PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: LaSalle 25F-412

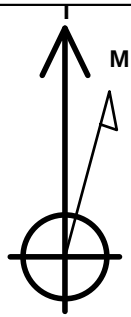
Surface Location: LaSalle 25F-HZ Pad Sec.25-T5N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4640.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1380231.95	3245132.45	40.373800	-104.620170	

RKB - 15' WELL @ 4655.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 1078'FNL, 50'FEL	6897.0	226.6	5014.0	Point



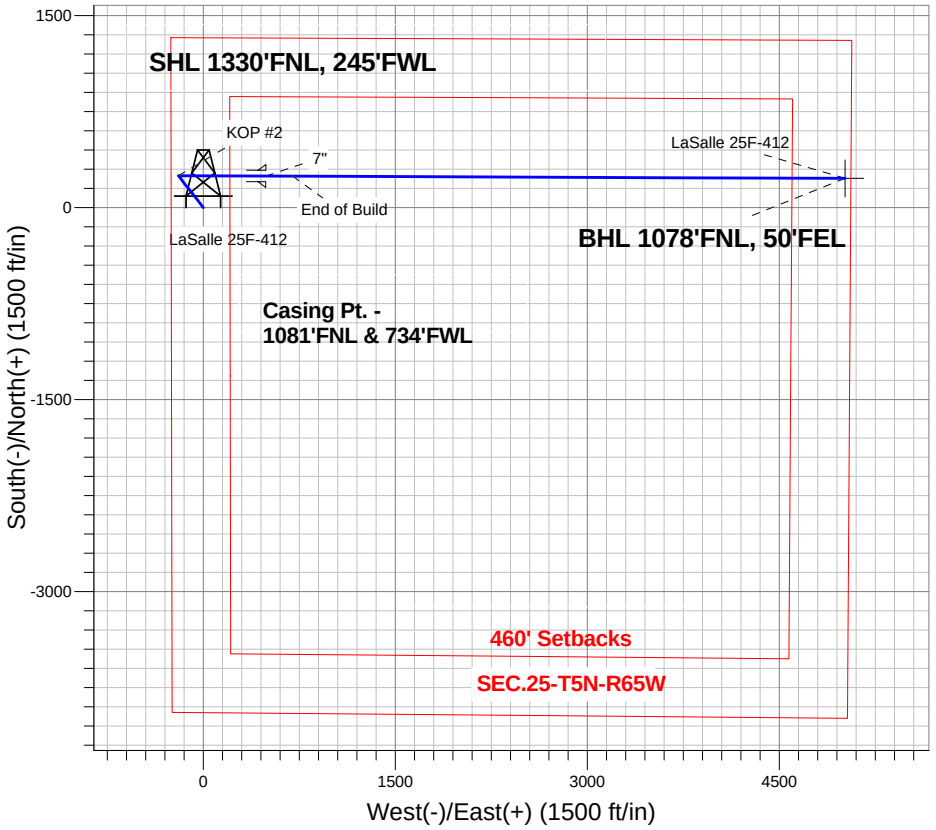
Azimuths to True North
Magnetic North: 8.56°

Magnetic Field
Strength: 52955.4snT
Dip Angle: 66.99°
Date: 2/25/2013
Model: IGRF2010

ANNOTATIONS

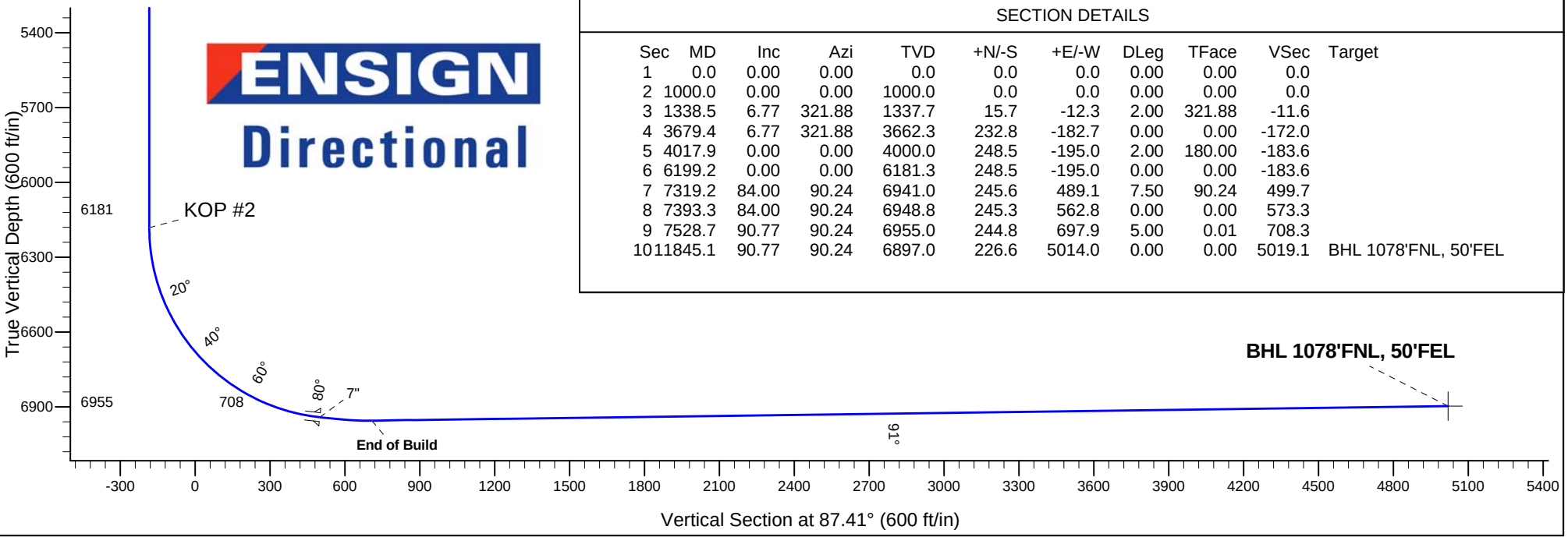
TVD	MD	Annotation
1000.0	1000.0	KOP #1
6181.3	6199.2	KOP #2
6955.0	7528.7	End of Build

LaSalle 25F-HZ Pad Sec.25-T5N-R65W
LaSalle 25F-412
Plan #2 (4-18-13)



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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1338.5	6.77	321.88	1337.7	15.7	-12.3	2.00	321.88	-11.6	
4	3679.4	6.77	321.88	3662.3	232.8	-182.7	0.00	0.00	-172.0	
5	4017.9	0.00	0.00	4000.0	248.5	-195.0	2.00	180.00	-183.6	
6	6199.2	0.00	0.00	6181.3	248.5	-195.0	0.00	0.00	-183.6	
7	7319.2	84.00	90.24	6941.0	245.6	489.1	7.50	90.24	499.7	
8	7393.3	84.00	90.24	6948.8	245.3	562.8	0.00	0.00	573.3	
9	7528.7	90.77	90.24	6955.0	244.8	697.9	5.00	0.01	708.3	
10	11845.1	90.77	90.24	6897.0	226.6	5014.0	0.00	0.00	5019.1	BHL 1078'FNL, 50'FEL



ENSIGN Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.25-T5N-R65W
LaSalle 25F-HZ Pad Sec.25-T5N-R65W
LaSalle 25F-412

Wellbore #1

Plan: Plan #2 (4-18-13)

Standard Planning Report

18 April, 2013

PDC ENERGY
Growing E&P Value

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

Project SEC.25-T5N-R65W, Weld County, Colorado

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 LaSalle 25F-HZ Pad Sec.25-T5N-R65W

Site Position:		**Northing:**	1,380,231.95 ft	**Latitude:**	40.373800
From:	Lat/Long	**Easting:**	3,245,132.45 ft	**Longitude:**	-104.620170
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.57 °

Well LaSalle 25F-412

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,380,231.95 ft	**Latitude:**	40.373800
	+E/-W	0.0 ft	**Easting:**	3,245,132.45 ft	**Longitude:**	-104.620170
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,640.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/25/2013	8.56	66.99	52,955

Design Plan #2 (4-18-13)

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	87.41

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,338.5	6.77	321.88	1,337.7	15.7	-12.3	2.00	2.00	0.00	321.88	
3,679.4	6.77	321.88	3,662.3	232.8	-182.7	0.00	0.00	0.00	0.00	
4,017.9	0.00	0.00	4,000.0	248.5	-195.0	2.00	-2.00	0.00	180.00	
6,199.2	0.00	0.00	6,181.3	248.5	-195.0	0.00	0.00	0.00	0.00	
7,319.2	84.00	90.24	6,941.0	245.6	489.1	7.50	7.50	0.00	90.24	
7,393.3	84.00	90.24	6,948.8	245.3	562.8	0.00	0.00	0.00	0.00	
7,528.7	90.77	90.24	6,955.0	244.8	697.9	5.00	5.00	0.00	0.01	
11,845.1	90.77	90.24	6,897.0	226.6	5,014.0	0.00	0.00	0.00	0.00	BHL 1078'FNL, 50'F

