Great Western

Well Name: Postle LC 11-159HC

Surface Location: Postle West Pad Sec.11-T3N-R68W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

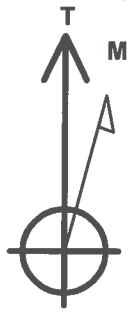
Ground Elevation: 4976.9

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1332051.75	3145730.70	40.243703	-104.977950	

RKB - 16.5' WELL @ 4993.4ft (RKB - 16.5')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1555'FNL & 511'FWL	1.0	0.0	0.0	Point
BHL 2025'FNL & 470'FEL	7321.4	-448.1	4307.9	Point
Entry Pt. 2019'FNL & 460'FWL	7321.4	-464.5	-48.9	Point



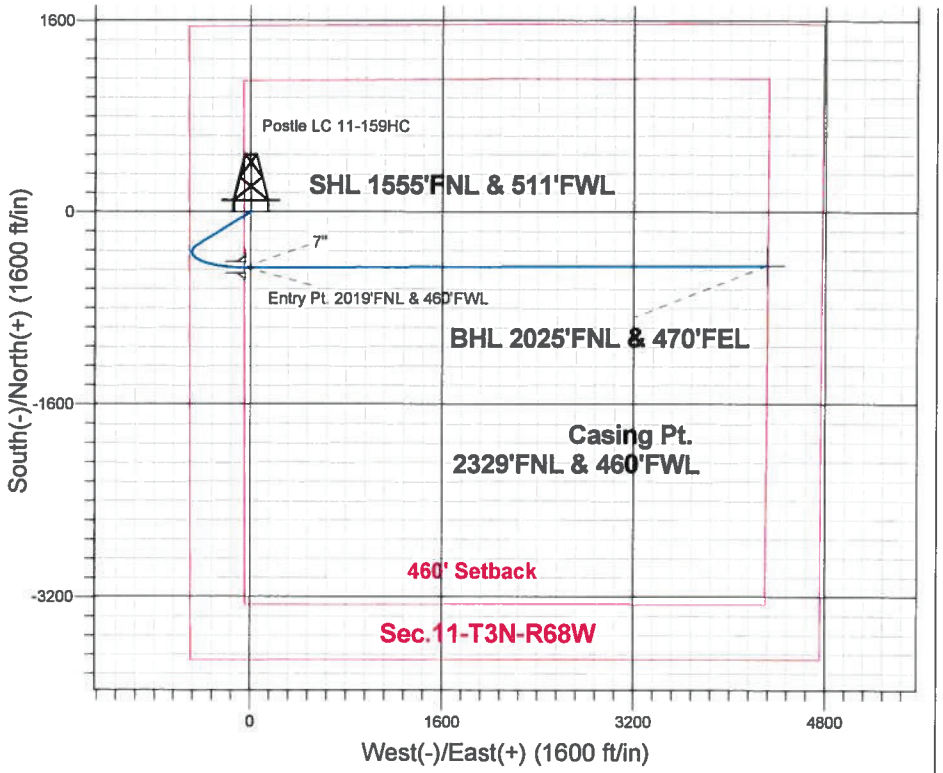
Azimuths to True North
Magnetic North: 8.63°

Magnetic Field
Strength: 52763.3snT
Dip Angle: 66.80°
Date: 12/10/2013
Model: IGRF2010

Postle West Pad Sec.11-T3N-R68W
Postle LC 11-159HC
Plan #1 (12-10-13)
11:14, December 12 2013

