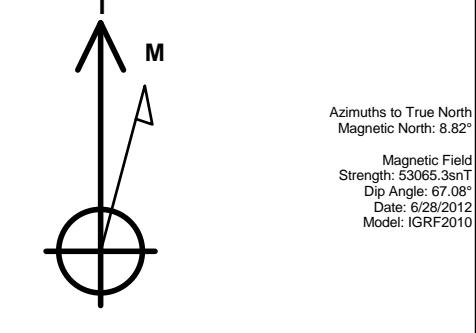


PETROLEUM DEVELOPMENT CORP Weld County CO

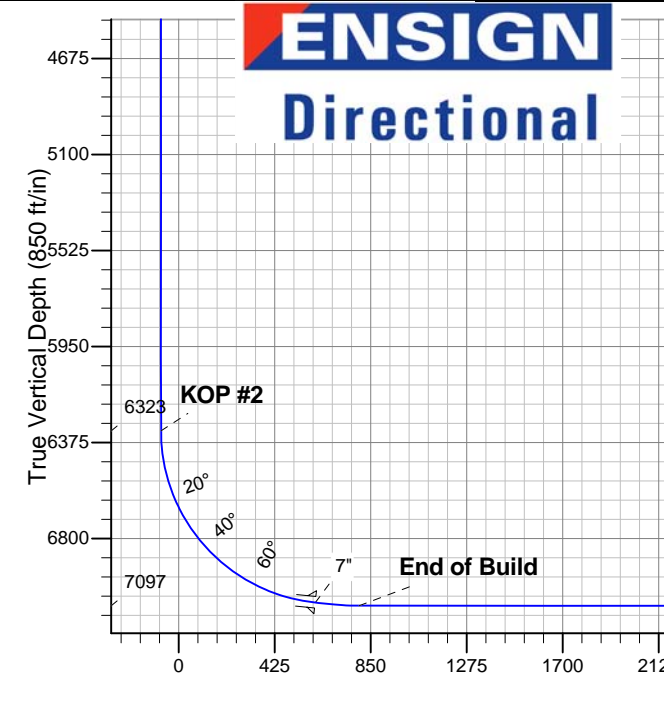
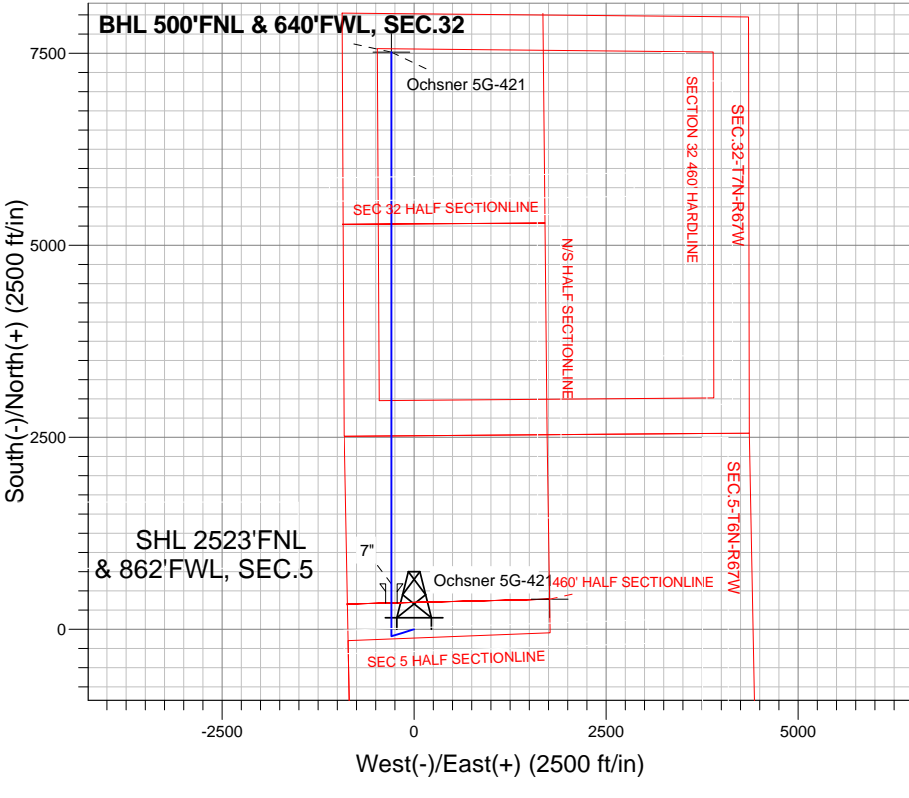
Well Name: **Ochsner 5G-421**
Surface Location: Ochsner L5-HZ Pad Sec.5-T6N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4882.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1431365.58 3160232.36 40.516070 -104.923690
RKB Ensign 32 - 15' WELL @ 4897.0ft (RKB Ensign 32 - 15')

WELLBORE TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Shape
460' HALF SECTIONLINE	1.0	393.6	1765.4	Polygon
BHL 500'FNL & 640'FWL	7097.0	7515.9	-294.6	Point

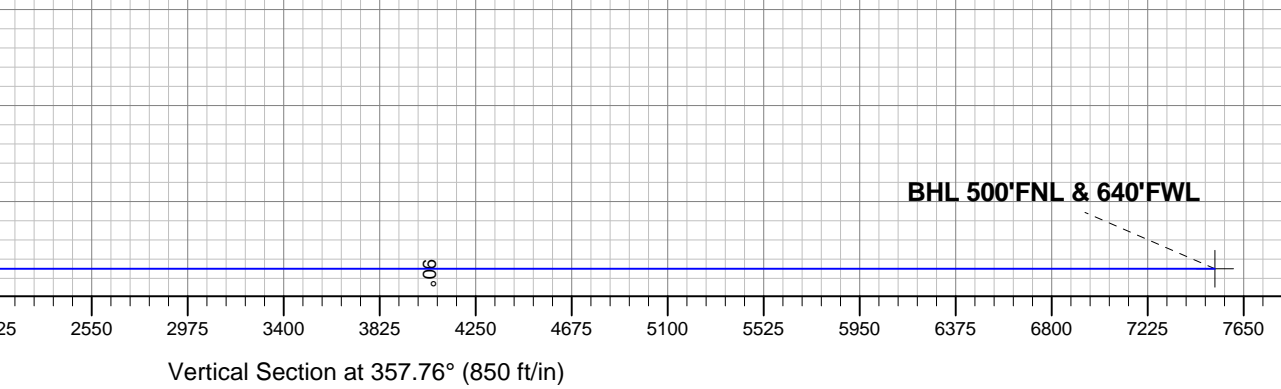


Ochsner L5-HZ Pad Sec.5-T6N-R67W
Ochsner 5G-421
Plan #1 (6-28-12)
9:27, July 19 2012

ANNOTATIONS		
TVD	MD	Annotation
1500.0	1500.0	KOP #1
6323.2	6343.5	KOP #2
7097.0	7657.5	End of Build



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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1899.4	7.99	252.86	1898.1	-8.2	-26.6	2.00	252.86	-7.1	
4	3720.9	7.99	252.86	3701.9	-82.8	-268.4	0.00	0.00	-72.2	
5	4120.3	0.00	0.00	4100.0	-91.0	-295.0	2.00	180.00	-79.4	
6	6343.5	0.00	0.00	6323.2	-91.0	-295.0	0.00	0.00	-79.4	
7	7463.5	84.00	0.00	7083.0	593.1	-295.0	7.50	0.00	604.2	
8	7537.5	84.00	0.00	7090.7	666.7	-295.0	0.00	0.00	677.7	
9	7657.5	90.00	0.00	7097.0	786.5	-295.0	5.00	0.03	797.4	
10	14387.0	90.00	0.00	7097.0	7515.9	-294.6	0.00	0.00	7521.7	BHL 500'FNL & 640'FWL





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.5-T6N-R67W

Ochsner L5-HZ Pad Sec.5-T6N-R67W

Ochsner 5G-421

Wellbore #1

Plan: Plan #1 (6-28-12)

Standard Planning Report

19 July, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

Project	SEC.5-T6N-R67W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Ochsner L5-HZ Pad Sec.5-T6N-R67W											
Site Position:						Northing:			1,431,361.74 ft			Latitude:			40.516060		
From:			Lat/Long			Easting:			3,160,201.80 ft			Longitude:			-104.923800		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.37 °		

Well	Ochsner 5G-421					
Well Position	+N/-S	3.6 ft	Northing:	1,431,365.58 ft	Latitude:	40.516070
	+E/-W	30.6 ft	Easting:	3,160,232.36 ft	Longitude:	-104.923690
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,882.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/28/2012	8.82	67.08	53,065

Design	Plan #1 (6-28-12)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	357.76

Plan Sections										
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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,899.4	7.99	252.86	1,898.1	-8.2	-26.6	2.00	2.00	0.00	252.86	
3,720.9	7.99	252.86	3,701.9	-82.8	-268.4	0.00	0.00	0.00	0.00	
4,120.3	0.00	0.00	4,100.0	-91.0	-295.0	2.00	-2.00	0.00	180.00	
6,343.5	0.00	0.00	6,323.2	-91.0	-295.0	0.00	0.00	0.00	0.00	
7,463.5	84.00	0.00	7,083.0	593.1	-295.0	7.50	7.50	0.00	0.00	
7,537.5	84.00	0.00	7,090.7	666.7	-295.0	0.00	0.00	0.00	0.00	
7,657.5	90.00	0.00	7,097.0	786.5	-295.0	5.00	5.00	0.00	0.03	
14,387.0	90.00	0.00	7,097.0	7,515.9	-294.6	0.00	0.00	0.00	0.00	BHL 500'FNL & 64C

