

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: LaSalle 25F-332

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

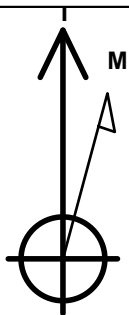
Ground Elevation: 4640.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1380202.80	3245132.74	40.373720	-104.620170	

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

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL 1545'FNL, 500'FEL	6805.0	-203.6	4564.0	Point



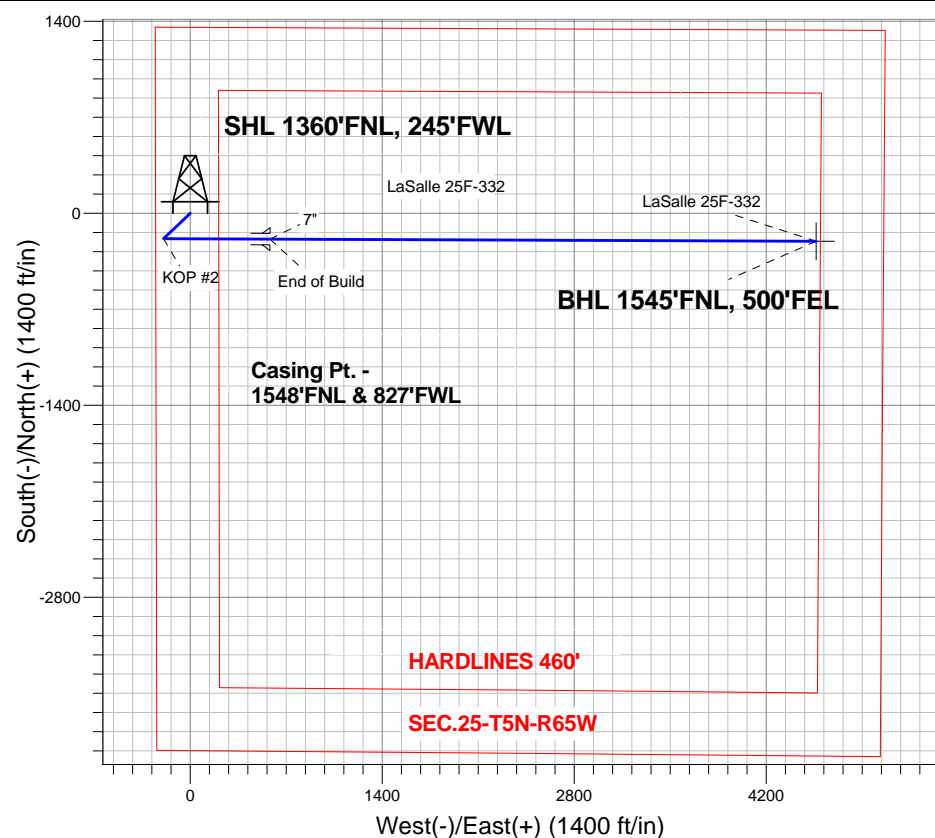
Azimuths to True North
Magnetic North: 8.56°

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

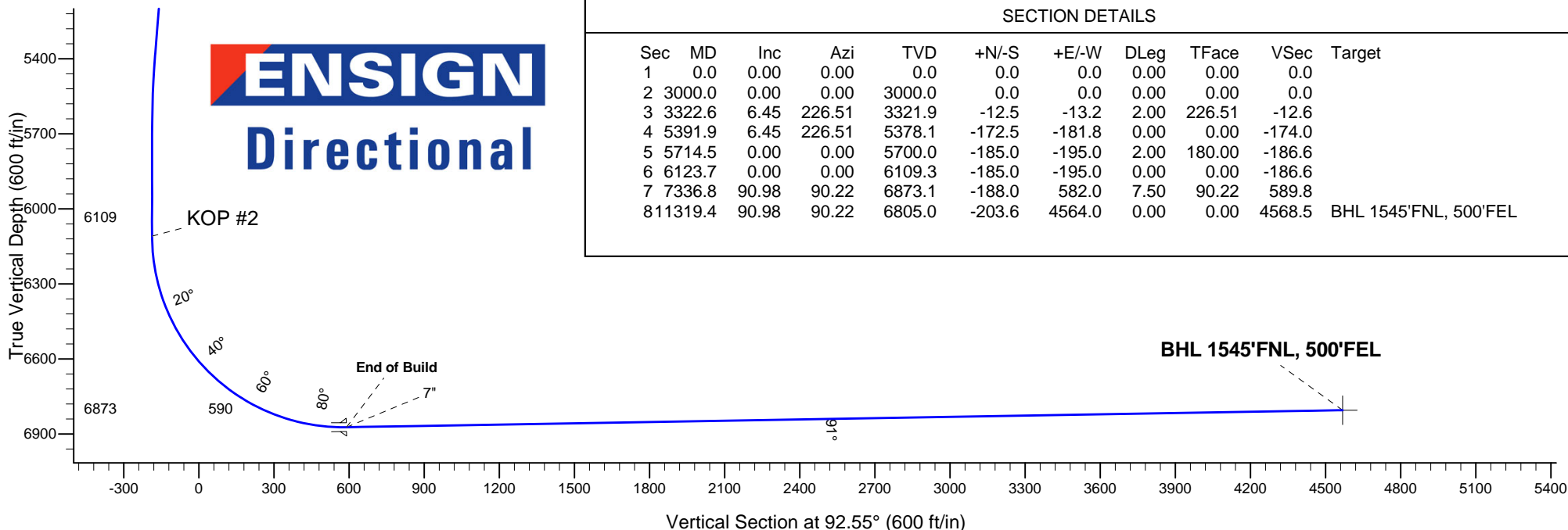
ANNOTATIONS

TVD	MD	Annotation
3000.0	3000.0	KOP #1
6109.2	6123.7	KOP #2
6873.1	7336.8	End of Build

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



ENSIGN
Directional



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	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3322.6	6.45	226.51	3321.9	-12.5	-13.2	2.00	226.51	-12.6	
4	5391.9	6.45	226.51	5378.1	-172.5	-181.8	0.00	0.00	-174.0	
5	5714.5	0.00	0.00	5700.0	-185.0	-195.0	2.00	180.00	-186.6	
6	6123.7	0.00	0.00	6109.3	-185.0	-195.0	0.00	0.00	-186.6	
7	7336.8	90.98	90.22	6873.1	-188.0	582.0	7.50	90.22	589.8	
8	11319.4	90.98	90.22	6805.0	-203.6	4564.0	0.00	0.00	4568.5	BHL 1545'FNL, 500'FEL



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.25-T5N-R65W

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

LaSalle 25F-332

Wellbore #1

Plan: Plan #1 (2-25-13)

Standard Planning Report

28 February, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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-332					
Well Position	+N/-S	-29.2 ft	Northing:	1,380,202.80 ft	Latitude:	40.373720
	+E/-W	0.0 ft	Easting:	3,245,132.74 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 #1 (2-25-13)			
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	92.55

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,322.6	6.45	226.51	3,321.9	-12.5	-13.2	2.00	2.00	0.00	226.51	
5,391.9	6.45	226.51	5,378.1	-172.5	-181.8	0.00	0.00	0.00	0.00	
5,714.5	0.00	0.00	5,700.0	-185.0	-195.0	2.00	-2.00	0.00	180.00	
6,123.7	0.00	0.00	6,109.3	-185.0	-195.0	0.00	0.00	0.00	0.00	
7,336.8	90.98	90.22	6,873.1	-188.0	582.0	7.50	7.50	0.00	90.22	
11,319.4	90.98	90.22	6,805.0	-203.6	4,564.0	0.00	0.00	0.00	0.00	BHL 1545'FNL, 500