ANNOTATIONS

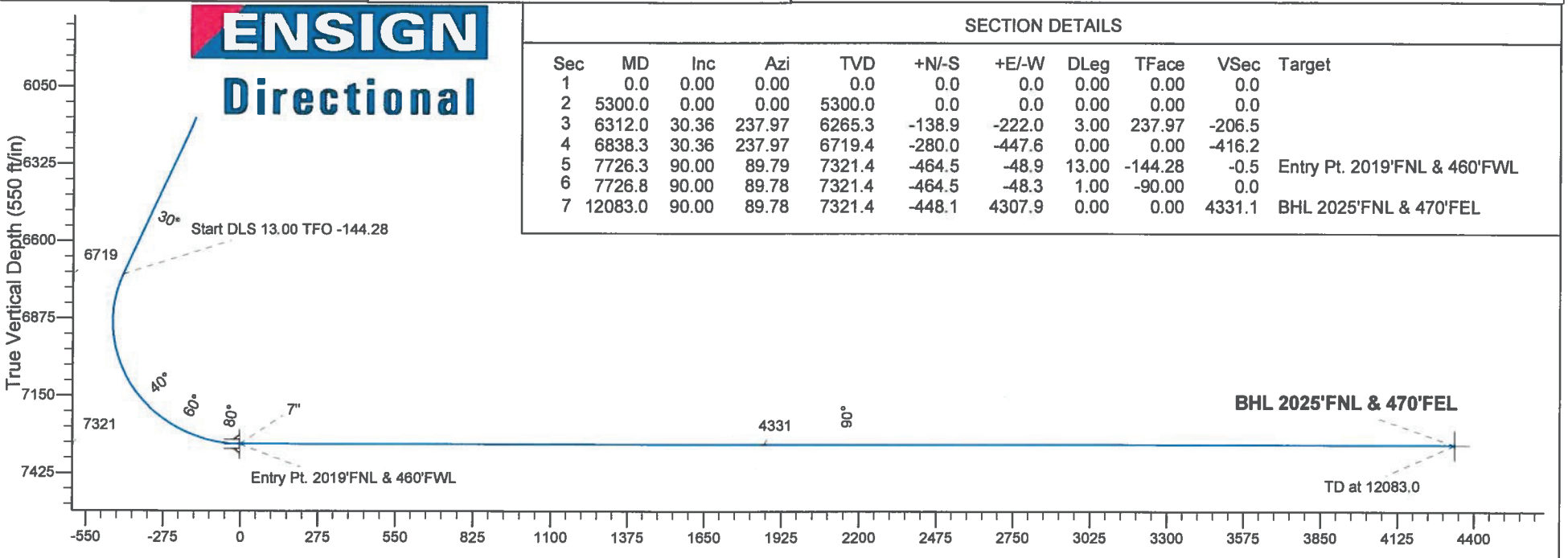
TVD	MD	Annotation
5300.0	5300.0	KOP - Start Build 3.00
6719.4	6838.3	Start DLS 13.00 TFO -144.28
7321.4	12083.0	TD at 12083.0



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	5300.0	0.00	0.00	5300.0	0.0	0.0	0.00	0.00	0.0	
3	6312.0	30.36	237.97	6265.3	-138.9	-222.0	3.00	237.97	-206.5	
4	6838.3	30.36	237.97	6719.4	-280.0	-447.6	0.00	0.00	-416.2	
5	7726.3	90.00	89.79	7321.4	-464.5	-48.9	13.00	-144.28	-0.5	Entry Pt. 2019'FNL & 460'FWL
6	7726.8	90.00	89.78	7321.4	-464.5	-48.3	1.00	-90.00	0.0	
7	12083.0	90.00	89.78	7321.4	-448.1	4307.9	0.00	0.00	4331.1	BHL 2025'FNL & 470'FEL



ENSIGN
Directional

Great Western

SEC.11-T3N-R68W
Postle West Pad Sec.11-T3N-R68W
Postle 1C 11-159HC

Wellbore #1

Plan: Plan #1 (12-10-13)

Standard Planning Report

12 December, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Company:	Great Western	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Project:	SEC.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site:	Postle West Pad Sec.11-T3N-R68W	**North Reference:**	True
Well:	Postle LC 11-159HC	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-10-13)		

Project	SEC.11-T3N-R68W, Weld County, CO		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Postle West Pad Sec.11-T3N-R68W				
Site Position:		**Northing:**	1,332,143.74 ft	**Latitude:**	40.243958
From:	Lat/Long	**Easting:**	3,145,575.78 ft	**Longitude:**	-104.978503
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.34 °

Well	Postle LC 11-159HC				
Well Position	**+N/-S**	-92.9 ft	**Northing:**	1,332,051.75 ft	**Latitude:**	40.243703
	+E/-W	154.4 ft	**Easting:**	3,145,730.70 ft	**Longitude:**	-104.977950
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,976.9 ft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	12/10/2013	8.63	66.80	52,763