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
460' HALF SECTIONLINE									
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
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,520.0	0.40	252.86	1,520.0	0.0	-0.1	0.0	2.00	2.00	0.00
1,560.0	1.20	252.86	1,560.0	-0.2	-0.6	-0.2	2.00	2.00	0.00
1,600.0	2.00	252.86	1,600.0	-0.5	-1.7	-0.4	2.00	2.00	0.00
1,640.0	2.80	252.86	1,639.9	-1.0	-3.3	-0.9	2.00	2.00	0.00
1,680.0	3.60	252.86	1,679.9	-1.7	-5.4	-1.5	2.00	2.00	0.00
1,720.0	4.40	252.86	1,719.8	-2.5	-8.1	-2.2	2.00	2.00	0.00
1,760.0	5.20	252.86	1,759.6	-3.5	-11.3	-3.0	2.00	2.00	0.00
1,800.0	6.00	252.86	1,799.5	-4.6	-15.0	-4.0	2.00	2.00	0.00
1,840.0	6.80	252.86	1,839.2	-5.9	-19.3	-5.2	2.00	2.00	0.00
1,880.0	7.60	252.86	1,878.9	-7.4	-24.0	-6.5	2.00	2.00	0.00
1,899.4	7.99	252.86	1,898.1	-8.2	-26.6	-7.1	2.00	2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
1,920.0	7.99	252.86	1,918.5	-9.0	-29.3	-7.9	0.00	0.00	0.00
1,960.0	7.99	252.86	1,958.1	-10.7	-34.6	-9.3	0.00	0.00	0.00
2,000.0	7.99	252.86	1,997.7	-12.3	-39.9	-10.7	0.00	0.00	0.00
2,040.0	7.99	252.86	2,037.3	-14.0	-45.2	-12.2	0.00	0.00	0.00
2,080.0	7.99	252.86	2,077.0	-15.6	-50.5	-13.6	0.00	0.00	0.00
2,120.0	7.99	252.86	2,116.6	-17.2	-55.9	-15.0	0.00	0.00	0.00
2,160.0	7.99	252.86	2,156.2	-18.9	-61.2	-16.5	0.00	0.00	0.00
2,200.0	7.99	252.86	2,195.8	-20.5	-66.5	-17.9	0.00	0.00	0.00
2,240.0	7.99	252.86	2,235.4	-22.1	-71.8	-19.3	0.00	0.00	0.00
2,280.0	7.99	252.86	2,275.0	-23.8	-77.1	-20.7	0.00	0.00	0.00
2,320.0	7.99	252.86	2,314.6	-25.4	-82.4	-22.2	0.00	0.00	0.00
2,360.0	7.99	252.86	2,354.2	-27.1	-87.7	-23.6	0.00	0.00	0.00
2,400.0	7.99	252.86	2,393.9	-28.7	-93.0	-25.0	0.00	0.00	0.00
2,440.0	7.99	252.86	2,433.5	-30.3	-98.3	-26.5	0.00	0.00	0.00
2,480.0	7.99	252.86	2,473.1	-32.0	-103.7	-27.9	0.00	0.00	0.00
2,520.0	7.99	252.86	2,512.7	-33.6	-109.0	-29.3	0.00	0.00	0.00
2,560.0	7.99	252.86	2,552.3	-35.3	-114.3	-30.8	0.00	0.00	0.00
2,600.0	7.99	252.86	2,591.9	-36.9	-119.6	-32.2	0.00	0.00	0.00
2,640.0	7.99	252.86	2,631.5	-38.5	-124.9	-33.6	0.00	0.00	0.00
2,680.0	7.99	252.86	2,671.1	-40.2	-130.2	-35.0	0.00	0.00	0.00
2,720.0	7.99	252.86	2,710.7	-41.8	-135.5	-36.5	0.00	0.00	0.00
2,760.0	7.99	252.86	2,750.4	-43.4	-140.8	-37.9	0.00	0.00	0.00
2,800.0	7.99	252.86	2,790.0	-45.1	-146.2	-39.3	0.00	0.00	0.00
2,840.0	7.99	252.86	2,829.6	-46.7	-151.5	-40.8	0.00	0.00	0.00
2,880.0	7.99	252.86	2,869.2	-48.4	-156.8	-42.2	0.00	0.00	0.00
2,920.0	7.99	252.86	2,908.8	-50.0	-162.1	-43.6	0.00	0.00	0.00
2,960.0	7.99	252.86	2,948.4	-51.6	-167.4	-45.0	0.00	0.00	0.00
3,000.0	7.99	252.86	2,988.0	-53.3	-172.7	-46.5	0.00	0.00	0.00
3,040.0	7.99	252.86	3,027.6	-54.9	-178.0	-47.9	0.00	0.00	0.00
3,080.0	7.99	252.86	3,067.3	-56.6	-183.3	-49.3	0.00	0.00	0.00
3,120.0	7.99	252.86	3,106.9	-58.2	-188.6	-50.8	0.00	0.00	0.00
3,160.0	7.99	252.86	3,146.5	-59.8	-194.0	-52.2	0.00	0.00	0.00
3,200.0	7.99	252.86	3,186.1	-61.5	-199.3	-53.6	0.00	0.00	0.00
3,240.0	7.99	252.86	3,225.7	-63.1	-204.6	-55.0	0.00	0.00	0.00
3,280.0	7.99	252.86	3,265.3	-64.7	-209.9	-56.5	0.00	0.00	0.00
3,320.0	7.99	252.86	3,304.9	-66.4	-215.2	-57.9	0.00	0.00	0.00
3,360.0	7.99	252.86	3,344.5	-68.0	-220.5	-59.3	0.00	0.00	0.00
3,400.0	7.99	252.86	3,384.1	-69.7	-225.8	-60.8	0.00	0.00	0.00
3,440.0	7.99	252.86	3,423.8	-71.3	-231.1	-62.2	0.00	0.00	0.00
3,480.0	7.99	252.86	3,463.4	-72.9	-236.5	-63.6	0.00	0.00	0.00
3,520.0	7.99	252.86	3,503.0	-74.6	-241.8	-65.1	0.00	0.00	0.00
3,560.0	7.99	252.86	3,542.6	-76.2	-247.1	-66.5	0.00	0.00	0.00
3,600.0	7.99	252.86	3,582.2	-77.9	-252.4	-67.9	0.00	0.00	0.00
3,640.0	7.99	252.86	3,621.8	-79.5	-257.7	-69.3	0.00	0.00	0.00
3,680.0	7.99	252.86	3,661.4	-81.1	-263.0	-70.8	0.00	0.00	0.00
3,720.0	7.99	252.86	3,701.0	-82.8	-268.3	-72.2	0.00	0.00	0.00
3,720.9	7.99	252.86	3,701.9	-82.8	-268.4	-72.2	0.00	0.00	0.00
3,760.0	7.21	252.86	3,740.7	-84.3	-273.4	-73.6	2.00	-2.00	0.00
3,800.0	6.41	252.86	3,780.4	-85.7	-277.9	-74.8	2.00	-2.00	0.00
3,840.0	5.61	252.86	3,820.2	-87.0	-281.9	-75.9	2.00	-2.00	0.00
3,880.0	4.81	252.86	3,860.0	-88.0	-285.4	-76.8	2.00	-2.00	0.00
3,920.0	4.01	252.86	3,899.9	-88.9	-288.3	-77.6	2.00	-2.00	0.00
3,960.0	3.21	252.86	3,939.8	-89.7	-290.7	-78.2	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
4,000.0	2.41	252.86	3,979.8	-90.3	-292.6	-78.7	2.00	-2.00	0.00
4,040.0	1.61	252.86	4,019.8	-90.7	-293.9	-79.1	2.00	-2.00	0.00
4,080.0	0.81	252.86	4,059.7	-90.9	-294.7	-79.3	2.00	-2.00	0.00
4,120.0	0.01	252.86	4,099.7	-91.0	-295.0	-79.4	2.00	-2.00	0.00
4,120.3	0.00	0.00	4,100.0	-91.0	-295.0	-79.4	2.00	-2.00	0.00
4,160.0	0.00	0.00	4,139.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,200.0	0.00	0.00	4,179.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,240.0	0.00	0.00	4,219.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,280.0	0.00	0.00	4,259.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,320.0	0.00	0.00	4,299.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,360.0	0.00	0.00	4,339.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,400.0	0.00	0.00	4,379.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,440.0	0.00	0.00	4,419.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,480.0	0.00	0.00	4,459.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,520.0	0.00	0.00	4,499.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,560.0	0.00	0.00	4,539.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,600.0	0.00	0.00	4,579.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,640.0	0.00	0.00	4,619.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,680.0	0.00	0.00	4,659.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,720.0	0.00	0.00	4,699.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,760.0	0.00	0.00	4,739.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,779.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,840.0	0.00	0.00	4,819.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,880.0	0.00	0.00	4,859.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,920.0	0.00	0.00	4,899.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
4,960.0	0.00	0.00	4,939.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,979.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,040.0	0.00	0.00	5,019.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,080.0	0.00	0.00	5,059.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,120.0	0.00	0.00	5,099.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,160.0	0.00	0.00	5,139.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,179.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,240.0	0.00	0.00	5,219.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,280.0	0.00	0.00	5,259.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,320.0	0.00	0.00	5,299.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,360.0	0.00	0.00	5,339.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,379.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,440.0	0.00	0.00	5,419.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,480.0	0.00	0.00	5,459.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,520.0	0.00	0.00	5,499.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,560.0	0.00	0.00	5,539.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,579.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,640.0	0.00	0.00	5,619.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,659.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,699.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,739.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,779.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,819.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,859.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,899.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,939.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,979.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,040.0	0.00	0.00	6,019.7	-91.0	-295.0	-79.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
6,080.0	0.00	0.00	6,059.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,120.0	0.00	0.00	6,099.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,160.0	0.00	0.00	6,139.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,179.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,240.0	0.00	0.00	6,219.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,280.0	0.00	0.00	6,259.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,299.7	-91.0	-295.0	-79.4	0.00	0.00	0.00
6,343.5	0.00	0.00	6,323.2	-91.0	-295.0	-79.4	0.00	0.00	0.00
KOP #2									
6,360.0	1.24	0.00	6,339.7	-90.8	-295.0	-79.2	7.50	7.50	0.00
6,400.0	4.24	0.00	6,379.7	-88.9	-295.0	-77.3	7.50	7.50	0.00
6,440.0	7.24	0.00	6,419.5	-84.9	-295.0	-73.3	7.50	7.50	0.00
6,480.0	10.24	0.00	6,459.0	-78.8	-295.0	-67.2	7.50	7.50	0.00
6,520.0	13.24	0.00	6,498.2	-70.7	-295.0	-59.1	7.50	7.50	0.00
6,560.0	16.24	0.00	6,536.9	-60.5	-295.0	-48.9	7.50	7.50	0.00
6,600.0	19.24	0.00	6,574.9	-48.3	-295.0	-36.7	7.50	7.50	0.00
6,640.0	22.24	0.00	6,612.4	-34.2	-295.0	-22.6	7.50	7.50	0.00
6,680.0	25.24	0.00	6,649.0	-18.1	-295.0	-6.5	7.50	7.50	0.00
6,720.0	28.24	0.00	6,684.7	-0.1	-295.0	11.5	7.50	7.50	0.00
6,760.0	31.24	0.00	6,719.4	19.8	-295.0	31.3	7.50	7.50	0.00
6,800.0	34.24	0.00	6,753.1	41.4	-295.0	52.9	7.50	7.50	0.00
6,840.0	37.24	0.00	6,785.5	64.7	-295.0	76.2	7.50	7.50	0.00
6,880.0	40.24	0.00	6,816.7	89.8	-295.0	101.3	7.50	7.50	0.00
6,920.0	43.24	0.00	6,846.6	116.4	-295.0	127.9	7.50	7.50	0.00
6,960.0	46.24	0.00	6,875.0	144.5	-295.0	156.0	7.50	7.50	0.00
7,000.0	49.24	0.00	6,901.9	174.1	-295.0	185.6	7.50	7.50	0.00
7,040.0	52.24	0.00	6,927.2	205.1	-295.0	216.5	7.50	7.50	0.00
7,080.0	55.24	0.00	6,950.8	237.4	-295.0	248.7	7.50	7.50	0.00
7,120.0	58.24	0.00	6,972.8	270.8	-295.0	282.2	7.50	7.50	0.00
7,160.0	61.24	0.00	6,992.9	305.3	-295.0	316.7	7.50	7.50	0.00
7,200.0	64.24	0.00	7,011.3	340.9	-295.0	352.2	7.50	7.50	0.00
7,240.0	67.24	0.00	7,027.7	377.4	-295.0	388.6	7.50	7.50	0.00
7,280.0	70.24	0.00	7,042.2	414.6	-295.0	425.9	7.50	7.50	0.00
7,320.0	73.24	0.00	7,054.7	452.6	-295.0	463.8	7.50	7.50	0.00
7,360.0	76.24	0.00	7,065.3	491.2	-295.0	502.4	7.50	7.50	0.00
7,400.0	79.24	0.00	7,073.7	530.3	-295.0	541.4	7.50	7.50	0.00
7,440.0	82.24	0.00	7,080.2	569.8	-295.0	580.9	7.50	7.50	0.00
7,463.5	84.00	0.00	7,083.0	593.1	-295.0	604.2	7.50	7.50	0.00
7"									
7,480.0	84.00	0.00	7,084.7	609.5	-295.0	620.6	0.00	0.00	0.00
7,520.0	84.00	0.00	7,088.9	649.3	-295.0	660.3	0.00	0.00	0.00
7,537.5	84.00	0.00	7,090.7	666.7	-295.0	677.7	0.00	0.00	0.00
7,560.0	85.12	0.00	7,092.9	689.1	-295.0	700.1	5.00	5.00	0.00
7,600.0	87.12	0.00	7,095.6	729.0	-295.0	740.0	5.00	5.00	0.00
7,640.0	89.12	0.00	7,096.9	769.0	-295.0	779.9	5.00	5.00	0.00
7,657.5	90.00	0.00	7,097.0	786.5	-295.0	797.4	5.00	5.00	0.00
End of Build									
7,680.0	90.00	0.00	7,097.0	809.0	-295.0	819.9	0.00	0.00	0.00
7,720.0	90.00	0.00	7,097.0	849.0	-295.0	859.9	0.00	0.00	0.00
7,760.0	90.00	0.00	7,097.0	889.0	-295.0	899.8	0.00	0.00	0.00
7,800.0	90.00	0.00	7,097.0	929.0	-295.0	939.8	0.00	0.00	0.00
