	-157.75	7.3	-209.8	412.7	395.4	17.32	23.831				
4,000.0	3,982.5	3,978.5	3,978.5	9.9	8.8	-158.48	7.3	-209.8	425.9	408.2	17.78	23.957				
4,010.7	3,993.1	3,989.1	3,989.1	10.0	8.9	-158.55	7.3	-209.8	427.4	409.5	17.83	23.970				
4,100.0	4,081.7	4,077.7	4,077.7	10.2	9.1	-159.17	7.3	-209.8	437.9	419.7	18.26	23.988				
4,200.0	4,181.2	4,177.2	4,177.2	10.4	9.3	-159.66	7.3	-209.8	446.7	428.0	18.69	23.895				
4,300.0	4,281.0	4,277.0	4,277.0	10.6	9.5	-159.95	7.3	-209.8	452.2	433.1	19.11	23.661				
4,400.0	4,381.0	4,377.0	4,377.0	10.8	9.7	-160.07	7.3	-209.8	454.5	435.0	19.51	23.295				
4,419.0	4,400.0	4,396.0	4,396.0	10.9	9.8	-115.64	7.3	-209.8	454.6	434.0	20.53	22.143				
4,500.0	4,481.0	4,477.0	4,477.0	11.0	10.0	-115.64	7.3	-209.8	454.6	433.7	20.85	21.797				
4,600.0	4,581.0	4,577.0	4,577.0	11.2	10.2	-115.64	7.3	-209.8	454.6	433.3	21.28	21.363				
4,700.0	4,681.0	4,677.0	4,677.0	11.4	10.4	-115.64	7.3	-209.8	454.6	432.8	21.70	20.946				
4,800.0	4,781.0	4,777.0	4,777.0	11.6	10.6	-115.64	7.3	-209.8	454.6	432.4	22.13	20.543				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Stonebraker 28U-HZ Pad Sec.28-T2N-R64W - Stonebraker 42-28 (Exist.) - Wellbore #1 - Design #1														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
4,900.0	4,881.0	4,877.0	4,877.0	11.8	10.8	-115.64	7.3	-209.8	454.6	432.0	22.55	20.155			
5,000.0	4,981.0	4,977.0	4,977.0	12.0	11.1	-115.64	7.3	-209.8	454.6	431.6	22.98	19.781			
5,100.0	5,081.0	5,077.0	5,077.0	12.2	11.3	-115.64	7.3	-209.8	454.6	431.1	23.41	19.419			
5,200.0	5,181.0	5,177.0	5,177.0	12.4	11.5	-115.64	7.3	-209.8	454.6	430.7	23.84	19.070			
5,300.0	5,281.0	5,277.0	5,277.0	12.6	11.7	-115.64	7.3	-209.8	454.6	430.3	24.26	18.733			
5,400.0	5,381.0	5,377.0	5,377.0	12.8	12.0	-115.64	7.3	-209.8	454.6	429.9	24.69	18.407			
5,500.0	5,481.0	5,477.0	5,477.0	13.0	12.2	-115.64	7.3	-209.8	454.6	429.4	25.13	18.092			
5,600.0	5,581.0	5,577.0	5,577.0	13.2	12.4	-115.64	7.3	-209.8	454.6	429.0	25.56	17.786			
5,700.0	5,681.0	5,677.0	5,677.0	13.4	12.6	-115.64	7.3	-209.8	454.6	428.6	25.99	17.491			
5,800.0	5,781.0	5,777.0	5,777.0	13.6	12.9	-115.64	7.3	-209.8	454.6	428.1	26.42	17.205			
5,900.0	5,881.0	5,877.0	5,877.0	13.8	13.1	-115.64	7.3	-209.8	454.6	427.7	26.85	16.927			
6,000.0	5,981.0	5,977.0	5,977.0	14.0	13.3	-115.64	7.3	-209.8	454.6	427.3	27.29	16.659			
6,100.0	6,081.0	6,077.0	6,077.0	14.2	13.5	-115.64	7.3	-209.8	454.6	426.8	27.72	16.398			
6,203.0	6,184.0	6,180.0	6,180.0	14.5	13.8	-115.64	7.3	-209.8	454.6	426.4	28.17	16.137			
6,250.0	6,231.0	6,227.0	6,227.0	14.5	13.9	-25.77	7.3	-209.8	453.2	425.7	27.58	16.431			
6,300.0	6,280.7	6,276.7	6,276.7	14.6	14.0	-26.17	7.3	-209.8	449.0	421.4	27.65	16.239			
6,350.0	6,330.1	6,326.1	6,326.1	14.7	14.1	-26.87	7.3	-209.8	441.9	414.2	27.64	15.986			
6,400.0	6,378.8	6,374.8	6,374.8	14.7	14.2	-27.89	7.3	-209.8	431.9	404.3	27.57	15.669			
6,450.0	6,426.7	6,422.7	6,422.7	14.8	14.3	-29.27	7.3	-209.8	419.2	391.8	27.43	15.281			
6,500.0	6,473.6	6,469.6	6,469.6	14.8	14.4	-31.08	7.3	-209.8	403.9	376.6	27.27	14.814			
6,550.0	6,519.2	6,515.2	6,515.2	14.9	14.5	-33.38	7.3	-209.8	386.2	359.1	27.09	14.255			
6,600.0	6,563.4	6,559.4	6,559.4	14.9	14.6	-36.27	7.3	-209.8	366.2	339.3	26.95	13.588			
6,650.0	6,605.9	6,601.9	6,601.9	14.9	14.7	-39.86	7.3	-209.8	344.4	317.5	26.91	12.800			
6,700.0	6,646.7	6,642.7	6,642.7	15.0	14.8	-44.26	7.3	-209.8	321.1	294.0	27.02	11.882			
6,750.0	6,685.4	6,681.4	6,681.4	15.1	14.9	-49.58	7.3	-209.8	296.7	269.4	27.37	10.843			
6,800.0	6,722.1	6,718.1	6,718.1	15.2	15.0	-55.84	7.3	-209.8	272.2	244.2	27.99	9.724			
6,850.0	6,756.4	6,752.4	6,752.4	15.5	15.1	-62.94	7.3	-209.8	248.5	219.6	28.88	8.603			
6,900.0	6,788.2	6,784.2	6,784.2	15.8	15.1	-70.60	7.3	-209.8	227.0	197.1	29.93	7.586			
6,950.0	6,817.5	6,813.5	6,813.5	16.2	15.2	-78.33	7.3	-209.8	209.8	178.8	30.96	6.776			
7,000.0	6,844.1	6,840.1	6,840.1	16.7	15.3	-85.56	7.3	-209.8	199.1	167.2	31.84	6.253			
7,034.7	6,860.9	6,856.9	6,856.9	17.1	15.3	-90.00	7.3	-209.8	196.7	164.4	32.34	6.083 CC, ES			
7,050.0	6,867.8	6,863.8	6,863.8	17.2	15.3	-91.77	7.3	-209.8	197.2	164.7	32.53	6.063 SF			
7,100.0	6,888.6	6,884.6	6,884.6	17.9	15.4	-96.62	7.3	-209.8	205.4	172.3	33.09	6.207			
7,150.0	6,906.4	6,900.0	6,900.0	18.6	15.4	-99.27	7.3	-209.8	223.4	189.7	33.69	6.631			
7,200.0	6,921.1	6,900.0	6,900.0	19.4	15.4	-96.90	7.3	-209.8	250.2	215.6	34.60	7.232			
7,250.0	6,932.7	6,900.0	6,900.0	20.2	15.4	-93.53	7.3	-209.8	283.6	248.0	35.56	7.974			
7,300.0	6,941.0	6,900.0	6,900.0	21.1	15.4	-89.17	7.3	-209.8	321.5	285.0	36.48	8.811			
7,350.0	6,946.1	6,900.0	6,900.0	22.1	15.4	-83.88	7.3	-209.8	362.3	325.0	37.22	9.734			
7,400.0	6,947.9	6,900.0	6,900.0	23.1	15.4	-77.80	7.3	-209.8	404.9	367.3	37.60	10.770			
7,412.7	6,947.9	6,900.0	6,900.0	23.4	15.4	-76.16	7.3	-209.8	416.0	378.4	37.63	11.057			
7,500.0	6,946.7	6,900.0	6,900.0	25.2	15.4	-76.16	7.3	-209.8	494.1	454.7	39.41	12.536			
7,600.0	6,945.5	6,900.0	6,900.0	27.4	15.4	-76.16	7.3	-209.8	586.7	545.1	41.57	14.113			
7,700.0	6,944.2	6,900.0	6,900.0	29.7	15.4	-76.16	7.3	-209.8	681.4	637.6	43.83	15.547			
7,800.0	6,942.9	6,900.0	6,900.0	32.1	15.4	-76.16	7.3	-209.8	777.5	731.3	46.16	16.842			
7,900.0	6,941.6	6,900.0	6,900.0	34.6	15.4	-76.16	7.3	-209.8	874.4	825.9	48.56	18.008			
8,000.0	6,940.4	6,900.0	6,900.0	37.1	15.4	-76.16	7.3	-209.8	972.0	921.0	51.00	19.059			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-214 - Wellbore #1 - Plan #1 (7-24-12)										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	61.9						