Design	Plan #1 (12-10-13)			
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	95.94

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	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,312.0	30.36	237.97	6,265.3	-138.9	-222.0	3.00	3.00	0.00	237.97	
6,838.3	30.36	237.97	6,719.4	-280.0	-447.6	0.00	0.00	0.00	0.00	
7,726.3	90.00	89.79	7,321.4	-464.5	-48.9	13.00	6.72	-16.69	-144.28	Entry Pt. 2019'FNL
7,726.8	90.00	89.78	7,321.4	-464.5	-48.3	1.00	0.00	-1.00	-90.00	
12,083.0	90.00	89.78	7,321.4	-448.1	4,307.9	0.00	0.00	0.00	0.00	BHL 2025'FNL & 47

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Project:	SEC.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site:	Postle West Pad Sec.11-T3N-R68W	**North Reference:**	True
Well:	Postle LC 11-159HC	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-10-13)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 1555'FNL & 511'FWL									
100.0	0.00	0.00	100.0	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
300.0	0.00	0.00	300.0	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
500.0	0.00	0.00	500.0	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
700.0	0.00	0.00	700.0	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
900.0	0.00	0.00	900.0	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
1,100.0	0.00	0.00	1,100.0	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
1,300.0	0.00	0.00	1,300.0	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
1,500.0	0.00	0.00	1,500.0	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
1,700.0	0.00	0.00	1,700.0	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
1,900.0	0.00	0.00	1,900.0	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
2,100.0	0.00	0.00	2,100.0	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
2,300.0	0.00	0.00	2,300.0	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
2,500.0	0.00	0.00	2,500.0	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
2,700.0	0.00	0.00	2,700.0	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
2,900.0	0.00	0.00	2,900.0	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
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

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Site:	Postle West Pad Sec.11-T3N-R68W	**North Reference:**	True
Well:	Postle LC 11-159HC	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-10-13)		