7,840.0	90.00	0.00	7,097.0	969.0	-295.0	979.8	0.00	0.00	0.00
7,880.0	90.00	0.00	7,097.0	1,009.0	-295.0	1,019.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
7,920.0	90.00	0.00	7,097.0	1,049.0	-295.0	1,059.7	0.00	0.00	0.00
7,960.0	90.00	0.00	7,097.0	1,089.0	-295.0	1,099.7	0.00	0.00	0.00
8,000.0	90.00	0.00	7,097.0	1,129.0	-295.0	1,139.7	0.00	0.00	0.00
8,040.0	90.00	0.00	7,097.0	1,169.0	-295.0	1,179.6	0.00	0.00	0.00
8,080.0	90.00	0.00	7,097.0	1,209.0	-295.0	1,219.6	0.00	0.00	0.00
8,120.0	90.00	0.00	7,097.0	1,249.0	-295.0	1,259.6	0.00	0.00	0.00
8,160.0	90.00	0.00	7,097.0	1,289.0	-295.0	1,299.5	0.00	0.00	0.00
8,200.0	90.00	0.00	7,097.0	1,329.0	-295.0	1,339.5	0.00	0.00	0.00
8,240.0	90.00	0.00	7,097.0	1,369.0	-295.0	1,379.5	0.00	0.00	0.00
8,280.0	90.00	0.00	7,097.0	1,409.0	-295.0	1,419.4	0.00	0.00	0.00
8,320.0	90.00	0.00	7,097.0	1,449.0	-295.0	1,459.4	0.00	0.00	0.00
8,360.0	90.00	0.00	7,097.0	1,489.0	-295.0	1,499.4	0.00	0.00	0.00
8,400.0	90.00	0.00	7,097.0	1,529.0	-295.0	1,539.3	0.00	0.00	0.00
8,440.0	90.00	0.00	7,097.0	1,569.0	-295.0	1,579.3	0.00	0.00	0.00
8,480.0	90.00	0.00	7,097.0	1,609.0	-295.0	1,619.3	0.00	0.00	0.00
8,520.0	90.00	0.00	7,097.0	1,649.0	-295.0	1,659.3	0.00	0.00	0.00
8,560.0	90.00	0.00	7,097.0	1,689.0	-294.9	1,699.2	0.00	0.00	0.00
8,600.0	90.00	0.00	7,097.0	1,729.0	-294.9	1,739.2	0.00	0.00	0.00
8,640.0	90.00	0.00	7,097.0	1,769.0	-294.9	1,779.2	0.00	0.00	0.00
8,680.0	90.00	0.00	7,097.0	1,809.0	-294.9	1,819.1	0.00	0.00	0.00
8,720.0	90.00	0.00	7,097.0	1,849.0	-294.9	1,859.1	0.00	0.00	0.00
8,760.0	90.00	0.00	7,097.0	1,889.0	-294.9	1,899.1	0.00	0.00	0.00
8,800.0	90.00	0.00	7,097.0	1,929.0	-294.9	1,939.0	0.00	0.00	0.00
8,840.0	90.00	0.00	7,097.0	1,969.0	-294.9	1,979.0	0.00	0.00	0.00
8,880.0	90.00	0.00	7,097.0	2,009.0	-294.9	2,019.0	0.00	0.00	0.00
8,920.0	90.00	0.00	7,097.0	2,049.0	-294.9	2,058.9	0.00	0.00	0.00
8,960.0	90.00	0.00	7,097.0	2,089.0	-294.9	2,098.9	0.00	0.00	0.00
9,000.0	90.00	0.00	7,097.0	2,129.0	-294.9	2,138.9	0.00	0.00	0.00
9,040.0	90.00	0.00	7,097.0	2,169.0	-294.9	2,178.9	0.00	0.00	0.00
9,080.0	90.00	0.00	7,097.0	2,209.0	-294.9	2,218.8	0.00	0.00	0.00
9,120.0	90.00	0.00	7,097.0	2,249.0	-294.9	2,258.8	0.00	0.00	0.00
9,160.0	90.00	0.00	7,097.0	2,289.0	-294.9	2,298.8	0.00	0.00	0.00
9,200.0	90.00	0.00	7,097.0	2,329.0	-294.9	2,338.7	0.00	0.00	0.00
9,240.0	90.00	0.00	7,097.0	2,369.0	-294.9	2,378.7	0.00	0.00	0.00
9,280.0	90.00	0.00	7,097.0	2,409.0	-294.9	2,418.7	0.00	0.00	0.00
9,320.0	90.00	0.00	7,097.0	2,449.0	-294.9	2,458.6	0.00	0.00	0.00
9,360.0	90.00	0.00	7,097.0	2,489.0	-294.9	2,498.6	0.00	0.00	0.00
9,400.0	90.00	0.00	7,097.0	2,529.0	-294.9	2,538.6	0.00	0.00	0.00
9,440.0	90.00	0.00	7,097.0	2,569.0	-294.9	2,578.5	0.00	0.00	0.00
9,480.0	90.00	0.00	7,097.0	2,609.0	-294.9	2,618.5	0.00	0.00	0.00
9,520.0	90.00	0.00	7,097.0	2,649.0	-294.9	2,658.5	0.00	0.00	0.00
9,560.0	90.00	0.00	7,097.0	2,689.0	-294.9	2,698.5	0.00	0.00	0.00
9,600.0	90.00	0.00	7,097.0	2,729.0	-294.9	2,738.4	0.00	0.00	0.00
9,640.0	90.00	0.00	7,097.0	2,769.0	-294.9	2,778.4	0.00	0.00	0.00
9,680.0	90.00	0.00	7,097.0	2,809.0	-294.9	2,818.4	0.00	0.00	0.00
9,720.0	90.00	0.00	7,097.0	2,849.0	-294.9	2,858.3	0.00	0.00	0.00
9,760.0	90.00	0.00	7,097.0	2,889.0	-294.9	2,898.3	0.00	0.00	0.00
9,800.0	90.00	0.00	7,097.0	2,929.0	-294.9	2,938.3	0.00	0.00	0.00
9,840.0	90.00	0.00	7,097.0	2,969.0	-294.9	2,978.2	0.00	0.00	0.00
9,880.0	90.00	0.00	7,097.0	3,009.0	-294.9	3,018.2	0.00	0.00	0.00
9,920.0	90.00	0.00	7,097.0	3,049.0	-294.9	3,058.2	0.00	0.00	0.00
9,960.0	90.00	0.00	7,097.0	3,089.0	-294.9	3,098.1	0.00	0.00	0.00
10,000.0	90.00	0.00	7,097.0	3,129.0	-294.9	3,138.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
10,040.0	90.00	0.00	7,097.0	3,169.0	-294.9	3,178.1	0.00	0.00	0.00
10,080.0	90.00	0.00	7,097.0	3,209.0	-294.9	3,218.1	0.00	0.00	0.00
10,120.0	90.00	0.00	7,097.0	3,249.0	-294.9	3,258.0	0.00	0.00	0.00
10,160.0	90.00	0.00	7,097.0	3,289.0	-294.9	3,298.0	0.00	0.00	0.00
10,200.0	90.00	0.00	7,097.0	3,329.0	-294.9	3,338.0	0.00	0.00	0.00
10,240.0	90.00	0.00	7,097.0	3,369.0	-294.9	3,377.9	0.00	0.00	0.00
10,280.0	90.00	0.00	7,097.0	3,409.0	-294.9	3,417.9	0.00	0.00	0.00
10,320.0	90.00	0.00	7,097.0	3,449.0	-294.9	3,457.9	0.00	0.00	0.00
10,360.0	90.00	0.00	7,097.0	3,489.0	-294.9	3,497.8	0.00	0.00	0.00
10,400.0	90.00	0.00	7,097.0	3,529.0	-294.8	3,537.8	0.00	0.00	0.00
10,440.0	90.00	0.00	7,097.0	3,569.0	-294.8	3,577.8	0.00	0.00	0.00
10,480.0	90.00	0.00	7,097.0	3,609.0	-294.8	3,617.7	0.00	0.00	0.00
10,520.0	90.00	0.00	7,097.0	3,649.0	-294.8	3,657.7	0.00	0.00	0.00
10,560.0	90.00	0.00	7,097.0	3,689.0	-294.8	3,697.7	0.00	0.00	0.00
10,600.0	90.00	0.00	7,097.0	3,729.0	-294.8	3,737.7	0.00	0.00	0.00
10,640.0	90.00	0.00	7,097.0	3,769.0	-294.8	3,777.6	0.00	0.00	0.00
10,680.0	90.00	0.00	7,097.0	3,809.0	-294.8	3,817.6	0.00	0.00	0.00
10,720.0	90.00	0.00	7,097.0	3,849.0	-294.8	3,857.6	0.00	0.00	0.00
10,760.0	90.00	0.00	7,097.0	3,889.0	-294.8	3,897.5	0.00	0.00	0.00
10,800.0	90.00	0.00	7,097.0	3,929.0	-294.8	3,937.5	0.00	0.00	0.00
10,840.0	90.00	0.00	7,097.0	3,969.0	-294.8	3,977.5	0.00	0.00	0.00
10,880.0	90.00	0.00	7,097.0	4,009.0	-294.8	4,017.4	0.00	0.00	0.00
10,920.0	90.00	0.00	7,097.0	4,049.0	-294.8	4,057.4	0.00	0.00	0.00
10,960.0	90.00	0.00	7,097.0	4,089.0	-294.8	4,097.4	0.00	0.00	0.00
11,000.0	90.00	0.00	7,097.0	4,129.0	-294.8	4,137.3	0.00	0.00	0.00
11,040.0	90.00	0.00	7,097.0	4,169.0	-294.8	4,177.3	0.00	0.00	0.00
11,080.0	90.00	0.00	7,097.0	4,209.0	-294.8	4,217.3	0.00	0.00	0.00
11,120.0	90.00	0.00	7,097.0	4,249.0	-294.8	4,257.3	0.00	0.00	0.00
11,160.0	90.00	0.00	7,097.0	4,289.0	-294.8	4,297.2	0.00	0.00	0.00
11,200.0	90.00	0.00	7,097.0	4,329.0	-294.8	4,337.2	0.00	0.00	0.00
11,240.0	90.00	0.00	7,097.0	4,369.0	-294.8	4,377.2	0.00	0.00	0.00
11,280.0	90.00	0.00	7,097.0	4,409.0	-294.8	4,417.1	0.00	0.00	0.00
11,320.0	90.00	0.00	7,097.0	4,449.0	-294.8	4,457.1	0.00	0.00	0.00
11,360.0	90.00	0.00	7,097.0	4,489.0	-294.8	4,497.1	0.00	0.00	0.00
11,400.0	90.00	0.00	7,097.0	4,529.0	-294.8	4,537.0	0.00	0.00	0.00
11,440.0	90.00	0.00	7,097.0	4,569.0	-294.8	4,577.0	0.00	0.00	0.00
11,480.0	90.00	0.00	7,097.0	4,609.0	-294.8	4,617.0	0.00	0.00	0.00
11,520.0	90.00	0.00	7,097.0	4,649.0	-294.8	4,656.9	0.00	0.00	0.00
11,560.0	90.00	0.00	7,097.0	4,689.0	-294.8	4,696.9	0.00	0.00	0.00
11,600.0	90.00	0.00	7,097.0	4,729.0	-294.8	4,736.9	0.00	0.00	0.00
11,640.0	90.00	0.00	7,097.0	4,769.0	-294.8	4,776.9	0.00	0.00	0.00
11,680.0	90.00	0.00	7,097.0	4,809.0	-294.8	4,816.8	0.00	0.00	0.00
11,720.0	90.00	0.00	7,097.0	4,849.0	-294.8	4,856.8	0.00	0.00	0.00
11,760.0	90.00	0.00	7,097.0	4,889.0	-294.8	4,896.8	0.00	0.00	0.00
11,800.0	90.00	0.00	7,097.0	4,929.0	-294.8	4,936.7	0.00	0.00	0.00
11,840.0	90.00	0.00	7,097.0	4,969.0	-294.8	4,976.7	0.00	0.00	0.00
11,880.0	90.00	0.00	7,097.0	5,009.0	-294.8	5,016.7	0.00	0.00	0.00
11,920.0	90.00	0.00	7,097.0	5,049.0	-294.8	5,056.6	0.00	0.00	0.00
11,960.0	90.00	0.00	7,097.0	5,089.0	-294.8	5,096.6	0.00	0.00	0.00
12,000.0	90.00	0.00	7,097.0	5,129.0	-294.8	5,136.6	0.00	0.00	0.00
12,040.0	90.00	0.00	7,097.0	5,169.0	-294.8	5,176.5	0.00	0.00	0.00
12,080.0	90.00	0.00	7,097.0	5,209.0	-294.8	5,216.5	0.00	0.00	0.00
12,120.0	90.00	0.00	7,097.0	5,249.0	-294.8	5,256.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
12,160.0	90.00	0.00	7,097.0	5,289.0	-294.8	5,296.5	0.00	0.00	0.00
12,200.0	90.00	0.00	7,097.0	5,329.0	-294.8	5,336.4	0.00	0.00	0.00
12,240.0	90.00	0.00	7,097.0	5,369.0	-294.8	5,376.4	0.00	0.00	0.00
12,280.0	90.00	0.00	7,097.0	5,409.0	-294.7	5,416.4	0.00	0.00	0.00
12,320.0	90.00	0.00	7,097.0	5,449.0	-294.7	5,456.3	0.00	0.00	0.00
12,360.0	90.00	0.00	7,097.0	5,489.0	-294.7	5,496.3	0.00	0.00	0.00
12,400.0	90.00	0.00	7,097.0	5,529.0	-294.7	5,536.3	0.00	0.00	0.00
12,440.0	90.00	0.00	7,097.0	5,569.0	-294.7	5,576.2	0.00	0.00	0.00
12,480.0	90.00	0.00	7,097.0	5,609.0	-294.7	5,616.2	0.00	0.00	0.00
12,520.0	90.00	0.00	7,097.0	5,649.0	-294.7	5,656.2	0.00	0.00	0.00
12,560.0	90.00	0.00	7,097.0	5,689.0	-294.7	5,696.1	0.00	0.00	0.00
12,600.0	90.00	0.00	7,097.0	5,729.0	-294.7	5,736.1	0.00	0.00	0.00
12,640.0	90.00	0.00	7,097.0	5,769.0	-294.7	5,776.1	0.00	0.00	0.00
12,680.0	90.00	0.00	7,097.0	5,809.0	-294.7	5,816.1	0.00	0.00	0.00
12,720.0	90.00	0.00	7,097.0	5,849.0	-294.7	5,856.0	0.00	0.00	0.00
12,760.0	90.00	0.00	7,097.0	5,889.0	-294.7	5,896.0	0.00	0.00	0.00
12,800.0	90.00	0.00	7,097.0	5,929.0	-294.7	5,936.0	0.00	0.00	0.00
12,840.0	90.00	0.00	7,097.0	5,969.0	-294.7	5,975.9	0.00	0.00	0.00
12,880.0	90.00	0.00	7,097.0	6,009.0	-294.7	6,015.9	0.00	0.00	0.00
12,920.0	90.00	0.00	7,097.0	6,049.0	-294.7	6,055.9	0.00	0.00	0.00
12,960.0	90.00	0.00	7,097.0	6,089.0	-294.7	6,095.8	0.00	0.00	0.00
13,000.0	90.00	0.00	7,097.0	6,129.0	-294.7	6,135.8	0.00	0.00	0.00
13,040.0	90.00	0.00	7,097.0	6,169.0	-294.7	6,175.8	0.00	0.00	0.00
13,080.0	90.00	0.00	7,097.0	6,209.0	-294.7	6,215.7	0.00	0.00	0.00
13,120.0	90.00	0.00	7,097.0	6,249.0	-294.7	6,255.7	0.00	0.00	0.00
13,160.0	90.00	0.00	7,097.0	6,289.0	-294.7	6,295.7	0.00	0.00	0.00
13,200.0	90.00	0.00	7,097.0	6,329.0	-294.7	6,335.7	0.00	0.00	0.00
13,240.0	90.00	0.00	7,097.0	6,369.0	-294.7	6,375.6	0.00	0.00	0.00
13,280.0	90.00	0.00	7,097.0	6,409.0	-294.7	6,415.6	0.00	0.00	0.00
13,320.0	90.00	0.00	7,097.0	6,449.0	-294.7	6,455.6	0.00	0.00	0.00
13,360.0	90.00	0.00	7,097.0	6,489.0	-294.7	6,495.5	0.00	0.00	0.00
13,400.0	90.00	0.00	7,097.0	6,529.0	-294.7	6,535.5	0.00	0.00	0.00
13,440.0	90.00	0.00	7,097.0	6,569.0	-294.7	6,575.5	0.00	0.00	0.00
13,480.0	90.00	0.00	7,097.0	6,609.0	-294.7	6,615.4	0.00	0.00	0.00
13,520.0	90.00	0.00	7,097.0	6,649.0	-294.7	6,655.4	0.00	0.00	0.00
13,560.0	90.00	0.00	7,097.0	6,689.0	-294.7	6,695.4	0.00	0.00	0.00
13,600.0	90.00	0.00	7,097.0	6,729.0	-294.7	6,735.3	0.00	0.00	0.00
13,640.0	90.00	0.00	7,097.0	6,769.0	-294.7	6,775.3	0.00	0.00	0.00
13,680.0	90.00	0.00	7,097.0	6,809.0	-294.7	6,815.3	0.00	0.00	0.00
13,720.0	90.00	0.00	7,097.0	6,849.0	-294.7	6,855.3	0.00	0.00	0.00
13,760.0	90.00	0.00	7,097.0	6,889.0	-294.7	6,895.2	0.00	0.00	0.00
13,800.0	90.00	0.00	7,097.0	6,929.0	-294.7	6,935.2	0.00	0.00	0.00
13,840.0	90.00	0.00	7,097.0	6,969.0	-294.7	6,975.2	0.00	0.00	0.00
13,880.0	90.00	0.00	7,097.0	7,009.0	-294.7	7,015.1	0.00	0.00	0.00
13,920.0	90.00	0.00	7,097.0	7,049.0	-294.7	7,055.1	0.00	0.00	0.00
13,960.0	90.00	0.00	7,097.0	7,089.0	-294.7	7,095.1	0.00	0.00	0.00
14,000.0	90.00	0.00	7,097.0	7,129.0	-294.7	7,135.0	0.00	0.00	0.00
14,040.0	90.00	0.00	7,097.0	7,169.0	-294.7	7,175.0	0.00	0.00	0.00
14,080.0	90.00	0.00	7,097.0	7,209.0	-294.7	7,215.0	0.00	0.00	0.00
14,120.0	90.00	0.00	7,097.0	7,249.0	-294.7	7,254.9	0.00	0.00	0.00
14,160.0	90.00	0.00	7,097.0	7,289.0	-294.6	7,294.9	0.00	0.00	0.00
14,200.0	90.00	0.00	7,097.0	7,329.0	-294.6	7,334.9	0.00	0.00	0.00
14,240.0	90.00	0.00	7,097.0	7,369.0	-294.6	7,374.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Ochsner 5G-421
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Project:	SEC.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	North Reference:	True
Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-28-12)		