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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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,040.0	0.00	0.00	2,040.0	0.0	0.0	0.0	0.00	0.00	0.00
2,080.0	0.00	0.00	2,080.0	0.0	0.0	0.0	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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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)
2,120.0	0.00	0.00	2,120.0	0.0	0.0	0.0	0.00	0.00	0.00
2,160.0	0.00	0.00	2,160.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,240.0	0.00	0.00	2,240.0	0.0	0.0	0.0	0.00	0.00	0.00
2,280.0	0.00	0.00	2,280.0	0.0	0.0	0.0	0.00	0.00	0.00
2,320.0	0.00	0.00	2,320.0	0.0	0.0	0.0	0.00	0.00	0.00
2,360.0	0.00	0.00	2,360.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,440.0	0.00	0.00	2,440.0	0.0	0.0	0.0	0.00	0.00	0.00
2,480.0	0.00	0.00	2,480.0	0.0	0.0	0.0	0.00	0.00	0.00
2,520.0	0.00	0.00	2,520.0	0.0	0.0	0.0	0.00	0.00	0.00
2,560.0	0.00	0.00	2,560.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,640.0	0.00	0.00	2,640.0	0.0	0.0	0.0	0.00	0.00	0.00
2,680.0	0.00	0.00	2,680.0	0.0	0.0	0.0	0.00	0.00	0.00
2,720.0	0.00	0.00	2,720.0	0.0	0.0	0.0	0.00	0.00	0.00
2,760.0	0.00	0.00	2,760.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,840.0	0.00	0.00	2,840.0	0.0	0.0	0.0	0.00	0.00	0.00
2,880.0	0.00	0.00	2,880.0	0.0	0.0	0.0	0.00	0.00	0.00
2,920.0	0.00	0.00	2,920.0	0.0	0.0	0.0	0.00	0.00	0.00
2,960.0	0.00	0.00	2,960.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
3,040.0	0.80	226.51	3,040.0	-0.2	-0.2	-0.2	2.00	2.00	0.00
3,080.0	1.60	226.51	3,080.0	-0.8	-0.8	-0.8	2.00	2.00	0.00
3,120.0	2.40	226.51	3,120.0	-1.7	-1.8	-1.7	2.00	2.00	0.00
3,160.0	3.20	226.51	3,159.9	-3.1	-3.2	-3.1	2.00	2.00	0.00
3,200.0	4.00	226.51	3,199.8	-4.8	-5.1	-4.8	2.00	2.00	0.00
3,240.0	4.80	226.51	3,239.7	-6.9	-7.3	-7.0	2.00	2.00	0.00
3,280.0	5.60	226.51	3,279.6	-9.4	-9.9	-9.5	2.00	2.00	0.00
3,320.0	6.40	226.51	3,319.3	-12.3	-13.0	-12.4	2.00	2.00	0.00
3,322.6	6.45	226.51	3,321.9	-12.5	-13.2	-12.6	2.00	2.00	0.00
3,360.0	6.45	226.51	3,359.1	-15.4	-16.2	-15.5	0.00	0.00	0.00
3,400.0	6.45	226.51	3,398.8	-18.5	-19.5	-18.6	0.00	0.00	0.00
3,440.0	6.45	226.51	3,438.6	-21.6	-22.7	-21.7	0.00	0.00	0.00
3,480.0	6.45	226.51	3,478.3	-24.7	-26.0	-24.9	0.00	0.00	0.00
3,520.0	6.45	226.51	3,518.1	-27.8	-29.3	-28.0	0.00	0.00	0.00
3,560.0	6.45	226.51	3,557.8	-30.8	-32.5	-31.1	0.00	0.00	0.00
3,600.0	6.45	226.51	3,597.6	-33.9	-35.8	-34.2	0.00	0.00	0.00
3,640.0	6.45	226.51	3,637.3	-37.0	-39.0	-37.3	0.00	0.00	0.00
3,680.0	6.45	226.51	3,677.1	-40.1	-42.3	-40.5	0.00	0.00	0.00
3,720.0	6.45	226.51	3,716.8	-43.2	-45.6	-43.6	0.00	0.00	0.00
3,760.0	6.45	226.51	3,756.5	-46.3	-48.8	-46.7	0.00	0.00	0.00
3,800.0	6.45	226.51	3,796.3	-49.4	-52.1	-49.8	0.00	0.00	0.00
3,840.0	6.45	226.51	3,836.0	-52.5	-55.3	-52.9	0.00	0.00	0.00
3,880.0	6.45	226.51	3,875.8	-55.6	-58.6	-56.1	0.00	0.00	0.00
3,920.0	6.45	226.51	3,915.5	-58.7	-61.9	-59.2	0.00	0.00	0.00
3,960.0	6.45	226.51	3,955.3	-61.8	-65.1	-62.3	0.00	0.00	0.00
4,000.0	6.45	226.51	3,995.0	-64.9	-68.4	-65.4	0.00	0.00	0.00
4,040.0	6.45	226.51	4,034.8	-68.0	-71.6	-68.5	0.00	0.00	0.00
4,080.0	6.45	226.51	4,074.5	-71.1	-74.9	-71.7	0.00	0.00	0.00
4,120.0	6.45	226.51	4,114.3	-74.2	-78.2	-74.8	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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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)
4,160.0	6.45	226.51	4,154.0	-77.2	-81.4	-77.9	0.00	0.00	0.00
4,200.0	6.45	226.51	4,193.8	-80.3	-84.7	-81.0	0.00	0.00	0.00
4,240.0	6.45	226.51	4,233.5	-83.4	-87.9	-84.1	0.00	0.00	0.00
4,280.0	6.45	226.51	4,273.3	-86.5	-91.2	-87.3	0.00	0.00	0.00
4,320.0	6.45	226.51	4,313.0	-89.6	-94.5	-90.4	0.00	0.00	0.00
4,360.0	6.45	226.51	4,352.7	-92.7	-97.7	-93.5	0.00	0.00	0.00
4,400.0	6.45	226.51	4,392.5	-95.8	-101.0	-96.6	0.00	0.00	0.00
4,440.0	6.45	226.51	4,432.2	-98.9	-104.2	-99.7	0.00	0.00	0.00
4,480.0	6.45	226.51	4,472.0	-102.0	-107.5	-102.9	0.00	0.00	0.00
4,520.0	6.45	226.51	4,511.7	-105.1	-110.8	-106.0	0.00	0.00	0.00
4,560.0	6.45	226.51	4,551.5	-108.2	-114.0	-109.1	0.00	0.00	0.00
4,600.0	6.45	226.51	4,591.2	-111.3	-117.3	-112.2	0.00	0.00	0.00
4,640.0	6.45	226.51	4,631.0	-114.4	-120.5	-115.3	0.00	0.00	0.00
4,680.0	6.45	226.51	4,670.7	-117.5	-123.8	-118.5	0.00	0.00	0.00
4,720.0	6.45	226.51	4,710.5	-120.6	-127.1	-121.6	0.00	0.00	0.00
4,760.0	6.45	226.51	4,750.2	-123.6	-130.3	-124.7	0.00	0.00	0.00
4,800.0	6.45	226.51	4,790.0	-126.7	-133.6	-127.8	0.00	0.00	0.00
4,840.0	6.45	226.51	4,829.7	-129.8	-136.9	-130.9	0.00	0.00	0.00
4,880.0	6.45	226.51	4,869.5	-132.9	-140.1	-134.0	0.00	0.00	0.00
4,920.0	6.45	226.51	4,909.2	-136.0	-143.4	-137.2	0.00	0.00	0.00
4,960.0	6.45	226.51	4,948.9	-139.1	-146.6	-140.3	0.00	0.00	0.00
5,000.0	6.45	226.51	4,988.7	-142.2	-149.9	-143.4	0.00	0.00	0.00
5,040.0	6.45	226.51	5,028.4	-145.3	-153.2	-146.5	0.00	0.00	0.00
5,080.0	6.45	226.51	5,068.2	-148.4	-156.4	-149.6	0.00	0.00	0.00
5,120.0	6.45	226.51	5,107.9	-151.5	-159.7	-152.8	0.00	0.00	0.00
5,160.0	6.45	226.51	5,147.7	-154.6	-162.9	-155.9	0.00	0.00	0.00
5,200.0	6.45	226.51	5,187.4	-157.7	-166.2	-159.0	0.00	0.00	0.00
5,240.0	6.45	226.51	5,227.2	-160.8	-169.5	-162.1	0.00	0.00	0.00
5,280.0	6.45	226.51	5,266.9	-163.9	-172.7	-165.2	0.00	0.00	0.00
5,320.0	6.45	226.51	5,306.7	-167.0	-176.0	-168.4	0.00	0.00	0.00
5,360.0	6.45	226.51	5,346.4	-170.0	-179.2	-171.5	0.00	0.00	0.00
5,391.9	6.45	226.51	5,378.1	-172.5	-181.8	-174.0	0.00	0.00	0.00
5,400.0	6.29	226.51	5,386.2	-173.1	-182.5	-174.6	2.00	-2.00	0.00
5,440.0	5.49	226.51	5,426.0	-176.0	-185.5	-177.4	2.00	-2.00	0.00
5,480.0	4.69	226.51	5,465.8	-178.4	-188.0	-179.9	2.00	-2.00	0.00
5,520.0	3.89	226.51	5,505.7	-180.5	-190.2	-182.0	2.00	-2.00	0.00
5,560.0	3.09	226.51	5,545.6	-182.1	-192.0	-183.7	2.00	-2.00	0.00
5,600.0	2.29	226.51	5,585.6	-183.4	-193.3	-185.0	2.00	-2.00	0.00
5,640.0	1.49	226.51	5,625.5	-184.3	-194.3	-185.9	2.00	-2.00	0.00
5,680.0	0.69	226.51	5,665.5	-184.9	-194.8	-186.4	2.00	-2.00	0.00
5,714.5	0.00	0.00	5,700.0	-185.0	-195.0	-186.6	2.00	-2.00	0.00
5,720.0	0.00	0.00	5,705.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,760.0	0.00	0.00	5,745.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,785.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,840.0	0.00	0.00	5,825.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,865.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,905.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,945.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,985.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
6,040.0	0.00	0.00	6,025.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
6,080.0	0.00	0.00	6,065.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
6,120.0	0.00	0.00	6,105.5	-185.0	-195.0	-186.6	0.00	0.00	0.00
6,123.7	0.00	0.00	6,109.2	-185.0	-195.0	-186.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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)
KOP #2									
6,160.0	2.72	90.22	6,145.5	-185.0	-194.1	-185.7	7.49	7.49	0.00
6,200.0	5.72	90.22	6,185.4	-185.0	-191.2	-182.8	7.50	7.50	0.00
6,240.0	8.72	90.22	6,225.1	-185.0	-186.2	-177.7	7.50	7.50	0.00
6,280.0	11.72	90.22	6,264.4	-185.1	-179.1	-170.7	7.50	7.50	0.00
6,320.0	14.72	90.22	6,303.4	-185.1	-169.9	-161.5	7.50	7.50	0.00
6,360.0	17.72	90.22	6,341.8	-185.1	-158.8	-150.4	7.50	7.50	0.00
6,400.0	20.72	90.22	6,379.6	-185.2	-145.6	-137.2	7.50	7.50	0.00
6,440.0	23.72	90.22	6,416.6	-185.3	-130.5	-122.1	7.50	7.50	0.00
6,480.0	26.72	90.22	6,452.8	-185.3	-113.4	-105.1	7.50	7.50	0.00
6,520.0	29.72	90.22	6,488.0	-185.4	-94.5	-86.2	7.50	7.50	0.00
6,560.0	32.72	90.22	6,522.2	-185.5	-73.8	-65.5	7.50	7.50	0.00
6,600.0	35.72	90.22	6,555.3	-185.6	-51.3	-43.0	7.50	7.50	0.00
6,640.0	38.72	90.22	6,587.1	-185.7	-27.1	-18.8	7.50	7.50	0.00
6,680.0	41.72	90.22	6,617.7	-185.8	-1.3	7.0	7.50	7.50	0.00
6,720.0	44.72	90.22	6,646.8	-185.9	26.1	34.4	7.50	7.50	0.00
6,760.0	47.72	90.22	6,674.5	-186.0	55.0	63.2	7.50	7.50	0.00
6,800.0	50.72	90.22	6,700.6	-186.1	85.3	93.5	7.50	7.50	0.00
6,840.0	53.72	90.22	6,725.1	-186.2	116.9	125.1	7.50	7.50	0.00
6,880.0	56.72	90.22	6,747.9	-186.3	149.7	157.9	7.50	7.50	0.00
6,920.0	59.72	90.22	6,769.0	-186.5	183.7	191.9	7.50	7.50	0.00
6,960.0	62.72	90.22	6,788.3	-186.6	218.8	226.9	7.50	7.50	0.00
7,000.0	65.72	90.22	6,805.6	-186.8	254.8	262.9	7.50	7.50	0.00
7,040.0	68.72	90.22	6,821.1	-186.9	291.7	299.7	7.50	7.50	0.00
7,080.0	71.72	90.22	6,834.7	-187.0	329.3	337.3	7.50	7.50	0.00
7,120.0	74.72	90.22	6,846.2	-187.2	367.6	375.6	7.50	7.50	0.00
7,160.0	77.72	90.22	6,855.7	-187.3	406.4	414.4	7.50	7.50	0.00
7,200.0	80.72	90.22	6,863.2	-187.5	445.7	453.6	7.50	7.50	0.00
7,240.0	83.72	90.22	6,868.6	-187.7	485.4	493.2	7.50	7.50	0.00
7,280.0	86.72	90.22	6,872.0	-187.8	525.2	533.1	7.50	7.50	0.00
7,320.0	89.72	90.22	6,873.2	-188.0	565.2	573.0	7.50	7.50	0.00
7,336.8	90.98	90.22	6,873.1	-188.0	582.0	589.8	7.50	7.50	0.00
End of Build - 7"									
7,360.0	90.98	90.22	6,872.7	-188.1	605.2	613.0	0.01	0.01	0.00
7,400.0	90.98	90.22	6,872.0	-188.3	645.2	652.9	0.00	0.00	0.00
7,440.0	90.98	90.22	6,871.4	-188.4	685.2	692.9	0.00	0.00	0.00
7,480.0	90.98	90.22	6,870.7	-188.6	725.2	732.8	0.00	0.00	0.00
7,520.0	90.98	90.22	6,870.0	-188.7	765.2	772.8	0.00	0.00	0.00
7,560.0	90.98	90.22	6,869.3	-188.9	805.2	812.8	0.00	0.00	0.00
7,600.0	90.98	90.22	6,868.6	-189.1	845.1	852.7	0.00	0.00	0.00
7,640.0	90.98	90.22	6,867.9	-189.2	885.1	892.7	0.00	0.00	0.00
7,680.0	90.98	90.22	6,867.2	-189.4	925.1	932.7	0.00	0.00	0.00
7,720.0	90.98	90.22	6,866.6	-189.5	965.1	972.6	0.00	0.00	0.00
7,760.0	90.98	90.22	6,865.9	-189.7	1,005.1	1,012.6	0.00	0.00	0.00
7,800.0	90.98	90.22	6,865.2	-189.8	1,045.1	1,052.5	0.00	0.00	0.00
7,840.0	90.98	90.22	6,864.5	-190.0	1,085.1	1,092.5	0.00	0.00	0.00
7,880.0	90.98	90.22	6,863.8	-190.2	1,125.1	1,132.5	0.00	0.00	0.00
7,920.0	90.98	90.22	6,863.1	-190.3	1,165.1	1,172.4	0.00	0.00	0.00
7,960.0	90.98	90.22	6,862.5	-190.5	1,205.1	1,212.4	0.00	0.00	0.00
8,000.0	90.98	90.22	6,861.8	-190.6	1,245.1	1,252.3	0.00	0.00	0.00
8,040.0	90.98	90.22	6,861.1	-190.8	1,285.1	1,292.3	0.00	0.00	0.00
8,080.0	90.98	90.22	6,860.4	-190.9	1,325.1	1,332.3	0.00	0.00	0.00
8,120.0	90.98	90.22	6,859.7	-191.1	1,365.1	1,372.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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)
8,160.0	90.98	90.22	6,859.0	-191.2	1,405.1	1,412.2	0.00	0.00	0.00
8,200.0	90.98	90.22	6,858.4	-191.4	1,445.1	1,452.1	0.00	0.00	0.00
8,240.0	90.98	90.22	6,857.7	-191.6	1,485.0	1,492.1	0.00	0.00	0.00
8,280.0	90.98	90.22	6,857.0	-191.7	1,525.0	1,532.1	0.00	0.00	0.00
8,320.0	90.98	90.22	6,856.3	-191.9	1,565.0	1,572.0	0.00	0.00	0.00
8,360.0	90.98	90.22	6,855.6	-192.0	1,605.0	1,612.0	0.00	0.00	0.00
8,400.0	90.98	90.22	6,854.9	-192.2	1,645.0	1,652.0	0.00	0.00	0.00
8,440.0	90.98	90.22	6,854.2	-192.3	1,685.0	1,691.9	0.00	0.00	0.00
8,480.0	90.98	90.22	6,853.6	-192.5	1,725.0	1,731.9	0.00	0.00	0.00
8,520.0	90.98	90.22	6,852.9	-192.7	1,765.0	1,771.8	0.00	0.00	0.00
8,560.0	90.98	90.22	6,852.2	-192.8	1,805.0	1,811.8	0.00	0.00	0.00
8,600.0	90.98	90.22	6,851.5	-193.0	1,845.0	1,851.8	0.00	0.00	0.00
8,640.0	90.98	90.22	6,850.8	-193.1	1,885.0	1,891.7	0.00	0.00	0.00
8,680.0	90.98	90.22	6,850.1	-193.3	1,925.0	1,931.7	0.00	0.00	0.00
8,720.0	90.98	90.22	6,849.5	-193.4	1,965.0	1,971.6	0.00	0.00	0.00
8,760.0	90.98	90.22	6,848.8	-193.6	2,005.0	2,011.6	0.00	0.00	0.00
8,800.0	90.98	90.22	6,848.1	-193.7	2,045.0	2,051.6	0.00	0.00	0.00
8,840.0	90.98	90.22	6,847.4	-193.9	2,085.0	2,091.5	0.00	0.00	0.00
8,880.0	90.98	90.22	6,846.7	-194.1	2,124.9	2,131.5	0.00	0.00	0.00
8,920.0	90.98	90.22	6,846.0	-194.2	2,164.9	2,171.4	0.00	0.00	0.00
8,960.0	90.98	90.22	6,845.4	-194.4	2,204.9	2,211.4	0.00	0.00	0.00
9,000.0	90.98	90.22	6,844.7	-194.5	2,244.9	2,251.4	0.00	0.00	0.00
9,040.0	90.98	90.22	6,844.0	-194.7	2,284.9	2,291.3	0.00	0.00	0.00
9,080.0	90.98	90.22	6,843.3	-194.8	2,324.9	2,331.3	0.00	0.00	0.00
9,120.0	90.98	90.22	6,842.6	-195.0	2,364.9	2,371.3	0.00	0.00	0.00
9,160.0	90.98	90.22	6,841.9	-195.2	2,404.9	2,411.2	0.00	0.00	0.00
9,200.0	90.98	90.22	6,841.2	-195.3	2,444.9	2,451.2	0.00	0.00	0.00
9,240.0	90.98	90.22	6,840.6	-195.5	2,484.9	2,491.1	0.00	0.00	0.00
9,280.0	90.98	90.22	6,839.9	-195.6	2,524.9	2,531.1	0.00	0.00	0.00
9,320.0	90.98	90.22	6,839.2	-195.8	2,564.9	2,571.1	0.00	0.00	0.00
9,360.0	90.98	90.22	6,838.5	-195.9	2,604.9	2,611.0	0.00	0.00	0.00
9,400.0	90.98	90.22	6,837.8	-196.1	2,644.9	2,651.0	0.00	0.00	0.00
9,440.0	90.98	90.22	6,837.1	-196.2	2,684.9	2,690.9	0.00	0.00	0.00
9,480.0	90.98	90.22	6,836.5	-196.4	2,724.9	2,730.9	0.00	0.00	0.00
9,520.0	90.98	90.22	6,835.8	-196.6	2,764.9	2,770.9	0.00	0.00	0.00
9,560.0	90.98	90.22	6,835.1	-196.7	2,804.8	2,810.8	0.00	0.00	0.00
9,600.0	90.98	90.22	6,834.4	-196.9	2,844.8	2,850.8	0.00	0.00	0.00
9,640.0	90.98	90.22	6,833.7	-197.0	2,884.8	2,890.7	0.00	0.00	0.00
9,680.0	90.98	90.22	6,833.0	-197.2	2,924.8	2,930.7	0.00	0.00	0.00
9,720.0	90.98	90.22	6,832.4	-197.3	2,964.8	2,970.7	0.00	0.00	0.00
9,760.0	90.98	90.22	6,831.7	-197.5	3,004.8	3,010.6	0.00	0.00	0.00
9,800.0	90.98	90.22	6,831.0	-197.7	3,044.8	3,050.6	0.00	0.00	0.00
9,840.0	90.98	90.22	6,830.3	-197.8	3,084.8	3,090.6	0.00	0.00	0.00
9,880.0	90.98	90.22	6,829.6	-198.0	3,124.8	3,130.5	0.00	0.00	0.00
9,920.0	90.98	90.22	6,828.9	-198.1	3,164.8	3,170.5	0.00	0.00	0.00
9,960.0	90.98	90.22	6,828.3	-198.3	3,204.8	3,210.4	0.00	0.00	0.00
10,000.0	90.98	90.22	6,827.6	-198.4	3,244.8	3,250.4	0.00	0.00	0.00
10,040.0	90.98	90.22	6,826.9	-198.6	3,284.8	3,290.4	0.00	0.00	0.00
10,080.0	90.98	90.22	6,826.2	-198.7	3,324.8	3,330.3	0.00	0.00	0.00
10,120.0	90.98	90.22	6,825.5	-198.9	3,364.8	3,370.3	0.00	0.00	0.00
10,160.0	90.98	90.22	6,824.8	-199.1	3,404.8	3,410.2	0.00	0.00	0.00
10,200.0	90.98	90.22	6,824.1	-199.2	3,444.7	3,450.2	0.00	0.00	0.00
10,240.0	90.98	90.22	6,823.5	-199.4	3,484.7	3,490.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-25-13)		