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
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Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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
KOP #1									
1,040.0	0.80	321.88	1,040.0	0.2	-0.2	-0.2	2.00	2.00	0.00
1,080.0	1.60	321.88	1,080.0	0.9	-0.7	-0.6	2.00	2.00	0.00
1,120.0	2.40	321.88	1,120.0	2.0	-1.6	-1.5	2.00	2.00	0.00
1,160.0	3.20	321.88	1,159.9	3.5	-2.8	-2.6	2.00	2.00	0.00
1,200.0	4.00	321.88	1,199.8	5.5	-4.3	-4.1	2.00	2.00	0.00
1,240.0	4.80	321.88	1,239.7	7.9	-6.2	-5.8	2.00	2.00	0.00
1,280.0	5.60	321.88	1,279.6	10.8	-8.4	-7.9	2.00	2.00	0.00
1,320.0	6.40	321.88	1,319.3	14.0	-11.0	-10.4	2.00	2.00	0.00
1,338.5	6.77	321.88	1,337.7	15.7	-12.3	-11.6	2.00	2.00	0.00
1,360.0	6.77	321.88	1,359.1	17.7	-13.9	-13.1	0.00	0.00	0.00
1,400.0	6.77	321.88	1,398.8	21.4	-16.8	-15.8	0.00	0.00	0.00
1,440.0	6.77	321.88	1,438.5	25.1	-19.7	-18.6	0.00	0.00	0.00
1,480.0	6.77	321.88	1,478.2	28.8	-22.6	-21.3	0.00	0.00	0.00
1,520.0	6.77	321.88	1,517.9	32.5	-25.5	-24.0	0.00	0.00	0.00
1,560.0	6.77	321.88	1,557.7	36.3	-28.4	-26.8	0.00	0.00	0.00
1,600.0	6.77	321.88	1,597.4	40.0	-31.4	-29.5	0.00	0.00	0.00
1,640.0	6.77	321.88	1,637.1	43.7	-34.3	-32.3	0.00	0.00	0.00
1,680.0	6.77	321.88	1,676.8	47.4	-37.2	-35.0	0.00	0.00	0.00
1,720.0	6.77	321.88	1,716.6	51.1	-40.1	-37.7	0.00	0.00	0.00
1,760.0	6.77	321.88	1,756.3	54.8	-43.0	-40.5	0.00	0.00	0.00
1,800.0	6.77	321.88	1,796.0	58.5	-45.9	-43.2	0.00	0.00	0.00
1,840.0	6.77	321.88	1,835.7	62.2	-48.8	-46.0	0.00	0.00	0.00
1,880.0	6.77	321.88	1,875.4	65.9	-51.7	-48.7	0.00	0.00	0.00
1,920.0	6.77	321.88	1,915.2	69.6	-54.6	-51.4	0.00	0.00	0.00
1,960.0	6.77	321.88	1,954.9	73.3	-57.6	-54.2	0.00	0.00	0.00
2,000.0	6.77	321.88	1,994.6	77.1	-60.5	-56.9	0.00	0.00	0.00

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Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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	6.77	321.88	2,034.3	80.8	-63.4	-59.7	0.00	0.00	0.00
2,080.0	6.77	321.88	2,074.0	84.5	-66.3	-62.4	0.00	0.00	0.00
2,120.0	6.77	321.88	2,113.8	88.2	-69.2	-65.1	0.00	0.00	0.00
2,160.0	6.77	321.88	2,153.5	91.9	-72.1	-67.9	0.00	0.00	0.00
2,200.0	6.77	321.88	2,193.2	95.6	-75.0	-70.6	0.00	0.00	0.00
2,240.0	6.77	321.88	2,232.9	99.3	-77.9	-73.4	0.00	0.00	0.00
2,280.0	6.77	321.88	2,272.6	103.0	-80.8	-76.1	0.00	0.00	0.00
2,320.0	6.77	321.88	2,312.4	106.7	-83.8	-78.8	0.00	0.00	0.00
2,360.0	6.77	321.88	2,352.1	110.4	-86.7	-81.6	0.00	0.00	0.00
2,400.0	6.77	321.88	2,391.8	114.1	-89.6	-84.3	0.00	0.00	0.00
2,440.0	6.77	321.88	2,431.5	117.9	-92.5	-87.1	0.00	0.00	0.00
2,480.0	6.77	321.88	2,471.3	121.6	-95.4	-89.8	0.00	0.00	0.00
2,520.0	6.77	321.88	2,511.0	125.3	-98.3	-92.5	0.00	0.00	0.00
2,560.0	6.77	321.88	2,550.7	129.0	-101.2	-95.3	0.00	0.00	0.00
2,600.0	6.77	321.88	2,590.4	132.7	-104.1	-98.0	0.00	0.00	0.00
2,640.0	6.77	321.88	2,630.1	136.4	-107.0	-100.8	0.00	0.00	0.00
2,680.0	6.77	321.88	2,669.9	140.1	-109.9	-103.5	0.00	0.00	0.00
2,720.0	6.77	321.88	2,709.6	143.8	-112.9	-106.3	0.00	0.00	0.00
2,760.0	6.77	321.88	2,749.3	147.5	-115.8	-109.0	0.00	0.00	0.00
2,800.0	6.77	321.88	2,789.0	151.2	-118.7	-111.7	0.00	0.00	0.00
2,840.0	6.77	321.88	2,828.7	154.9	-121.6	-114.5	0.00	0.00	0.00
2,880.0	6.77	321.88	2,868.5	158.7	-124.5	-117.2	0.00	0.00	0.00
2,920.0	6.77	321.88	2,908.2	162.4	-127.4	-120.0	0.00	0.00	0.00
2,960.0	6.77	321.88	2,947.9	166.1	-130.3	-122.7	0.00	0.00	0.00
3,000.0	6.77	321.88	2,987.6	169.8	-133.2	-125.4	0.00	0.00	0.00
3,040.0	6.77	321.88	3,027.4	173.5	-136.1	-128.2	0.00	0.00	0.00
3,080.0	6.77	321.88	3,067.1	177.2	-139.1	-130.9	0.00	0.00	0.00
3,120.0	6.77	321.88	3,106.8	180.9	-142.0	-133.7	0.00	0.00	0.00
3,160.0	6.77	321.88	3,146.5	184.6	-144.9	-136.4	0.00	0.00	0.00
3,200.0	6.77	321.88	3,186.2	188.3	-147.8	-139.1	0.00	0.00	0.00
3,240.0	6.77	321.88	3,226.0	192.0	-150.7	-141.9	0.00	0.00	0.00
3,280.0	6.77	321.88	3,265.7	195.7	-153.6	-144.6	0.00	0.00	0.00
3,320.0	6.77	321.88	3,305.4	199.5	-156.5	-147.4	0.00	0.00	0.00
3,360.0	6.77	321.88	3,345.1	203.2	-159.4	-150.1	0.00	0.00	0.00
3,400.0	6.77	321.88	3,384.8	206.9	-162.3	-152.8	0.00	0.00	0.00
3,440.0	6.77	321.88	3,424.6	210.6	-165.2	-155.6	0.00	0.00	0.00
3,480.0	6.77	321.88	3,464.3	214.3	-168.2	-158.3	0.00	0.00	0.00
3,520.0	6.77	321.88	3,504.0	218.0	-171.1	-161.1	0.00	0.00	0.00
3,560.0	6.77	321.88	3,543.7	221.7	-174.0	-163.8	0.00	0.00	0.00
3,600.0	6.77	321.88	3,583.4	225.4	-176.9	-166.5	0.00	0.00	0.00
3,640.0	6.77	321.88	3,623.2	229.1	-179.8	-169.3	0.00	0.00	0.00
3,679.4	6.77	321.88	3,662.3	232.8	-182.7	-172.0	0.00	0.00	0.00
3,680.0	6.76	321.88	3,662.9	232.8	-182.7	-172.0	2.00	-2.00	0.00
3,720.0	5.96	321.88	3,702.6	236.3	-185.4	-174.6	2.00	-2.00	0.00
3,760.0	5.16	321.88	3,742.5	239.4	-187.8	-176.8	2.00	-2.00	0.00
3,800.0	4.36	321.88	3,782.3	242.0	-189.9	-178.8	2.00	-2.00	0.00
3,840.0	3.56	321.88	3,822.2	244.2	-191.6	-180.4	2.00	-2.00	0.00
3,880.0	2.76	321.88	3,862.2	245.9	-193.0	-181.7	2.00	-2.00	0.00
3,920.0	1.96	321.88	3,902.1	247.2	-194.0	-182.6	2.00	-2.00	0.00
3,960.0	1.16	321.88	3,942.1	248.0	-194.6	-183.2	2.00	-2.00	0.00
4,000.0	0.36	321.88	3,982.1	248.5	-195.0	-183.6	2.00	-2.00	0.00
4,017.9	0.00	0.00	4,000.0	248.5	-195.0	-183.6	2.00	-2.00	0.00
4,040.0	0.00	0.00	4,022.1	248.5	-195.0	-183.6	0.00	0.00	0.00