100.0	100.0	99.0	99.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.22	276.913			
200.0	200.0	199.0	199.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.67	92.151			
300.0	300.0	299.0	299.0	0.6	0.6	0.00	61.9	0.0	61.9	60.8	1.12	55.217			
400.0	400.0	399.0	399.0	0.8	0.8	0.00	61.9	0.0	61.9	60.4	1.57	39.418			
500.0	500.0	499.0	499.0	1.0	1.0	0.00	61.9	0.0	61.9	59.9	2.02	30.649			
600.0	600.0	599.0	599.0	1.2	1.2	0.00	61.9	0.0	61.9	59.5	2.47	25.071			
700.0	700.0	699.0	699.0	1.5	1.5	0.00	61.9	0.0	61.9	59.0	2.92	21.211			
800.0	800.0	799.0	799.0	1.7	1.7	0.00	61.9	0.0	61.9	58.6	3.37	18.381	CC, ES		
900.0	900.0	896.9	896.9	1.9	1.9	0.33	63.5	0.4	63.6	59.8	3.81	16.668			
1,000.0	1,000.0	994.6	994.4	2.1	2.1	1.23	68.4	1.5	68.5	64.3	4.26	16.093			
1,100.0	1,100.0	1,091.8	1,091.3	2.4	2.4	2.48	76.4	3.3	76.9	72.2	4.71	16.321			
1,200.0	1,200.0	1,188.4	1,187.2	2.6	2.6	3.83	87.6	5.9	88.5	83.4	5.17	17.128			
1,300.0	1,300.0	1,284.0	1,281.7	2.8	2.8	5.11	101.7	9.1	103.6	97.9	5.64	18.349			
1,400.0	1,400.0	1,378.6	1,374.7	3.0	3.1	6.24	118.7	13.0	121.9	115.7	6.14	19.862			
1,500.0	1,500.0	1,472.0	1,465.8	3.3	3.5	7.20	138.4	17.5	143.4	136.7	6.65	21.578			
1,600.0	1,600.0	1,568.9	1,560.0	3.5	3.8	8.00	160.6	22.6	166.8	159.6	7.19	23.203			
1,700.0	1,700.0	1,666.1	1,654.5	3.7	4.2	8.60	182.8	27.6	190.1	182.4	7.74	24.572			
1,800.0	1,800.0	1,763.3	1,749.0	3.9	4.6	9.07	205.0	32.7	213.5	205.2	8.30	25.732			
1,900.0	1,900.0	1,860.5	1,843.5	4.2	5.1	9.44	227.2	37.8	237.0	228.1	8.87	26.725			
2,000.0	2,000.0	1,957.7	1,938.0	4.4	5.5	9.75	249.5	42.9	260.4	250.9	9.44	27.582			
2,100.0	2,100.0	2,055.2	2,032.8	4.6	5.9	-34.37	271.8	48.0	282.4	273.1	9.33	30.281			
2,200.0	2,199.8	2,153.4	2,128.2	4.8	6.4	-34.49	294.2	53.1	301.6	291.8	9.80	30.777			
2,300.0	2,299.5	2,251.9	2,224.0	5.0	6.8	-34.96	316.8	58.3	318.0	307.7	10.28	30.941			
2,408.3	2,406.9	2,359.0	2,328.2	5.3	7.3	-35.83	341.2	63.9	332.7	321.9	10.80	30.791			
2,500.0	2,497.7	2,449.9	2,416.5	5.5	7.7	-36.81	362.0	68.6	343.8	332.5	11.27	30.499			
2,600.0	2,596.7	2,549.0	2,512.8	5.8	8.2	-37.81	384.7	73.8	356.0	344.2	11.79	30.193			
2,700.0	2,695.7	2,648.0	2,609.1	6.0	8.7	-38.75	407.3	79.0	368.3	356.0	12.32	29.900			
2,800.0	2,794.6	2,747.1	2,705.4	6.3	9.1	-39.63	430.0	84.2	380.7	367.9	12.85	29.618			
2,900.0	2,893.6	2,846.2	2,801.7	6.6	9.6	-40.45	452.6	89.3	393.2	379.8	13.40	29.346			
3,000.0	2,992.6	2,945.2	2,898.0	6.9	10.1	-41.22	475.3	94.5	405.8	391.8	13.95	29.086			
3,100.0	3,091.6	3,044.3	2,994.3	7.2	10.5	-41.94	497.9	99.7	418.4	403.9	14.51	28.836			
3,200.0	3,190.6	3,143.4	3,090.6	7.5	11.0	-42.62	520.6	104.9	431.1	416.0	15.08	28.595			
3,300.0	3,289.6	3,242.4	3,186.9	7.8	11.5	-43.27	543.2	110.1	443.9	428.2	15.65	28.365			
3,400.0	3,388.6	3,341.5	3,283.2	8.1	12.0	-43.87	565.9	115.2	456.7	440.5	16.23	28.143			
3,500.0	3,487.6	3,440.6	3,379.5	8.4	12.4	-44.45	588.5	120.4	469.5	452.7	16.81	27.931			
3,600.0	3,586.5	3,539.6	3,475.8	8.7	12.9	-44.99	611.2	125.6	482.4	465.0	17.40	27.727			
3,700.0	3,685.5	3,638.7	3,572.1	9.0	13.4	-45.50	633.9	130.8	495.4	477.4	17.99	27.531			
3,800.0	3,784.5	3,737.7	3,668.4	9.3	13.9	-45.99	656.5	135.9	508.3	489.8	18.59	27.344			
3,900.0	3,883.5	3,836.8	3,764.7	9.6	14.3	-46.46	679.2	141.1	521.4	502.2	19.19	27.164			
4,000.0	3,982.5	3,935.9	3,861.0	9.9	14.8	-46.90	701.8	146.3	534.4	514.6	19.80	26.991			
4,010.7	3,993.1	3,946.5	3,871.3	10.0	14.9	-46.94	704.2	146.9	535.8	515.9	19.86	26.973			
4,100.0	4,081.7	4,034.8	3,957.2	10.2	15.3	-47.40	724.4	151.5	548.4	528.0	20.36	26.929			
4,200.0	4,181.2	4,133.5	4,053.1	10.4	15.8	-47.68	747.0	156.6	564.7	543.9	20.85	27.080			
4,300.0	4,281.0	4,231.7	4,148.6	10.6	16.3	-47.73	769.5	161.8	583.4	562.1	21.30	27.384			
4,400.0	4,381.0	4,329.4	4,243.5	10.8	16.7	-47.59	791.8	166.9	604.4	582.7	21.71	27.837			
4,419.0	4,400.0	4,347.9	4,261.5	10.9	16.8	-3.11	796.0	167.8	608.6	582.0	26.62	22.867			
4,500.0	4,481.0	4,426.6	4,338.0	11.0	17.2	-2.63	814.0	172.0	627.0	599.8	27.17	23.075			
4,600.0	4,581.0	4,523.8	4,432.5	11.2	17.7	-2.08	836.2	177.0	649.6	621.8	27.87	23.308			
4,700.0	4,681.0	4,621.0	4,527.0	11.4	18.1	-1.56	858.5	182.1	672.4	643.8	28.57	23.533			
4,800.0	4,781.0	4,747.8	4,650.9	11.6	18.6	-1.00	884.8	188.2	693.1	663.8	29.29	23.660			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-214 - Wellbore #1 - Plan #1 (7-24-12)				Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
4,900.0	4,881.0	4,877.2	4,778.4	11.8	19.0	-0.57	906.2	193.0	709.6	679.6	29.92	23.714				
5,000.0	4,981.0	5,008.3	4,908.5	12.0	19.4	-0.26	922.1	196.7	721.7	691.2	30.48	23.676				
5,100.0	5,081.0	5,140.7	5,040.4	12.2	19.6	-0.08	932.3	199.0	729.4	698.4	30.96	23.556				
5,200.0	5,181.0	5,273.7	5,173.4	12.4	19.8	0.00	936.5	200.0	732.5	701.2	31.37	23.350				
5,300.0	5,281.0	5,380.3	5,280.0	12.6	19.9	0.00	936.6	200.0	732.6	700.9	31.71	23.105				
5,400.0	5,381.0	5,480.3	5,380.0	12.8	20.1	0.00	936.6	200.0	732.6	700.6	32.04	22.864				
5,500.0	5,481.0	5,580.3	5,480.0	13.0	20.2	0.00	936.6	200.0	732.6	700.3	32.38	22.627				
5,600.0	5,581.0	5,680.3	5,580.0	13.2	20.3	0.00	936.6	200.0	732.6	699.9	32.72	22.392				
5,700.0	5,681.0	5,780.3	5,680.0	13.4	20.4	0.00	936.6	200.0	732.6	699.6	33.06	22.161				
5,800.0	5,781.0	5,880.3	5,780.0	13.6	20.6	0.00	936.6	200.0	732.6	699.2	33.40	21.933				