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)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 3.00									
5,400.0	3.00	237.97	5,400.0	-1.4	-2.2	-2.1	3.00	3.00	0.00
5,500.0	6.00	237.97	5,499.6	-5.5	-8.9	-8.2	3.00	3.00	0.00
5,600.0	9.00	237.97	5,598.8	-12.5	-19.9	-18.5	3.00	3.00	0.00
5,700.0	12.00	237.97	5,697.1	-22.1	-35.4	-32.9	3.00	3.00	0.00
5,800.0	15.00	237.97	5,794.3	-34.5	-55.2	-51.3	3.00	3.00	0.00
5,900.0	18.00	237.97	5,890.2	-49.6	-79.2	-73.7	3.00	3.00	0.00
6,000.0	21.00	237.97	5,984.4	-67.3	-107.5	-100.0	3.00	3.00	0.00
6,100.0	24.00	237.97	6,076.8	-87.6	-140.0	-130.2	3.00	3.00	0.00
6,200.0	27.00	237.97	6,167.1	-110.4	-176.5	-164.1	3.00	3.00	0.00
6,300.0	30.00	237.97	6,254.9	-135.7	-216.9	-201.7	3.00	3.00	0.00
6,312.0	30.36	237.97	6,265.3	-138.9	-222.0	-206.5	3.00	3.00	0.00
6,400.0	30.36	237.97	6,341.2	-162.5	-259.7	-241.5	0.00	0.00	0.00
6,500.0	30.36	237.97	6,427.5	-189.3	-302.6	-281.4	0.00	0.00	0.00
6,600.0	30.36	237.97	6,513.8	-216.1	-345.4	-321.2	0.00	0.00	0.00
6,700.0	30.36	237.97	6,600.1	-242.9	-388.3	-361.1	0.00	0.00	0.00
6,800.0	30.36	237.97	6,686.4	-269.7	-431.1	-400.9	0.00	0.00	0.00
6,838.3	30.36	237.97	6,719.4	-280.0	-447.5	-416.2	0.00	0.00	0.00
Start DLS 13.00 TFO -144.28									
6,900.0	24.26	226.54	6,774.3	-297.0	-470.0	-436.8	13.00	-9.88	-18.53
7,000.0	17.71	194.45	6,867.9	-326.0	-488.8	-452.4	13.00	-6.56	-32.08
7,100.0	19.13	152.70	6,963.2	-355.4	-485.1	-445.7	13.00	1.43	-41.75
7,200.0	27.32	126.51	7,055.2	-383.8	-459.0	-416.8	13.00	8.19	-26.19
7,300.0	38.13	112.96	7,139.3	-409.6	-411.9	-367.3	13.00	10.81	-13.55
7,400.0	49.88	104.88	7,211.2	-431.5	-346.3	-299.8	13.00	11.75	-8.08
7,500.0	62.01	99.24	7,267.1	-448.5	-265.4	-217.6	13.00	12.14	-5.64
7,600.0	74.34	94.76	7,304.2	-459.6	-173.4	-124.9	13.00	12.32	-4.48
7,700.0	86.74	90.80	7,320.7	-464.3	-75.1	-26.7	13.00	12.40	-3.96
7,726.3	90.00	89.79	7,321.4	-464.5	-48.9	-0.5	12.99	12.41	-3.84
7" - Entry Pt. 2019'FNL & 460'FWL									
7,726.8	90.00	89.78	7,321.4	-464.5	-48.3	0.0	1.34	0.62	-1.19
7,800.0	90.00	89.78	7,321.4	-464.2	24.9	72.8	0.00	0.00	0.00
7,900.0	90.00	89.78	7,321.4	-463.8	124.9	172.2	0.00	0.00	0.00
8,000.0	90.00	89.78	7,321.4	-463.4	224.9	271.6	0.00	0.00	0.00
8,100.0	90.00	89.78	7,321.4	-463.1	324.9	371.0	0.00	0.00	0.00
8,200.0	90.00	89.78	7,321.4	-462.7	424.9	470.5	0.00	0.00	0.00
8,300.0	90.00	89.78	7,321.4	-462.3	524.9	569.9	0.00	0.00	0.00
8,400.0	90.00	89.78	7,321.4	-461.9	624.9	669.3	0.00	0.00	0.00
8,500.0	90.00	89.78	7,321.4	-461.6	724.9	768.7	0.00	0.00	0.00
8,600.0	90.00	89.78	7,321.4	-461.2	824.9	868.2	0.00	0.00	0.00
8,700.0	90.00	89.78	7,321.4	-460.8	924.9	967.6	0.00	0.00	0.00
8,800.0	90.00	89.78	7,321.4	-460.4	1,024.9	1,067.0	0.00	0.00	0.00
8,900.0	90.00	89.78	7,321.4	-460.1	1,124.9	1,166.4	0.00	0.00	0.00
9,000.0	90.00	89.78	7,321.4	-459.7	1,224.9	1,265.8	0.00	0.00	0.00
9,100.0	90.00	89.78	7,321.4	-459.3	1,324.9	1,365.3	0.00	0.00	0.00
9,200.0	90.00	89.78	7,321.4	-458.9	1,424.9	1,464.7	0.00	0.00	0.00
9,300.0	90.00	89.78	7,321.4	-458.6	1,524.9	1,564.1	0.00	0.00	0.00
9,400.0	90.00	89.78	7,321.4	-458.2	1,624.9	1,663.5	0.00	0.00	0.00
9,500.0	90.00	89.78	7,321.4	-457.8	1,724.9	1,763.0	0.00	0.00	0.00
9,600.0	90.00	89.78	7,321.4	-457.4	1,824.9	1,862.4	0.00	0.00	0.00
9,700.0	90.00	89.78	7,321.4	-457.0	1,924.9	1,961.8	0.00	0.00	0.00

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Site:	Postle West Pad Sec.11-T3N-R68W	**North Reference:**	True
Well:	Postle LC 11-159HC	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-10-13)		