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Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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)
4,080.0	0.00	0.00	4,062.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,120.0	0.00	0.00	4,102.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,160.0	0.00	0.00	4,142.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,200.0	0.00	0.00	4,182.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,240.0	0.00	0.00	4,222.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,280.0	0.00	0.00	4,262.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,320.0	0.00	0.00	4,302.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,360.0	0.00	0.00	4,342.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,400.0	0.00	0.00	4,382.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,440.0	0.00	0.00	4,422.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,480.0	0.00	0.00	4,462.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,520.0	0.00	0.00	4,502.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,560.0	0.00	0.00	4,542.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,600.0	0.00	0.00	4,582.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,640.0	0.00	0.00	4,622.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,680.0	0.00	0.00	4,662.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,720.0	0.00	0.00	4,702.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,760.0	0.00	0.00	4,742.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,800.0	0.00	0.00	4,782.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,840.0	0.00	0.00	4,822.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,880.0	0.00	0.00	4,862.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,920.0	0.00	0.00	4,902.1	248.5	-195.0	-183.6	0.00	0.00	0.00
4,960.0	0.00	0.00	4,942.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,000.0	0.00	0.00	4,982.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,040.0	0.00	0.00	5,022.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,080.0	0.00	0.00	5,062.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,120.0	0.00	0.00	5,102.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,160.0	0.00	0.00	5,142.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,182.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,240.0	0.00	0.00	5,222.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,280.0	0.00	0.00	5,262.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,320.0	0.00	0.00	5,302.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,360.0	0.00	0.00	5,342.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,382.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,440.0	0.00	0.00	5,422.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,480.0	0.00	0.00	5,462.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,520.0	0.00	0.00	5,502.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,560.0	0.00	0.00	5,542.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,582.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,640.0	0.00	0.00	5,622.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,680.0	0.00	0.00	5,662.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,720.0	0.00	0.00	5,702.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,760.0	0.00	0.00	5,742.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,782.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,840.0	0.00	0.00	5,822.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,862.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,902.1	248.5	-195.0	-183.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,942.1	248.5	-195.0	-183.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,982.1	248.5	-195.0	-183.6	0.00	0.00	0.00
6,040.0	0.00	0.00	6,022.1	248.5	-195.0	-183.6	0.00	0.00	0.00
6,080.0	0.00	0.00	6,062.1	248.5	-195.0	-183.6	0.00	0.00	0.00
6,120.0	0.00	0.00	6,102.1	248.5	-195.0	-183.6	0.00	0.00	0.00
6,160.0	0.00	0.00	6,142.1	248.5	-195.0	-183.6	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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)
6,199.2	0.00	0.00	6,181.3	248.5	-195.0	-183.6	0.00	0.00	0.00
KOP #2									
6,200.0	0.06	90.24	6,182.1	248.5	-195.0	-183.6	7.75	7.75	0.00
6,240.0	3.06	90.24	6,222.1	248.5	-193.9	-182.5	7.50	7.50	0.00
6,280.0	6.06	90.24	6,262.0	248.5	-190.7	-179.3	7.50	7.50	0.00
6,320.0	9.06	90.24	6,301.6	248.5	-185.5	-174.1	7.50	7.50	0.00
6,360.0	12.06	90.24	6,340.9	248.4	-178.1	-166.7	7.50	7.50	0.00
6,400.0	15.06	90.24	6,379.8	248.4	-168.8	-157.4	7.50	7.50	0.00
6,440.0	18.06	90.24	6,418.1	248.3	-157.4	-146.0	7.50	7.50	0.00
6,480.0	21.06	90.24	6,455.8	248.3	-144.0	-132.6	7.50	7.50	0.00
6,520.0	24.06	90.24	6,492.8	248.2	-128.6	-117.3	7.50	7.50	0.00
6,560.0	27.06	90.24	6,528.8	248.1	-111.4	-100.0	7.50	7.50	0.00
6,600.0	30.06	90.24	6,564.0	248.1	-92.2	-80.9	7.50	7.50	0.00
6,640.0	33.06	90.24	6,598.0	248.0	-71.3	-60.0	7.50	7.50	0.00
6,680.0	36.06	90.24	6,631.0	247.9	-48.6	-37.4	7.50	7.50	0.00
6,720.0	39.06	90.24	6,662.7	247.8	-24.2	-13.0	7.50	7.50	0.00
6,760.0	42.06	90.24	6,693.1	247.7	1.8	13.0	7.50	7.50	0.00
6,800.0	45.06	90.24	6,722.1	247.6	29.3	40.5	7.50	7.50	0.00
6,840.0	48.06	90.24	6,749.6	247.4	58.4	69.5	7.50	7.50	0.00
6,880.0	51.06	90.24	6,775.5	247.3	88.8	99.9	7.50	7.50	0.00
6,920.0	54.06	90.24	6,799.8	247.2	120.6	131.6	7.50	7.50	0.00
6,960.0	57.06	90.24	6,822.4	247.0	153.6	164.6	7.50	7.50	0.00
7,000.0	60.06	90.24	6,843.3	246.9	187.7	198.6	7.50	7.50	0.00
7,040.0	63.06	90.24	6,862.3	246.7	222.9	233.8	7.50	7.50	0.00
7,080.0	66.06	90.24	6,879.5	246.6	259.0	269.8	7.50	7.50	0.00
7,120.0	69.06	90.24	6,894.8	246.4	295.9	306.8	7.50	7.50	0.00
7,160.0	72.06	90.24	6,908.1	246.3	333.7	344.4	7.50	7.50	0.00
7,200.0	75.06	90.24	6,919.4	246.1	372.0	382.7	7.50	7.50	0.00
7,240.0	78.06	90.24	6,928.7	246.0	410.9	421.6	7.50	7.50	0.00
7,280.0	81.06	90.24	6,935.9	245.8	450.2	460.9	7.50	7.50	0.00
7,319.2	84.00	90.24	6,941.0	245.6	489.1	499.7	7.50	7.50	0.00
7"									
7,320.0	84.00	90.24	6,941.1	245.6	489.9	500.5	0.00	0.00	0.00
7,360.0	84.00	90.24	6,945.3	245.5	529.7	540.2	0.00	0.00	0.00
7,393.3	84.00	90.24	6,948.8	245.3	562.8	573.3	0.00	0.00	0.00
7,400.0	84.34	90.24	6,949.5	245.3	569.5	580.0	5.00	5.00	0.00
7,440.0	86.34	90.24	6,952.7	245.1	609.3	619.8	5.00	5.00	0.00
7,480.0	88.34	90.24	6,954.6	245.0	649.3	659.7	5.00	5.00	0.00
7,520.0	90.34	90.24	6,955.0	244.8	689.3	699.6	5.00	5.00	0.00
7,528.7	90.77	90.24	6,955.0	244.8	698.0	708.3	4.98	4.98	0.00
End of Build									
7,560.0	90.77	90.24	6,954.5	244.6	729.3	739.6	0.00	0.00	0.00
7,600.0	90.77	90.24	6,954.0	244.5	769.3	779.5	0.00	0.00	0.00
7,640.0	90.77	90.24	6,953.5	244.3	809.3	819.5	0.00	0.00	0.00
7,680.0	90.77	90.24	6,952.9	244.1	849.3	859.4	0.00	0.00	0.00
7,720.0	90.77	90.24	6,952.4	244.0	889.3	899.4	0.00	0.00	0.00
7,760.0	90.77	90.24	6,951.9	243.8	929.3	939.3	0.00	0.00	0.00
7,800.0	90.77	90.24	6,951.3	243.6	969.3	979.3	0.00	0.00	0.00
7,840.0	90.77	90.24	6,950.8	243.4	1,009.3	1,019.2	0.00	0.00	0.00
7,880.0	90.77	90.24	6,950.2	243.3	1,049.2	1,059.2	0.00	0.00	0.00
7,920.0	90.77	90.24	6,949.7	243.1	1,089.2	1,099.1	0.00	0.00	0.00
7,960.0	90.77	90.24	6,949.2	242.9	1,129.2	1,139.1	0.00	0.00	0.00
8,000.0	90.77	90.24	6,948.6	242.8	1,169.2	1,179.0	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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)
8,040.0	90.77	90.24	6,948.1	242.6	1,209.2	1,219.0	0.00	0.00	0.00
8,080.0	90.77	90.24	6,947.6	242.4	1,249.2	1,258.9	0.00	0.00	0.00
8,120.0	90.77	90.24	6,947.0	242.3	1,289.2	1,298.8	0.00	0.00	0.00
8,160.0	90.77	90.24	6,946.5	242.1	1,329.2	1,338.8	0.00	0.00	0.00
8,200.0	90.77	90.24	6,945.9	241.9	1,369.2	1,378.7	0.00	0.00	0.00
8,240.0	90.77	90.24	6,945.4	241.8	1,409.2	1,418.7	0.00	0.00	0.00
8,280.0	90.77	90.24	6,944.9	241.6	1,449.2	1,458.6	0.00	0.00	0.00
8,320.0	90.77	90.24	6,944.3	241.4	1,489.2	1,498.6	0.00	0.00	0.00
8,360.0	90.77	90.24	6,943.8	241.3	1,529.2	1,538.5	0.00	0.00	0.00
8,400.0	90.77	90.24	6,943.3	241.1	1,569.2	1,578.5	0.00	0.00	0.00
8,440.0	90.77	90.24	6,942.7	240.9	1,609.2	1,618.4	0.00	0.00	0.00
8,480.0	90.77	90.24	6,942.2	240.7	1,649.2	1,658.4	0.00	0.00	0.00
8,520.0	90.77	90.24	6,941.6	240.6	1,689.2	1,698.3	0.00	0.00	0.00
8,560.0	90.77	90.24	6,941.1	240.4	1,729.2	1,738.3	0.00	0.00	0.00
8,600.0	90.77	90.24	6,940.6	240.2	1,769.2	1,778.2	0.00	0.00	0.00
8,640.0	90.77	90.24	6,940.0	240.1	1,809.2	1,818.2	0.00	0.00	0.00
8,680.0	90.77	90.24	6,939.5	239.9	1,849.2	1,858.1	0.00	0.00	0.00
8,720.0	90.77	90.24	6,939.0	239.7	1,889.2	1,898.1	0.00	0.00	0.00
8,760.0	90.77	90.24	6,938.4	239.6	1,929.2	1,938.0	0.00	0.00	0.00
8,800.0	90.77	90.24	6,937.9	239.4	1,969.2	1,978.0	0.00	0.00	0.00
8,840.0	90.77	90.24	6,937.4	239.2	2,009.2	2,017.9	0.00	0.00	0.00
8,880.0	90.77	90.24	6,936.8	239.1	2,049.1	2,057.9	0.00	0.00	0.00
8,920.0	90.77	90.24	6,936.3	238.9	2,089.1	2,097.8	0.00	0.00	0.00
8,960.0	90.77	90.24	6,935.7	238.7	2,129.1	2,137.7	0.00	0.00	0.00
9,000.0	90.77	90.24	6,935.2	238.6	2,169.1	2,177.7	0.00	0.00	0.00
9,040.0	90.77	90.24	6,934.7	238.4	2,209.1	2,217.6	0.00	0.00	0.00
9,080.0	90.77	90.24	6,934.1	238.2	2,249.1	2,257.6	0.00	0.00	0.00
9,120.0	90.77	90.24	6,933.6	238.1	2,289.1	2,297.5	0.00	0.00	0.00
9,160.0	90.77	90.24	6,933.1	237.9	2,329.1	2,337.5	0.00	0.00	0.00
9,200.0	90.77	90.24	6,932.5	237.7	2,369.1	2,377.4	0.00	0.00	0.00
9,240.0	90.77	90.24	6,932.0	237.5	2,409.1	2,417.4	0.00	0.00	0.00
9,280.0	90.77	90.24	6,931.4	237.4	2,449.1	2,457.3	0.00	0.00	0.00
9,320.0	90.77	90.24	6,930.9	237.2	2,489.1	2,497.3	0.00	0.00	0.00
9,360.0	90.77	90.24	6,930.4	237.0	2,529.1	2,537.2	0.00	0.00	0.00
9,400.0	90.77	90.24	6,929.8	236.9	2,569.1	2,577.2	0.00	0.00	0.00
9,440.0	90.77	90.24	6,929.3	236.7	2,609.1	2,617.1	0.00	0.00	0.00
9,480.0	90.77	90.24	6,928.8	236.5	2,649.1	2,657.1	0.00	0.00	0.00
9,520.0	90.77	90.24	6,928.2	236.4	2,689.1	2,697.0	0.00	0.00	0.00
9,560.0	90.77	90.24	6,927.7	236.2	2,729.1	2,737.0	0.00	0.00	0.00
9,600.0	90.77	90.24	6,927.1	236.0	2,769.1	2,776.9	0.00	0.00	0.00
9,640.0	90.77	90.24	6,926.6	235.9	2,809.1	2,816.9	0.00	0.00	0.00
9,680.0	90.77	90.24	6,926.1	235.7	2,849.1	2,856.8	0.00	0.00	0.00
9,720.0	90.77	90.24	6,925.5	235.5	2,889.1	2,896.8	0.00	0.00	0.00
9,760.0	90.77	90.24	6,925.0	235.4	2,929.1	2,936.7	0.00	0.00	0.00
9,800.0	90.77	90.24	6,924.5	235.2	2,969.1	2,976.6	0.00	0.00	0.00
9,840.0	90.77	90.24	6,923.9	235.0	3,009.1	3,016.6	0.00	0.00	0.00
9,880.0	90.77	90.24	6,923.4	234.9	3,049.0	3,056.5	0.00	0.00	0.00
9,920.0	90.77	90.24	6,922.9	234.7	3,089.0	3,096.5	0.00	0.00	0.00
9,960.0	90.77	90.24	6,922.3	234.5	3,129.0	3,136.4	0.00	0.00	0.00
10,000.0	90.77	90.24	6,921.8	234.3	3,169.0	3,176.4	0.00	0.00	0.00
10,040.0	90.77	90.24	6,921.2	234.2	3,209.0	3,216.3	0.00	0.00	0.00
10,080.0	90.77	90.24	6,920.7	234.0	3,249.0	3,256.3	0.00	0.00	0.00
10,120.0	90.77	90.24	6,920.2	233.8	3,289.0	3,296.2	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