5,900.0	5,881.0	5,980.3	5,880.0	13.8	20.7	0.00	936.6	200.0	732.6	698.9	33.75	21.708				
6,000.0	5,981.0	6,080.3	5,980.0	14.0	20.8	0.00	936.6	200.0	732.6	698.5	34.10	21.487				
6,100.0	6,081.0	6,180.3	6,080.0	14.2	21.0	0.00	936.6	200.0	732.6	698.2	34.45	21.269				
6,164.9	6,145.9	6,245.3	6,144.9	14.4	21.1	0.00	936.6	200.0	732.6	698.0	34.67	21.129				
6,203.0	6,184.0	6,283.3	6,183.0	14.5	21.1	-0.02	936.6	199.7	732.6	697.8	34.80	21.050				
6,250.0	6,231.0	6,330.3	6,229.8	14.5	21.2	89.88	936.6	197.1	732.6	703.2	29.39	24.925				
6,300.0	6,280.7	6,380.1	6,279.3	14.6	21.2	89.78	936.6	191.1	732.6	703.1	29.55	24.797				
6,350.0	6,330.1	6,429.9	6,328.2	14.7	21.2	89.68	936.6	181.9	732.6	703.0	29.68	24.685				
6,400.0	6,378.8	6,479.6	6,376.3	14.7	21.3	89.58	936.6	169.6	732.6	702.8	29.80	24.587				
6,450.0	6,426.7	6,529.1	6,423.5	14.8	21.3	89.48	936.6	154.2	732.7	702.7	29.91	24.496				
6,500.0	6,473.6	6,578.7	6,469.4	14.8	21.3	89.39	936.6	135.8	732.7	702.6	30.02	24.407				
6,550.0	6,519.2	6,628.1	6,514.1	14.9	21.3	89.29	936.6	114.6	732.7	702.5	30.14	24.311				
6,600.0	6,563.4	6,677.5	6,557.1	14.9	21.4	89.20	936.6	90.5	732.7	702.4	30.28	24.197				
6,650.0	6,605.9	6,726.8	6,598.5	14.9	21.4	89.12	936.6	63.7	732.7	702.2	30.46	24.056				
6,700.0	6,646.7	6,776.0	6,638.0	15.0	21.4	89.04	936.6	34.3	732.7	702.0	30.69	23.874				
6,750.0	6,685.4	6,825.2	6,675.5	15.1	21.4	88.96	936.6	2.5	732.7	701.7	31.00	23.640				
6,800.0	6,722.1	6,874.3	6,710.9	15.2	21.5	88.89	936.6	-31.5	732.7	701.4	31.39	23.342				
6,850.0	6,756.4	6,923.3	6,743.9	15.5	21.5	88.82	936.6	-67.8	732.8	700.9	31.90	22.972				
6,900.0	6,788.2	6,972.3	6,774.5	15.8	21.6	88.75	936.6	-106.1	732.8	700.2	32.53	22.528				
6,950.0	6,817.5	7,021.3	6,802.6	16.2	21.7	88.70	936.6	-146.1	732.8	699.5	33.30	22.007				
7,000.0	6,844.1	7,070.2	6,828.0	16.7	21.8	88.64	936.6	-187.9	732.8	698.6	34.22	21.416				
7,050.0	6,867.8	7,119.1	6,850.7	17.2	21.9	88.60	936.6	-231.2	732.8	697.5	35.29	20.765				
7,100.0	6,888.6	7,167.9	6,870.5	17.9	22.2	88.55	936.6	-275.8	732.8	696.3	36.52	20.065				
7,150.0	6,906.4	7,216.7	6,887.5	18.6	22.5	88.52	936.6	-321.6	732.8	694.9	37.90	19.334				
7,200.0	6,921.1	7,265.5	6,901.5	19.4	22.9	88.49	936.6	-368.3	732.8	693.4	39.43	18.587				
7,250.0	6,932.7	7,314.2	6,912.4	20.2	23.4	88.47	936.6	-415.8	732.8	691.8	41.08	17.838				
7,300.0	6,941.0	7,363.0	6,920.4	21.1	24.0	88.45	936.6	-463.9	732.8	690.0	42.85	17.101				
7,350.0	6,946.1	7,411.7	6,925.2	22.1	24.7	88.44	936.6	-512.3	732.8	688.1	44.72	16.387				
7,400.0	6,947.9	7,460.4	6,926.9	23.1	25.4	88.44	936.6	-561.0	732.8	686.2	46.66	15.704				
7,412.7	6,947.9	7,472.9	6,926.9	23.4	25.6	88.44	936.6	-573.5	732.8	685.7	47.17	15.536				
7,500.0	6,946.7	7,560.2	6,926.1	25.2	27.2	88.46	936.6	-660.8	732.8	682.0	50.81	14.422				
7,600.0	6,945.5	7,660.2	6,925.2	27.4	29.2	88.49	936.6	-760.8	732.8	677.6	55.20	13.275				
7,700.0	6,944.2	7,760.2	6,924.3	29.7	31.4	88.52	936.6	-860.8	732.8	673.0	59.80	12.254				
7,800.0	6,942.9	7,860.2	6,923.4	32.1	33.6	88.55	936.6	-960.8	732.8	668.2	64.55	11.351				
7,900.0	6,941.6	7,960.2	6,922.5	34.6	36.0	88.58	936.6	-1,060.8	732.7	663.3	69.44	10.553				
8,000.0	6,940.4	8,060.2	6,921.7	37.1	38.4	88.61	936.6	-1,160.8	732.7	658.3	74.42	9.845				
8,100.0	6,939.1	8,160.2	6,920.8	39.7	40.8	88.64	936.6	-1,260.8	732.7	653.2	79.49	9.217				
8,200.0	6,937.8	8,260.2	6,919.9	42.2	43.3	88.67	936.6	-1,360.7	732.7	648.1	84.63	8.658				
8,300.0	6,936.6	8,360.2	6,919.0	44.8	45.8	88.70	936.6	-1,460.7	732.7	642.9	89.82	8.157				
8,400.0	6,935.3	8,460.2	6,918.1	47.5	48.4	88.73	936.6	-1,560.7	732.7	637.6	95.07	7.707				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-214 - Wellbore #1 - Plan #1 (7-24-12)										Offset Site Error:		0.0 ft			
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor					
8,500.0	6,934.0	8,560.2	6,917.2	50.1	51.0	88.76	936.6	-1,660.7	732.6	632.3	100.35	7.301					
8,600.0	6,932.7	8,660.2	6,916.3	52.8	53.6	88.79	936.6	-1,760.7	732.6	627.0	105.66	6.934					
8,700.0	6,931.5	8,760.2	6,915.4	55.5	56.2	88.82	936.6	-1,860.7	732.6	621.6	111.01	6.600					
8,800.0	6,930.2	8,860.2	6,914.5	58.2	58.9	88.85	936.6	-1,960.7	732.6	616.2	116.37	6.295					
8,900.0	6,928.9	8,960.2	6,913.6	60.9	61.6	88.88	936.6	-2,060.7	732.6	610.8	121.76	6.016					
9,000.0	6,927.6	9,060.2	6,912.8	63.6	64.2	88.91	936.6	-2,160.7	732.6	605.4	127.17	5.760					
9,100.0	6,926.4	9,160.2	6,911.9	66.3	66.9	88.94	936.6	-2,260.7	732.5	599.9	132.60	5.524					
9,200.0	6,925.1	9,260.2	6,911.0	69.0	69.6	88.97	936.6	-2,360.7	732.5	594.5	138.04	5.307					
9,300.0	6,923.8	9,360.2	6,910.1	71.7	72.3	89.00	936.6	-2,460.7	732.5	589.0	143.50	5.105					
9,400.0	6,922.5	9,460.2	6,909.2	74.5	75.0	89.03	936.6	-2,560.7	732.5	583.5	148.96	4.917					
9,500.0	6,921.3	9,560.2	6,908.3	77.2	77.7	89.06	936.6	-2,660.7	732.5	578.0	154.44	4.743					
9,600.0	6,920.0	9,660.2	6,907.4	80.0	80.5	89.09	936.6	-2,760.7	732.5	572.5	159.92	4.580					
9,700.0	6,918.7	9,760.2	6,906.5	82.7	83.2	89.12	936.6	-2,860.7	732.5	567.0	165.42	4.428					
9,800.0	6,917.4	9,860.2	6,905.6	85.5	85.9	89.15	936.6	-2,960.7	732.4	561.5	170.92	4.285					
9,900.0	6,916.2	9,960.2	6,904.7	88.2	88.7	89.18	936.6	-3,060.7	732.4	556.0	176.43	4.151					
10,000.0	6,914.9	10,060.2	6,903.9	91.0	91.4	89.21	936.6	-3,160.7	732.4	550.5	181.94	4.026					
10,100.0	6,913.6	10,160.2	6,903.0	93.7	94.1	89.24	936.6	-3,260.7	732.4	544.9	187.46	3.907					