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)
9,800.0	90.00	89.78	7,321.4	-456.7	2,024.9	2,061.2	0.00	0.00	0.00
9,900.0	90.00	89.78	7,321.4	-456.3	2,124.9	2,160.7	0.00	0.00	0.00
10,000.0	90.00	89.78	7,321.4	-455.9	2,224.9	2,260.1	0.00	0.00	0.00
10,100.0	90.00	89.78	7,321.4	-455.5	2,324.9	2,359.5	0.00	0.00	0.00
10,200.0	90.00	89.78	7,321.4	-455.2	2,424.9	2,458.9	0.00	0.00	0.00
10,300.0	90.00	89.78	7,321.4	-454.8	2,524.9	2,558.4	0.00	0.00	0.00
10,400.0	90.00	89.78	7,321.4	-454.4	2,624.9	2,657.8	0.00	0.00	0.00
10,500.0	90.00	89.78	7,321.4	-454.0	2,724.9	2,757.2	0.00	0.00	0.00
10,600.0	90.00	89.78	7,321.4	-453.7	2,824.9	2,856.6	0.00	0.00	0.00
10,700.0	90.00	89.78	7,321.4	-453.3	2,924.9	2,956.1	0.00	0.00	0.00
10,800.0	90.00	89.78	7,321.4	-452.9	3,024.9	3,055.5	0.00	0.00	0.00
10,900.0	90.00	89.78	7,321.4	-452.5	3,124.9	3,154.9	0.00	0.00	0.00
11,000.0	90.00	89.78	7,321.4	-452.2	3,224.9	3,254.3	0.00	0.00	0.00
11,100.0	90.00	89.78	7,321.4	-451.8	3,324.8	3,353.7	0.00	0.00	0.00
11,200.0	90.00	89.78	7,321.4	-451.4	3,424.8	3,453.2	0.00	0.00	0.00
11,300.0	90.00	89.78	7,321.4	-451.0	3,524.8	3,552.6	0.00	0.00	0.00
11,400.0	90.00	89.78	7,321.4	-450.6	3,624.8	3,652.0	0.00	0.00	0.00
11,500.0	90.00	89.78	7,321.4	-450.3	3,724.8	3,751.4	0.00	0.00	0.00
11,600.0	90.00	89.78	7,321.4	-449.9	3,824.8	3,850.9	0.00	0.00	0.00
11,700.0	90.00	89.78	7,321.4	-449.5	3,924.8	3,950.3	0.00	0.00	0.00
11,800.0	90.00	89.78	7,321.4	-449.1	4,024.8	4,049.7	0.00	0.00	0.00
11,900.0	90.00	89.78	7,321.4	-448.8	4,124.8	4,149.1	0.00	0.00	0.00
12,000.0	90.00	89.78	7,321.4	-448.4	4,224.8	4,248.6	0.00	0.00	0.00
12,083.0	90.00	89.78	7,321.4	-448.1	4,307.8	4,331.1	0.00	0.00	0.00
TD at 12083.0 - BHL 2025'FNL & 470'FEL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,726.3	7,321.4	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,300.0	5,300.0	0.0	0.0	KOP - Start Build 3.00
6,838.3	6,719.4	-280.0	-447.5	Start DLS 13.00 TFO -144.28
12,083.0	7,321.4	-448.1	4,307.8	TD at 12083.0

ENSIGN
Directional

Great Western

SEC.11-T3N-R68W
Postle West Pad Sec.11-T3N-R68W
PostleⅠC 11-159HC

Wellbore #1
Plan #1 (12-10-13)

Anticollision Report

12 December, 2013

ENSIGN Directional

Anticollision Report

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (12-10-13)

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** 12/11/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,083.0	Plan #1 (12-10-13) (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
Postle West Pad Sec.11-T3N-R68W						
Postle IC 11-4HN - Wellbore #1 - Wellbore #1	522.3	524.9	179.4	177.5	92.106	CC
Postle IC 11-4HN - Wellbore #1 - Wellbore #1	600.0	601.9	179.6	177.3	78.492	ES
Postle IC 11-4HN - Wellbore #1 - Wellbore #1	12,083.0	11,715.0	961.2	707.0	3.781	SF
Postle LC 11-162HN - Wellbore #1 - Plan #1 (12-10-13)	4,900.0	4,900.0	30.2	8.4	1.384	Level 3, CC, ES, SF
Postle LC 11-239HN - Wellbore #1 - Plan #1 (12-10-13)	4,100.0	4,100.0	59.8	41.6	3.286	CC, ES
Postle LC 11-239HN - Wellbore #1 - Plan #1 (12-10-13)	4,200.0	4,198.7	60.9	42.3	3.270	SF
Postle LC 11-259HC - Wellbore #1 - Plan #1 (12-10-13)	3,800.0	3,800.0	90.0	73.1	5.338	CC, ES
Postle LC 11-259HC - Wellbore #1 - Plan #1 (12-10-13)	12,083.0	12,369.5	1,248.8	987.4	4.777	SF