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)
10,280.0	90.98	90.22	6,822.8	-199.5	3,524.7	3,530.1	0.00	0.00	0.00
10,320.0	90.98	90.22	6,822.1	-199.7	3,564.7	3,570.1	0.00	0.00	0.00
10,360.0	90.98	90.22	6,821.4	-199.8	3,604.7	3,610.0	0.00	0.00	0.00
10,400.0	90.98	90.22	6,820.7	-200.0	3,644.7	3,650.0	0.00	0.00	0.00
10,440.0	90.98	90.22	6,820.0	-200.2	3,684.7	3,690.0	0.00	0.00	0.00
10,480.0	90.98	90.22	6,819.4	-200.3	3,724.7	3,729.9	0.00	0.00	0.00
10,520.0	90.98	90.22	6,818.7	-200.5	3,764.7	3,769.9	0.00	0.00	0.00
10,560.0	90.98	90.22	6,818.0	-200.6	3,804.7	3,809.9	0.00	0.00	0.00
10,600.0	90.98	90.22	6,817.3	-200.8	3,844.7	3,849.8	0.00	0.00	0.00
10,640.0	90.98	90.22	6,816.6	-200.9	3,884.7	3,889.8	0.00	0.00	0.00
10,680.0	90.98	90.22	6,815.9	-201.1	3,924.7	3,929.7	0.00	0.00	0.00
10,720.0	90.98	90.22	6,815.3	-201.2	3,964.7	3,969.7	0.00	0.00	0.00
10,760.0	90.98	90.22	6,814.6	-201.4	4,004.7	4,009.7	0.00	0.00	0.00
10,800.0	90.98	90.22	6,813.9	-201.6	4,044.7	4,049.6	0.00	0.00	0.00
10,840.0	90.98	90.22	6,813.2	-201.7	4,084.6	4,089.6	0.00	0.00	0.00
10,880.0	90.98	90.22	6,812.5	-201.9	4,124.6	4,129.5	0.00	0.00	0.00
10,920.0	90.98	90.22	6,811.8	-202.0	4,164.6	4,169.5	0.00	0.00	0.00
10,960.0	90.98	90.22	6,811.1	-202.2	4,204.6	4,209.5	0.00	0.00	0.00
11,000.0	90.98	90.22	6,810.5	-202.3	4,244.6	4,249.4	0.00	0.00	0.00
11,040.0	90.98	90.22	6,809.8	-202.5	4,284.6	4,289.4	0.00	0.00	0.00
11,080.0	90.98	90.22	6,809.1	-202.6	4,324.6	4,329.3	0.00	0.00	0.00
11,120.0	90.98	90.22	6,808.4	-202.8	4,364.6	4,369.3	0.00	0.00	0.00
11,160.0	90.98	90.22	6,807.7	-203.0	4,404.6	4,409.3	0.00	0.00	0.00
11,200.0	90.98	90.22	6,807.0	-203.1	4,444.6	4,449.2	0.00	0.00	0.00
11,240.0	90.98	90.22	6,806.4	-203.3	4,484.6	4,489.2	0.00	0.00	0.00
11,280.0	90.98	90.22	6,805.7	-203.4	4,524.6	4,529.2	0.00	0.00	0.00
11,319.4	90.98	90.22	6,805.0	-203.6	4,564.0	4,568.5	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,336.8	6,873.1	7"	7	8-3/4