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)
14,280.0	90.00	0.00	7,097.0	7,409.0	-294.6	7,414.8	0.00	0.00	0.00
14,320.0	90.00	0.00	7,097.0	7,449.0	-294.6	7,454.8	0.00	0.00	0.00
14,360.0	90.00	0.00	7,097.0	7,489.0	-294.6	7,494.8	0.00	0.00	0.00
14,387.0	90.00	0.00	7,097.0	7,515.9	-294.6	7,521.7	0.00	0.00	0.00
BHL 500'FNL & 640'FWL									

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL 500'FNL & 640'F	0.00	0.00	7,097.0	7,515.9	-294.6	1,438,879.18	3,159,888.90	40.536700	-104.924750
- plan hits target center									
- Point									
460' HALF SECTION I	0.00	0.00	1.0	393.6	1,765.4	1,431,770.61	3,161,995.11	40.517150	-104.917341
- plan misses target center by 1808.7ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,431,770.61	3,161,995.11		
Point 2			1.0	-64.0	-2,638.0	1,431,689.47	3,159,357.67		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,463.5	7,083.0	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP #1
6,343.5	6,323.2	-91.0	-295.0	KOP #2
7,657.5	7,097.0	786.5	-295.0	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.5-T6N-R67W

Ochsner L5-HZ Pad Sec.5-T6N-R67W

Ochsner 5G-421

Wellbore #1

Plan #1 (6-28-12)

Anticollision Report

19 July, 2012



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (6-28-12)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 7/19/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,387.0	Plan #1 (6-28-12) (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
Offset Well - Wellbore - Design						
Ochsner L5-HZ Pad Sec.5-T6N-R67W						
Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)	400.0	400.0	30.8	29.2	19.577	CC, ES
Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)	14,387.0	14,237.0	482.6	212.7	1.788	SF
Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)	1,500.0	1,501.0	27.8	21.3	4.264	CC, ES
Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)	14,387.0	14,182.5	485.5	217.2	1.810	SF

Offset Design												
Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)												
Survey Program: 0-MWD												
Reference												
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-96.79	-3.6	-30.6	30.8			
100.0	100.0	100.0	100.0	0.1	0.1	-96.79	-3.6	-30.6	30.8	30.6	0.22	137.036
200.0	200.0	200.0	200.0	0.3	0.3	-96.79	-3.6	-30.6	30.8	30.1	0.67	45.679
300.0	300.0	300.0	300.0	0.6	0.6	-96.79	-3.6	-30.6	30.8	29.7	1.12	27.407
400.0	400.0	400.0	400.0	0.8	0.8	-96.79	-3.6	-30.6	30.8	29.2	1.57	19.577 CC, ES
500.0	500.0	498.9	498.9	1.0	1.0	-96.82	-3.9	-32.3	32.5	30.5	2.01	16.205
600.0	600.0	597.6	597.4	1.2	1.2	-96.88	-4.5	-37.3	37.7	35.3	2.44	15.445
700.0	700.0	695.8	695.2	1.5	1.4	-96.96	-5.6	-45.7	46.3	43.4	2.90	15.989
800.0	800.0	793.3	792.0	1.7	1.7	-97.03	-7.1	-57.3	58.3	54.9	3.38	17.256
900.0	900.0	889.9	887.5	1.9	2.0	-97.08	-8.9	-72.0	73.7	69.8	3.89	18.912
1,000.0	1,000.0	988.4	984.6	2.1	2.3	-97.12	-11.1	-88.6	90.6	86.2	4.45	20.377
1,100.0	1,100.0	1,087.0	1,081.7	2.4	2.7	-97.15	-13.2	-105.3	107.6	102.6	5.02	21.463
1,200.0	1,200.0	1,185.5	1,178.8	2.6	3.1	-97.17	-15.3	-121.9	124.6	119.0	5.59	22.291
1,300.0	1,300.0	1,284.0	1,275.9	2.8	3.4	-97.18	-17.5	-138.5	141.6	135.5	6.17	22.940
1,400.0	1,400.0	1,382.6	1,373.0	3.0	3.8	-97.20	-19.6	-155.1	158.6	151.9	6.76	23.461
1,500.0	1,500.0	1,481.1	1,470.2	3.3	4.2	-97.21	-21.7	-171.7	175.6	168.3	7.35	23.887
1,600.0	1,600.0	1,580.0	1,567.5	3.5	4.6	9.97	-23.8	-188.4	190.9	183.9	6.98	27.351
1,700.0	1,699.8	1,679.2	1,665.4	3.7	4.9	10.17	-26.0	-205.1	202.8	195.4	7.41	27.359
1,800.0	1,799.5	1,778.9	1,763.5	3.9	5.3	10.53	-28.1	-221.9	211.3	203.5	7.85	26.924
1,899.4	1,898.1	1,878.1	1,861.4	4.1	5.7	11.04	-30.3	-238.6	216.4	208.1	8.28	26.123
2,000.0	1,997.7	1,978.6	1,960.4	4.3	6.1	11.64	-32.4	-255.6	219.8	211.0	8.74	25.135
2,100.0	2,096.8	2,078.5	2,058.9	4.6	6.5	12.22	-34.6	-272.4	223.2	214.0	9.21	24.236