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle IC 11-4HN - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0ft

Survey Program: 229-MWD — **Offset Well Error:** 0.0ft

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	2.6	2.6	0.0	0.0	-58.96	92.9	-154.4	180.2	180.2	0.00	N/A	
100.0	100.0	102.7	102.7	0.1	0.1	-58.99	92.8	-154.4	180.2	179.9	0.23	790.272	
200.0	200.0	202.7	202.7	0.3	0.2	-59.06	92.6	-154.5	180.1	179.5	0.57	318.669	
300.0	300.0	302.9	302.9	0.6	0.4	-59.16	92.3	-154.5	180.0	179.0	0.97	184.657	
400.0	400.0	403.2	403.2	0.8	0.6	-59.25	91.9	-154.5	179.7	178.3	1.41	127.249	
500.0	500.0	502.8	502.8	1.0	0.8	-59.45	91.2	-154.5	179.4	177.6	1.85	96.965	
522.3	522.3	524.9	524.9	1.1	0.9	-59.50	91.0	-154.6	179.4	177.5	1.95	92.106	CC
600.0	600.0	601.9	601.9	1.2	1.1	-59.74	90.5	-155.1	179.6	177.3	2.29	78.492	ES
700.0	700.0	701.7	701.7	1.5	1.3	-60.09	89.8	-156.0	180.0	177.3	2.72	66.278	
800.0	800.0	801.5	801.5	1.7	1.5	-60.39	89.2	-157.0	180.6	177.4	3.14	57.451	
900.0	900.0	900.7	900.7	1.9	1.7	-60.69	88.8	-158.1	181.4	177.8	3.57	50.758	
1,000.0	1,000.0	999.9	999.8	2.1	1.9	-61.13	88.2	-159.9	182.6	178.6	4.01	45.531	
1,100.0	1,100.0	1,098.7	1,098.6	2.4	2.1	-61.64	87.6	-162.3	184.5	180.0	4.45	41.467	
1,200.0	1,200.0	1,198.4	1,198.3	2.6	2.3	-62.01	87.7	-164.9	186.8	182.0	4.88	38.283	
1,300.0	1,300.0	1,299.1	1,298.9	2.8	2.5	-62.24	88.0	-167.2	188.9	183.6	5.31	35.601	
1,400.0	1,400.0	1,399.2	1,399.0	3.0	2.7	-62.39	88.4	-169.1	190.8	185.1	5.74	33.269	
1,500.0	1,500.0	1,499.7	1,499.5	3.3	2.9	-62.36	89.3	-170.6	192.6	186.4	6.17	31.224	
1,600.0	1,600.0	1,600.3	1,600.2	3.5	3.1	-62.05	90.9	-171.4	194.0	187.4	6.60	29.383	
1,700.0	1,700.0	1,701.4	1,701.2	3.7	3.3	-61.90	91.9	-172.0	195.0	188.0	7.04	27.706	
1,800.0	1,800.0	1,800.3	1,800.1	3.9	3.5	-61.82	92.5	-172.7	196.0	188.5	7.47	26.228	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle IC 11-4HN - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0ft