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)
10,160.0	90.77	90.24	6,919.6	233.7	3,329.0	3,336.2	0.00	0.00	0.00
10,200.0	90.77	90.24	6,919.1	233.5	3,369.0	3,376.1	0.00	0.00	0.00
10,240.0	90.77	90.24	6,918.6	233.3	3,409.0	3,416.1	0.00	0.00	0.00
10,280.0	90.77	90.24	6,918.0	233.2	3,449.0	3,456.0	0.00	0.00	0.00
10,320.0	90.77	90.24	6,917.5	233.0	3,489.0	3,496.0	0.00	0.00	0.00
10,360.0	90.77	90.24	6,916.9	232.8	3,529.0	3,535.9	0.00	0.00	0.00
10,400.0	90.77	90.24	6,916.4	232.7	3,569.0	3,575.9	0.00	0.00	0.00
10,440.0	90.77	90.24	6,915.9	232.5	3,609.0	3,615.8	0.00	0.00	0.00
10,480.0	90.77	90.24	6,915.3	232.3	3,649.0	3,655.8	0.00	0.00	0.00
10,520.0	90.77	90.24	6,914.8	232.2	3,689.0	3,695.7	0.00	0.00	0.00
10,560.0	90.77	90.24	6,914.3	232.0	3,729.0	3,735.7	0.00	0.00	0.00
10,600.0	90.77	90.24	6,913.7	231.8	3,769.0	3,775.6	0.00	0.00	0.00
10,640.0	90.77	90.24	6,913.2	231.6	3,809.0	3,815.5	0.00	0.00	0.00
10,680.0	90.77	90.24	6,912.6	231.5	3,849.0	3,855.5	0.00	0.00	0.00
10,720.0	90.77	90.24	6,912.1	231.3	3,889.0	3,895.4	0.00	0.00	0.00
10,760.0	90.77	90.24	6,911.6	231.1	3,929.0	3,935.4	0.00	0.00	0.00
10,800.0	90.77	90.24	6,911.0	231.0	3,969.0	3,975.3	0.00	0.00	0.00
10,840.0	90.77	90.24	6,910.5	230.8	4,009.0	4,015.3	0.00	0.00	0.00
10,880.0	90.77	90.24	6,910.0	230.6	4,049.0	4,055.2	0.00	0.00	0.00
10,920.0	90.77	90.24	6,909.4	230.5	4,088.9	4,095.2	0.00	0.00	0.00
10,960.0	90.77	90.24	6,908.9	230.3	4,128.9	4,135.1	0.00	0.00	0.00
11,000.0	90.77	90.24	6,908.3	230.1	4,168.9	4,175.1	0.00	0.00	0.00
11,040.0	90.77	90.24	6,907.8	230.0	4,208.9	4,215.0	0.00	0.00	0.00
11,080.0	90.77	90.24	6,907.3	229.8	4,248.9	4,255.0	0.00	0.00	0.00
11,120.0	90.77	90.24	6,906.7	229.6	4,288.9	4,294.9	0.00	0.00	0.00
11,160.0	90.77	90.24	6,906.2	229.5	4,328.9	4,334.9	0.00	0.00	0.00
11,200.0	90.77	90.24	6,905.7	229.3	4,368.9	4,374.8	0.00	0.00	0.00
11,240.0	90.77	90.24	6,905.1	229.1	4,408.9	4,414.8	0.00	0.00	0.00
11,280.0	90.77	90.24	6,904.6	229.0	4,448.9	4,454.7	0.00	0.00	0.00
11,320.0	90.77	90.24	6,904.1	228.8	4,488.9	4,494.7	0.00	0.00	0.00
11,360.0	90.77	90.24	6,903.5	228.6	4,528.9	4,534.6	0.00	0.00	0.00
11,400.0	90.77	90.24	6,903.0	228.4	4,568.9	4,574.6	0.00	0.00	0.00
11,440.0	90.77	90.24	6,902.4	228.3	4,608.9	4,614.5	0.00	0.00	0.00
11,480.0	90.77	90.24	6,901.9	228.1	4,648.9	4,654.4	0.00	0.00	0.00
11,520.0	90.77	90.24	6,901.4	227.9	4,688.9	4,694.4	0.00	0.00	0.00
11,560.0	90.77	90.24	6,900.8	227.8	4,728.9	4,734.3	0.00	0.00	0.00
11,600.0	90.77	90.24	6,900.3	227.6	4,768.9	4,774.3	0.00	0.00	0.00
11,640.0	90.77	90.24	6,899.8	227.4	4,808.9	4,814.2	0.00	0.00	0.00
11,680.0	90.77	90.24	6,899.2	227.3	4,848.9	4,854.2	0.00	0.00	0.00
11,720.0	90.77	90.24	6,898.7	227.1	4,888.9	4,894.1	0.00	0.00	0.00
11,760.0	90.77	90.24	6,898.1	226.9	4,928.9	4,934.1	0.00	0.00	0.00
11,800.0	90.77	90.24	6,897.6	226.8	4,968.9	4,974.0	0.00	0.00	0.00
11,840.0	90.77	90.24	6,897.1	226.6	5,008.9	5,014.0	0.00	0.00	0.00
11,845.1	90.77	90.24	6,897.0	226.6	5,014.0	5,019.1	0.00	0.00	0.00
BHL 1078'FNL, 50'FEL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,319.2	6,941.0	7"	7	8-3/4

Database:	Landmark	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Project:	SEC.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**North Reference:**	True
Well:	LaSalle 25F-412	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-18-13)		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,000.0	1,000.0	0.0	0.0	KOP #1
6,199.2	6,181.3	248.5	-195.0	KOP #2
7,528.7	6,955.0	244.8	698.0	End of Build

ENSIGN Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.25-T5N-R65W
LaSalle 25F-HZ Pad Sec.25-T5N-R65W
LaSalle 25F-412

Wellbore #1
Plan #2 (4-18-13)

Anticollision Report

18 April, 2013

PDC ENERGY
Growing E&P Value

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Reference Plan #2 (4-18-13)