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,000.0	3,000.0	0.0	0.0	KOP #1
6,123.7	6,109.2	-185.0	-195.0	KOP #2
7,336.8	6,873.1	-188.0	582.0	End of Build



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.25-T5N-R65W

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

LaSalle 25F-332

Wellbore #1

Plan #1 (2-25-13)

Anticollision Report

28 February, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (2-25-13)		
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 2/28/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,319.4	Plan #1 (2-25-13) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
LaSalle 25F-HZ Pad Sec.25-T5N-R65W						
LaSalle 25F-412 - Wellbore #1 - Plan #1 (2-25-13)	1,000.0	1,000.0	29.1	24.9	6.826	CC, ES
LaSalle 25F-412 - Wellbore #1 - Plan #1 (2-25-13)	11,319.4	11,398.5	476.8	223.0	1.879	SF
LaSalle 25G-212 - Wellbore #1 - Plan #1 (2-25-13)	1,000.0	1,000.0	29.1	24.9	6.826	CC, ES
LaSalle 25G-212 - Wellbore #1 - Plan #1 (2-25-13)	11,319.4	11,253.5	490.2	233.1	1.907	SF
LaSalle 25G-402 - Wellbore #1 - Plan #1 (2-25-13)	200.0	200.0	61.9	61.3	91.848	CC, ES
LaSalle 25G-402 - Wellbore #1 - Plan #1 (2-25-13)	11,319.4	11,466.4	885.0	627.6	3.438	SF

Offset Design												
LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-412 - Wellbore #1 - Plan #1 (2-25-13)												
Survey Program: 0-MWD												
Offset Site Error: 0.0ft												
Offset Well Error: 0.0ft												
Reference	Offset	Semi Major Axis	Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
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	129.686
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.229
300.0	300.0	300.0	300.0	0.6	0.6	0.00	29.1	0.0	29.1	28.0	1.12	25.937
400.0	400.0	400.0	400.0	0.8	0.8	0.00	29.1	0.0	29.1	27.6	1.57	18.527
500.0	500.0	500.0	500.0	1.0	1.0	0.00	29.1	0.0	29.1	27.1	2.02	14.410
600.0	600.0	600.0	600.0	1.2	1.2	0.00	29.1	0.0	29.1	26.7	2.47	11.790
700.0	700.0	700.0	700.0	1.5	1.5	0.00	29.1	0.0	29.1	26.2	2.92	9.976
800.0	800.0	800.0	800.0	1.7	1.7	0.00	29.1	0.0	29.1	25.8	3.37	8.646
900.0	900.0	900.0	900.0	1.9	1.9	0.00	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	0.00	29.1	0.0	29.1	24.9	4.27	6.826 CC, ES
1,100.0	1,100.0	1,099.2	1,099.1	2.4	2.4	-1.97	30.5	-1.1	30.5	25.8	4.72	6.476
1,200.0	1,200.0	1,198.1	1,197.9	2.6	2.6	-6.91	34.6	-4.2	34.9	29.7	5.16	6.759
1,300.0	1,300.0	1,296.5	1,296.0	2.8	2.8	-12.81	41.3	-9.4	42.5	36.9	5.61	7.585
1,400.0	1,400.0	1,395.2	1,394.0	3.0	3.0	-18.02	50.3	-16.4	53.2	47.2	6.06	8.787
1,500.0	1,500.0	1,494.5	1,492.6	3.3	3.3	-21.58	59.6	-23.6	64.6	58.0	6.51	9.918
1,600.0	1,600.0	1,593.8	1,591.2	3.5	3.6	-24.08	69.0	-30.8	76.1	69.1	6.97	10.916
1,700.0	1,700.0	1,693.1	1,689.8	3.7	3.8	-25.91	78.3	-38.1	87.7	80.2	7.43	11.796
1,800.0	1,800.0	1,792.4	1,788.4	3.9	4.1	-27.32	87.7	-45.3	99.4	91.5	7.90	12.574
1,900.0	1,900.0	1,891.7	1,886.9	4.2	4.4	-28.43	97.0	-52.5	111.1	102.7	8.38	13.264
2,000.0	2,000.0	1,991.0	1,985.5	4.4	4.7	-29.33	106.4	-59.8	122.9	114.0	8.85	13.878

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 LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-412 - Wellbore #1 - Plan #1 (2-25-13)													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
2,100.0	2,100.0	2,090.2	2,084.1	4.6	5.0	-30.07		115.7	-67.0	134.6	125.3	9.33	14.428	
2,200.0	2,200.0	2,189.5	2,182.7	4.8	5.3	-30.69		125.1	-74.2	146.5	136.6	9.81	14.923	
2,300.0	2,300.0	2,288.8	2,281.3	5.1	5.6	-31.22		134.4	-81.5	158.3	148.0	10.30	15.370	
2,400.0	2,400.0	2,388.1	2,379.9	5.3	5.9	-31.67		143.8	-88.7	170.1	159.3	10.78	15.775	
2,500.0	2,500.0	2,487.4	2,478.4	5.5	6.2	-32.07		153.1	-95.9	182.0	170.7	11.27	16.144	
2,600.0	2,600.0	2,586.7	2,577.0	5.7	6.5	-32.41		162.5	-103.2	193.8	182.0	11.76	16.481	
2,700.0	2,700.0	2,686.0	2,675.6	6.0	6.8	-32.72		171.8	-110.4	205.7	193.4	12.25	16.790	
2,800.0	2,800.0	2,785.3	2,774.2	6.2	7.1	-33.00		181.1	-117.6	217.5	204.8	12.74	17.075	
2,900.0	2,900.0	2,884.6	2,872.8	6.4	7.4	-33.24		190.5	-124.9	229.4	216.2	13.23	17.337	
3,000.0	3,000.0	2,983.8	2,971.4	6.6	7.7	-33.46		199.8	-132.1	241.3	227.5	13.72	17.580	
3,100.0	3,100.0	3,083.1	3,069.9	6.8	8.0	99.98		209.2	-139.3	253.4	239.6	13.78	18.393	
3,200.0	3,199.8	3,182.2	3,168.3	7.0	8.3	100.64		218.5	-146.5	266.2	252.0	14.19	18.760	
3,300.0	3,299.5	3,281.0	3,266.4	7.2	8.6	101.91		227.8	-153.7	279.8	265.2	14.61	19.148	
3,400.0	3,398.8	3,379.5	3,364.2	7.4	8.9	103.70		237.1	-160.9	294.1	279.1	15.05	19.542	
3,500.0	3,498.2	3,478.0	3,462.0	7.6	9.2	105.40		246.4	-168.1	308.8	293.3	15.50	19.918	
3,600.0	3,597.6	3,576.6	3,559.9	7.8	9.5	106.95		255.6	-175.3	323.6	307.7	15.96	20.276	
3,700.0	3,696.9	3,675.1	3,657.7	8.0	9.8	108.35		264.9	-182.4	338.7	322.3	16.43	20.617	
3,800.0	3,796.3	3,786.8	3,768.8	8.2	10.1	109.89		273.8	-189.3	352.2	335.3	16.88	20.868	
3,900.0	3,895.7	3,899.4	3,881.2	8.5	10.3	111.51		279.2	-193.5	362.1	344.7	17.32	20.966	
4,000.0	3,995.0	4,012.6	3,994.3	8.7	10.5	113.25		281.1	-195.0	368.5	350.7	17.76	20.742	
4,100.0	4,094.4	4,112.6	4,094.4	8.9	10.6	114.84		281.1	-195.0	373.1	354.9	18.21	20.487	
4,200.0	4,193.8	4,212.0	4,193.8	9.2	10.8	116.38		281.1	-195.0	377.9	359.3	18.68	20.235	
4,300.0	4,293.1	4,311.3	4,293.1	9.4	11.0	117.87		281.1	-195.0	383.1	363.9	19.15	20.007	
4,400.0	4,392.5	4,410.7	4,392.5	9.7	11.2	119.33		281.1	-195.0	388.5	368.9	19.62	19.802	
4,500.0	4,491.9	4,510.1	4,491.9	9.9	11.4	120.75		281.1	-195.0	394.2	374.1	20.09	19.618	
4,600.0	4,591.2	4,609.4	4,591.2	10.2	11.6	122.13		281.1	-195.0	400.0	379.5	20.56	19.454	
4,700.0	4,690.6	4,708.8	4,690.6	10.5	11.8	123.46		281.1	-195.0	406.2	385.1	21.04	19.308	
4,800.0	4,790.0	4,808.2	4,790.0	10.7	11.9	124.76		281.1	-195.0	412.5	391.0	21.51	19.178	
4,900.0	4,889.3	4,907.5	4,889.3	11.0	12.1	126.02		281.1	-195.0	419.0	397.0	21.98	19.064	
5,000.0	4,988.7	5,006.9	4,988.7	11.3	12.3	127.24		281.1	-195.0	425.8	403.3	22.45	18.964	
5,100.0	5,088.1	5,106.3	5,088.1	11.5	12.5	128.42		281.1	-195.0	432.7	409.8	22.92	18.877	
5,200.0	5,187.4	5,205.6	5,187.4	11.8	12.7	129.56		281.1	-195.0	439.8	416.4	23.39	18.802	
5,300.0	5,286.8	5,305.0	5,286.8	12.1	12.9	130.66		281.1	-195.0	447.0	423.2	23.86	18.738	
5,400.0	5,386.2	5,404.4	5,386.2	12.4	13.1	131.74		281.1	-195.0	454.5	430.1	24.33	18.682	
5,500.0	5,485.7	5,504.0	5,485.7	12.6	13.3	132.69		281.1	-195.0	460.7	435.9	24.80	18.574	
5,600.0	5,585.6	5,603.8	5,585.6	12.8	13.5	133.27		281.1	-195.0	466.6	439.3	25.25	18.396	
5,700.0	5,685.5	5,703.8	5,685.5	13.0	13.7	133.49		281.1	-195.0	466.1	440.4	25.68	18.149	
5,800.0	5,785.5	5,803.8	5,785.5	13.2	13.9	0.00		281.1	-195.0	466.1	440.0	26.14	17.836	
5,900.0	5,885.5	5,903.8	5,885.5	13.4	14.1	0.00		281.1	-195.0	466.1	439.6	26.55	17.558	
6,000.0	5,985.5	6,003.8	5,985.5	13.6	14.3	0.00		281.1	-195.0	466.1	439.2	26.96	17.289	
6,100.0	6,085.5	6,103.8	6,085.5	13.8	14.5	0.00		281.1	-195.0	466.1	438.8	27.38	17.027	
6,123.0	6,108.5	6,126.7	6,108.5	13.8	14.6	-90.26		281.1	-195.0	466.2	438.7	27.44	16.985	
6,200.0	6,185.4	6,203.7	6,185.4	14.0	14.7	-90.69		281.1	-195.0	466.2	438.4	27.75	16.802	
6,300.0	6,284.0	6,304.6	6,284.0	14.1	14.9	-91.83		281.1	-187.8	466.4	438.3	28.04	16.631	
6,400.0	6,379.6	6,406.8	6,386.1	14.2	15.0	-92.96		281.0	-167.0	466.8	438.5	28.27	16.510	
6,500.0	6,470.5	6,510.3	6,483.6	14.3	15.1	-94.03		280.9	-132.6	467.3	438.8	28.50	16.398	
6,600.0	6,555.3	6,615.1	6,576.7	14.4	15.2	-95.04		280.7	-84.7	467.9	439.1	28.82	16.238	
6,700.0	6,632.4	6,721.1	6,663.3	14.5	15.2	-95.96		280.4	-23.8	468.6	439.3	29.37	15.958	
6,800.0	6,700.6	6,828.2	6,741.4	15.0	15.5	-96.78		280.1	49.4	469.4	439.1	30.32	15.482	
6,900.0	6,758.7	6,936.3	6,809.1	15.9	16.2	-97.47		279.8	133.6	470.1	438.2	31.83	14.770	
7,000.0	6,805.6	7,045.3	6,864.6	17.0	17.3	-98.03		279.4	227.3	470.7	436.6	34.01	13.838	