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design												Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)		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 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)					
2,200.0	2,195.8	2,178.5	2,157.3	4.9	6.9	12.79	-36.8	-289.3	226.7	217.0	9.68	23.412				
2,300.0	2,294.8	2,278.4	2,255.8	5.1	7.3	13.33	-38.9	-306.1	230.1	220.0	10.16	22.654				
2,400.0	2,393.9	2,378.3	2,354.3	5.4	7.7	13.86	-41.1	-322.9	233.6	223.0	10.64	21.956				
2,500.0	2,492.9	2,478.2	2,452.7	5.7	8.1	14.38	-43.2	-339.8	237.1	226.0	11.13	21.310				
2,600.0	2,591.9	2,578.1	2,551.2	6.0	8.5	14.88	-45.4	-356.6	240.7	229.0	11.62	20.713				
2,700.0	2,690.9	2,678.0	2,649.6	6.3	8.9	15.36	-47.5	-373.5	244.2	232.1	12.11	20.159				
2,800.0	2,790.0	2,778.0	2,748.1	6.6	9.3	15.83	-49.7	-390.3	247.8	235.2	12.61	19.643				
2,900.0	2,889.0	2,877.9	2,846.6	7.0	9.7	16.29	-51.9	-407.2	251.3	238.2	13.12	19.162				
3,000.0	2,988.0	2,977.8	2,945.0	7.3	10.1	16.74	-54.0	-424.0	254.9	241.3	13.62	18.713				
3,100.0	3,087.1	3,077.7	3,043.5	7.6	10.5	17.17	-56.2	-440.8	258.6	244.4	14.13	18.293				
3,200.0	3,186.1	3,177.6	3,142.0	7.9	10.9	17.59	-58.3	-457.7	262.2	247.5	14.65	17.899				
3,300.0	3,285.1	3,277.5	3,240.4	8.3	11.3	18.00	-60.5	-474.5	265.8	250.7	15.16	17.529				
3,400.0	3,384.1	3,377.4	3,338.9	8.6	11.7	18.40	-62.6	-491.4	269.5	253.8	15.68	17.181				
3,500.0	3,483.2	3,477.4	3,437.3	8.9	12.1	18.79	-64.8	-508.2	273.1	256.9	16.21	16.853				
3,600.0	3,582.2	3,577.3	3,535.8	9.2	12.5	19.16	-66.9	-525.1	276.8	260.1	16.73	16.544				
3,700.0	3,681.2	3,677.2	3,634.3	9.6	12.9	19.53	-69.1	-541.9	280.5	263.2	17.26	16.251				
3,720.9	3,701.9	3,698.0	3,654.8	9.6	12.9	19.60	-69.6	-545.4	281.3	263.9	17.37	16.192				
3,800.0	3,780.4	3,777.1	3,732.7	9.9	13.3	19.84	-71.3	-558.7	285.2	267.5	17.77	16.050				
3,900.0	3,880.0	3,876.7	3,830.9	10.1	13.6	19.94	-73.4	-575.5	293.2	274.9	18.23	16.085				
4,000.0	3,979.8	3,976.1	3,928.8	10.3	14.0	19.83	-75.6	-592.3	304.4	285.7	18.64	16.325				
4,100.0	4,079.7	4,075.0	4,026.3	10.5	14.4	19.54	-77.7	-609.0	318.8	299.8	19.03	16.758				
4,120.3	4,100.0	4,095.0	4,046.0	10.5	14.5	-87.68	-78.1	-612.3	322.2	303.1	19.10	16.868				
4,200.0	4,179.7	4,173.6	4,123.4	10.6	14.8	-88.06	-79.8	-625.6	335.5	316.1	19.43	17.265				
4,300.0	4,279.7	4,272.1	4,220.5	10.8	15.2	-88.51	-81.9	-642.2	352.3	332.5	19.87	17.736				
4,400.0	4,379.7	4,370.7	4,317.7	11.0	15.6	-88.91	-84.1	-658.8	369.1	348.8	20.30	18.185				
4,500.0	4,479.7	4,469.2	4,414.8	11.2	16.0	-89.28	-86.2	-675.4	386.0	365.2	20.74	18.613				
4,600.0	4,579.7	4,567.8	4,511.9	11.4	16.4	-89.61	-88.3	-692.0	402.8	381.6	21.18	19.022				
4,700.0	4,679.7	4,682.8	4,625.6	11.6	16.7	-89.93	-90.5	-709.2	417.7	396.1	21.60	19.340				
4,800.0	4,779.7	4,799.3	4,741.3	11.7	17.0	-90.16	-92.2	-722.0	428.7	406.7	22.01	19.474				
4,900.0	4,879.7	4,916.6	4,858.4	11.9	17.2	-90.29	-93.2	-730.1	435.6	413.2	22.42	19.429				
5,000.0	4,979.7	5,034.4	4,976.1	12.1	17.4	-90.34	-93.6	-733.5	438.5	415.7	22.83	19.210				
5,100.0	5,079.7	5,138.0	5,079.7	12.3	17.5	-90.35	-93.6	-733.6	438.6	415.4	23.22	18.888				
5,200.0	5,179.7	5,238.0	5,179.7	12.5	17.6	-90.35	-93.6	-733.6	438.6	415.0	23.61	18.577				
5,300.0	5,279.7	5,338.0	5,279.7	12.7	17.8	-90.35	-93.6	-733.6	438.6	414.6	24.00	18.274				
5,400.0	5,379.7	5,438.0	5,379.7	12.9	17.9	-90.35	-93.6	-733.6	438.6	414.2	24.39	17.980				
5,500.0	5,479.7	5,538.0	5,479.7	13.1	18.0	-90.35	-93.6	-733.6	438.6	413.8	24.79	17.693				
5,600.0	5,579.7	5,638.0	5,579.7	13.3	18.2	-90.35	-93.6	-733.6	438.6	413.4	25.19	17.414				
5,700.0	5,679.7	5,738.0	5,679.7	13.5	18.3	-90.35	-93.6	-733.6	438.6	413.0	25.58	17.143				
5,800.0	5,779.7	5,838.0	5,779.7	13.7	18.5	-90.35	-93.6	-733.6	438.6	412.6	25.98	16.879				
5,900.0	5,879.7	5,938.0	5,879.7	13.9	18.6	-90.35	-93.6	-733.6	438.6	412.2	26.39	16.622				
6,000.0	5,979.7	6,038.0	5,979.7	14.1	18.8	-90.35	-93.6	-733.6	438.6	411.8	26.79	16.372				
6,100.0	6,079.7	6,138.0	6,079.7	14.3	18.9	-90.35	-93.6	-733.6	438.6	411.4	27.19	16.129				
6,200.0	6,179.7	6,238.1	6,179.8	14.5	19.1	-90.16	-92.2	-733.6	438.6	411.0	27.60	15.889				
6,216.6	6,196.4	6,254.7	6,196.4	14.5	19.1	-90.00	-91.0	-733.6	438.6	410.9	27.68	15.848				
6,300.0	6,279.7	6,336.7	6,277.6	14.7	19.2	-88.54	-79.8	-733.6	438.7	410.7	28.05	15.642				
6,343.5	6,323.2	6,378.4	6,318.2	14.8	19.2	-87.37	-70.9	-733.6	439.1	410.8	28.25	15.541				
6,350.0	6,329.7	6,384.5	6,324.2	14.8	19.2	-87.17	-69.4	-733.6	439.2	410.9	28.29	15.526				
6,400.0	6,379.7	6,431.3	6,369.1	14.9	19.3	-85.65	-56.3	-733.6	439.9	411.4	28.53	15.421				
6,450.0	6,429.4	6,477.5	6,412.5	15.0	19.3	-84.16	-40.7	-733.6	441.0	412.2	28.76	15.335				
6,500.0	6,478.6	6,523.0	6,454.4	15.1	19.4	-82.71	-22.8	-733.6	442.4	413.4	28.98	15.267				
6,550.0	6,527.2	6,568.0	6,494.7	15.1	19.5	-81.30	-2.6	-733.6	444.0	414.8	29.18	15.217				