10,200.0	6,912.3	10,260.2	6,902.1	96.5	96.9	89.27	936.6	-3,360.7	732.4	539.4	192.99	3.795					
10,300.0	6,911.1	10,360.2	6,901.2	99.3	99.6	89.30	936.6	-3,460.6	732.4	533.9	198.52	3.689					
10,400.0	6,909.8	10,460.2	6,900.3	102.0	102.4	89.33	936.6	-3,560.6	732.4	528.3	204.05	3.589					
10,500.0	6,908.5	10,560.2	6,899.4	104.8	105.2	89.36	936.6	-3,660.6	732.3	522.8	209.59	3.494					
10,600.0	6,907.2	10,660.2	6,898.5	107.6	107.9	89.39	936.6	-3,760.6	732.3	517.2	215.13	3.404					
10,700.0	6,906.0	10,760.2	6,897.6	110.4	110.7	89.42	936.6	-3,860.6	732.3	511.6	220.68	3.319					
10,800.0	6,904.7	10,860.2	6,896.7	113.1	113.4	89.45	936.6	-3,960.6	732.3	506.1	226.22	3.237					
10,900.0	6,903.4	10,960.2	6,895.8	115.9	116.2	89.48	936.6	-4,060.6	732.3	500.5	231.78	3.160					
11,000.0	6,902.2	11,060.2	6,894.9	118.7	119.0	89.51	936.6	-4,160.6	732.3	495.0	237.33	3.086					
11,100.0	6,900.9	11,160.2	6,894.1	121.5	121.8	89.54	936.6	-4,260.6	732.3	489.4	242.89	3.015					
11,200.0	6,899.6	11,260.2	6,893.2	124.3	124.5	89.57	936.6	-4,360.6	732.3	483.8	248.45	2.947					
11,300.0	6,898.3	11,360.2	6,892.3	127.0	127.3	89.60	936.7	-4,460.6	732.3	478.2	254.01	2.883					
11,325.8	6,898.0	11,386.0	6,892.0	127.5	128.0	89.61	936.7	-4,486.4	732.2	477.1	255.19	2.869 SF					

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-404 - Wellbore #1 - Plan #1 (7-24-12)				Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.1	0.0	29.2							
100.0	100.0	99.0	99.0	0.1	0.1	0.00	29.1	0.0	29.1	28.9	0.22	130.312				
200.0	200.0	199.0	199.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.365				
300.0	300.0	299.0	299.0	0.6	0.6	0.00	29.1	0.0	29.1	28.0	1.12	25.984				
400.0	400.0	399.0	399.0	0.8	0.8	0.00	29.1	0.0	29.1	27.6	1.57	18.550				
500.0	500.0	499.0	499.0	1.0	1.0	0.00	29.1	0.0	29.1	27.1	2.02	14.423				
600.0	600.0	599.0	599.0	1.2	1.2	0.00	29.1	0.0	29.1	26.7	2.47	11.798				
700.0	700.0	699.0	699.0	1.5	1.5	0.00	29.1	0.0	29.1	26.2	2.92	9.982				
800.0	800.0	799.0	799.0	1.7	1.7	0.00	29.1	0.0	29.1	25.8	3.37	8.650				
900.0	900.0	899.0	899.0	1.9	1.9	0.00	29.1	0.0	29.1	25.3	3.82	7.632				
1,000.0	1,000.0	999.0	999.0	2.1	2.1	0.00	29.1	0.0	29.1	24.9	4.27	6.828 CC, ES				
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.4	1.06	30.7	0.6	30.7	26.0	4.71	6.521				
1,200.0	1,200.0	1,196.8	1,196.6	2.6	2.6	3.68	35.5	2.3	35.7	30.5	5.16	6.908				
1,300.0	1,300.0	1,295.1	1,294.6	2.8	2.8	6.73	43.4	5.1	44.0	38.3	5.61	7.833				
1,400.0	1,400.0	1,392.7	1,391.5	3.0	3.0	9.46	54.4	9.1	55.7	49.6	6.07	9.172				
1,500.0	1,500.0	1,489.7	1,487.4	3.3	3.3	11.63	68.4	14.1	70.8	64.3	6.55	10.818				
1,600.0	1,600.0	1,588.4	1,584.6	3.5	3.6	13.17	83.8	19.6	87.3	80.3	7.03	12.408				
1,700.0	1,700.0	1,687.0	1,681.9	3.7	3.9	14.21	99.2	25.1	103.8	96.3	7.53	13.784				
1,800.0	1,800.0	1,785.6	1,779.1	3.9	4.2	14.97	114.6	30.7	120.3	112.3	8.03	14.981				
1,900.0	1,900.0	1,884.2	1,876.3	4.2	4.5	15.55	130.0	36.2	136.9	128.3	8.54	16.029				
2,000.0	2,000.0	1,982.8	1,973.6	4.4	4.8	16.00	145.5	41.7	153.4	144.4	9.05	16.953				
2,100.0	2,100.0	2,081.7	2,071.1	4.6	5.2	-28.21	160.9	47.2	168.5	159.2	9.26	18.203				
2,200.0	2,199.8	2,180.9	2,169.0	4.8	5.5	-28.55	176.4	52.8	180.5	170.8	9.71	18.588				
2,300.0	2,299.5	2,280.5	2,267.1	5.0	5.9	-29.38	192.0	58.4	189.5	179.3	10.16	18.639				
2,408.3	2,406.9	2,388.4	2,373.6	5.3	6.2	-30.80	208.8	64.4	195.9	185.2	10.66	18.370				
2,500.0	2,497.7	2,479.9	2,463.8	5.5	6.6	-32.24	223.1	69.5	199.9	188.8	11.11	17.991				
2,600.0	2,596.7	2,579.7	2,562.2	5.8	6.9	-33.74	238.7	75.1	204.5	192.8	11.61	17.611				
2,700.0	2,695.7	2,679.4	2,660.6	6.0	7.3	-35.18	254.3	80.7	209.1	197.0	12.12	17.259				
2,800.0	2,794.6	2,779.2	2,758.9	6.3	7.6	-36.56	269.9	86.3	214.0	201.3	12.64	16.933				
2,900.0	2,893.6	2,879.0	2,857.3	6.6	8.0	-37.87	285.4	91.9	218.9	205.7	13.16	16.631				
3,000.0	2,992.6	2,978.7	2,955.7	6.9	8.4	-39.13	301.0	97.5	223.9	210.2	13.70	16.348				
3,100.0	3,091.6	3,078.5	3,054.1	7.2	8.7	-40.33	316.6	103.1	229.1	214.8	14.24	16.085				
3,200.0	3,190.6	3,178.2	3,152.4	7.5	9.1	-41.47	332.2	108.7	234.3	219.5	14.79	15.839				
3,300.0	3,289.6	3,278.0	3,250.8	7.8	9.5	-42.57	347.8	114.2	239.6	224.3	15.35	15.608				
3,400.0	3,388.6	3,377.7	3,349.2	8.1	9.8	-43.62	363.4	119.8	245.1	229.1	15.92	15.391				
3,500.0	3,487.6	3,477.5	3,447.5	8.4	10.2	-44.62	378.9	125.4	250.6	234.1	16.50	15.187				
3,600.0	3,586.5	3,577.2	3,545.9	8.7	10.6	-45.58	394.5	131.0	256.1	239.0	17.08	14.995				
3,700.0	3,685.5	3,677.0	3,644.3	9.0	10.9	-46.50	410.1	136.6	261.8	244.1	17.67	14.814				
3,800.0	3,784.5	3,776.8	3,742.7	9.3	11.3	-47.38	425.7	142.2	267.5	249.2	18.26	14.644				
3,900.0	3,883.5	3,876.5	3,841.0	9.6	11.7	-48.22	441.3	147.8	273.2	254.3	18.86	14.483				
4,000.0	3,982.5	3,976.3	3,939.4	9.9	12.0	-49.03	456.9	153.4	279.0	259.6	19.47	14.331				
4,010.7	3,993.1	3,987.0	3,950.0	10.0	12.1	-49.11	458.5	154.0	279.7	260.1	19.54	14.315				
4,100.0	4,081.7	4,076.0	4,037.7	10.2	12.4	-49.69	472.4	158.9	285.8	265.8	20.04	14.264				
4,200.0	4,181.2	4,175.6	4,136.0	10.4	12.8	-49.84	488.0	164.5	294.8	274.3	20.52	14.370				
4,300.0	4,281.0	4,274.9	4,233.9	10.6	13.2	-49.53	503.5	170.1	306.1	285.1	20.94	14.615				
4,400.0	4,381.0	4,373.8	4,331.5	10.8	13.5	-48.81	519.0	175.6	319.6	298.3	21.32	14.994				
4,419.0	4,400.0	4,392.6	4,350.0	10.9	13.6	-4.20	521.9	176.7	322.5	299.2	23.26	13.868				
4,500.0	4,481.0	4,472.5	4,428.7	11.0	13.9	-3.27	534.4	181.1	334.9	311.1	23.75	14.102				