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

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Site Error:	0.0ft	North Reference:	True
Reference Well:	LaSalle 25F-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25F-412 - Wellbore #1 - Plan #1 (2-25-13)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	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
7,100.0	6,840.7	7,154.9	6,906.4	18.5	18.8	-98.44		279.0	328.5	471.1	434.2	36.90	12.766	
7,200.0	6,863.2	7,265.1	6,933.4	20.3	20.7	-98.70		278.5	435.2	471.4	431.0	40.43	11.659	
7,300.0	6,872.9	7,370.1	6,946.3	22.3	22.7	-98.99		278.1	539.4	471.8	427.4	44.33	10.642	
7,400.0	6,872.0	7,475.4	6,954.4	24.4	24.9	-100.02		277.6	644.4	473.1	424.7	48.45	9.766	
7,500.0	6,870.3	7,579.1	6,954.4	26.6	27.2	-100.23		277.2	748.1	473.4	420.5	52.87	8.954	
7,600.0	6,868.6	7,679.1	6,953.3	29.0	29.5	-100.30		276.8	848.1	473.5	416.0	57.44	8.243	
7,700.0	6,866.9	7,779.1	6,952.1	31.4	31.9	-100.37		276.4	948.0	473.6	411.4	62.16	7.619	
7,800.0	6,865.2	7,879.1	6,951.0	33.9	34.3	-100.44		275.9	1,048.0	473.6	406.6	66.99	7.070	
7,900.0	6,863.5	7,979.1	6,949.9	36.4	36.8	-100.51		275.5	1,148.0	473.7	401.8	71.93	6.586	
8,000.0	6,861.8	8,079.1	6,948.8	38.9	39.4	-100.58		275.1	1,248.0	473.8	396.8	76.93	6.158	
8,100.0	6,860.1	8,179.1	6,947.6	41.5	41.9	-100.65		274.7	1,348.0	473.9	391.9	82.01	5.778	
8,200.0	6,858.4	8,279.1	6,946.5	44.2	44.5	-100.72		274.3	1,448.0	473.9	386.8	87.13	5.440	
8,300.0	6,856.6	8,379.1	6,945.4	46.8	47.2	-100.79		273.8	1,548.0	474.0	381.7	92.29	5.136	
8,400.0	6,854.9	8,479.1	6,944.3	49.5	49.8	-100.86		273.4	1,648.0	474.1	376.6	97.49	4.863	
8,500.0	6,853.2	8,579.1	6,943.1	52.1	52.5	-100.93		273.0	1,748.0	474.2	371.5	102.72	4.616	
8,600.0	6,851.5	8,679.1	6,942.0	54.8	55.2	-101.00		272.6	1,848.0	474.3	366.3	107.97	4.392	
8,700.0	6,849.8	8,779.1	6,940.9	57.5	57.8	-101.07		272.1	1,948.0	474.3	361.1	113.25	4.189	
8,800.0	6,848.1	8,879.1	6,939.8	60.2	60.5	-101.14		271.7	2,048.0	474.4	355.9	118.54	4.002	
8,900.0	6,846.4	8,979.1	6,938.7	63.0	63.3	-101.21		271.3	2,147.9	474.5	350.7	123.84	3.832	
9,000.0	6,844.7	9,079.1	6,937.5	65.7	66.0	-101.28		270.9	2,247.9	474.6	345.4	129.16	3.674	
9,100.0	6,843.0	9,179.1	6,936.4	68.4	68.7	-101.35		270.5	2,347.9	474.7	340.2	134.49	3.530	
9,200.0	6,841.2	9,279.1	6,935.3	71.2	71.4	-101.42		270.0	2,447.9	474.8	334.9	139.83	3.395	
9,300.0	6,839.5	9,379.1	6,934.2	73.9	74.2	-101.49		269.6	2,547.9	474.9	329.7	145.17	3.271	
9,400.0	6,837.8	9,479.1	6,933.0	76.6	76.9	-101.56		269.2	2,647.9	474.9	324.4	150.53	3.155	
9,500.0	6,836.1	9,579.1	6,931.9	79.4	79.7	-101.63		268.8	2,747.9	475.0	319.1	155.89	3.047	
9,600.0	6,834.4	9,679.1	6,930.8	82.2	82.4	-101.70		268.4	2,847.9	475.1	313.9	161.25	2.947	
9,700.0	6,832.7	9,779.1	6,929.7	84.9	85.2	-101.77		267.9	2,947.9	475.2	308.6	166.62	2.852	
9,800.0	6,831.0	9,879.1	6,928.5	87.7	87.9	-101.84		267.5	3,047.9	475.3	303.3	171.99	2.764	
9,900.0	6,829.3	9,979.1	6,927.4	90.4	90.7	-101.91		267.1	3,147.9	475.4	298.0	177.36	2.680	
10,000.0	6,827.6	10,079.1	6,926.3	93.2	93.5	-101.98		266.7	3,247.8	475.5	292.7	182.74	2.602	
10,100.0	6,825.9	10,179.1	6,925.2	96.0	96.2	-102.05		266.3	3,347.8	475.6	287.5	188.11	2.528	
10,200.0	6,824.1	10,279.1	6,924.0	98.8	99.0	-102.12		265.8	3,447.8	475.7	282.2	193.49	2.458	
10,300.0	6,822.4	10,379.1	6,922.9	101.5	101.8	-102.19		265.4	3,547.8	475.8	276.9	198.87	2.392	
10,400.0	6,820.7	10,479.1	6,921.8	104.3	104.5	-102.26		265.0	3,647.8	475.9	271.6	204.26	2.330	
10,500.0	6,819.0	10,579.1	6,920.7	107.1	107.3	-102.33		264.6	3,747.8	476.0	266.3	209.64	2.270	
10,600.0	6,817.3	10,679.1	6,919.5	109.9	110.1	-102.40		264.2	3,847.8	476.1	261.0	215.02	2.214	
10,700.0	6,815.6	10,779.1	6,918.4	112.6	112.9	-102.47		263.7	3,947.8	476.1	255.7	220.40	2.160	
10,800.0	6,813.9	10,879.1	6,917.3	115.4	115.6	-102.54		263.3	4,047.8	476.2	250.5	225.78	2.109	
10,900.0	6,812.2	10,979.1	6,916.2	118.2	118.4	-102.61		262.9	4,147.8	476.3	245.2	231.16	2.061	
11,000.0	6,810.5	11,079.1	6,915.1	121.0	121.2	-102.68		262.5	4,247.8	476.4	239.9	236.54	2.014	
11,100.0	6,808.8	11,179.1	6,913.9	123.8	124.0	-102.75		262.1	4,347.7	476.5	234.6	241.92	1.970	
11,200.0	6,807.0	11,279.1	6,912.8	126.6	126.8	-102.82		261.6	4,447.7	476.6	229.3	247.30	1.927	
11,300.0	6,805.3	11,379.0	6,911.7	129.4	129.6	-102.89		261.2	4,547.7	476.7	224.1	252.67	1.887	
11,319.4	6,805.0	11,398.5	6,911.5	129.9	130.1	-102.90		261.1	4,567.2	476.8	223.0	253.72	1.879 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design		LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-212 - Wellbore #1 - Plan #1 (2-25-13)											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)				
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	1,099.0	1,099.0	2.4	2.3	-179.07	-30.8	-0.5	30.8	26.1	4.69	6.568			
1,200.0	1,200.0	1,197.8	1,197.6	2.6	2.5	-176.81	-35.7	-2.0	35.8	30.7	5.09	7.035			
1,300.0	1,300.0	1,296.0	1,295.5	2.8	2.7	-174.19	-43.8	-4.5	44.2	38.7	5.50	8.034			
1,400.0	1,400.0	1,393.6	1,392.4	3.0	2.9	-171.85	-55.0	-7.9	56.1	50.1	5.94	9.445			
1,500.0	1,500.0	1,491.7	1,489.4	3.3	3.1	-170.03	-68.9	-12.1	70.8	64.4	6.39	11.079			
1,600.0	1,600.0	1,590.5	1,587.1	3.5	3.4	-168.80	-83.2	-16.5	85.8	79.0	6.85	12.524			
1,700.0	1,700.0	1,689.4	1,684.8	3.7	3.7	-167.94	-97.6	-20.8	100.9	93.6	7.33	13.768			
1,800.0	1,800.0	1,788.2	1,782.5	3.9	4.0	-167.30	-111.9	-25.2	116.0	108.2	7.82	14.845			
1,900.0	1,900.0	1,887.1	1,880.2	4.2	4.3	-166.81	-126.2	-29.6	131.1	122.8	8.31	15.783			
2,000.0	2,000.0	1,985.9	1,977.9	4.4	4.6	-166.42	-140.6	-33.9	146.3	137.5	8.81	16.606			
2,100.0	2,100.0	2,084.7	2,075.6	4.6	4.9	-166.11	-154.9	-38.3	161.4	152.1	9.31	17.333			
2,200.0	2,200.0	2,183.6	2,173.3	4.8	5.3	-165.85	-169.2	-42.7	176.5	166.7	9.82	17.977			
2,300.0	2,300.0	2,282.4	2,271.0	5.1	5.6	-165.62	-183.5	-47.0	191.7	181.4	10.33	18.553			
2,400.0	2,400.0	2,381.3	2,368.7	5.3	5.9	-165.44	-197.9	-51.4	206.8	196.0	10.85	19.069			
2,500.0	2,500.0	2,480.1	2,466.4	5.5	6.3	-165.27	-212.2	-55.8	222.0	210.6	11.36	19.535			
2,600.0	2,600.0	2,579.0	2,564.1	5.7	6.6	-165.13	-226.5	-60.1	237.1	225.2	11.88	19.956			
2,700.0	2,700.0	2,677.8	2,661.8	6.0	7.0	-165.01	-240.9	-64.5	252.3	239.9	12.40	20.340			
2,800.0	2,800.0	2,776.7	2,759.5	6.2	7.3	-164.90	-255.2	-68.9	267.4	254.5	12.93	20.690			
2,900.0	2,900.0	2,875.5	2,857.2	6.4	7.7	-164.80	-269.5	-73.2	282.6	269.1	13.45	21.011			
3,000.0	3,000.0	2,974.3	2,954.9	6.6	8.0	-164.71	-283.9	-77.6	297.7	283.7	13.97	21.306			
3,100.0	3,100.0	3,073.4	3,052.8	6.8	8.4	-31.16	-298.2	-82.0	311.4	297.9	13.50	23.071			
3,200.0	3,199.8	3,172.8	3,151.1	7.0	8.7	-31.45	-312.6	-86.4	322.1	308.2	13.91	23.148			
3,300.0	3,299.5	3,272.4	3,249.5	7.2	9.1	-32.07	-327.1	-90.8	329.9	315.6	14.33	23.020			
3,400.0	3,398.8	3,372.1	3,348.1	7.4	9.4	-32.95	-341.5	-95.2	335.7	320.9	14.76	22.739			
3,500.0	3,498.2	3,471.8	3,446.6	7.6	9.8	-33.82	-356.0	-99.6	341.5	326.3	15.20	22.460			
3,600.0	3,597.6	3,571.5	3,545.2	7.8	10.1	-34.66	-370.4	-104.0	347.3	331.7	15.65	22.192			
3,700.0	3,696.9	3,671.2	3,643.7	8.0	10.5	-35.47	-384.9	-108.4	353.3	337.2	16.10	21.935			
3,800.0	3,796.3	3,770.9	3,742.3	8.2	10.9	-36.26	-399.4	-112.8	359.3	342.7	16.56	21.688			
3,900.0	3,895.7	3,870.6	3,840.8	8.5	11.2	-37.02	-413.8	-117.2	365.3	348.3	17.03	21.451			
4,000.0	3,995.0	3,970.3	3,939.3	8.7	11.6	-37.75	-428.3	-121.6	371.5	354.0	17.50	21.223			
4,100.0	4,094.4	4,070.0	4,037.9	8.9	11.9	-38.46	-442.7	-126.0	377.7	359.7	17.98	21.004			
4,200.0	4,193.8	4,169.7	4,136.4	9.2	12.3	-39.15	-457.2	-130.4	383.9	365.4	18.46	20.793			
4,300.0	4,293.1	4,269.4	4,235.0	9.4	12.7	-39.82	-471.6	-134.8	390.2	371.2	18.95	20.590			
4,400.0	4,392.5	4,369.1	4,333.5	9.7	13.0	-40.46	-486.1	-139.2	396.5	377.1	19.44	20.394			
4,500.0	4,491.9	4,468.8	4,432.1	9.9	13.4	-41.09	-500.5	-143.6	402.9	383.0	19.94	20.205			
4,600.0	4,591.2	4,568.5	4,530.6	10.2	13.8	-41.69	-515.0	-148.0	409.4	388.9	20.45	20.024			
4,700.0	4,690.6	4,668.2	4,629.2	10.5	14.1	-42.28	-529.4	-152.4	415.9	394.9	20.95	19.849			
4,800.0	4,790.0	4,767.9	4,727.7	10.7	14.5	-42.85	-543.9	-156.8	422.4	401.0	21.46	19.680			
4,900.0	4,889.3	4,867.6	4,826.3	11.0	14.8	-43.40	-558.4	-161.2	429.0	407.0	21.98	19.517			
5,000.0	4,988.7	4,967.3	4,924.8	11.3	15.2	-43.93	-572.8	-165.6	435.6	413.1	22.50	19.360			