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,600.0	6,574.9	6,612.5	6,533.2	15.2	19.5	-79.94		19.5	-733.6	445.8	416.4	29.36	15.185	
6,650.0	6,621.6	6,656.5	6,570.0	15.3	19.6	-78.62		43.6	-733.6	447.8	418.2	29.53	15.161	
6,700.0	6,666.9	6,700.0	6,605.0	15.4	19.6	-77.37		69.5	-733.6	449.9	420.2	29.69	15.156	
6,750.0	6,710.8	6,743.1	6,638.1	15.5	19.7	-76.17		97.1	-733.6	452.2	422.3	29.84	15.154	
6,800.0	6,753.1	6,785.9	6,669.4	15.6	19.8	-75.03		126.3	-733.6	454.5	424.5	29.99	15.156	
6,850.0	6,793.4	6,828.2	6,698.7	15.6	19.8	-73.96		156.8	-733.6	456.9	426.7	30.15	15.155	
6,900.0	6,831.8	6,870.3	6,726.1	15.7	19.9	-72.96		188.7	-733.6	459.2	428.9	30.32	15.145	
6,950.0	6,868.0	6,912.0	6,751.5	15.9	20.0	-72.03		221.8	-733.6	461.6	431.1	30.53	15.120	
7,000.0	6,901.9	6,950.0	6,773.0	16.0	20.2	-71.22		253.1	-733.6	463.9	433.1	30.76	15.080	
7,050.0	6,933.3	6,994.7	6,796.3	16.2	20.3	-70.37		291.3	-733.6	466.1	435.0	31.08	14.996	
7,100.0	6,962.0	7,035.7	6,815.7	16.4	20.5	-69.66		327.4	-733.6	468.2	436.7	31.45	14.885	
7,150.0	6,988.1	7,076.6	6,833.1	16.7	20.7	-69.01		364.3	-733.6	470.1	438.2	31.90	14.736	
7,200.0	7,011.3	7,117.2	6,848.3	17.0	20.9	-68.44		402.0	-733.6	471.9	439.4	32.44	14.547	
7,250.0	7,031.5	7,157.7	6,861.5	17.4	21.1	-67.95		440.3	-733.6	473.4	440.4	33.07	14.317	
7,300.0	7,048.7	7,200.0	6,873.2	17.8	21.4	-67.51		481.0	-733.6	474.8	441.0	33.81	14.042	
7,350.0	7,062.8	7,238.3	6,881.7	18.2	21.7	-67.18		518.3	-733.6	475.9	441.3	34.64	13.741	
7,400.0	7,073.7	7,278.4	6,888.7	18.7	22.0	-66.91		557.8	-733.6	476.8	441.3	35.57	13.405	
7,450.0	7,081.5	7,318.6	6,893.5	19.3	22.3	-66.72		597.6	-733.6	477.5	440.9	36.61	13.044	
7,463.5	7,083.0	7,329.4	6,894.5	19.4	22.4	-66.68		608.4	-733.6	477.6	440.7	36.90	12.943	
7,500.0	7,086.8	7,358.6	6,896.3	19.9	22.7	-66.54		637.6	-733.6	478.3	440.7	37.60	12.721	
7,537.5	7,090.7	7,391.3	6,897.0	20.3	23.0	-66.24		670.3	-733.6	479.5	441.2	38.33	12.510	
7,600.0	7,095.6	7,450.0	6,897.0	21.1	23.7	-65.67		729.0	-733.6	481.5	441.7	39.81	12.093	
7,657.5	7,097.0	7,507.5	6,897.0	21.8	24.3	-65.49		786.5	-733.6	482.1	440.7	41.35	11.659	
7,700.0	7,097.0	7,550.0	6,897.0	22.4	24.8	-65.49		829.0	-733.6	482.1	439.6	42.43	11.362	
7,800.0	7,097.0	7,650.0	6,897.0	23.8	26.1	-65.49		929.0	-733.6	482.1	437.0	45.06	10.699	
7,900.0	7,097.0	7,750.0	6,897.0	25.3	27.4	-65.49		1,029.0	-733.6	482.1	434.3	47.81	10.084	
8,000.0	7,097.0	7,850.0	6,897.0	26.8	28.8	-65.49		1,129.0	-733.6	482.1	431.4	50.65	9.517	
8,100.0	7,097.0	7,950.0	6,897.0	28.4	30.3	-65.49		1,229.0	-733.6	482.1	428.5	53.59	8.996	
8,200.0	7,097.0	8,050.0	6,897.0	30.0	31.8	-65.49		1,329.0	-733.6	482.1	425.5	56.59	8.519	
8,300.0	7,097.0	8,150.0	6,897.0	31.7	33.4	-65.49		1,429.0	-733.6	482.1	422.5	59.66	8.081	
8,400.0	7,097.0	8,250.0	6,897.0	33.3	35.0	-65.49		1,529.0	-733.6	482.1	419.3	62.77	7.680	
8,500.0	7,097.0	8,350.0	6,897.0	35.1	36.7	-65.49		1,629.0	-733.6	482.1	416.2	65.93	7.312	
8,600.0	7,097.0	8,450.0	6,897.0	36.8	38.3	-65.49		1,729.0	-733.6	482.1	413.0	69.13	6.974	
8,700.0	7,097.0	8,550.0	6,897.0	38.5	40.0	-65.49		1,829.0	-733.6	482.1	409.8	72.37	6.663	
8,800.0	7,097.0	8,650.0	6,897.0	40.3	41.7	-65.49		1,929.0	-733.6	482.2	406.5	75.63	6.376	
8,900.0	7,097.0	8,750.0	6,897.0	42.1	43.4	-65.49		2,029.0	-733.7	482.2	403.2	78.91	6.110	
9,000.0	7,097.0	8,850.0	6,897.0	43.9	45.2	-65.49		2,129.0	-733.7	482.2	399.9	82.22	5.864	
9,100.0	7,097.0	8,950.0	6,897.0	45.6	46.9	-65.49		2,229.0	-733.7	482.2	396.6	85.55	5.636	
9,200.0	7,097.0	9,050.0	6,897.0	47.5	48.7	-65.49		2,329.0	-733.7	482.2	393.3	88.89	5.424	
9,300.0	7,097.0	9,150.0	6,897.0	49.3	50.5	-65.49		2,429.0	-733.7	482.2	389.9	92.25	5.227	
9,400.0	7,097.0	9,250.0	6,897.0	51.1	52.3	-65.49		2,529.0	-733.7	482.2	386.6	95.63	5.042	
9,500.0	7,097.0	9,350.0	6,897.0	52.9	54.1	-65.49		2,629.0	-733.7	482.2	383.2	99.02	4.870	
9,600.0	7,097.0	9,450.0	6,897.0	54.8	55.9	-65.49		2,729.0	-733.7	482.2	379.8	102.42	4.708	
9,700.0	7,097.0	9,550.0	6,897.0	56.6	57.7	-65.50		2,829.0	-733.7	482.2	376.4	105.82	4.557	
9,800.0	7,097.0	9,650.0	6,897.0	58.5	59.5	-65.50		2,929.0	-733.7	482.2	373.0	109.24	4.414	
9,900.0	7,097.0	9,750.0	6,897.0	60.3	61.4	-65.50		3,029.0	-733.7	482.2	369.6	112.67	4.280	
10,000.0	7,097.0	9,850.0	6,897.0	62.2	63.2	-65.50		3,129.0	-733.7	482.2	366.1	116.10	4.154	
10,100.0	7,097.0	9,950.0	6,897.0	64.0	65.0	-65.50		3,229.0	-733.7	482.3	362.7	119.54	4.034	
10,200.0	7,097.0	10,050.0	6,897.0	65.9	66.9	-65.50		3,329.0	-733.7	482.3	359.3	122.99	3.921	
10,300.0	7,097.0	10,150.0	6,897.0	67.8	68.7	-65.50		3,429.0	-733.7	482.3	355.8	126.44	3.814	
10,400.0	7,097.0	10,250.0	6,897.0	69.7	70.6	-65.50		3,529.0	-733.7	482.3	352.4	129.90	3.713	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5G-201 - Wellbore #1 - Plan #1 (6-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,500.0	7,097.0	10,350.0	6,897.0	71.5	72.4	-65.50	-65.50	3,629.0	-733.7	482.3	348.9	133.37	3.616	
10,600.0	7,097.0	10,450.0	6,897.0	73.4	74.3	-65.50	-65.50	3,729.0	-733.7	482.3	345.5	136.84	3.525	
10,700.0	7,097.0	10,550.0	6,897.0	75.3	76.2	-65.50	-65.50	3,829.0	-733.7	482.3	342.0	140.31	3.437	
10,800.0	7,097.0	10,650.0	6,897.0	77.2	78.0	-65.50	-65.50	3,929.0	-733.7	482.3	338.5	143.78	3.354	
10,900.0	7,097.0	10,750.0	6,897.0	79.0	79.9	-65.50	-65.50	4,029.0	-733.7	482.3	335.0	147.27	3.275	
11,000.0	7,097.0	10,850.0	6,897.0	80.9	81.8	-65.50	-65.50	4,129.0	-733.7	482.3	331.6	150.75	3.199	
11,100.0	7,097.0	10,950.0	6,897.0	82.8	83.6	-65.50	-65.50	4,229.0	-733.7	482.3	328.1	154.24	3.127	
11,200.0	7,097.0	11,050.0	6,897.0	84.7	85.5	-65.50	-65.50	4,329.0	-733.7	482.3	324.6	157.73	3.058	
11,300.0	7,097.0	11,150.0	6,897.0	86.6	87.4	-65.50	-65.50	4,429.0	-733.7	482.3	321.1	161.22	2.992	
11,400.0	7,097.0	11,250.0	6,897.0	88.5	89.3	-65.50	-65.50	4,529.0	-733.7	482.4	317.6	164.71	2.928	
11,500.0	7,097.0	11,350.0	6,897.0	90.4	91.2	-65.50	-65.50	4,629.0	-733.7	482.4	314.1	168.21	2.868	
11,600.0	7,097.0	11,450.0	6,897.0	92.3	93.0	-65.50	-65.50	4,729.0	-733.7	482.4	310.7	171.71	2.809	
11,700.0	7,097.0	11,550.0	6,897.0	94.2	94.9	-65.50	-65.50	4,829.0	-733.7	482.4	307.2	175.21	2.753	
11,800.0	7,097.0	11,650.0	6,897.0	96.1	96.8	-65.50	-65.50	4,929.0	-733.7	482.4	303.7	178.72	2.699	
11,900.0	7,097.0	11,750.0	6,897.0	98.0	98.7	-65.51	-65.51	5,029.0	-733.7	482.4	300.2	182.22	2.647	
12,000.0	7,097.0	11,850.0	6,897.0	99.9	100.6	-65.51	-65.51	5,129.0	-733.7	482.4	296.7	185.73	2.597	
12,100.0	7,097.0	11,950.0	6,897.0	101.8	102.5	-65.51	-65.51	5,229.0	-733.7	482.4	293.2	189.24	2.549	
12,200.0	7,097.0	12,050.0	6,897.0	103.7	104.4	-65.51	-65.51	5,329.0	-733.8	482.4	289.7	192.75	2.503	
12,300.0	7,097.0	12,150.0	6,897.0	105.6	106.3	-65.51	-65.51	5,429.0	-733.8	482.4	286.2	196.27	2.458	
12,400.0	7,097.0	12,250.0	6,897.0	107.5	108.2	-65.51	-65.51	5,529.0	-733.8	482.4	282.6	199.78	2.415	
12,500.0	7,097.0	12,350.0	6,897.0	109.4	110.1	-65.51	-65.51	5,629.0	-733.8	482.4	279.1	203.30	2.373	
12,600.0	7,097.0	12,450.0	6,897.0	111.3	111.9	-65.51	-65.51	5,729.0	-733.8	482.4	275.6	206.81	2.333	
12,700.0	7,097.0	12,550.0	6,897.0	113.2	113.8	-65.51	-65.51	5,829.0	-733.8	482.5	272.1	210.33	2.294	
12,800.0	7,097.0	12,650.0	6,897.0	115.1	115.7	-65.51	-65.51	5,929.0	-733.8	482.5	268.6	213.85	2.256	
12,900.0	7,097.0	12,750.0	6,897.0	117.0	117.6	-65.51	-65.51	6,029.0	-733.8	482.5	265.1	217.37	2.220	
13,000.0	7,097.0	12,850.0	6,897.0	118.9	119.5	-65.51	-65.51	6,129.0	-733.8	482.5	261.6	220.90	2.184	
13,100.0	7,097.0	12,950.0	6,897.0	120.8	121.4	-65.51	-65.51	6,229.0	-733.8	482.5	258.1	224.42	2.150	
13,200.0	7,097.0	13,050.0	6,897.0	122.7	123.3	-65.51	-65.51	6,329.0	-733.8	482.5	254.5	227.94	2.117	
13,300.0	7,097.0	13,150.0	6,897.0	124.6	125.2	-65.51	-65.51	6,429.0	-733.8	482.5	251.0	231.47	2.085	
13,400.0	7,097.0	13,250.0	6,897.0	126.5	127.1	-65.51	-65.51	6,529.0	-733.8	482.5	247.5	234.99	2.053	
13,500.0	7,097.0	13,350.0	6,897.0	128.4	129.0	-65.51	-65.51	6,629.0	-733.8	482.5	244.0	238.52	2.023	
13,600.0	7,097.0	13,450.0	6,897.0	130.4	131.0	-65.51	-65.51	6,729.0	-733.8	482.5	240.5	242.05	1.993	
13,700.0	7,097.0	13,550.0	6,897.0	132.3	132.9	-65.51	-65.51	6,829.0	-733.8	482.5	237.0	245.57	1.965	
13,800.0	7,097.0	13,650.0	6,897.0	134.2	134.8	-65.51	-65.51	6,929.0	-733.8	482.5	233.4	249.10	1.937	
13,900.0	7,097.0	13,750.0	6,897.0	136.1	136.7	-65.51	-65.51	7,029.0	-733.8	482.5	229.9	252.63	1.910	
14,000.0	7,097.0	13,850.0	6,897.0	138.0	138.6	-65.51	-65.51	7,129.0	-733.8	482.5	226.4	256.16	1.884	
14,100.0	7,097.0	13,950.0	6,897.0	139.9	140.5	-65.51	-65.51	7,229.0	-733.8	482.6	222.9	259.69	1.858	
14,200.0	7,097.0	14,050.0	6,897.0	141.8	142.4	-65.52	-65.52	7,329.0	-733.8	482.6	219.3	263.23	1.833	
14,300.0	7,097.0	14,150.0	6,897.0	143.7	144.3	-65.52	-65.52	7,429.0	-733.8	482.6	215.8	266.76	1.809	
14,387.0	7,097.0	14,237.0	6,897.0	145.4	146.0	-65.52	-65.52	7,515.9	-733.8	482.6	212.7	269.83	1.788 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	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	1.0	1.0	0.0	0.0	90.01	90.01	0.0	27.8	27.8	27.8	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	90.01	90.01	0.0	27.8	27.8	27.6	0.23	122.479	
200.0	200.0	201.0	201.0	0.3	0.3	90.01	90.01	0.0	27.8	27.8	27.1	0.68	41.097	
300.0	300.0	301.0	301.0	0.6	0.6	90.01	90.01	0.0	27.8	27.8	26.7	1.13	24.691	
400.0	400.0	401.0	401.0	0.8	0.8	90.01	90.01	0.0	27.8	27.8	26.2	1.58	17.647	
500.0	500.0	501.0	501.0	1.0	1.0	90.01	90.01	0.0	27.8	27.8	25.8	2.03	13.730	
600.0	600.0	601.0	601.0	1.2	1.2	90.01	90.01	0.0	27.8	27.8	25.3	2.47	11.236	
700.0	700.0	701.0	701.0	1.5	1.5	90.01	90.01	0.0	27.8	27.8	24.9	2.92	9.508	
800.0	800.0	801.0	801.0	1.7	1.7	90.01	90.01	0.0	27.8	27.8	24.4	3.37	8.241	
900.0	900.0	901.0	901.0	1.9	1.9	90.01	90.01	0.0	27.8	27.8	24.0	3.82	7.272	
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	90.01	90.01	0.0	27.8	27.8	23.5	4.27	6.507	
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	90.01	90.01	0.0	27.8	27.8	23.1	4.72	5.888	
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	90.01	90.01	0.0	27.8	27.8	22.6	5.17	5.376	
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	90.01	90.01	0.0	27.8	27.8	22.2	5.62	4.946	
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	90.01	90.01	0.0	27.8	27.8	21.7	6.07	4.580	
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	90.01	90.01	0.0	27.8	27.8	21.3	6.52	4.264 CC, ES	
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	-163.84	-163.84	0.0	27.8	29.5	22.5	6.95	4.242	
1,700.0	1,699.8	1,700.8	1,700.8	3.7	3.7	-166.23	-166.23	0.0	27.8	34.5	27.2	7.36	4.695	
1,800.0	1,799.5	1,800.5	1,800.5	3.9	3.9	-168.96	-168.96	0.0	27.8	43.0	35.3	7.76	5.549	
1,899.4	1,898.1	1,899.1	1,899.1	4.1	4.2	-171.34	-171.34	0.0	27.8	55.0	46.8	8.15	6.744	
2,000.0	1,997.7	1,998.7	1,998.7	4.3	4.4	-173.09	-173.09	0.0	27.8	68.8	60.3	8.58	8.024	
2,100.0	2,096.8	2,097.8	2,097.8	4.6	4.6	-174.25	-174.25	0.0	27.8	82.6	73.6	9.01	9.176	
2,200.0	2,195.8	2,196.8	2,196.8	4.9	4.8	-175.08	-175.08	0.0	27.8	96.5	87.0	9.44	10.222	
2,300.0	2,294.8	2,295.8	2,295.8	5.1	5.0	-175.70	-175.70	0.0	27.8	110.3	100.5	9.87	11.174	
2,400.0	2,393.9	2,394.9	2,394.9	5.4	5.3	-176.18	-176.18	0.0	27.8	124.2	113.9	10.31	12.043	
2,500.0	2,492.9	2,493.9	2,493.9	5.7	5.5	-176.56	-176.56	0.0	27.8	138.1	127.3	10.75	12.839	
2,600.0	2,591.9	2,589.9	2,589.9	6.0	5.7	-176.45	-176.45	-0.9	28.9	152.9	141.7	11.17	13.684	
2,700.0	2,690.9	2,685.0	2,684.9	6.3	5.9	-175.51	-175.51	-3.6	32.5	169.7	158.2	11.57	14.668	
2,800.0	2,790.0	2,779.3	2,778.8	6.6	6.0	-174.01	-174.01	-8.3	38.6	188.8	176.8	11.98	15.762	
2,900.0	2,889.0	2,872.4	2,871.3	7.0	6.2	-172.17	-172.17	-14.7	47.0	210.1	197.7	12.39	16.958	