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**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** 4/18/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,845.1	Plan #2 (4-18-13) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
LaSalle 25F-HZ Pad Sec.25-T5N-R65W						
LaSalle 25E-202 - Wellbore #1 - Plan #2 (4-18-13)	200.0	200.0	29.1	28.5	43.216	CC, ES
LaSalle 25E-202 - Wellbore #1 - Plan #2 (4-18-13)	11,845.1	11,788.6	948.6	668.1	3.382	SF
LaSalle 25F-332 - Wellbore #1 - Plan #1 (2-25-13)	1,000.0	1,000.0	29.1	24.9	6.826	CC, ES
LaSalle 25F-332 - Wellbore #1 - Plan #1 (2-25-13)	11,400.0	11,319.4	471.5	216.9	1.852	SF

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25E-202 - Wellbore #1 - Plan #2 (4-18-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance 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	29.1				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	29.1	0.0	29.1	28.9	0.22	129.649	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.216	CC, ES
300.0	300.0	299.0	298.9	0.6	0.6	-0.53	30.8	-0.3	30.8	29.7	1.12	27.471	
400.0	400.0	397.7	397.5	0.8	0.8	-1.82	35.9	-1.1	36.0	34.4	1.58	22.776	
500.0	500.0	496.0	495.4	1.0	1.0	-3.31	44.2	-2.6	44.5	42.5	2.05	21.757	
600.0	600.0	593.5	592.3	1.2	1.3	-4.63	55.7	-4.5	56.5	53.9	2.53	22.343	
700.0	700.0	690.2	687.8	1.5	1.6	-5.67	70.4	-7.0	71.8	68.8	3.03	23.725	
800.0	800.0	785.7	781.7	1.7	2.0	-6.47	88.0	-10.0	90.4	86.9	3.54	25.516	
900.0	900.0	880.6	874.2	1.9	2.4	-7.07	108.4	-13.4	112.3	108.2	4.08	27.491	
1,000.0	1,000.0	977.9	968.9	2.1	2.8	-7.50	130.5	-17.2	135.3	130.6	4.64	29.159	
1,100.0	1,100.0	1,075.5	1,063.9	2.4	3.2	30.42	152.7	-20.9	156.8	151.9	4.85	32.319	
1,200.0	1,199.8	1,173.8	1,159.5	2.6	3.7	30.83	175.0	-24.7	175.4	170.1	5.32	32.947	
1,300.0	1,299.5	1,272.5	1,255.6	2.8	4.2	31.71	197.4	-28.5	191.1	185.3	5.81	32.911	
1,400.0	1,398.8	1,371.5	1,351.9	3.1	4.6	32.96	219.8	-32.3	204.5	198.2	6.31	32.405	
1,500.0	1,498.1	1,470.5	1,448.3	3.3	5.1	34.15	242.3	-36.1	217.7	210.9	6.83	31.894	
1,600.0	1,597.4	1,569.5	1,544.6	3.6	5.6	35.21	264.8	-40.0	231.1	223.7	7.35	31.430	
1,700.0	1,696.7	1,668.5	1,641.0	3.9	6.0	36.14	287.2	-43.8	244.5	236.6	7.89	31.005	
1,800.0	1,796.0	1,767.5	1,737.4	4.1	6.5	36.98	309.7	-47.6	258.0	249.5	8.43	30.617	
1,900.0	1,895.3	1,866.6	1,833.7	4.4	7.0	37.74	332.2	-51.4	271.5	262.5	8.97	30.260	
2,000.0	1,994.6	1,965.6	1,930.1	4.7	7.5	38.43	354.6	-55.2	285.0	275.5	9.52	29.932	
2,100.0	2,093.9	2,064.6	2,026.4	5.0	7.9	39.05	377.1	-59.0	298.6	288.6	10.08	29.630	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25E-202 - Wellbore #1 - Plan #2 (4-18-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,200.0	2,193.2	2,163.6	2,122.8	5.3	8.4	39.62	399.6	-62.8	312.3	301.6	10.64	29.351	
2,300.0	2,292.5	2,262.6	2,219.2	5.6	8.9	40.14	422.1	-66.6	325.9	314.7	11.20	29.093	
2,400.0	2,391.8	2,361.7	2,315.5	5.9	9.4	40.62	444.5	-70.4	339.6	327.8	11.77	28.853	
2,500.0	2,491.1	2,460.7	2,411.9	6.2	9.8	41.06	467.0	-74.2	353.3	341.0	12.34	28.631	
2,600.0	2,590.4	2,559.7	2,508.3	6.5	10.3	41.47	489.5	-78.1	367.0	354.1	12.91	28.424	
2,700.0	2,689.7	2,658.7	2,604.6	6.8	10.8	41.85	511.9	-81.9	380.8	367.3	13.49	28.230	
2,800.0	2,789.0	2,757.8	2,701.0	7.1	11.3	42.20	534.4	-85.7	394.5	380.5	14.07	28.050	
2,900.0	2,888.3	2,856.8	2,797.3	7.4	11.7	42.53	556.9	-89.5	408.3	393.7	14.64	27.881	
3,000.0	2,987.6	2,955.8	2,893.7	7.7	12.2	42.84	579.4	-93.3	422.1	406.9	15.23	27.722	
3,100.0	3,086.9	3,054.8	2,990.1	8.0	12.7	43.13	601.8	-97.1	435.9	420.1	15.81	27.573	
3,200.0	3,186.2	3,153.8	3,086.4	8.3	13.2	43.40	624.3	-100.9	449.7	433.3	16.39	27.433	
3,300.0	3,285.5	3,252.9	3,182.8	8.6	13.6	43.65	646.8	-104.7	463.5	446.5	16.98	27.301	
3,400.0	3,384.8	3,351.9	3,279.2	8.9	14.1	43.89	669.2	-108.5	477.3	459.8	17.56	27.176	
3,500.0	3,484.1	3,450.9	3,375.5	9.2	14.6	44.12	691.7	-112.3	491.2	473.0	18.15	27.058	
3,600.0	3,583.4	3,549.9	3,471.9	9.5	15.1	44.33	714.2	-116.2	505.0	486.3	18.74	26.946	
3,700.0	3,682.8	3,648.9	3,568.2	9.8	15.5	44.57	736.6	-120.0	518.9	499.6	19.32	26.856	
3,800.0	3,782.3	3,747.7	3,664.4	10.1	16.0	44.80	759.1	-123.8	534.5	514.7	19.80	26.988	
3,900.0	3,882.1	3,846.0	3,760.0	10.2	16.5	44.80	781.4	-127.6	552.5	532.3	20.24	27.299	
4,000.0	3,982.1	3,943.8	3,855.2	10.4	17.0	44.61	803.6	-131.3	573.0	552.3	20.63	27.779	
4,100.0	4,082.1	4,041.1	3,949.9	10.6	17.4	5.93	825.6	-135.1	595.1	568.3	26.85	22.163	
4,200.0	4,182.1	4,138.4	4,044.6	10.8	17.9	5.36	847.7	-138.8	617.4	589.8	27.55	22.409	
4,300.0	4,282.1	4,235.8	4,139.3	11.0	18.4	4.83	869.8	-142.5	639.7	611.4	28.25	22.645	
4,400.0	4,382.1	4,333.1	4,234.0	11.1	18.8	4.33	891.9	-146.3	662.0	633.1	28.94	22.873	
4,500.0	4,482.1	4,430.4	4,328.7	11.3	19.3	3.87	914.0	-150.0	684.4	654.8	29.64	23.093	
4,600.0	4,582.1	4,527.7	4,423.4	11.5	19.8	3.43	936.1	-153.8	706.8	676.5	30.33	23.305	
4,700.0	4,682.1	4,625.0	4,518.1	11.7	20.3	3.02	958.1	-157.5	729.3	698.3	31.02	23.509	
4,800.0	4,782.1	4,722.3	4,612.8	11.9	20.7	2.64	980.2	-161.3	751.8	720.1	31.71	23.706	
4,900.0	4,882.1	4,819.6	4,707.5	12.1	21.2	2.28	1,002.3	-165.0	774.3	741.9	32.40	23.896	
5,000.0	4,982.1	4,917.0	4,802.2	12.3	21.7	1.94	1,024.4	-168.8	796.9	763.8	33.09	24.080	
5,100.0	5,082.1	5,014.3	4,896.9	12.5	22.1	1.61	1,046.5	-172.5	819.5	785.7	33.78	24.257	
5,200.0	5,182.1	5,111.6	4,991.6	12.7	22.6	1.31	1,068.6	-176.2	842.1	807.6	34.47	24.428	
5,300.0	5,282.1	5,208.9	5,086.3	12.9	23.1	1.02	1,090.6	-180.0	864.7	829.6	35.16	24.593	
5,400.0	5,382.1	5,324.4	5,198.9	13.1	23.6	0.70	1,116.3	-184.3	887.0	851.1	35.89	24.716	
5,500.0	5,482.1	5,466.5	5,338.4	13.3	24.0	0.40	1,142.2	-188.7	905.2	868.7	36.57	24.754	
5,600.0	5,582.1	5,610.8	5,481.4	13.5	24.4	0.19	1,161.6	-192.0	918.7	881.5	37.17	24.713	
5,700.0	5,682.1	5,756.8	5,626.9	13.7	24.7	0.05	1,174.0	-194.1	927.1	889.4	37.68	24.605	
5,800.0	5,782.1	5,903.7	5,773.7	13.9	24.9	0.00	1,179.0	-195.0	930.6	892.5	38.10	24.424	