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 LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-212 - Wellbore #1 - Plan #1 (2-25-13)													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
5,100.0	5,088.1	5,067.0	5,023.4	11.5	15.6	-44.45	-587.3	-170.1	442.2	419.2	23.02	19.208		
5,200.0	5,187.4	5,166.7	5,121.9	11.8	15.9	-44.95	-601.7	-174.5	448.9	425.4	23.55	19.062		
5,300.0	5,286.8	5,266.4	5,220.5	12.1	16.3	-45.44	-616.2	-178.9	455.6	431.6	24.08	18.920		
5,400.0	5,386.2	5,366.1	5,319.0	12.4	16.7	-45.92	-630.6	-183.3	462.4	437.8	24.62	18.785		
5,500.0	5,485.7	5,475.5	5,427.2	12.6	17.0	-46.36	-645.9	-187.9	470.0	444.9	25.13	18.708		
5,600.0	5,585.6	5,594.0	5,545.0	12.8	17.3	-46.59	-658.3	-191.7	476.6	451.0	25.58	18.630		
5,700.0	5,685.5	5,712.9	5,663.6	13.0	17.5	-46.61	-666.0	-194.1	481.6	455.6	25.98	18.535		
5,800.0	5,785.5	5,832.1	5,782.7	13.2	17.7	180.00	-669.1	-195.0	484.1	454.0	30.07	16.101		
5,900.0	5,885.5	5,934.8	5,885.5	13.4	17.9	-180.00	-669.1	-195.0	484.1	453.7	30.42	15.917		
6,000.0	5,985.5	6,034.8	5,985.5	13.6	18.0	-180.00	-669.1	-195.0	484.1	453.4	30.75	15.743		
6,027.7	6,013.2	6,062.5	6,013.2	13.6	18.0	180.00	-669.1	-195.0	484.1	453.3	30.85	15.695		
6,100.0	6,085.5	6,134.4	6,085.0	13.8	18.1	179.58	-669.2	-191.5	484.2	453.1	31.07	15.582		
6,200.0	6,185.4	6,232.2	6,181.5	14.0	18.2	87.93	-669.2	-175.9	484.5	456.5	27.93	17.347		
6,300.0	6,284.0	6,328.5	6,273.7	14.1	18.3	86.50	-669.3	-148.6	485.1	456.9	28.22	17.191		
6,400.0	6,379.6	6,423.4	6,360.6	14.2	18.3	85.14	-669.5	-110.6	485.9	457.5	28.45	17.082		
6,500.0	6,470.5	6,517.0	6,441.1	14.3	18.4	83.87	-669.7	-62.8	487.0	458.3	28.68	16.979		
6,600.0	6,555.3	6,609.6	6,514.3	14.4	18.4	82.70	-669.9	-6.3	488.1	459.1	29.03	16.817		
6,700.0	6,632.4	6,700.0	6,578.7	14.5	18.5	81.67	-670.2	57.1	489.4	459.8	29.62	16.524		
6,800.0	6,700.6	6,791.9	6,636.0	15.0	18.6	80.76	-670.4	128.8	490.6	459.9	30.63	16.018		
6,900.0	6,758.7	6,882.0	6,683.5	15.9	18.8	80.00	-670.7	205.4	491.7	459.5	32.16	15.287		
7,000.0	6,805.6	6,971.5	6,721.4	17.0	19.3	79.40	-671.1	286.4	492.6	458.3	34.30	14.360		
7,100.0	6,840.7	7,060.6	6,749.4	18.5	20.2	78.97	-671.4	370.9	493.3	456.3	37.05	13.315		
7,200.0	6,863.2	7,150.0	6,767.5	20.3	21.5	78.69	-671.8	458.4	493.8	453.4	40.35	12.237		
7,300.0	6,872.9	7,238.1	6,775.2	22.3	23.1	78.59	-672.1	546.2	494.0	449.9	44.06	11.210		
7,400.0	6,872.0	7,334.1	6,774.8	24.4	25.0	78.64	-672.5	642.2	493.9	445.7	48.17	10.252		
7,500.0	6,870.3	7,434.1	6,773.7	26.6	27.2	78.71	-672.9	742.2	493.8	441.2	52.56	9.394		
7,600.0	6,868.6	7,534.1	6,772.5	29.0	29.5	78.78	-673.3	842.1	493.7	436.5	57.15	8.639		
7,700.0	6,866.9	7,634.1	6,771.4	31.4	31.8	78.85	-673.7	942.1	493.6	431.7	61.89	7.975		
7,800.0	6,865.2	7,734.1	6,770.3	33.9	34.2	78.91	-674.1	1,042.1	493.5	426.7	66.75	7.392		
7,900.0	6,863.5	7,834.1	6,769.2	36.4	36.7	78.98	-674.5	1,142.1	493.4	421.6	71.71	6.879		
8,000.0	6,861.8	7,934.1	6,768.1	38.9	39.3	79.05	-674.9	1,242.1	493.2	416.5	76.76	6.426		
8,100.0	6,860.1	8,034.1	6,767.0	41.5	41.8	79.12	-675.3	1,342.1	493.1	411.3	81.86	6.024		
8,200.0	6,858.4	8,134.1	6,765.8	44.2	44.4	79.18	-675.7	1,442.1	493.0	406.0	87.03	5.665		
8,300.0	6,856.6	8,234.1	6,764.7	46.8	47.0	79.25	-676.1	1,542.1	492.9	400.7	92.23	5.344		
8,400.0	6,854.9	8,334.1	6,763.6	49.5	49.7	79.32	-676.5	1,642.1	492.8	395.4	97.48	5.056		
8,500.0	6,853.2	8,434.1	6,762.5	52.1	52.3	79.39	-676.9	1,742.1	492.7	390.0	102.76	4.795		
8,600.0	6,851.5	8,534.1	6,761.4	54.8	55.0	79.46	-677.3	1,842.1	492.6	384.6	108.06	4.559		
8,700.0	6,849.8	8,634.1	6,760.3	57.5	57.7	79.52	-677.7	1,942.0	492.5	379.1	113.40	4.343		
8,800.0	6,848.1	8,734.1	6,759.1	60.2	60.4	79.59	-678.1	2,042.0	492.4	373.7	118.75	4.147		
8,900.0	6,846.4	8,834.1	6,758.0	63.0	63.1	79.66	-678.5	2,142.0	492.3	368.2	124.12	3.967		
9,000.0	6,844.7	8,934.1	6,756.9	65.7	65.8	79.73	-678.9	2,242.0	492.2	362.7	129.51	3.801		
9,100.0	6,843.0	9,034.1	6,755.8	68.4	68.5	79.80	-679.3	2,342.0	492.1	357.2	134.92	3.648		
9,200.0	6,841.2	9,134.1	6,754.7	71.2	71.2	79.87	-679.7	2,442.0	492.0	351.7	140.34	3.506		
9,300.0	6,839.5	9,234.1	6,753.6	73.9	74.0	79.93	-680.1	2,542.0	491.9	346.2	145.77	3.375		
9,400.0	6,837.8	9,334.1	6,752.4	76.6	76.7	80.00	-680.5	2,642.0	491.9	340.6	151.21	3.253		
9,500.0	6,836.1	9,434.1	6,751.3	79.4	79.5	80.07	-680.9	2,742.0	491.8	335.1	156.66	3.139		
9,600.0	6,834.4	9,534.1	6,750.2	82.2	82.2	80.14	-681.3	2,842.0	491.7	329.5	162.12	3.033		
9,700.0	6,832.7	9,634.1	6,749.1	84.9	85.0	80.21	-681.7	2,942.0	491.6	324.0	167.60	2.933		
9,800.0	6,831.0	9,734.1	6,748.0	87.7	87.7	80.28	-682.1	3,041.9	491.5	318.4	173.07	2.840		
9,900.0	6,829.3	9,834.1	6,746.9	90.4	90.5	80.34	-682.5	3,141.9	491.4	312.8	178.56	2.752		
10,000.0	6,827.6	9,934.1	6,745.7	93.2	93.2	80.41	-682.9	3,241.9	491.3	307.2	184.05	2.669		