3,000.0	2,988.0	2,968.7	2,966.8	7.3	6.4	-170.24	-170.24	-22.6	57.2	233.1	220.2	12.82	18.180	
3,100.0	3,087.1	3,065.7	3,062.9	7.6	6.7	-168.64	-168.64	-30.5	67.6	256.3	243.0	13.26	19.329	
3,200.0	3,186.1	3,162.8	3,159.1	7.9	6.9	-167.30	-167.30	-38.5	78.0	279.6	265.9	13.70	20.404	
3,300.0	3,285.1	3,259.8	3,255.2	8.3	7.1	-166.17	-166.17	-46.4	88.4	303.1	288.9	14.16	21.412	
3,400.0	3,384.1	3,356.9	3,351.4	8.6	7.4	-165.20	-165.20	-54.4	98.7	326.7	312.1	14.61	22.354	
3,500.0	3,483.2	3,453.9	3,447.6	8.9	7.6	-164.36	-164.36	-62.3	109.1	350.3	335.3	15.08	23.236	
3,600.0	3,582.2	3,550.9	3,543.7	9.2	7.9	-163.63	-163.63	-70.3	119.5	374.0	358.5	15.55	24.062	
3,700.0	3,681.2	3,651.2	3,643.1	9.6	8.1	-162.98	-162.98	-78.4	130.1	397.7	381.7	16.02	24.821	
3,720.9	3,701.9	3,674.0	3,665.7	9.6	8.2	-162.87	-162.87	-80.1	132.3	402.4	386.3	16.13	24.956	
3,800.0	3,780.4	3,761.5	3,752.7	9.9	8.4	-162.65	-162.65	-85.5	139.3	418.2	401.7	16.53	25.299	
3,900.0	3,880.0	3,873.7	3,864.7	10.1	8.7	-162.55	-162.55	-90.1	145.3	432.5	415.5	17.00	25.434	
4,000.0	3,979.8	3,987.1	3,978.1	10.3	8.9	-162.62	-162.62	-92.0	147.7	440.3	422.9	17.44	25.246	
4,100.0	4,079.7	4,089.8	4,080.7	10.5	9.1	-162.72	-162.72	-92.0	147.8	442.7	424.9	17.83	24.826	
4,120.3	4,100.0	4,110.1	4,101.0	10.5	9.1	90.13	90.13	-92.0	147.8	442.8	424.9	17.91	24.722	
4,200.0	4,179.7	4,189.8	4,180.7	10.6	9.3	90.13	90.13	-92.0	147.8	442.8	424.6	18.24	24.279	
4,300.0	4,279.7	4,289.8	4,280.7	10.8	9.5	90.13	90.13	-92.0	147.8	442.8	424.1	18.66	23.735	
4,400.0	4,379.7	4,389.8	4,380.7	11.0	9.7	90.13	90.13	-92.0	147.8	442.8	423.7	19.08	23.213	
4,500.0	4,479.7	4,489.8	4,480.7	11.2	9.9	90.13	90.13	-92.0	147.8	442.8	423.3	19.50	22.713	
4,600.0	4,579.7	4,589.8	4,580.7	11.4	10.1	90.13	90.13	-92.0	147.8	442.8	422.9	19.92	22.232	
4,700.0	4,679.7	4,689.8	4,680.7	11.6	10.4	90.13	90.13	-92.0	147.8	442.8	422.5	20.34	21.770	
4,800.0	4,779.7	4,789.8	4,780.7	11.7	10.6	90.13	90.13	-92.0	147.8	442.8	422.0	20.76	21.325	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.0	4,879.7	4,889.8	4,880.7	11.9	10.8	90.13	90.13	-92.0	147.8	442.8	421.6	21.19	20.897	
5,000.0	4,979.7	4,989.8	4,980.7	12.1	11.0	90.13	90.13	-92.0	147.8	442.8	421.2	21.62	20.485	
5,100.0	5,079.7	5,089.8	5,080.7	12.3	11.2	90.13	90.13	-92.0	147.8	442.8	420.8	22.04	20.088	
5,200.0	5,179.7	5,189.8	5,180.7	12.5	11.4	90.13	90.13	-92.0	147.8	442.8	420.3	22.47	19.706	
5,300.0	5,279.7	5,289.8	5,280.7	12.7	11.6	90.13	90.13	-92.0	147.8	442.8	419.9	22.90	19.337	
5,400.0	5,379.7	5,389.8	5,380.7	12.9	11.9	90.13	90.13	-92.0	147.8	442.8	419.5	23.33	18.981	
5,500.0	5,479.7	5,489.8	5,480.7	13.1	12.1	90.13	90.13	-92.0	147.8	442.8	419.0	23.76	18.637	
5,600.0	5,579.7	5,589.8	5,580.7	13.3	12.3	90.13	90.13	-92.0	147.8	442.8	418.6	24.19	18.305	
5,700.0	5,679.7	5,689.8	5,680.7	13.5	12.5	90.13	90.13	-92.0	147.8	442.8	418.2	24.62	17.984	
5,800.0	5,779.7	5,789.8	5,780.7	13.7	12.7	90.13	90.13	-92.0	147.8	442.8	417.8	25.05	17.674	
5,900.0	5,879.7	5,889.8	5,880.7	13.9	12.9	90.13	90.13	-92.0	147.8	442.8	417.3	25.49	17.374	
6,000.0	5,979.7	5,989.8	5,980.7	14.1	13.2	90.13	90.13	-92.0	147.8	442.8	416.9	25.92	17.084	
6,100.0	6,079.7	6,089.8	6,080.7	14.3	13.4	90.13	90.13	-92.0	147.8	442.8	416.5	26.35	16.802	
6,174.4	6,154.1	6,164.2	6,155.1	14.4	13.5	90.09	90.09	-91.7	147.8	442.8	416.1	26.68	16.600	
6,200.0	6,179.7	6,189.8	6,180.7	14.5	13.6	89.94	89.94	-90.5	147.8	442.8	416.0	26.78	16.533	
6,300.0	6,279.7	6,288.2	6,278.2	14.7	13.8	88.33	88.33	-78.1	147.8	443.0	415.8	27.17	16.302	
6,343.5	6,323.2	6,329.7	6,318.8	14.8	13.9	87.17	87.17	-69.1	147.8	443.4	416.0	27.33	16.222	
6,350.0	6,329.7	6,335.8	6,324.7	14.8	13.9	86.97	86.97	-67.6	147.8	443.5	416.1	27.36	16.211	
6,400.0	6,379.7	6,382.5	6,369.5	14.9	14.0	85.46	85.46	-54.5	147.8	444.3	416.8	27.53	16.140	
6,450.0	6,429.4	6,428.5	6,412.8	15.0	14.0	83.98	83.98	-38.9	147.8	445.4	417.7	27.69	16.086	
6,500.0	6,478.6	6,474.0	6,454.6	15.1	14.1	82.54	82.54	-21.0	147.8	446.8	418.9	27.85	16.045	
6,550.0	6,527.2	6,518.9	6,494.8	15.1	14.2	81.14	81.14	-1.0	147.8	448.4	420.4	28.00	16.015	
6,600.0	6,574.9	6,563.3	6,533.2	15.2	14.3	79.79	79.79	21.2	147.8	450.3	422.1	28.15	15.992	
6,650.0	6,621.6	6,607.2	6,569.9	15.3	14.4	78.49	78.49	45.2	147.8	452.3	424.0	28.31	15.974	
6,700.0	6,666.9	6,650.0	6,604.4	15.4	14.4	77.27	77.27	70.7	147.8	454.4	426.0	28.48	15.958	
6,750.0	6,710.8	6,693.6	6,637.9	15.5	14.5	76.07	76.07	98.6	147.8	456.7	428.0	28.66	15.936	
6,800.0	6,753.1	6,736.3	6,669.1	15.6	14.6	74.94	74.94	127.7	147.8	459.0	430.2	28.85	15.909	
6,850.0	6,793.4	6,778.6	6,698.4	15.6	14.8	73.89	73.89	158.1	147.8	461.4	432.3	29.07	15.873	
6,900.0	6,831.8	6,820.5	6,725.8	15.7	15.0	72.90	72.90	190.0	147.8	463.8	434.5	29.31	15.824	
6,950.0	6,868.0	6,862.2	6,751.2	15.9	15.2	71.98	71.98	223.0	147.8	466.1	436.5	29.58	15.758	
7,000.0	6,901.9	6,900.0	6,772.6	16.0	15.4	71.18	71.18	254.1	147.8	468.4	438.6	29.87	15.682	
7,050.0	6,933.3	6,944.8	6,796.0	16.2	15.7	70.35	70.35	292.3	147.8	470.6	440.3	30.24	15.563	
7,100.0	6,962.0	6,985.7	6,815.4	16.4	16.0	69.64	69.64	328.3	147.8	472.6	442.0	30.64	15.427	
7,150.0	6,988.1	7,026.5	6,832.7	16.7	16.4	69.01	69.01	365.2	147.8	474.6	443.5	31.09	15.264	
7,200.0	7,011.3	7,067.0	6,848.0	17.0	16.7	68.46	68.46	402.8	147.8	476.3	444.7	31.60	15.074	
7,250.0	7,031.5	7,107.5	6,861.2	17.4	17.1	67.97	67.97	441.0	147.8	477.8	445.7	32.16	14.857	
7,300.0	7,048.7	7,150.0	6,873.0	17.8	17.5	67.55	67.55	481.9	147.8	479.2	446.4	32.81	14.604	
7,350.0	7,062.8	7,188.0	6,881.5	18.2	17.9	67.23	67.23	518.8	147.8	480.3	446.8	33.49	14.339	
7,400.0	7,073.7	7,228.1	6,888.5	18.7	18.4	66.97	66.97	558.3	147.8	481.2	446.9	34.26	14.044	
7,450.0	7,081.5	7,268.1	6,893.4	19.3	18.8	66.79	66.79	598.1	147.8	481.8	446.7	35.09	13.730	
7,463.5	7,083.0	7,278.9	6,894.4	19.4	18.9	66.75	66.75	608.8	147.8	481.9	446.6	35.33	13.642	
7,500.0	7,086.8	7,308.1	6,896.2	19.9	19.3	66.62	66.62	637.9	147.8	482.5	446.5	36.02	13.395	
7,537.5	7,090.7	7,342.1	6,897.0	20.3	19.7	66.31	66.31	671.9	147.8	483.7	446.9	36.77	13.156	
7,600.0	7,095.6	7,399.2	6,897.0	21.1	20.5	65.76	65.76	729.0	147.8	485.7	447.7	37.99	12.784	
7,657.5	7,097.0	7,456.7	6,897.0	21.8	21.2	65.58	65.58	786.5	147.7	486.2	446.9	39.31	12.369	
7,700.0	7,097.0	7,499.2	6,897.0	22.4	21.8	65.58	65.58	829.0	147.7	486.2	445.9	40.38	12.042	
7,800.0	7,097.0	7,599.2	6,897.0	23.8	23.3	65.58	65.58	929.0	147.7	486.2	443.2	43.01	11.304	
7,900.0	7,097.0	7,699.2	6,897.0	25.3	24.8	65.58	65.58	1,029.0	147.7	486.2	440.4	45.77	10.623	
8,000.0	7,097.0	7,799.2	6,897.0	26.8	26.3	65.58	65.58	1,129.0	147.7	486.2	437.6	48.63	9.997	
8,100.0	7,097.0	7,899.2	6,897.0	28.4	27.9	65.58	65.58	1,229.0	147.7	486.2	434.6	51.58	9.425	
8,200.0	7,097.0	7,999.2	6,897.0	30.0	29.6	65.58	65.58	1,329.0	147.7	486.2	431.6	54.61	8.904	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design		Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)											Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
8,300.0	7,097.0	8,099.2	6,897.0	31.7	31.2	65.58	1,429.0	147.7	486.2	428.5	57.69	8.428		
8,400.0	7,097.0	8,199.2	6,897.0	33.3	32.9	65.58	1,529.0	147.7	486.2	425.3	60.82	7.993		
8,500.0	7,097.0	8,299.2	6,897.0	35.1	34.7	65.58	1,629.0	147.7	486.2	422.2	64.00	7.596		
8,600.0	7,097.0	8,399.2	6,897.0	36.8	36.4	65.58	1,729.0	147.7	486.1	418.9	67.22	7.232		
8,700.0	7,097.0	8,499.2	6,897.0	38.5	38.2	65.58	1,829.0	147.7	486.1	415.7	70.47	6.899		
8,800.0	7,097.0	8,599.2	6,897.0	40.3	40.0	65.57	1,929.0	147.7	486.1	412.4	73.74	6.592		
8,900.0	7,097.0	8,699.2	6,897.0	42.1	41.7	65.57	2,029.0	147.7	486.1	409.1	77.05	6.309		
9,000.0	7,097.0	8,799.2	6,897.0	43.9	43.5	65.57	2,129.0	147.7	486.1	405.7	80.37	6.048		
9,100.0	7,097.0	8,899.2	6,897.0	45.6	45.4	65.57	2,229.0	147.7	486.1	402.4	83.71	5.807		
9,200.0	7,097.0	8,999.2	6,897.0	47.5	47.2	65.57	2,329.0	147.7	486.1	399.0	87.07	5.582		
9,300.0	7,097.0	9,099.2	6,897.0	49.3	49.0	65.57	2,429.0	147.6	486.1	395.6	90.45	5.374		
9,400.0	7,097.0	9,199.2	6,897.0	51.1	50.8	65.57	2,529.0	147.6	486.1	392.2	93.84	5.180		
9,500.0	7,097.0	9,299.2	6,897.0	52.9	52.7	65.57	2,629.0	147.6	486.0	388.8	97.24	4.999		
9,600.0	7,097.0	9,399.2	6,897.0	54.8	54.5	65.57	2,729.0	147.6	486.0	385.4	100.65	4.829		
9,700.0	7,097.0	9,499.2	6,897.0	56.6	56.4	65.57	2,829.0	147.6	486.0	382.0	104.07	4.670		
9,800.0	7,097.0	9,599.2	6,897.0	58.5	58.2	65.57	2,929.0	147.6	486.0	378.5	107.50	4.521		
9,900.0	7,097.0	9,699.2	6,897.0	60.3	60.1	65.57	3,029.0	147.6	486.0	375.1	110.94	4.381		
10,000.0	7,097.0	9,799.2	6,897.0	62.2	62.0	65.57	3,129.0	147.6	486.0	371.6	114.38	4.249		
10,100.0	7,097.0	9,899.2	6,897.0	64.0	63.8	65.57	3,229.0	147.6	486.0	368.1	117.83	4.124		
10,200.0	7,097.0	9,999.2	6,897.0	65.9	65.7	65.57	3,329.0	147.6	486.0	364.7	121.29	4.007		
10,300.0	7,097.0	10,099.2	6,897.0	67.8	67.6	65.57	3,429.0	147.6	486.0	361.2	124.75	3.895		
10,400.0	7,097.0	10,199.2	6,897.0	69.7	69.5	65.57	3,529.0	147.6	485.9	357.7	128.22	3.790		
10,500.0	7,097.0	10,299.2	6,897.0	71.5	71.3	65.57	3,629.0	147.6	485.9	354.2	131.69	3.690		
10,600.0	7,097.0	10,399.2	6,897.0	73.4	73.2	65.57	3,729.0	147.6	485.9	350.8	135.17	3.595		
10,700.0	7,097.0	10,499.2	6,897.0	75.3	75.1	65.56	3,829.0	147.6	485.9	347.3	138.65	3.505		
10,800.0	7,097.0	10,599.2	6,897.0	77.2	77.0	65.56	3,929.0	147.6	485.9	343.8	142.14	3.419		
10,900.0	7,097.0	10,699.2	6,897.0	79.0	78.9	65.56	4,029.0	147.5	485.9	340.3	145.62	3.337		
11,000.0	7,097.0	10,799.2	6,897.0	80.9	80.8	65.56	4,129.0	147.5	485.9	336.8	149.12	3.258		
11,100.0	7,097.0	10,899.2	6,897.0	82.8	82.7	65.56	4,229.0	147.5	485.9	333.3	152.61	3.184		
11,200.0	7,097.0	10,999.2	6,897.0	84.7	84.6	65.56	4,329.0	147.5	485.9	329.8	156.11	3.112		
11,300.0	7,097.0	11,099.2	6,897.0	86.6	86.5	65.56	4,429.0	147.5	485.9	326.2	159.61	3.044		
11,400.0	7,097.0	11,199.2	6,897.0	88.5	88.3	65.56	4,529.0	147.5	485.8	322.7	163.11	2.979		
11,500.0	7,097.0	11,299.2	6,897.0	90.4	90.2	65.56	4,629.0	147.5	485.8	319.2	166.61	2.916		
11,600.0	7,097.0	11,399.2	6,897.0	92.3	92.1	65.56	4,729.0	147.5	485.8	315.7	170.12	2.856		
11,700.0	7,097.0	11,499.2	6,897.0	94.2	94.0	65.56	4,829.0	147.5	485.8	312.2	173.63	2.798		
11,800.0	7,097.0	11,599.2	6,897.0	96.1	95.9	65.56	4,929.0	147.5	485.8	308.7	177.14	2.742		
11,900.0	7,097.0	11,699.2	6,897.0	98.0	97.8	65.56	5,029.0	147.5	485.8	305.1	180.65	2.689		
12,000.0	7,097.0	11,799.2	6,897.0	99.9	99.7	65.56	5,129.0	147.5	485.8	301.6	184.16	2.638		
12,100.0	7,097.0	11,899.2	6,897.0	101.8	101.6	65.56	5,229.0	147.5	485.8	298.1	187.68	2.588		
12,200.0	7,097.0	11,999.2	6,897.0	103.7	103.5	65.56	5,329.0	147.5	485.8	294.6	191.20	2.541		
12,300.0	7,097.0	12,099.2	6,897.0	105.6	105.5	65.56	5,429.0	147.5	485.7	291.0	194.71	2.495		
12,400.0	7,097.0	12,199.2	6,897.0	107.5	107.4	65.56	5,529.0	147.5	485.7	287.5	198.23	2.450		
12,500.0	7,097.0	12,299.2	6,897.0	109.4	109.3	65.55	5,629.0	147.4	485.7	284.0	201.75	2.407		
12,600.0	7,097.0	12,399.2	6,897.0	111.3	111.2	65.55	5,729.0	147.4	485.7	280.4	205.28	2.366		
12,700.0	7,097.0	12,499.2	6,897.0	113.2	113.1	65.55	5,829.0	147.4	485.7	276.9	208.80	2.326		
12,800.0	7,097.0	12,599.2	6,897.0	115.1	115.0	65.55	5,929.0	147.4	485.7	273.4	212.32	2.288		
12,900.0	7,097.0	12,699.2	6,897.0	117.0	116.9	65.55	6,029.0	147.4	485.7	269.8	215.85	2.250		
13,000.0	7,097.0	12,799.2	6,897.0	118.9	118.8	65.55	6,129.0	147.4	485.7	266.3	219.38	2.214		
13,100.0	7,097.0	12,899.2	6,897.0	120.8	120.7	65.55	6,229.0	147.4	485.7	262.8	222.90	2.179		
13,200.0	7,097.0	12,999.2	6,897.0	122.7	122.6	65.55	6,329.0	147.4	485.6	259.2	226.43	2.145		
13,300.0	7,097.0	13,099.2	6,897.0	124.6	124.5	65.55	6,429.0	147.4	485.6	255.7	229.96	2.112		