4,600.0	4,581.0	4,571.3	4,526.2	11.2	14.3	-2.21	549.8	186.7	350.2	325.9	24.37	14.373				
4,700.0	4,681.0	4,683.2	4,636.9	11.4	14.6	-1.24	565.2	192.2	363.8	338.9	24.94	14.590				
4,800.0	4,781.0	4,796.3	4,749.3	11.6	14.8	-0.57	576.6	196.3	373.9	348.4	25.45	14.691				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-404 - Wellbore #1 - Plan #1 (7-24-12)										Offset Site Error:		0.0 ft			
Survey Program: 0-MWDD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
							+N/-S (ft)	+E/-W (ft)									
4,900.0	4,881.0	4,910.1	4,862.9	11.8	15.1	-0.17	583.9	198.9	380.2	354.3	25.90	14.679					
5,000.0	4,981.0	5,024.4	4,977.1	12.0	15.3	0.00	586.9	200.0	382.9	356.6	26.30	14.556					
5,100.0	5,081.0	5,127.3	5,080.0	12.2	15.4	0.00	586.9	200.0	382.9	356.3	26.66	14.362					
5,200.0	5,181.0	5,227.3	5,180.0	12.4	15.6	0.00	586.9	200.0	382.9	355.9	27.03	14.166					
5,300.0	5,281.0	5,327.3	5,280.0	12.6	15.7	0.00	586.9	200.0	382.9	355.5	27.40	13.974					
5,400.0	5,381.0	5,427.3	5,380.0	12.8	15.9	0.00	586.9	200.0	382.9	355.2	27.78	13.786					
5,500.0	5,481.0	5,527.3	5,480.0	13.0	16.0	0.00	586.9	200.0	382.9	354.8	28.15	13.602					
5,600.0	5,581.0	5,627.3	5,580.0	13.2	16.2	0.00	586.9	200.0	382.9	354.4	28.53	13.423					
5,700.0	5,681.0	5,727.3	5,680.0	13.4	16.4	0.00	586.9	200.0	382.9	354.0	28.91	13.247					
5,800.0	5,781.0	5,827.3	5,780.0	13.6	16.5	0.00	586.9	200.0	382.9	353.7	29.29	13.074					
5,900.0	5,881.0	5,927.3	5,880.0	13.8	16.7	0.00	586.9	200.0	382.9	353.3	29.67	12.906					
6,000.0	5,981.0	6,027.3	5,980.0	14.0	16.9	0.00	586.9	200.0	382.9	352.9	30.06	12.741					
6,100.0	6,081.0	6,127.3	6,080.0	14.2	17.0	0.00	586.9	200.0	382.9	352.5	30.44	12.579					
6,203.0	6,184.0	6,230.3	6,183.0	14.5	17.2	0.00	586.9	200.0	382.9	352.1	30.84	12.416					
6,213.8	6,194.8	6,241.1	6,193.8	14.5	17.2	90.01	586.9	200.0	382.9	354.3	28.65	13.368					
6,250.0	6,231.0	6,277.3	6,230.0	14.5	17.3	90.21	586.9	200.0	382.9	354.2	28.78	13.306					
6,300.0	6,280.7	6,327.0	6,279.7	14.6	17.4	90.91	586.9	200.0	383.0	354.1	28.92	13.242					
6,350.0	6,330.1	6,376.5	6,329.2	14.7	17.5	92.07	586.9	200.0	383.2	354.2	29.03	13.200					
6,400.0	6,378.8	6,426.9	6,379.5	14.7	17.5	93.41	586.9	197.9	383.6	354.5	29.11	13.181					
6,450.0	6,426.7	6,477.9	6,430.2	14.8	17.6	94.75	586.9	192.5	384.3	355.1	29.17	13.175					
6,500.0	6,473.6	6,529.6	6,481.1	14.8	17.7	96.07	586.9	183.5	385.2	355.9	29.23	13.178					
6,550.0	6,519.2	6,581.9	6,531.9	14.9	17.7	97.37	586.9	171.0	386.2	356.9	29.29	13.187					
6,600.0	6,563.4	6,634.9	6,582.4	14.9	17.7	98.64	586.9	154.7	387.5	358.1	29.36	13.197					
6,650.0	6,605.9	6,688.7	6,632.3	14.9	17.8	99.87	586.9	134.7	388.9	359.4	29.45	13.202					
6,700.0	6,646.7	6,743.1	6,681.2	15.0	17.8	101.06	586.9	111.0	390.4	360.8	29.58	13.198					
6,750.0	6,685.4	6,798.2	6,728.9	15.1	17.8	102.20	586.9	83.4	392.0	362.2	29.75	13.176					
6,800.0	6,722.1	6,854.0	6,775.1	15.2	17.8	103.28	586.9	52.1	393.7	363.7	29.99	13.128					
6,850.0	6,756.4	6,910.6	6,819.4	15.5	17.9	104.30	586.9	17.0	395.4	365.1	30.31	13.045					
6,900.0	6,788.2	6,967.7	6,861.5	15.8	17.9	105.26	586.9	-21.7	397.1	366.4	30.75	12.916					
6,950.0	6,817.5	7,025.6	6,900.9	16.2	18.0	106.14	586.9	-64.0	398.9	367.6	31.27	12.753					
7,000.0	6,844.1	7,084.0	6,937.4	16.7	18.1	106.94	586.9	-109.6	400.5	368.5	31.96	12.531					
7,050.0	6,867.8	7,143.0	6,970.7	17.2	18.3	107.66	586.9	-158.3	402.0	369.2	32.80	12.258					
7,100.0	6,888.6	7,202.5	7,000.3	17.9	18.6	108.30	586.9	-209.9	403.4	369.6	33.80	11.937					
7,150.0	6,906.4	7,262.5	7,025.9	18.6	19.1	108.85	586.9	-264.1	404.7	369.7	34.98	11.569					
7,200.0	6,921.1	7,322.9	7,047.4	19.4	19.8	109.30	586.9	-320.6	405.8	369.4	36.33	11.169					
7,250.0	6,932.7	7,383.6	7,064.5	20.2	20.7	109.65	586.9	-378.8	406.6	368.8	37.84	10.745					
7,300.0	6,941.0	7,444.6	7,076.9	21.1	21.7	109.91	586.9	-438.5	407.3	367.7	39.51	10.308					
7,350.0	6,946.1	7,502.9	7,084.3	22.1	22.7	110.08	586.9	-496.4	407.7	366.4	41.27	9.879					
7,400.0	6,947.9	7,552.8	7,089.5	23.1	23.7	110.44	586.9	-546.0	408.9	365.9	42.91	9.529					
7,412.7	6,947.9	7,565.6	7,090.9	23.4	23.9	110.59	586.9	-558.7	409.3	366.0	43.31	9.451					
7,500.0	6,946.7	7,665.6	7,096.9	25.2	25.9	111.54	586.9	-658.4	411.6	365.0	46.68	8.818					
7,600.0	6,945.5	7,766.9	7,097.7	27.4	28.1	111.81	586.9	-759.7	412.4	361.7	50.73	8.129					
7,700.0	6,944.2	7,866.8	7,098.5	29.7	30.4	112.08	586.9	-859.7	413.2	358.2	54.93	7.522					
7,800.0	6,942.9	7,966.8	7,099.3	32.1	32.7	112.34	586.9	-959.7	413.9	354.7	59.25	6.986					
7,900.0	6,941.6	8,066.8	7,100.1	34.6	35.1	112.61	586.9	-1,059.7	414.7	351.0	63.69	6.512					
8,000.0	6,940.4	8,166.8	7,100.9	37.1	37.6	112.87	586.9	-1,159.7	415.5	347.3	68.19	6.093					
8,100.0	6,939.1	8,266.8	7,101.7	39.7	40.1	113.13	586.9	-1,259.6	416.3	343.5	72.76	5.721					
8,200.0	6,937.8	8,366.7	7,102.4	42.2	42.7	113.39	586.9	-1,359.6	417.1	339.7	77.37	5.391					
8,300.0	6,936.6	8,466.7	7,103.2	44.8	45.2	113.65	586.9	-1,459.6	417.9	335.9	82.02	5.095					
8,400.0	6,935.3	8,566.7	7,104.0	47.5	47.8	113.91	586.9	-1,559.6	418.7	332.0	86.69	4.830					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28V-404 - Wellbore #1 - Plan #1 (7-24-12)				Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance					Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)			Separation Factor		
8,500.0	6,934.0	8,666.7	7,104.8	50.1	50.5	114.17	586.9	-1,659.5	419.6	328.2	91.38	4.592				