Survey Program: 229-MWD — **Offset Well Error:** 0.0ft

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
1,900.0	1,900.0	1,900.1	1,899.8	4.2	3.8	-61.76	93.4	-173.8	197.3	189.4	7.91	24.954	
2,000.0	2,000.0	2,001.6	2,001.4	4.4	4.0	-61.71	94.0	-174.6	198.3	190.0	8.35	23.764	
2,100.0	2,100.0	2,100.9	2,100.7	4.6	4.2	-61.54	94.9	-175.0	199.1	190.3	8.78	22.685	
2,200.0	2,200.0	2,200.3	2,200.0	4.8	4.4	-61.37	96.0	-175.8	200.3	191.1	9.21	21.741	
2,300.0	2,300.0	2,300.6	2,300.4	5.1	4.6	-61.31	96.7	-176.7	201.4	191.8	9.65	20.875	
2,400.0	2,400.0	2,400.1	2,399.9	5.3	4.8	-61.58	96.5	-178.3	202.7	192.7	10.09	20.103	
2,500.0	2,500.0	2,501.3	2,501.0	5.5	5.0	-61.95	95.8	-179.9	203.8	193.3	10.52	19.371	
2,600.0	2,600.0	2,602.2	2,601.9	5.7	5.2	-62.20	95.3	-180.7	204.3	193.4	10.95	18.653	
2,700.0	2,700.0	2,702.6	2,702.3	6.0	5.4	-62.39	94.8	-181.3	204.5	193.2	11.39	17.960	
2,800.0	2,800.0	2,802.6	2,802.4	6.2	5.7	-62.64	94.1	-181.7	204.6	192.8	11.82	17.306	
2,900.0	2,900.0	2,902.3	2,902.0	6.4	5.9	-62.93	93.2	-182.4	204.8	192.6	12.26	16.707	
3,000.0	3,000.0	3,001.1	3,000.8	6.6	6.1	-63.29	92.3	-183.4	205.3	192.6	12.69	16.175	
3,100.0	3,100.0	3,100.0	3,099.7	6.9	6.3	-63.63	91.7	-185.0	206.5	193.4	13.13	15.732	
3,200.0	3,200.0	3,199.8	3,199.5	7.1	6.5	-64.00	91.2	-186.9	208.0	194.4	13.56	15.338	
3,300.0	3,300.0	3,298.3	3,297.9	7.3	6.7	-64.50	90.3	-189.3	209.8	195.8	14.00	14.987	
3,400.0	3,400.0	3,397.2	3,396.8	7.5	6.9	-64.99	89.8	-192.4	212.4	197.9	14.43	14.714	
3,500.0	3,500.0	3,493.9	3,493.4	7.8	7.1	-65.52	89.3	-196.1	215.7	200.8	14.87	14.509	
3,600.0	3,600.0	3,592.3	3,591.7	8.0	7.4	-66.00	89.6	-201.2	220.5	205.2	15.30	14.411	
3,700.0	3,700.0	3,691.3	3,690.5	8.2	7.6	-66.43	90.1	-206.5	225.6	209.9	15.74	14.336	
3,800.0	3,800.0	3,788.8	3,787.8	8.4	7.8	-66.91	90.6	-212.4	231.4	215.2	16.18	14.307	
3,900.0	3,900.0	3,886.4	3,885.2	8.7	8.0	-67.46	91.1	-219.5	238.3	221.7	16.62	14.340	
4,000.0	4,000.0	3,985.7	3,984.2	8.9	8.2	-68.03	91.7	-227.3	245.7	228.7	17.06	14.405	
4,100.0	4,100.0	4,088.0	4,086.2	9.1	8.5	-68.58	92.1	-234.8	252.8	235.3	17.50	14.442	
4,200.0	4,200.0	4,187.5	4,185.5	9.3	8.7	-69.14	92.1	-241.8	259.3	241.3	17.95	14.449	
4,300.0	4,300.0	4,285.0	4,282.7	9.6	8.9	-69.76	91.9	-249.1	266.3	247.9	18.39	14.481	
4,400.0	4,400.0	4,383.5	4,380.8	9.8	9.2	-70.41	91.6	-257.3	274.0	255.1	18.84	14.545	
4,500.0	4,500.0	4,482.9	4,479.9	10.0	9.4	-71.05	91.3	-265.8	282.0	262.7	19.29	14.618	
4,600.0	4,600.0	4,580.1	4,576.7	10.2	9.6	-71.65	91.1	-274.6	290.5	270.7	19.73	14.719	
4,700.0	4,700.0	4,678.8	4,675.0	10.5	9.9	-72.19	91.2	-284.0	299.6	279.4	20.18	14.841	
4,800.0	4,800.0	4,778.4	4,774.1	10.7	10.1	-72.66	91.6	-293.5	308.8	288.2	20.64	14.965	