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 LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-212 - Wellbore #1 - Plan #1 (2-25-13)												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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	6,825.9	10,034.1	6,744.6	96.0	96.0	80.48	-683.3	3,341.9	491.2	301.6	189.55	2.591	
10,200.0	6,824.1	10,134.1	6,743.5	98.8	98.8	80.55	-683.7	3,441.9	491.1	296.1	195.06	2.518	
10,300.0	6,822.4	10,234.1	6,742.4	101.5	101.5	80.62	-684.1	3,541.9	491.0	290.5	200.57	2.448	
10,400.0	6,820.7	10,334.1	6,741.3	104.3	104.3	80.69	-684.5	3,641.9	490.9	284.8	206.09	2.382	
10,500.0	6,819.0	10,434.1	6,740.2	107.1	107.1	80.75	-684.8	3,741.9	490.8	279.2	211.61	2.320	
10,600.0	6,817.3	10,534.1	6,739.0	109.9	109.9	80.82	-685.2	3,841.9	490.8	273.6	217.14	2.260	
10,700.0	6,815.6	10,634.1	6,737.9	112.6	112.6	80.89	-685.6	3,941.9	490.7	268.0	222.67	2.204	
10,800.0	6,813.9	10,734.1	6,736.8	115.4	115.4	80.96	-686.0	4,041.9	490.6	262.4	228.20	2.150	
10,900.0	6,812.2	10,834.1	6,735.7	118.2	118.2	81.03	-686.4	4,141.9	490.5	256.8	233.74	2.098	
11,000.0	6,810.5	10,934.1	6,734.6	121.0	121.0	81.10	-686.8	4,241.8	490.4	251.1	239.29	2.050	
11,100.0	6,808.8	11,034.1	6,733.5	123.8	123.7	81.17	-687.2	4,341.8	490.3	245.5	244.84	2.003	
11,200.0	6,807.0	11,134.1	6,732.3	126.6	126.5	81.23	-687.6	4,441.8	490.3	239.9	250.39	1.958	
11,300.0	6,805.3	11,234.1	6,731.2	129.4	129.3	81.30	-688.0	4,541.8	490.2	234.2	255.94	1.915	
11,319.4	6,805.0	11,253.5	6,731.0	129.9	129.9	81.32	-688.1	4,561.2	490.2	233.1	257.02	1.907 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-402 - Wellbore #1 - Plan #1 (2-25-13)													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	0.0	0.0	0.0	0.0	-180.00	-180.00	-61.9	0.0	61.9				
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-180.00	-61.9	0.0	61.9	61.7	0.22	275.543	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-180.00	-61.9	0.0	61.9	61.3	0.67	91.848 CC, ES	
300.0	300.0	297.9	297.9	0.6	0.5	-179.71	-179.71	-63.6	-0.3	63.6	62.5	1.10	58.000	
400.0	400.0	395.5	395.4	0.8	0.7	-178.93	-178.93	-68.5	-1.3	68.6	67.1	1.52	45.021	
500.0	500.0	492.7	492.2	1.0	1.0	-177.86	-177.86	-76.6	-2.9	77.0	75.1	1.98	38.911	
600.0	600.0	589.3	588.1	1.2	1.2	-176.71	-176.71	-87.9	-5.0	88.8	86.3	2.46	36.056	
700.0	700.0	684.9	682.6	1.5	1.6	-175.62	-175.62	-102.1	-7.8	103.9	100.9	2.97	34.938	
800.0	800.0	780.8	776.8	1.7	1.9	-174.65	-174.65	-119.4	-11.2	122.1	118.6	3.51	34.753	
900.0	900.0	878.9	873.2	1.9	2.3	-173.88	-173.88	-137.7	-14.8	141.1	137.0	4.07	34.661	
1,000.0	1,000.0	977.1	969.5	2.1	2.7	-173.30	-173.30	-156.1	-18.3	160.1	155.5	4.63	34.556	
1,100.0	1,100.0	1,075.3	1,065.9	2.4	3.1	-172.84	-172.84	-174.5	-21.9	179.1	173.9	5.20	34.450	
1,200.0	1,200.0	1,173.4	1,162.3	2.6	3.5	-172.47	-172.47	-192.9	-25.5	198.2	192.4	5.77	34.351	
1,300.0	1,300.0	1,271.6	1,258.6	2.8	3.9	-172.16	-172.16	-211.2	-29.1	217.2	210.9	6.34	34.262	
1,400.0	1,400.0	1,369.7	1,355.0	3.0	4.4	-171.90	-171.90	-229.6	-32.7	236.3	229.4	6.91	34.181	
1,500.0	1,500.0	1,467.9	1,451.4	3.3	4.8	-171.68	-171.68	-248.0	-36.2	255.3	247.8	7.49	34.110	
1,600.0	1,600.0	1,566.1	1,547.7	3.5	5.2	-171.50	-171.50	-266.4	-39.8	274.4	266.3	8.06	34.046	
1,700.0	1,700.0	1,664.2	1,644.1	3.7	5.6	-171.33	-171.33	-284.8	-43.4	293.4	284.8	8.63	33.989	
1,800.0	1,800.0	1,762.4	1,740.4	3.9	6.0	-171.19	-171.19	-303.1	-47.0	312.5	303.3	9.21	33.937	
1,900.0	1,900.0	1,860.6	1,836.8	4.2	6.4	-171.06	-171.06	-321.5	-50.6	331.5	321.8	9.78	33.891	
2,000.0	2,000.0	1,958.7	1,933.2	4.4	6.9	-170.95	-170.95	-339.9	-54.1	350.6	340.3	10.36	33.849	
2,100.0	2,100.0	2,056.9	2,029.5	4.6	7.3	-170.85	-170.85	-358.3	-57.7	369.7	358.7	10.93	33.811	
2,200.0	2,200.0	2,155.1	2,125.9	4.8	7.7	-170.75	-170.75	-376.6	-61.3	388.7	377.2	11.51	33.776	
2,300.0	2,300.0	2,253.2	2,222.2	5.1	8.1	-170.67	-170.67	-395.0	-64.9	407.8	395.7	12.09	33.744	
2,400.0	2,400.0	2,351.4	2,318.6	5.3	8.5	-170.60	-170.60	-413.4	-68.5	426.9	414.2	12.66	33.715	
2,500.0	2,500.0	2,449.5	2,415.0	5.5	9.0	-170.53	-170.53	-431.8	-72.0	445.9	432.7	13.24	33.688	
2,600.0	2,600.0	2,547.7	2,511.3	5.7	9.4	-170.46	-170.46	-450.2	-75.6	465.0	451.2	13.81	33.663	
2,700.0	2,700.0	2,645.9	2,607.7	6.0	9.8	-170.40	-170.40	-468.5	-79.2	484.1	469.7	14.39	33.639	
2,800.0	2,800.0	2,744.0	2,704.1	6.2	10.2	-170.35	-170.35	-486.9	-82.8	503.1	488.2	14.97	33.618	
2,900.0	2,900.0	2,842.2	2,800.4	6.4	10.7	-170.30	-170.30	-505.3	-86.4	522.2	506.7	15.54	33.598	
3,000.0	3,000.0	2,940.4	2,896.8	6.6	11.1	-170.25	-170.25	-523.7	-89.9	541.3	525.2	16.12	33.579	
3,100.0	3,100.0	3,038.8	2,993.4	6.8	11.5	-36.61	-36.61	-542.1	-93.5	559.0	544.7	14.22	39.303	
3,200.0	3,199.8	3,137.6	3,090.4	7.0	11.9	-36.70	-36.70	-560.6	-97.1	573.9	559.2	14.67	39.112	
3,300.0	3,299.5	3,236.8	3,187.7	7.2	12.3	-37.02	-37.02	-579.2	-100.8	586.1	571.0	15.12	38.753	
3,400.0	3,398.8	3,336.0	3,285.2	7.4	12.8	-37.58	-37.58	-597.8	-104.4	596.4	580.8	15.58	38.287	
3,500.0	3,498.2	3,435.3	3,382.7	7.6	13.2	-38.15	-38.15	-616.3	-108.0	606.7	590.6	16.04	37.832	
3,600.0	3,597.6	3,534.6	3,480.1	7.8	13.6	-38.71	-38.71	-634.9	-111.6	617.0	600.5	16.50	37.392	
3,700.0	3,696.9	3,633.9	3,577.6	8.0	14.1	-39.25	-39.25	-653.5	-115.2	627.4	610.5	16.97	36.967	
3,800.0	3,796.3	3,733.2	3,675.1	8.2	14.5	-39.77	-39.77	-672.1	-118.9	637.9	620.4	17.45	36.556	
3,900.0	3,895.7	3,832.5	3,772.5	8.5	14.9	-40.27	-40.27	-690.7	-122.5	648.4	630.5	17.93	36.158	
4,000.0	3,995.0	3,931.8	3,870.0	8.7	15.3	-40.75	-40.75	-709.3	-126.1	659.0	640.5	18.42	35.774	
4,100.0	4,094.4	4,031.1	3,967.4	8.9	15.8	-41.22	-41.22	-727.9	-129.7	669.6	650.7	18.91	35.403	
4,200.0	4,193.8	4,130.3	4,064.9	9.2	16.2	-41.68	-41.68	-746.5	-133.3	680.2	660.8	19.41	35.044	
4,300.0	4,293.1	4,229.6	4,162.4	9.4	16.6	-42.12	-42.12	-765.0	-137.0	690.9	671.0	19.91	34.698	
4,400.0	4,392.5	4,328.9	4,259.8	9.7	17.0	-42.55	-42.55	-783.6	-140.6	701.6	681.2	20.42	34.363	
4,500.0	4,491.9	4,428.2	4,357.3	9.9	17.5	-42.97	-42.97	-802.2	-144.2	712.4	691.5	20.93	34.039	
4,600.0	4,591.2	4,527.5	4,454.8	10.2	17.9	-43.37	-43.37	-820.8	-147.8	723.2	701.7	21.44	33.726	
4,700.0	4,690.6	4,626.8	4,552.2	10.5	18.3	-43.76	-43.76	-839.4	-151.5	734.0	712.1	21.96	33.424	
4,800.0	4,790.0	4,726.1	4,649.7	10.7	18.7	-44.14	-44.14	-858.0	-155.1	744.9	722.4	22.48	33.131	
4,900.0	4,889.3	4,825.4	4,747.2	11.0	19.2	-44.51	-44.51	-876.6	-158.7	755.8	732.8	23.01	32.848	
5,000.0	4,988.7	4,924.6	4,844.6	11.3	19.6	-44.87	-44.87	-895.2	-162.3	766.7	743.2	23.54	32.575	