8,600.0	6,932.7	8,766.7	7,105.6	52.8	53.1	114.42	586.9	-1,759.5	420.4	324.3	96.07	4.376				
8,700.0	6,931.5	8,866.6	7,106.4	55.5	55.8	114.68	586.9	-1,859.5	421.2	320.5	100.78	4.180				
8,800.0	6,930.2	8,966.6	7,107.2	58.2	58.4	114.93	586.9	-1,959.5	422.1	316.6	105.49	4.001				
8,900.0	6,928.9	9,066.6	7,107.9	60.9	61.1	115.19	586.9	-2,059.4	423.0	312.8	110.20	3.838				
9,000.0	6,927.6	9,166.6	7,108.7	63.6	63.8	115.44	586.9	-2,159.4	423.8	308.9	114.90	3.689				
9,100.0	6,926.4	9,266.5	7,109.5	66.3	66.5	115.69	586.9	-2,259.4	424.7	305.1	119.60	3.551				
9,200.0	6,925.1	9,366.5	7,110.3	69.0	69.2	115.94	586.9	-2,359.4	425.6	301.3	124.30	3.424				
9,300.0	6,923.8	9,466.5	7,111.1	71.7	71.9	116.19	586.9	-2,459.3	426.5	297.5	128.98	3.307				
9,400.0	6,922.5	9,566.5	7,111.9	74.5	74.7	116.44	586.9	-2,559.3	427.4	293.8	133.66	3.198				
9,500.0	6,921.3	9,666.5	7,112.6	77.2	77.4	116.69	586.9	-2,659.3	428.3	290.0	138.32	3.097				
9,600.0	6,920.0	9,766.4	7,113.4	80.0	80.1	116.93	586.9	-2,759.3	429.2	286.3	142.97	3.002				
9,700.0	6,918.7	9,866.4	7,114.2	82.7	82.9	117.18	586.9	-2,859.2	430.2	282.6	147.60	2.914				
9,800.0	6,917.4	9,966.4	7,115.0	85.5	85.6	117.42	586.9	-2,959.2	431.1	278.9	152.23	2.832				
9,900.0	6,916.2	10,066.4	7,115.8	88.2	88.3	117.66	586.9	-3,059.2	432.0	275.2	156.83	2.755				
10,000.0	6,914.9	10,166.4	7,116.6	91.0	91.1	117.90	586.9	-3,159.2	433.0	271.6	161.42	2.682				
10,100.0	6,913.6	10,266.3	7,117.3	93.7	93.9	118.15	586.9	-3,259.1	434.0	268.0	166.00	2.614				
10,200.0	6,912.3	10,366.3	7,118.1	96.5	96.6	118.39	586.9	-3,359.1	434.9	264.4	170.56	2.550				
10,300.0	6,911.1	10,466.3	7,118.9	99.3	99.4	118.62	586.9	-3,459.1	435.9	260.8	175.10	2.489				
10,400.0	6,909.8	10,566.3	7,119.7	102.0	102.1	118.86	586.9	-3,559.1	436.9	257.3	179.62	2.432				
10,500.0	6,908.5	10,666.2	7,120.5	104.8	104.9	119.10	586.9	-3,659.0	437.9	253.7	184.13	2.378				
10,600.0	6,907.2	10,766.2	7,121.3	107.6	107.7	119.33	586.9	-3,759.0	438.9	250.3	188.61	2.327				
10,700.0	6,906.0	10,866.2	7,122.1	110.4	110.4	119.57	586.9	-3,859.0	439.9	246.8	193.08	2.278				
10,800.0	6,904.7	10,966.2	7,122.8	113.1	113.2	119.80	586.9	-3,959.0	440.9	243.3	197.53	2.232				
10,900.0	6,903.4	11,066.2	7,123.6	115.9	116.0	120.03	586.9	-4,058.9	441.9	239.9	201.96	2.188				
11,000.0	6,902.2	11,166.1	7,124.4	118.7	118.7	120.26	586.9	-4,158.9	442.9	236.6	206.37	2.146				
11,100.0	6,900.9	11,266.1	7,125.2	121.5	121.5	120.49	586.9	-4,258.9	444.0	233.2	210.77	2.106				
11,200.0	6,899.6	11,366.1	7,126.0	124.3	124.3	120.72	586.9	-4,358.9	445.0	229.9	215.14	2.068				
11,300.0	6,898.3	11,466.1	7,126.8	127.0	127.1	120.95	586.9	-4,458.8	446.0	226.6	219.49	2.032				
11,325.8	6,898.0	11,491.9	7,127.0	127.5	127.8	121.01	586.9	-4,484.7	446.3	225.9	220.39	2.025 SF				

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28W-204 - Wellbore #1 - Plan #1 (7-24-1														Offset Site Error:	0.0ft
Survey Program: 0-MWD														Offset Well Error:	0.0ft
Reference	Offset	Semi Major Axis		Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-29.1	0.0	29.1						
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-29.1	0.0	29.1	28.9	0.22	129.662			
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-29.1	0.0	29.1	28.5	0.67	43.221			
300.0	300.0	300.0	300.0	0.6	0.6	180.00	-29.1	0.0	29.1	28.0	1.12	25.932			
400.0	400.0	400.0	400.0	0.8	0.8	180.00	-29.1	0.0	29.1	27.6	1.57	18.523			
500.0	500.0	500.0	500.0	1.0	1.0	180.00	-29.1	0.0	29.1	27.1	2.02	14.407			
600.0	600.0	600.0	600.0	1.2	1.2	180.00	-29.1	0.0	29.1	26.7	2.47	11.787			
700.0	700.0	700.0	700.0	1.5	1.5	180.00	-29.1	0.0	29.1	26.2	2.92	9.974			
800.0	800.0	800.0	800.0	1.7	1.7	180.00	-29.1	0.0	29.1	25.8	3.37	8.644			
900.0	900.0	900.0	900.0	1.9	1.9	180.00	-29.1	0.0	29.1	25.3	3.82	7.627			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	180.00	-29.1	0.0	29.1	24.9	4.27	6.824 CC, ES			
1,100.0	1,100.0	1,099.1	1,099.0	2.4	2.3	178.56	-30.7	0.8	30.7	26.0	4.69	6.543			
1,200.0	1,200.0	1,197.9	1,197.7	2.6	2.5	175.01	-35.2	3.1	35.5	30.4	5.09	6.959			
1,300.0	1,300.0	1,296.2	1,295.7	2.8	2.7	170.86	-42.8	6.9	43.6	38.1	5.51	7.913			
1,400.0	1,400.0	1,393.9	1,392.7	3.0	2.9	167.13	-53.3	12.2	55.1	49.2	5.93	9.301			
1,500.0	1,500.0	1,492.6	1,490.4	3.3	3.2	164.31	-65.8	18.5	69.0	62.6	6.37	10.840			
1,600.0	1,600.0	1,591.6	1,588.3	3.5	3.4	162.43	-78.4	24.8	83.0	76.2	6.81	12.183			
1,700.0	1,700.0	1,690.6	1,686.3	3.7	3.7	161.09	-90.9	31.2	97.1	89.8	7.27	13.348			
1,800.0	1,800.0	1,789.5	1,784.3	3.9	4.0	160.09	-103.5	37.5	111.2	103.5	7.74	14.362			
1,900.0	1,900.0	1,888.5	1,882.3	4.2	4.3	159.31	-116.1	43.8	125.4	117.1	8.22	15.248			
2,000.0	2,000.0	1,987.5	1,980.2	4.4	4.6	158.70	-128.7	50.2	139.5	130.8	8.71	16.026			
2,100.0	2,100.0	2,086.4	2,078.1	4.6	4.9	114.08	-141.2	56.5	154.4	145.4	8.97	17.209			
2,200.0	2,199.8	2,185.0	2,175.7	4.8	5.2	114.94	-153.8	62.8	170.7	161.3	9.41	18.142			
2,300.0	2,299.5	2,283.2	2,272.9	5.0	5.5	116.54	-166.2	69.1	188.6	178.8	9.85	19.143			
2,408.3	2,406.9	2,388.9	2,377.6	5.3	5.9	118.81	-179.7	75.9	210.0	199.7	10.34	20.309			
2,500.0	2,497.7	2,478.2	2,465.9	5.5	6.2	121.05	-191.0	81.6	229.3	218.6	10.78	21.275			
2,600.0	2,596.7	2,575.5	2,562.3	5.8	6.5	123.10	-203.4	87.9	250.7	239.5	11.27	22.249			
2,700.0	2,695.7	2,672.9	2,658.6	6.0	6.8	124.82	-215.8	94.1	272.4	260.6	11.77	23.147			
2,800.0	2,794.6	2,770.2	2,754.9	6.3	7.2	126.30	-228.1	100.3	294.2	281.9	12.27	23.974			