5,900.0	5,882.1	6,012.2	5,882.1	14.1	25.0	0.00	1,179.1	-195.0	930.6	892.2	38.42	24.223	
6,000.0	5,982.1	6,112.2	5,982.1	14.3	25.1	0.00	1,179.1	-195.0	930.6	891.9	38.74	24.024	
6,100.0	6,082.1	6,212.3	6,082.2	14.5	25.2	0.20	1,179.1	-191.7	930.6	891.6	39.04	23.837	
6,109.6	6,091.8	6,221.9	6,091.8	14.5	25.2	-89.98	1,179.1	-190.8	930.6	900.8	29.84	31.189	
6,200.0	6,182.1	6,310.3	6,178.9	14.7	25.3	-89.10	1,179.1	-176.5	930.7	900.5	30.21	30.806	
6,300.0	6,281.8	6,404.8	6,269.6	14.9	25.4	-87.81	1,178.9	-150.1	931.3	900.7	30.60	30.440	
6,400.0	6,379.8	6,497.1	6,354.4	15.0	25.4	-86.56	1,178.8	-113.8	932.4	901.4	30.92	30.155	
6,500.0	6,474.4	6,587.3	6,432.4	15.1	25.4	-85.38	1,178.6	-68.7	933.7	902.5	31.23	29.902	
6,600.0	6,564.0	6,675.8	6,503.3	15.1	25.4	-84.28	1,178.3	-15.8	935.4	903.8	31.59	29.613	
6,700.0	6,647.0	6,762.7	6,566.5	15.2	25.5	-83.28	1,178.1	43.8	937.2	905.1	32.09	29.207	
6,800.0	6,722.1	6,850.0	6,622.8	15.3	25.5	-82.36	1,177.8	110.5	939.0	906.1	32.88	28.558	
6,900.0	6,787.9	6,932.9	6,668.8	15.9	25.6	-81.59	1,177.4	179.3	940.8	906.7	34.06	27.623	
7,000.0	6,843.3	7,016.5	6,707.5	16.8	25.8	-80.93	1,177.1	253.5	942.4	906.6	35.73	26.373	
7,100.0	6,887.4	7,100.0	6,737.7	18.0	26.1	-80.40	1,176.8	331.2	943.7	905.8	37.96	24.862	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25E-202 - Wellbore #1 - Plan #2 (4-18-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,200.0	6,919.4	7,181.9	6,759.0	19.5	26.5	-80.01	1,176.4	410.3	944.8	904.1	40.73	23.197	
7,300.0	6,938.8	7,264.0	6,771.7	21.3	27.1	-79.77	1,176.0	491.3	945.5	901.5	43.97	21.503	
7,400.0	6,949.5	7,345.6	6,775.6	23.3	27.9	-79.47	1,175.7	572.8	946.5	899.1	47.43	19.955	
7,500.0	6,955.0	7,443.4	6,774.1	25.4	29.3	-79.00	1,175.2	670.6	947.8	896.2	51.55	18.385	
7,600.0	6,954.0	7,543.4	6,772.5	27.7	31.0	-78.96	1,174.8	770.6	947.9	892.0	55.89	16.960	
7,700.0	6,952.7	7,643.4	6,770.9	30.0	32.9	-78.95	1,174.3	870.6	947.9	887.5	60.38	15.697	
7,800.0	6,951.3	7,743.4	6,769.4	32.4	35.0	-78.93	1,173.9	970.6	947.9	882.8	65.04	14.574	
7,900.0	6,950.0	7,843.4	6,767.8	34.8	37.3	-78.92	1,173.4	1,070.6	947.9	878.1	69.82	13.576	
8,000.0	6,948.6	7,943.4	6,766.2	37.4	39.6	-78.90	1,173.0	1,170.5	947.9	873.2	74.70	12.689	
8,100.0	6,947.3	8,043.4	6,764.6	39.9	42.0	-78.89	1,172.5	1,270.5	947.9	868.3	79.67	11.899	
8,200.0	6,945.9	8,143.4	6,763.0	42.5	44.4	-78.87	1,172.1	1,370.5	948.0	863.3	84.70	11.192	
8,300.0	6,944.6	8,243.4	6,761.4	45.1	46.9	-78.86	1,171.6	1,470.5	948.0	858.2	89.79	10.558	
8,400.0	6,943.3	8,343.4	6,759.8	47.7	49.4	-78.84	1,171.2	1,570.5	948.0	853.1	94.93	9.987	
8,500.0	6,941.9	8,443.4	6,758.2	50.4	52.0	-78.83	1,170.7	1,670.5	948.0	847.9	100.10	9.470	
8,600.0	6,940.6	8,543.4	6,756.6	53.0	54.6	-78.81	1,170.3	1,770.5	948.0	842.7	105.31	9.002	
8,700.0	6,939.2	8,643.4	6,755.1	55.7	57.2	-78.80	1,169.8	1,870.4	948.0	837.5	110.55	8.576	
8,800.0	6,937.9	8,743.4	6,753.5	58.4	59.8	-78.78	1,169.4	1,970.4	948.1	832.2	115.82	8.186	
8,900.0	6,936.5	8,843.4	6,751.9	61.1	62.4	-78.77	1,168.9	2,070.4	948.1	827.0	121.10	7.829	
9,000.0	6,935.2	8,943.4	6,750.3	63.8	65.1	-78.75	1,168.5	2,170.4	948.1	821.7	126.41	7.500	
9,100.0	6,933.9	9,043.4	6,748.7	66.5	67.8	-78.74	1,168.0	2,270.4	948.1	816.4	131.73	7.197	
9,200.0	6,932.5	9,143.4	6,747.1	69.3	70.4	-78.72	1,167.5	2,370.4	948.1	811.1	137.07	6.917	
9,300.0	6,931.2	9,243.4	6,745.5	72.0	73.1	-78.71	1,167.1	2,470.4	948.2	805.7	142.42	6.658	
9,400.0	6,929.8	9,343.4	6,743.9	74.7	75.8	-78.69	1,166.6	2,570.3	948.2	800.4	147.78	6.416	
9,500.0	6,928.5	9,443.4	6,742.4	77.5	78.5	-78.68	1,166.2	2,670.3	948.2	795.0	153.15	6.191	
9,600.0	6,927.1	9,543.4	6,740.8	80.2	81.2	-78.66	1,165.7	2,770.3	948.2	789.7	158.53	5.981	
9,700.0	6,925.8	9,643.4	6,739.2	83.0	84.0	-78.65	1,165.3	2,870.3	948.2	784.3	163.92	5.785	
9,800.0	6,924.5	9,743.4	6,737.6	85.7	86.7	-78.63	1,164.8	2,970.3	948.2	778.9	169.31	5.601	
9,900.0	6,923.1	9,843.4	6,736.0	88.5	89.4	-78.62	1,164.4	3,070.3	948.3	773.5	174.72	5.427	
10,000.0	6,921.8	9,943.4	6,734.4	91.3	92.1	-78.60	1,163.9	3,170.3	948.3	768.2	180.12	5.265	
10,100.0	6,920.4	10,043.4	6,732.8	94.0	94.9	-78.59	1,163.5	3,270.2	948.3	762.8	185.54	5.111	
10,200.0	6,919.1	10,143.4	6,731.2	96.8	97.6	-78.57	1,163.0	3,370.2	948.3	757.4	190.96	4.966	
10,300.0	6,917.7	10,243.4	6,729.7	99.6	100.4	-78.56	1,162.6	3,470.2	948.3	752.0	196.38	4.829	
10,400.0	6,916.4	10,343.4	6,728.1	102.3	103.1	-78.54	1,162.1	3,570.2	948.4	746.6	201.80	4.699	
10,500.0	6,915.1	10,443.4	6,726.5	105.1	105.9	-78.53	1,161.7	3,670.2	948.4	741.1	207.23	4.576	
10,600.0	6,913.7	10,543.4	6,724.9	107.9	108.6	-78.51	1,161.2	3,770.2	948.4	735.7	212.67	4.460	
10,700.0	6,912.4	10,643.4	6,723.3	110.7	111.4	-78.50	1,160.8	3,870.2	948.4	730.3	218.10	4.348	
10,800.0	6,911.0	10,743.4	6,721.7	113.4	114.2	-78.48	1,160.3	3,970.2	948.4	724.9	223.54	4.243	
10,900.0	6,909.7	10,843.4	6,720.1	116.2	116.9	-78.47	1,159.9	4,070.1	948.5	719.5	228.99	4.142	
11,000.0	6,908.3	10,943.4	6,718.5	119.0	119.7	-78.45	1,159.4	4,170.1	948.5	714.0	234.43	4.046	
11,100.0	6,907.0	11,043.4	6,716.9	121.8	122.4	-78.44	1,159.0	4,270.1	948.5	708.6	239.88	3.954	
11,200.0	6,905.7	11,143.4	6,715.4	124.6	125.2	-78.42	1,158.5	4,370.1	948.5	703.2	245.33	3.866	
11,300.0	6,904.3	11,243.4	6,713.8	127.4	128.0	-78.41	1,158.1	4,470.1	948.5	697.8	250.78	3.782	
11,400.0	6,903.0	11,343.4	6,712.2	130.1	130.8	-78.39	1,157.6	4,570.1	948.5	692.3	256.23	3.702	
11,500.0	6,901.6	11,443.4	6,710.6	132.9	133.5	-78.38	1,157.2	4,670.1	948.6	686.9	261.68	3.625	
11,600.0	6,900.3	11,543.4	6,709.0	135.7	136.3	-78.36	1,156.7	4,770.0	948.6	681.5	267.13	3.551	
11,700.0	6,898.9	11,643.4	6,707.4	138.5	139.1	-78.35	1,156.3	4,870.0	948.6	676.0	272.59	3.480	
11,800.0	6,897.6	11,743.4	6,705.8	141.3	141.9	-78.34	1,155.8	4,970.0	948.6	670.6	278.05	3.412	