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 LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-402 - Wellbore #1 - Plan #1 (2-25-13)													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
5,100.0	5,088.1	5,023.9	4,942.1	11.5	20.0	-45.22	-913.8	-165.9	777.7	753.6	24.07	32.310		
5,200.0	5,187.4	5,123.2	5,039.6	11.8	20.5	-45.56	-932.3	-169.6	788.7	764.1	24.60	32.054		
5,300.0	5,286.8	5,222.5	5,137.0	12.1	20.9	-45.89	-950.9	-173.2	799.7	774.5	25.14	31.807		
5,400.0	5,386.2	5,321.8	5,234.5	12.4	21.3	-46.22	-969.5	-176.8	810.7	785.0	25.68	31.569		
5,500.0	5,485.7	5,421.0	5,331.8	12.6	21.7	-46.61	-988.1	-180.4	823.2	797.0	26.18	31.448		
5,600.0	5,585.6	5,519.9	5,428.9	12.8	22.2	-46.86	-1,006.6	-184.0	838.0	811.4	26.64	31.459		
5,700.0	5,685.5	5,648.7	5,555.7	13.0	22.6	-46.92	-1,028.9	-188.4	853.9	826.8	27.10	31.515		
5,800.0	5,785.5	5,789.2	5,695.0	13.2	22.9	179.79	-1,047.0	-191.9	866.7	831.4	35.33	24.532		
5,900.0	5,885.5	5,931.2	5,836.6	13.4	23.2	179.94	-1,058.4	-194.1	874.7	838.9	35.80	24.435		
6,000.0	5,985.5	6,074.1	5,979.3	13.6	23.4	180.00	-1,062.9	-195.0	877.9	841.7	36.20	24.248		
6,100.0	6,085.5	6,180.3	6,085.5	13.8	23.5	-180.00	-1,062.9	-195.0	877.9	841.4	36.52	24.040		
6,192.5	6,177.9	6,272.7	6,177.9	14.0	23.6	90.05	-1,062.9	-195.0	877.9	848.8	29.09	30.181		
6,200.0	6,185.4	6,280.2	6,185.4	14.0	23.6	90.02	-1,062.9	-195.0	877.9	848.8	29.12	30.152		
6,300.0	6,284.0	6,380.4	6,285.3	14.1	23.7	90.64	-1,063.0	-187.9	878.0	848.6	29.33	29.932		
6,400.0	6,379.6	6,481.9	6,384.7	14.2	23.7	91.24	-1,063.0	-167.4	878.1	848.6	29.49	29.778		
6,500.0	6,470.5	6,584.7	6,481.6	14.3	23.8	91.83	-1,063.2	-133.5	878.4	848.7	29.64	29.631		
6,600.0	6,555.3	6,688.7	6,574.2	14.4	23.8	92.39	-1,063.4	-86.2	878.7	848.8	29.89	29.395		
6,700.0	6,632.4	6,794.1	6,660.5	14.5	23.9	92.91	-1,063.6	-26.0	879.1	848.7	30.37	28.945		
6,800.0	6,700.6	6,900.5	6,738.5	15.0	23.9	93.37	-1,063.9	46.4	879.4	848.2	31.24	28.154		
6,900.0	6,758.7	7,008.1	6,806.3	15.9	24.0	93.78	-1,064.2	129.8	879.8	847.2	32.66	26.937		
7,000.0	6,805.6	7,116.6	6,862.2	17.0	24.2	94.13	-1,064.5	222.7	880.2	845.4	34.75	25.328		
7,100.0	6,840.7	7,225.9	6,904.6	18.5	24.6	94.39	-1,064.9	323.3	880.5	842.9	37.53	23.460		
7,200.0	6,863.2	7,335.8	6,932.3	20.3	25.3	94.58	-1,065.3	429.5	880.7	839.8	40.94	21.512		
7,300.0	6,872.9	7,441.3	6,945.7	22.3	26.3	94.76	-1,065.7	534.2	880.9	836.2	44.75	19.686		
7,400.0	6,872.0	7,546.1	6,954.2	24.4	27.8	95.34	-1,066.1	638.5	881.7	832.9	48.87	18.043		
7,500.0	6,870.3	7,650.1	6,954.6	26.6	29.6	95.48	-1,066.5	742.6	881.9	828.6	53.31	16.543		
7,600.0	6,868.6	7,750.1	6,953.6	29.0	31.6	95.53	-1,066.9	842.5	882.0	824.1	57.89	15.236		
7,700.0	6,866.9	7,850.1	6,952.5	31.4	33.7	95.57	-1,067.3	942.5	882.1	819.4	62.63	14.083		
7,800.0	6,865.2	7,950.1	6,951.5	33.9	36.0	95.62	-1,067.7	1,042.5	882.1	814.6	67.50	13.068		
7,900.0	6,863.5	8,050.1	6,950.5	36.4	38.3	95.66	-1,068.1	1,142.5	882.2	809.7	72.48	12.172		
8,000.0	6,861.8	8,150.1	6,949.5	38.9	40.7	95.71	-1,068.5	1,242.5	882.3	804.7	77.53	11.379		
8,100.0	6,860.1	8,250.1	6,948.5	41.5	43.1	95.75	-1,068.9	1,342.5	882.3	799.7	82.66	10.675		
8,200.0	6,858.4	8,350.1	6,947.5	44.2	45.7	95.80	-1,069.3	1,442.5	882.4	794.6	87.83	10.046		
8,300.0	6,856.6	8,450.1	6,946.5	46.8	48.2	95.84	-1,069.7	1,542.5	882.5	789.4	93.06	9.483		
8,400.0	6,854.9	8,550.1	6,945.5	49.5	50.8	95.89	-1,070.1	1,642.5	882.6	784.2	98.32	8.976		
8,500.0	6,853.2	8,650.1	6,944.5	52.1	53.4	95.93	-1,070.5	1,742.5	882.6	779.0	103.62	8.518		
8,600.0	6,851.5	8,750.1	6,943.4	54.8	56.0	95.98	-1,070.9	1,842.5	882.7	773.8	108.94	8.103		
8,700.0	6,849.8	8,850.1	6,942.4	57.5	58.6	96.02	-1,071.3	1,942.5	882.8	768.5	114.29	7.724		
8,800.0	6,848.1	8,950.1	6,941.4	60.2	61.3	96.07	-1,071.7	2,042.4	882.9	763.2	119.66	7.378		
8,900.0	6,846.4	9,050.1	6,940.4	63.0	63.9	96.11	-1,072.1	2,142.4	882.9	757.9	125.04	7.061		
9,000.0	6,844.7	9,150.1	6,939.4	65.7	66.6	96.16	-1,072.5	2,242.4	883.0	752.6	130.44	6.769		
9,100.0	6,843.0	9,250.1	6,938.4	68.4	69.3	96.20	-1,072.8	2,342.4	883.1	747.2	135.86	6.500		
9,200.0	6,841.2	9,350.1	6,937.4	71.2	72.0	96.25	-1,073.2	2,442.4	883.2	741.9	141.28	6.251		
9,300.0	6,839.5	9,450.1	6,936.4	73.9	74.7	96.29	-1,073.6	2,542.4	883.3	736.5	146.72	6.020		
9,400.0	6,837.8	9,550.1	6,935.4	76.6	77.4	96.34	-1,074.0	2,642.4	883.3	731.2	152.16	5.805		
9,500.0	6,836.1	9,650.1	6,934.4	79.4	80.1	96.38	-1,074.4	2,742.4	883.4	725.8	157.61	5.605		
9,600.0	6,834.4	9,750.1	6,933.3	82.2	82.8	96.43	-1,074.8	2,842.4	883.5	720.4	163.07	5.418		
9,700.0	6,832.7	9,850.1	6,932.3	84.9	85.6	96.47	-1,075.2	2,942.4	883.6	715.0	168.54	5.243		
9,800.0	6,831.0	9,950.1	6,931.3	87.7	88.3	96.52	-1,075.6	3,042.4	883.7	709.7	174.01	5.078		
9,900.0	6,829.3	10,050.0	6,930.3	90.4	91.0	96.56	-1,076.0	3,142.4	883.8	704.3	179.49	4.924		
10,000.0	6,827.6	10,150.0	6,929.3	93.2	93.8	96.61	-1,076.4	3,242.3	883.8	698.9	184.97	4.778		

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 LaSalle 25F-332
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-332	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 (2-25-13)	Offset TVD Reference:	Offset Datum

Offset Design LaSalle 25F-HZ Pad Sec.25-T5N-R65W - LaSalle 25G-402 - Wellbore #1 - Plan #1 (2-25-13)												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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	6,825.9	10,250.0	6,928.3	96.0	96.5	96.65	-1,076.8	3,342.3	883.9	693.5	190.45	4.641	
10,200.0	6,824.1	10,350.0	6,927.3	98.8	99.3	96.70	-1,077.2	3,442.3	884.0	688.1	195.94	4.512	
10,300.0	6,822.4	10,450.0	6,926.3	101.5	102.0	96.75	-1,077.6	3,542.3	884.1	682.7	201.43	4.389	
10,400.0	6,820.7	10,550.0	6,925.3	104.3	104.8	96.79	-1,078.0	3,642.3	884.2	677.2	206.93	4.273	
10,500.0	6,819.0	10,650.0	6,924.2	107.1	107.5	96.84	-1,078.4	3,742.3	884.3	671.8	212.42	4.163	
10,600.0	6,817.3	10,750.0	6,923.2	109.9	110.3	96.88	-1,078.8	3,842.3	884.3	666.4	217.92	4.058	
10,700.0	6,815.6	10,850.0	6,922.2	112.6	113.1	96.93	-1,079.1	3,942.3	884.4	661.0	223.42	3.959	
10,800.0	6,813.9	10,950.0	6,921.2	115.4	115.8	96.97	-1,079.5	4,042.3	884.5	655.6	228.92	3.864	
10,900.0	6,812.2	11,050.0	6,920.2	118.2	118.6	97.01	-1,079.9	4,142.3	884.6	650.2	234.43	3.773	
11,000.0	6,810.5	11,150.0	6,919.2	121.0	121.4	97.06	-1,080.3	4,242.3	884.7	644.8	239.93	3.687	
11,100.0	6,808.8	11,250.0	6,918.2	123.8	124.2	97.10	-1,080.7	4,342.3	884.8	639.4	245.44	3.605	
11,200.0	6,807.0	11,350.0	6,917.2	126.6	126.9	97.15	-1,081.1	4,442.2	884.9	633.9	250.95	3.526	
11,300.0	6,805.3	11,450.0	6,916.2	129.4	129.7	97.19	-1,081.5	4,542.2	885.0	628.5	256.46	3.451	
11,319.4	6,805.0	11,466.4	6,916.0	129.9	130.2	97.20	-1,081.6	4,558.6	885.0	627.6	257.44	3.438 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LaSalle 25F-332
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-332	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 (2-25-13)	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-332
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-332
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-332	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 (2-25-13)	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-332
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