2,900.0	2,893.6	2,867.5	2,851.3	6.6	7.5	127.57	-240.5	106.6	316.2	303.4	12.78	24.737			
3,000.0	2,992.6	2,964.8	2,947.6	6.9	7.8	128.67	-252.9	112.8	338.3	325.0	13.30	25.442			
3,100.0	3,091.6	3,062.2	3,044.0	7.2	8.2	129.64	-265.2	119.0	360.5	346.7	13.82	26.093			
3,200.0	3,190.6	3,159.5	3,140.3	7.5	8.5	130.49	-277.6	125.3	382.9	368.5	14.34	26.696			
3,300.0	3,289.6	3,256.8	3,236.6	7.8	8.8	131.26	-290.0	131.5	405.2	390.4	14.87	27.257			
3,400.0	3,388.6	3,354.1	3,333.0	8.1	9.2	131.94	-302.3	137.7	427.7	412.3	15.40	27.777			
3,500.0	3,487.6	3,451.5	3,429.3	8.4	9.5	132.55	-314.7	144.0	450.2	434.3	15.93	28.262			
3,600.0	3,586.5	3,548.8	3,525.6	8.7	9.9	133.11	-327.1	150.2	472.7	456.3	16.46	28.715			
3,700.0	3,685.5	3,646.1	3,622.0	9.0	10.2	133.62	-339.4	156.4	495.3	478.3	17.00	29.139			
3,800.0	3,784.5	3,743.5	3,718.3	9.3	10.5	134.08	-351.8	162.7	517.9	500.4	17.54	29.535			
3,900.0	3,883.5	3,840.8	3,814.6	9.6	10.9	134.50	-364.2	168.9	540.6	522.5	18.08	29.907			
4,000.0	3,982.5	3,938.1	3,911.0	9.9	11.2	134.89	-376.5	175.1	563.3	544.7	18.62	30.257			
4,010.7	3,993.1	3,948.6	3,921.3	10.0	11.3	134.93	-377.9	175.8	565.7	547.0	18.67	30.293			
4,100.0	4,081.7	4,035.7	4,007.6	10.2	11.6	135.43	-388.9	181.4	585.0	565.8	19.17	30.520			
4,200.0	4,181.2	4,136.7	4,107.5	10.4	11.9	135.71	-401.7	187.8	604.3	584.6	19.67	30.721			
4,300.0	4,281.0	4,258.8	4,228.9	10.6	12.2	135.78	-414.4	194.2	618.8	598.7	20.16	30.701			
4,400.0	4,381.0	4,382.4	4,352.1	10.8	12.5	135.71	-422.4	198.3	627.1	606.5	20.59	30.454			
4,419.0	4,400.0	4,406.0	4,375.7	10.9	12.5	-179.89	-423.4	198.8	627.9	605.6	22.28	28.181			
4,500.0	4,481.0	4,506.7	4,476.4	11.0	12.7	-180.00	-425.8	200.0	629.8	607.2	22.60	27.866			
4,600.0	4,581.0	4,611.4	4,581.0	11.2	12.9	180.00	-425.8	200.0	629.8	606.9	22.97	27.418			
4,700.0	4,681.0	4,711.4	4,681.0	11.4	13.0	180.00	-425.8	200.0	629.8	606.5	23.33	26.999			
4,800.0	4,781.0	4,811.4	4,781.0	11.6	13.1	180.00	-425.8	200.0	629.8	606.2	23.69	26.590			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28W-204 - Wellbore #1 - Plan #1 (7-24-1										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
4,900.0	4,881.0	4,911.4	4,881.0	11.8	13.3	180.00	-425.8	200.0	629.8	605.8	24.05	26.190			
5,000.0	4,981.0	5,011.4	4,981.0	12.0	13.4	180.00	-425.8	200.0	629.8	605.4	24.41	25.799			
5,100.0	5,081.0	5,111.4	5,081.0	12.2	13.6	180.00	-425.8	200.0	629.8	605.1	24.78	25.417			
5,200.0	5,181.0	5,211.4	5,181.0	12.4	13.8	180.00	-425.8	200.0	629.8	604.7	25.15	25.043			
5,300.0	5,281.0	5,311.4	5,281.0	12.6	13.9	180.00	-425.8	200.0	629.8	604.3	25.52	24.678			
5,400.0	5,381.0	5,411.4	5,381.0	12.8	14.1	180.00	-425.8	200.0	629.8	603.9	25.90	24.322			
5,500.0	5,481.0	5,511.4	5,481.0	13.0	14.2	180.00	-425.8	200.0	629.8	603.6	26.27	23.973			
5,600.0	5,581.0	5,611.4	5,581.0	13.2	14.4	180.00	-425.8	200.0	629.8	603.2	26.65	23.632			
5,700.0	5,681.0	5,711.4	5,681.0	13.4	14.6	180.00	-425.8	200.0	629.8	602.8	27.03	23.300			
5,800.0	5,781.0	5,811.4	5,781.0	13.6	14.7	180.00	-425.8	200.0	629.8	602.4	27.42	22.974			
5,900.0	5,881.0	5,911.4	5,881.0	13.8	14.9	180.00	-425.8	200.0	629.8	602.0	27.80	22.657			
6,000.0	5,981.0	6,011.4	5,981.0	14.0	15.1	180.00	-425.8	200.0	629.8	601.7	28.19	22.346			
6,100.0	6,081.0	6,111.4	6,081.0	14.2	15.2	180.00	-425.8	200.0	629.8	601.3	28.57	22.042			
6,164.0	6,145.0	6,175.4	6,145.0	14.4	15.4	180.00	-425.8	200.0	629.8	601.0	28.82	21.852			
6,203.0	6,184.0	6,214.3	6,184.0	14.5	15.4	-179.96	-425.8	199.6	629.8	600.9	28.97	21.738			
6,250.0	6,231.0	6,261.3	6,230.8	14.5	15.5	-89.83	-425.8	196.7	629.8	601.9	27.97	22.516			
6,300.0	6,280.7	6,311.1	6,280.2	14.6	15.5	-89.69	-425.8	190.4	629.9	601.7	28.12	22.396			
6,350.0	6,330.1	6,360.8	6,329.0	14.7	15.6	-89.54	-425.8	180.9	629.9	601.6	28.25	22.294			
6,400.0	6,378.8	6,410.4	6,376.9	14.7	15.6	-89.40	-425.8	168.4	629.9	601.5	28.37	22.205			
6,450.0	6,426.7	6,459.9	6,423.9	14.8	15.7	-89.26	-425.8	152.7	629.9	601.4	28.47	22.124			
6,500.0	6,473.6	6,509.3	6,469.6	14.8	15.7	-89.13	-425.8	134.1	629.9	601.3	28.58	22.043			
6,550.0	6,519.2	6,558.6	6,514.0	14.9	15.7	-88.99	-425.8	112.7	629.9	601.3	28.69	21.955			
6,600.0	6,563.4	6,607.8	6,556.8	14.9	15.8	-88.87	-425.8	88.4	630.0	601.1	28.83	21.848			
6,650.0	6,605.9	6,656.9	6,598.0	14.9	15.8	-88.74	-425.8	61.5	630.0	601.0	29.01	21.713			
6,700.0	6,646.7	6,706.0	6,637.2	15.0	15.8	-88.63	-425.8	32.1	630.0	600.8	29.25	21.537			
6,750.0	6,685.4	6,754.9	6,674.4	15.1	15.8	-88.51	-425.8	0.3	630.1	600.5	29.57	21.309			
6,800.0	6,722.1	6,803.8	6,709.4	15.2	15.9	-88.41	-425.8	-33.8	630.1	600.1	29.98	21.019			
6,850.0	6,756.4	6,852.7	6,742.2	15.5	15.9	-88.31	-425.8	-70.0	630.1	599.6	30.50	20.659			
6,900.0	6,788.2	6,901.4	6,772.5	15.8	15.9	-88.22	-425.8	-108.2	630.2	599.0	31.16	20.226			
6,950.0	6,817.5	6,950.0	6,800.2	16.2	16.1	-88.14	-425.8	-148.1	630.2	598.3	31.95	19.723			
7,000.0	6,844.1	6,998.8	6,825.4	16.7	16.4	-88.06	-425.8	-189.9	630.2	597.3	32.91	19.152			
7,050.0	6,867.8	7,047.4	6,847.9	17.2	17.0	-87.99	-425.8	-233.0	630.3	596.2	34.02	18.527			
7,100.0	6,888.6	7,096.0	6,867.5	17.9	17.6	-87.93	-425.8	-277.4	630.3	595.0	35.29	17.862			
7,150.0	6,906.4	7,144.5	6,884.3	18.6	18.3	-87.88	-425.8	-322.9	630.3	593.6	36.71	17.171			
7,200.0	6,921.1	7,193.0	6,898.1	19.4	19.1	-87.84	-425.8	-369.4	630.3	592.1	38.27	16.471			