11,845.1	6,897.0	11,788.6	6,705.1	142.6	143.1	-78.33	1,155.6	5,015.2	948.6	668.1	280.51	3.382	SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-332 - Wellbore #1 - Plan #1 (2-25-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance 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	129.686	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-29.1	0.0	29.1	28.5	0.67	43.229	
300.0	300.0	300.0	300.0	0.6	0.6	-180.00	-29.1	0.0	29.1	28.0	1.12	25.937	
400.0	400.0	400.0	400.0	0.8	0.8	-180.00	-29.1	0.0	29.1	27.6	1.57	18.527	
500.0	500.0	500.0	500.0	1.0	1.0	-180.00	-29.1	0.0	29.1	27.1	2.02	14.410	
600.0	600.0	600.0	600.0	1.2	1.2	-180.00	-29.1	0.0	29.1	26.7	2.47	11.790	
700.0	700.0	700.0	700.0	1.5	1.5	-180.00	-29.1	0.0	29.1	26.2	2.92	9.976	
800.0	800.0	800.0	800.0	1.7	1.7	-180.00	-29.1	0.0	29.1	25.8	3.37	8.646	
900.0	900.0	900.0	900.0	1.9	1.9	-180.00	-29.1	0.0	29.1	25.3	3.82	7.629	
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	6.826	CC, ES
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-143.88	-29.1	0.0	30.5	25.8	4.72	6.474	
1,200.0	1,199.8	1,199.8	1,199.8	2.6	2.6	-148.91	-29.1	0.0	34.9	29.7	5.16	6.764	
1,300.0	1,299.5	1,299.5	1,299.5	2.8	2.8	-154.90	-29.1	0.0	42.6	37.0	5.60	7.607	
1,400.0	1,398.8	1,398.8	1,398.8	3.1	3.0	-160.14	-29.1	0.0	53.3	47.2	6.04	8.815	
1,500.0	1,498.1	1,498.1	1,498.1	3.3	3.3	-163.69	-29.1	0.0	64.5	58.0	6.49	9.933	
1,600.0	1,597.4	1,597.4	1,597.4	3.6	3.5	-166.19	-29.1	0.0	75.9	69.0	6.94	10.930	
1,700.0	1,696.7	1,696.7	1,696.7	3.9	3.7	-168.04	-29.1	0.0	87.4	80.0	7.39	11.818	
1,800.0	1,796.0	1,796.0	1,796.0	4.1	3.9	-169.45	-29.1	0.0	99.0	91.1	7.85	12.610	
1,900.0	1,895.3	1,895.3	1,895.3	4.4	4.1	-170.57	-29.1	0.0	110.6	102.3	8.30	13.321	
2,000.0	1,994.6	1,994.6	1,994.6	4.7	4.4	-171.47	-29.1	0.0	122.2	113.5	8.75	13.960	
2,100.0	2,093.9	2,093.9	2,093.9	5.0	4.6	-172.22	-29.1	0.0	133.9	124.7	9.21	14.538	
2,200.0	2,193.2	2,193.2	2,193.2	5.3	4.8	-172.85	-29.1	0.0	145.6	135.9	9.66	15.062	
2,300.0	2,292.5	2,292.5	2,292.5	5.6	5.0	-173.38	-29.1	0.0	157.3	147.2	10.12	15.540	
2,400.0	2,391.8	2,391.8	2,391.8	5.9	5.3	-173.84	-29.1	0.0	169.0	158.4	10.58	15.977	
2,500.0	2,491.1	2,491.1	2,491.1	6.2	5.5	-174.25	-29.1	0.0	180.7	169.7	11.03	16.378	
2,600.0	2,590.4	2,590.4	2,590.4	6.5	5.7	-174.60	-29.1	0.0	192.4	181.0	11.49	16.748	
2,700.0	2,689.7	2,689.7	2,689.7	6.8	5.9	-174.91	-29.1	0.0	204.2	192.2	11.95	17.089	
2,800.0	2,789.0	2,789.0	2,789.0	7.1	6.2	-175.19	-29.1	0.0	215.9	203.5	12.41	17.405	
2,900.0	2,888.3	2,888.3	2,888.3	7.4	6.4	-175.44	-29.1	0.0	227.7	214.8	12.86	17.698	
3,000.0	2,987.6	2,987.6	2,987.6	7.7	6.6	-175.66	-29.1	0.0	239.4	226.1	13.32	17.971	
3,100.0	3,086.9	3,085.7	3,085.7	8.0	6.8	-175.57	-30.0	-0.9	251.4	237.6	13.76	18.271	
3,200.0	3,186.2	3,183.3	3,183.1	8.3	7.0	-174.78	-33.2	-4.3	264.0	249.8	14.18	18.616	
3,300.0	3,285.5	3,280.4	3,279.9	8.6	7.2	-173.38	-38.6	-9.9	277.3	262.7	14.61	18.982	
3,400.0	3,384.8	3,378.1	3,377.0	8.9	7.3	-171.57	-45.9	-17.7	291.4	276.3	15.05	19.362	
3,500.0	3,484.1	3,476.6	3,475.0	9.2	7.5	-169.86	-53.5	-25.7	305.8	290.3	15.50	19.726	
3,600.0	3,583.4	3,575.2	3,572.9	9.5	7.7	-168.29	-61.2	-33.8	320.5	304.6	15.97	20.075	
3,700.0	3,682.8	3,673.7	3,670.8	9.8	8.0	-166.88	-68.8	-41.8	335.4	318.9	16.44	20.402	
3,800.0	3,782.3	3,772.6	3,769.0	10.1	8.2	-165.54	-76.4	-49.8	348.1	331.2	16.88	20.627	
3,900.0	3,882.1	3,871.7	3,867.5	10.2	8.4	-164.13	-84.1	-57.9	357.7	340.4	17.30	20.673	
4,000.0	3,982.1	3,971.0	3,966.2	10.4	8.6	-162.63	-91.8	-66.0	364.2	346.5	17.71	20.559	
4,100.0	4,082.1	4,070.4	4,064.9	10.6	8.9	160.84	-99.5	-74.1	368.8	349.7	19.08	19.326	
4,200.0	4,182.1	4,169.7	4,163.7	10.8	9.1	162.40	-107.1	-82.2	373.6	354.1	19.45	19.204	
4,300.0	4,282.1	4,269.1	4,262.4	11.0	9.4	163.93	-114.8	-90.3	378.6	358.8	19.83	19.095	
4,400.0	4,382.1	4,368.5	4,361.2	11.1	9.6	165.41	-122.5	-98.4	384.0	363.7	20.21	18.998	
4,500.0	4,482.1	4,467.8	4,459.9	11.3	9.9	166.85	-130.2	-106.5	389.5	368.9	20.60	18.910	
4,600.0	4,582.1	4,567.2	4,558.6	11.5	10.1	168.25	-137.9	-114.6	395.4	374.4	20.99	18.832	
4,700.0	4,682.1	4,666.6	4,657.4	11.7	10.4	169.61	-145.6	-122.7	401.4	380.0	21.39	18.763	
4,800.0	4,782.1	4,765.9	4,756.1	11.9	10.6	170.92	-153.3	-130.8	407.7	385.9	21.80	18.701	
4,900.0	4,882.1	4,865.3	4,854.8	12.1	10.9	172.20	-160.9	-138.9	414.2	391.9	22.21	18.645	
5,000.0	4,982.1	4,964.7	4,953.6	12.3	11.2	173.44	-168.6	-147.0	420.8	398.2	22.63	18.596	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-332 - Wellbore #1 - Plan #1 (2-25-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,082.1	5,064.0	5,052.3	12.5	11.4	174.64	-176.3	-155.1	427.7	404.7	23.06	18.552	
5,200.0	5,182.1	5,163.4	5,151.1	12.7	11.7	175.80	-184.0	-163.2	434.8	411.3	23.48	18.513	
5,300.0	5,282.1	5,262.8	5,249.8	12.9	12.0	176.92	-191.7	-171.3	442.0	418.1	23.92	18.478	
5,400.0	5,382.1	5,362.1	5,348.5	13.1	12.2	178.01	-199.4	-179.4	449.4	425.0	24.36	18.448	
5,500.0	5,482.1	5,469.9	5,455.8	13.3	12.5	179.05	-207.0	-187.4	456.3	431.5	24.81	18.392	
5,600.0	5,582.1	5,581.9	5,567.5	13.5	12.8	179.72	-212.0	-192.8	460.8	435.5	25.25	18.245	
5,700.0	5,682.1	5,694.3	5,679.9	13.7	13.0	179.99	-214.1	-194.9	462.6	436.9	25.69	18.007	
5,800.0	5,782.1	5,796.6	5,782.1	13.9	13.2	180.00	-214.1	-195.0	462.6	436.5	26.10	17.726	
5,900.0	5,882.1	5,896.6	5,882.1	14.1	13.4	180.00	-214.1	-195.0	462.6	436.1	26.51	17.450	
6,000.0	5,982.1	5,996.6	5,982.1	14.3	13.6	180.00	-214.1	-195.0	462.6	435.7	26.93	17.182	
6,100.0	6,082.1	6,096.6	6,082.1	14.5	13.8	180.00	-214.1	-195.0	462.6	435.3	27.34	16.920	
6,128.3	6,110.4	6,124.9	6,110.4	14.6	13.8	89.76	-214.1	-195.0	462.6	435.2	27.46	16.851	
6,200.0	6,182.1	6,196.2	6,181.6	14.7	14.0	89.34	-214.2	-191.6	462.7	434.9	27.73	16.684	
6,300.0	6,281.8	6,294.5	6,278.6	14.9	14.1	88.19	-214.2	-176.0	462.9	434.8	28.03	16.514	
6,400.0	6,379.8	6,391.7	6,371.7	15.0	14.2	87.09	-214.3	-148.5	463.2	435.0	28.26	16.394	