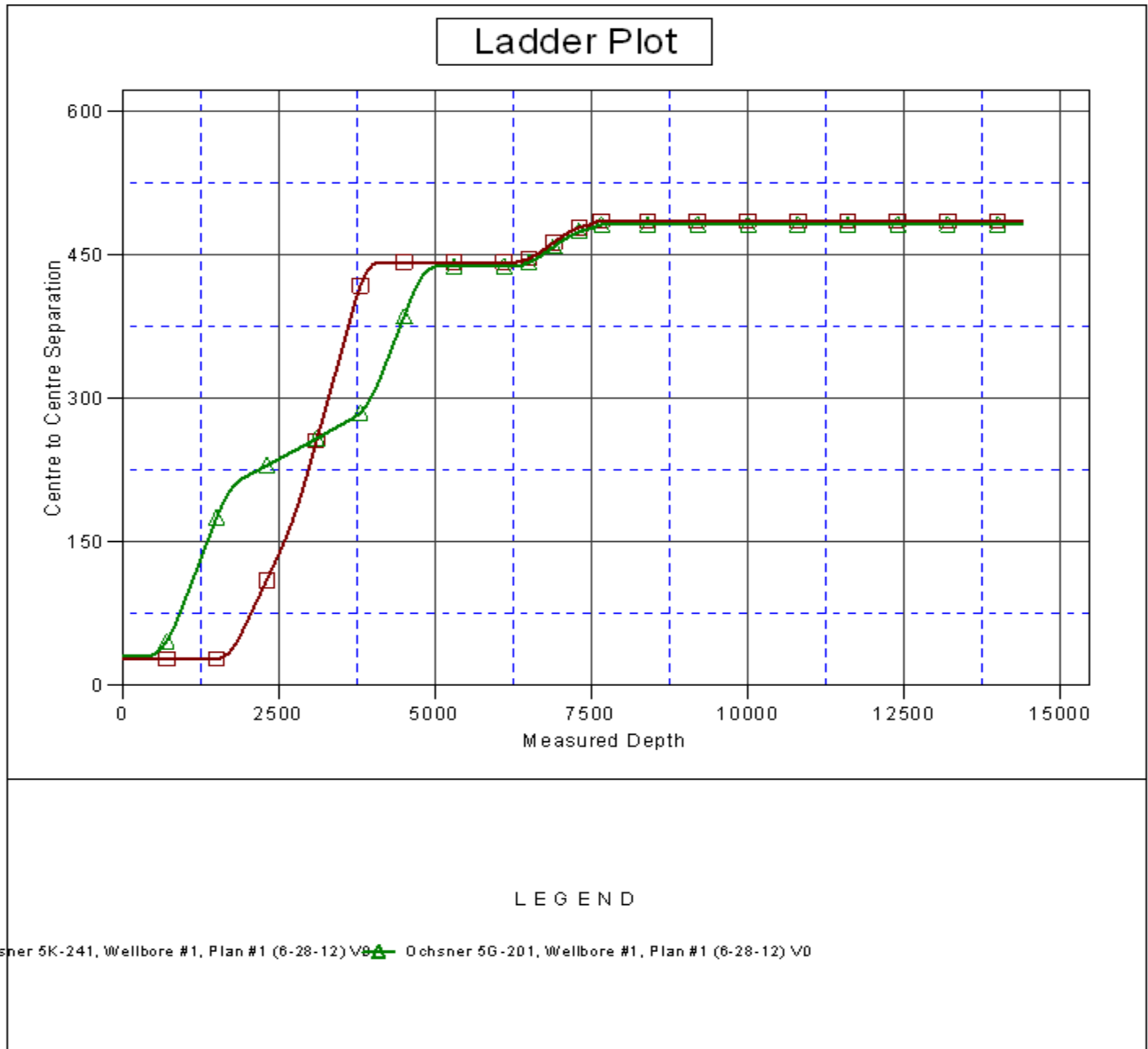
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Offset Design Ochsner L5-HZ Pad Sec.5-T6N-R67W - Ochsner 5K-241 - Wellbore #1 - Plan #1 (6-28-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
13,400.0	7,097.0	13,199.2	6,897.0	126.5	126.4	65.55	6,529.0	147.4	485.6	252.1	233.49	2.080	
13,500.0	7,097.0	13,299.2	6,897.0	128.4	128.4	65.55	6,629.0	147.4	485.6	248.6	237.02	2.049	
13,600.0	7,097.0	13,399.2	6,897.0	130.4	130.3	65.55	6,729.0	147.4	485.6	245.1	240.55	2.019	
13,700.0	7,097.0	13,499.2	6,897.0	132.3	132.2	65.55	6,829.0	147.4	485.6	241.5	244.08	1.989	
13,800.0	7,097.0	13,599.2	6,897.0	134.2	134.1	65.55	6,929.0	147.4	485.6	238.0	247.61	1.961	
13,900.0	7,097.0	13,699.2	6,897.0	136.1	136.0	65.55	7,029.0	147.4	485.6	234.4	251.15	1.933	
14,000.0	7,097.0	13,799.2	6,897.0	138.0	137.9	65.55	7,129.0	147.4	485.6	230.9	254.68	1.907	
14,100.0	7,097.0	13,899.2	6,897.0	139.9	139.8	65.55	7,229.0	147.3	485.6	227.3	258.21	1.880	
14,200.0	7,097.0	13,999.2	6,897.0	141.8	141.7	65.55	7,329.0	147.3	485.5	223.8	261.75	1.855	
14,300.0	7,097.0	14,099.2	6,897.0	143.7	143.6	65.54	7,429.0	147.3	485.5	220.2	265.28	1.830	
14,362.4	7,097.0	14,161.5	6,897.0	144.9	144.8	65.54	7,491.3	147.3	485.5	218.0	267.49	1.815	
14,387.0	7,097.0	14,182.5	6,897.0	145.4	145.2	65.54	7,512.3	147.3	485.5	217.2	268.29	1.810 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4897.0ft (RKB Ensign 32 - 1 Coordinates are relative to: Ochsner 5G-421
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: 0.37°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Ochsner 5G-421
Project:	SEC.5-T6N-R67W	TVD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Reference Site:	Ochsner L5-HZ Pad Sec.5-T6N-R67W	MD Reference:	WELL @ 4897.0ft (RKB Ensign 32 - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Ochsner 5G-421	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-28-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4897.0ft (RKB Ensign 32 - 1 Coordinates are relative to: Ochsner 5G-421
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