7,250.0	6,932.7	7,241.5	6,909.0	20.2	20.0	-87.81	-425.8	-416.6	630.4	590.4	39.96	15.774			
7,300.0	6,941.0	7,290.0	6,916.8	21.1	20.9	-87.78	-425.8	-464.5	630.4	588.6	41.77	15.093			
7,350.0	6,946.1	7,338.4	6,921.6	22.1	21.8	-87.77	-425.8	-512.7	630.4	586.7	43.66	14.437			
7,400.0	6,947.9	7,386.8	6,923.3	23.1	22.8	-87.76	-425.8	-561.1	630.4	584.7	45.64	13.813			
7,412.7	6,947.9	7,399.3	6,923.3	23.4	23.0	-87.76	-425.8	-573.5	630.4	584.2	46.15	13.659			
7,500.0	6,946.7	7,486.6	6,922.7	25.2	24.9	-87.81	-425.8	-660.8	630.4	580.5	49.86	12.643			
7,600.0	6,945.5	7,586.6	6,922.0	27.4	27.2	-87.87	-425.8	-760.8	630.4	576.0	54.33	11.602			
7,700.0	6,944.2	7,686.6	6,921.4	29.7	29.5	-87.93	-425.8	-860.8	630.3	571.3	59.00	10.685			
7,800.0	6,942.9	7,786.6	6,920.8	32.1	31.9	-87.98	-425.8	-960.8	630.3	566.5	63.81	9.878			
7,900.0	6,941.6	7,886.6	6,920.1	34.6	34.4	-88.04	-425.8	-1,060.8	630.3	561.6	68.75	9.168			
8,000.0	6,940.4	7,986.6	6,919.5	37.1	36.9	-88.10	-425.8	-1,160.8	630.3	556.5	73.78	8.543			
8,100.0	6,939.1	8,086.6	6,918.8	39.7	39.5	-88.16	-425.8	-1,260.8	630.3	551.4	78.90	7.989			
8,200.0	6,937.8	8,186.6	6,918.2	42.2	42.0	-88.21	-425.8	-1,360.8	630.3	546.2	84.07	7.497			
8,300.0	6,936.6	8,286.6	6,917.5	44.8	44.7	-88.27	-425.8	-1,460.8	630.3	541.0	89.30	7.058			
8,400.0	6,935.3	8,386.6	6,916.9	47.5	47.3	-88.33	-425.8	-1,560.8	630.3	535.7	94.57	6.664			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W - Stonebraker 28W-204 - Wellbore #1 - Plan #1 (7-24-1										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor
8,500.0	6,934.0	8,486.6	6,916.2	50.1	50.0	-88.38	-425.8	-1,660.8	630.2	530.4	99.88	6.310	
8,600.0	6,932.7	8,586.6	6,915.6	52.8	52.6	-88.44	-425.8	-1,760.8	630.2	525.0	105.22	5.990	
8,700.0	6,931.5	8,686.6	6,914.9	55.5	55.3	-88.50	-425.8	-1,860.8	630.2	519.6	110.59	5.699	
8,800.0	6,930.2	8,786.6	6,914.3	58.2	58.0	-88.56	-425.8	-1,960.8	630.2	514.2	115.98	5.434	
8,900.0	6,928.9	8,886.6	6,913.6	60.9	60.7	-88.61	-425.8	-2,060.7	630.2	508.8	121.39	5.192	
9,000.0	6,927.6	8,986.6	6,913.0	63.6	63.4	-88.67	-425.8	-2,160.7	630.2	503.4	126.82	4.969	
9,100.0	6,926.4	9,086.6	6,912.4	66.3	66.1	-88.73	-425.8	-2,260.7	630.2	497.9	132.26	4.765	
9,200.0	6,925.1	9,186.6	6,911.7	69.0	68.9	-88.78	-425.8	-2,360.7	630.2	492.5	137.72	4.576	
9,300.0	6,923.8	9,286.6	6,911.1	71.7	71.6	-88.84	-425.8	-2,460.7	630.2	487.0	143.19	4.401	
9,400.0	6,922.5	9,386.6	6,910.4	74.5	74.3	-88.90	-425.8	-2,560.7	630.2	481.5	148.67	4.239	
9,500.0	6,921.3	9,486.6	6,909.8	77.2	77.1	-88.96	-425.8	-2,660.7	630.2	476.0	154.16	4.088	
9,600.0	6,920.0	9,586.6	6,909.1	80.0	79.8	-89.01	-425.8	-2,760.7	630.2	470.5	159.66	3.947	
9,700.0	6,918.7	9,686.6	6,908.5	82.7	82.6	-89.07	-425.8	-2,860.7	630.2	465.0	165.16	3.816	
9,800.0	6,917.4	9,786.5	6,907.8	85.5	85.3	-89.13	-425.8	-2,960.7	630.2	459.5	170.68	3.692	
9,900.0	6,916.2	9,886.5	6,907.2	88.2	88.1	-89.18	-425.8	-3,060.7	630.2	454.0	176.19	3.577	
10,000.0	6,914.9	9,986.5	6,906.5	91.0	90.9	-89.24	-425.8	-3,160.7	630.2	448.5	181.72	3.468	
10,002.1	6,914.9	9,988.6	6,906.5	91.0	90.9	-89.24	-425.8	-3,162.8	630.2	448.3	181.83	3.466	
10,100.0	6,913.6	10,086.5	6,905.9	93.7	93.6	-89.30	-425.8	-3,260.7	630.2	442.9	187.25	3.365	
10,200.0	6,912.3	10,186.5	6,905.3	96.5	96.4	-89.36	-425.8	-3,360.7	630.2	437.4	192.78	3.269	
10,300.0	6,911.1	10,286.5	6,904.6	99.3	99.1	-89.41	-425.8	-3,460.7	630.2	431.9	198.32	3.178	
10,400.0	6,909.8	10,386.5	6,904.0	102.0	101.9	-89.47	-425.8	-3,560.7	630.2	426.3	203.87	3.091	
10,500.0	6,908.5	10,486.5	6,903.3	104.8	104.7	-89.53	-425.8	-3,660.7	630.2	420.8	209.41	3.009	
10,600.0	6,907.2	10,586.5	6,902.7	107.6	107.5	-89.58	-425.8	-3,760.7	630.2	415.2	214.96	2.932	
10,700.0	6,906.0	10,686.5	6,902.0	110.4	110.2	-89.64	-425.8	-3,860.7	630.2	409.7	220.51	2.858	
10,800.0	6,904.7	10,786.5	6,901.4	113.1	113.0	-89.70	-425.8	-3,960.7	630.2	404.1	226.07	2.788	
10,900.0	6,903.4	10,886.5	6,900.7	115.9	115.8	-89.76	-425.8	-4,060.7	630.2	398.6	231.63	2.721	
11,000.0	6,902.2	10,986.5	6,900.1	118.7	118.6	-89.81	-425.8	-4,160.7	630.2	393.0	237.19	2.657	
11,100.0	6,900.9	11,086.5	6,899.4	121.5	121.4	-89.87	-425.8	-4,260.7	630.2	387.5	242.75	2.596	
11,200.0	6,899.6	11,186.5	6,898.8	124.3	124.1	-89.93	-425.8	-4,360.7	630.2	381.9	248.31	2.538	
11,300.0	6,898.3	11,286.5	6,898.1	127.0	126.9	-89.98	-425.8	-4,460.7	630.2	376.3	253.88	2.482	
11,310.4	6,898.2	11,296.9	6,898.1	127.2	127.2	-89.99	-425.8	-4,471.0	630.2	375.9	254.36	2.478	
11,325.8	6,898.0	11,309.7	6,898.0	127.5	127.6	-90.00	-425.8	-4,483.8	630.2	375.2	254.99	2.472 SF	



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<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4973.0ft (RKB Ensign 32 - 1 Coordinates are relative to: Stonebraker 28V-234  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.62°



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Stonebraker 28V-234
<b>Project:</b>	SEC.28-T2N-R64W	<b>TVD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Reference Site:</b>	Stonebraker 28VW-HZ Pad Sec.28-T2N-R64W	<b>MD Reference:</b>	WELL @ 4973.0ft (RKB Ensign 32 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Stonebraker 28V-234	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (7-24-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4973.0ft (RKB Ensign 32 - 1 Coordinates are relative to: Stonebraker 28V-234

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000 °

Grid Convergence at Surface is: 0.62°