6,500.0	6,474.4	6,487.8	6,459.7	15.1	14.3	86.04	-214.5	-109.9	463.7	435.3	28.47	16.287	
6,600.0	6,564.0	6,583.0	6,541.4	15.1	14.4	85.06	-214.7	-61.1	464.3	435.6	28.76	16.145	
6,700.0	6,647.0	6,677.3	6,615.7	15.2	14.5	84.17	-214.9	-3.1	465.0	435.8	29.23	15.909	
6,800.0	6,722.1	6,770.9	6,681.8	15.3	14.8	83.37	-215.2	63.1	465.7	435.7	30.01	15.517	
6,900.0	6,787.9	6,863.9	6,738.9	15.9	15.5	82.69	-215.4	136.3	466.4	435.1	31.24	14.930	
7,000.0	6,843.3	6,956.3	6,786.5	16.8	16.5	82.12	-215.8	215.5	466.9	433.9	33.00	14.150	
7,100.0	6,887.4	7,050.0	6,824.7	18.0	17.7	81.67	-216.1	301.0	467.4	432.1	35.37	13.215	
7,200.0	6,919.4	7,140.0	6,851.2	19.5	19.2	81.37	-216.4	386.9	467.8	429.5	38.26	12.225	
7,300.0	6,938.8	7,231.5	6,867.7	21.3	20.9	81.19	-216.8	476.9	468.0	426.3	41.65	11.235	
7,400.0	6,949.5	7,322.6	6,873.2	23.3	22.7	80.68	-217.1	567.8	468.7	423.3	45.36	10.333	
7,500.0	6,955.0	7,420.9	6,871.7	25.4	24.8	79.79	-217.5	666.1	469.8	420.4	49.40	9.510	
7,600.0	6,954.0	7,520.9	6,870.0	27.7	27.1	79.70	-217.9	766.0	469.9	416.1	53.81	8.733	
7,700.0	6,952.7	7,620.9	6,868.3	30.0	29.5	79.65	-218.3	866.0	470.0	411.6	58.41	8.046	
7,800.0	6,951.3	7,720.9	6,866.5	32.4	31.9	79.61	-218.7	966.0	470.0	406.9	63.16	7.442	
7,900.0	6,950.0	7,820.9	6,864.8	34.8	34.4	79.56	-219.1	1,066.0	470.1	402.0	68.03	6.910	
8,000.0	6,948.6	7,920.9	6,863.1	37.4	36.9	79.52	-219.5	1,166.0	470.1	397.1	72.98	6.441	
8,100.0	6,947.3	8,020.9	6,861.4	39.9	39.5	79.47	-219.9	1,266.0	470.1	392.1	78.01	6.026	
8,200.0	6,945.9	8,120.9	6,859.7	42.5	42.1	79.43	-220.2	1,365.9	470.2	387.1	83.10	5.658	
8,300.0	6,944.6	8,220.9	6,858.0	45.1	44.7	79.38	-220.6	1,465.9	470.2	382.0	88.24	5.328	
8,400.0	6,943.3	8,320.9	6,856.3	47.7	47.4	79.34	-221.0	1,565.9	470.2	376.8	93.43	5.033	
8,500.0	6,941.9	8,420.9	6,854.6	50.4	50.0	79.30	-221.4	1,665.9	470.3	371.6	98.64	4.768	
8,600.0	6,940.6	8,520.9	6,852.9	53.0	52.7	79.25	-221.8	1,765.9	470.3	366.4	103.89	4.527	
8,700.0	6,939.2	8,620.9	6,851.2	55.7	55.4	79.21	-222.2	1,865.9	470.4	361.2	109.16	4.309	
8,800.0	6,937.9	8,720.9	6,849.4	58.4	58.1	79.16	-222.6	1,965.8	470.4	355.9	114.45	4.110	
8,900.0	6,936.5	8,820.9	6,847.7	61.1	60.8	79.12	-223.0	2,065.8	470.4	350.7	119.75	3.928	
9,000.0	6,935.2	8,920.9	6,846.0	63.8	63.5	79.07	-223.4	2,165.8	470.5	345.4	125.08	3.761	
9,100.0	6,933.9	9,020.9	6,844.3	66.5	66.3	79.03	-223.8	2,265.8	470.5	340.1	130.42	3.608	
9,200.0	6,932.5	9,120.9	6,842.6	69.3	69.0	78.98	-224.1	2,365.8	470.5	334.8	135.76	3.466	
9,300.0	6,931.2	9,220.9	6,840.9	72.0	71.7	78.94	-224.5	2,465.8	470.6	329.5	141.12	3.335	
9,400.0	6,929.8	9,320.9	6,839.2	74.7	74.5	78.89	-224.9	2,565.7	470.6	324.1	146.49	3.213	
9,500.0	6,928.5	9,420.9	6,837.5	77.5	77.2	78.85	-225.3	2,665.7	470.7	318.8	151.86	3.099	
9,600.0	6,927.1	9,520.9	6,835.8	80.2	80.0	78.80	-225.7	2,765.7	470.7	313.5	157.25	2.993	
9,700.0	6,925.8	9,620.9	6,834.1	83.0	82.7	78.76	-226.1	2,865.7	470.8	308.1	162.63	2.895	
9,800.0	6,924.5	9,720.9	6,832.3	85.7	85.5	78.71	-226.5	2,965.7	470.8	302.8	168.03	2.802	
9,900.0	6,923.1	9,820.9	6,830.6	88.5	88.3	78.67	-226.9	3,065.7	470.8	297.4	173.42	2.715	
10,000.0	6,921.8	9,920.9	6,828.9	91.3	91.0	78.63	-227.3	3,165.6	470.9	292.1	178.82	2.633	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-332 - Wellbore #1 - Plan #1 (2-25-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	6,920.4	10,020.9	6,827.2	94.0	93.8	78.58	-227.7	3,265.6	470.9	286.7	184.23	2.556	
10,200.0	6,919.1	10,120.9	6,825.5	96.8	96.6	78.54	-228.1	3,365.6	471.0	281.3	189.63	2.484	
10,300.0	6,917.7	10,220.9	6,823.8	99.6	99.3	78.49	-228.4	3,465.6	471.0	276.0	195.04	2.415	
10,400.0	6,916.4	10,320.9	6,822.1	102.3	102.1	78.45	-228.8	3,565.6	471.0	270.6	200.45	2.350	
10,500.0	6,915.1	10,420.9	6,820.4	105.1	104.9	78.40	-229.2	3,665.6	471.1	265.2	205.87	2.288	
10,600.0	6,913.7	10,520.9	6,818.7	107.9	107.7	78.36	-229.6	3,765.6	471.1	259.9	211.28	2.230	
10,700.0	6,912.4	10,620.9	6,816.9	110.7	110.4	78.31	-230.0	3,865.5	471.2	254.5	216.70	2.174	
10,800.0	6,911.0	10,720.9	6,815.2	113.4	113.2	78.27	-230.4	3,965.5	471.2	249.1	222.12	2.122	
10,900.0	6,909.7	10,820.9	6,813.5	116.2	116.0	78.22	-230.8	4,065.5	471.3	243.7	227.54	2.071	
11,000.0	6,908.3	10,920.9	6,811.8	119.0	118.8	78.18	-231.2	4,165.5	471.3	238.4	232.95	2.023	
11,100.0	6,907.0	11,020.8	6,810.1	121.8	121.6	78.14	-231.6	4,265.5	471.4	233.0	238.37	1.977	
11,200.0	6,905.7	11,120.8	6,808.4	124.6	124.4	78.09	-232.0	4,365.5	471.4	227.6	243.79	1.934	
11,300.0	6,904.3	11,220.8	6,806.7	127.4	127.1	78.05	-232.3	4,465.4	471.4	222.2	249.21	1.892	
11,351.6	6,903.6	11,272.4	6,805.8	128.8	128.6	78.02	-232.5	4,517.0	471.5	219.5	252.01	1.871	
11,400.0	6,903.0	11,319.4	6,805.0	130.1	129.9	78.00	-232.7	4,564.0	471.5	216.9	254.59	1.852 SF	
11,500.0	6,901.6	11,319.4	6,805.0	132.9	129.9	78.00	-232.7	4,564.0	482.3	225.0	257.32	1.874	
11,600.0	6,900.3	11,319.4	6,805.0	135.7	129.9	78.00	-232.7	4,564.0	512.8	252.7	260.05	1.972	
11,700.0	6,898.9	11,319.4	6,805.0	138.5	129.9	78.00	-232.7	4,564.0	559.7	296.9	262.79	2.130	
11,800.0	6,897.6	11,319.4	6,805.0	141.3	129.9	78.00	-232.7	4,564.0	619.4	353.9	265.52	2.333	
11,845.1	6,897.0	11,319.4	6,805.0	142.6	129.9	78.00	-232.7	4,564.0	649.6	382.8	266.75	2.435	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4655.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: LaSalle 25F-412
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well LaSalle 25F-412
Project:	SEC.25-T5N-R65W	**TVD Reference:**	WELL @ 4655.0ft (RKB - 15')
Reference Site:	LaSalle 25F-HZ Pad Sec.25-T5N-R65W	**MD Reference:**	WELL @ 4655.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	LaSalle 25F-412	**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 #2 (4-18-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4655.0ft (RKB - 15')	Coordinates are relative to: LaSalle 25F-412
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: 0.57°