4,900.0	4,900.0	4,878.5	4,873.7	10.9	10.4	-73.10	92.0	-303.0	318.0	296.9	21.08	15.080	
5,000.0	5,000.0	4,978.9	4,973.7	11.1	10.6	-73.50	92.5	-312.3	327.0	305.4	21.53	15.184	
5,100.0	5,100.0	5,079.9	5,074.3	11.4	10.8	-73.85	93.0	-321.2	335.6	313.6	21.98	15.264	
5,200.0	5,200.0	5,180.2	5,174.3	11.6	11.1	-74.16	93.6	-329.7	343.9	321.5	22.43	15.330	
5,300.0	5,300.0	5,281.7	5,275.4	11.8	11.3	-74.43	94.2	-338.0	351.9	329.1	22.89	15.378	
5,400.0	5,400.0	5,383.7	5,377.1	12.0	11.5	47.57	94.8	-345.7	357.6	334.4	23.15	15.449	
5,500.0	5,499.6	5,487.2	5,480.4	12.2	11.8	48.30	95.6	-352.7	359.0	335.5	23.52	15.263	
5,600.0	5,598.8	5,588.1	5,581.1	12.4	12.0	49.73	95.9	-358.6	356.2	332.3	23.89	14.911	
5,700.0	5,697.1	5,686.7	5,679.5	12.6	12.2	51.91	96.4	-364.4	350.3	326.1	24.25	14.448	
5,800.0	5,794.3	5,787.1	5,779.8	12.8	12.5	55.08	97.4	-370.0	341.7	317.1	24.64	13.871	
5,900.0	5,890.2	5,887.5	5,880.1	13.1	12.7	59.50	99.3	-374.0	330.5	305.4	25.09	13.171	
6,000.0	5,984.4	5,982.3	5,974.8	13.3	12.9	65.11	102.5	-376.2	318.0	292.4	25.62	12.412	
6,100.0	6,076.8	6,070.2	6,062.6	13.7	13.1	71.70	107.5	-377.6	307.9	281.6	26.25	11.728	
6,189.3	6,157.5	6,135.7	6,127.8	14.1	13.2	77.29	112.3	-379.2	303.8	277.0	26.86	11.310	
6,200.0	6,167.1	6,149.0	6,141.0	14.1	13.2	78.52	114.0	-379.8	304.1	277.2	26.96	11.279	
6,300.0	6,254.9	6,212.5	6,203.7	14.6	13.4	84.51	123.9	-383.0	312.9	285.2	27.69	11.297	
6,400.0	6,341.2	6,285.8	6,275.7	15.1	13.6	91.69	136.6	-386.9	332.1	303.6	28.48	11.659	
6,500.0	6,427.5	6,340.0	6,328.4	15.8	13.7	96.66	148.8	-390.6	363.8	334.6	29.20	12.460	
6,600.0	6,513.8	6,403.1	6,388.9	16.4	13.9	102.06	166.5	-394.4	406.3	376.4	29.90	13.589	
6,700.0	6,600.1	6,454.4	6,437.1	17.1	14.0	106.25	183.8	-395.2	457.8	427.2	30.55	14.983	
6,800.0	6,686.4	6,510.5	6,489.0	17.9	14.2	110.45	205.2	-394.7	516.6	485.4	31.17	16.575	
6,900.0	6,774.3	6,595.5	6,567.7	18.6	14.4	131.88	237.1	-392.9	578.8	547.7	31.10	18.613	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle IC 11-4HN - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0ft

Survey Program: 229-MWD — **Offset Well Error:** 0.0ft

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
7,000.0	6,867.9	6,661.9	6,629.4	19.0	14.6	173.65	261.5	-393.8	642.1	611.2	30.89	20.789	
7,100.0	6,963.2	6,745.5	6,706.5	19.2	14.9	-138.20	293.8	-396.1	704.7	673.5	31.21	22.577	
7,200.0	7,055.2	6,817.3	6,773.3	19.3	15.1	-107.91	319.9	-394.3	761.8	730.1	31.66	24.058	
7,300.0	7,139.3	6,905.8	6,854.2	19.3	15.3	-92.38	350.5	-376.2	813.5	781.5	32.00	25.425	
7,400.0	7,211.2	6,970.9	6,911.0	19.3	15.5	-83.01	371.4	-352.2	858.1	826.0	32.11	26.727	
7,500.0	7,267.1	7,031.7	6,960.1	19.3	15.6	-77.37	391.2	-322.6	896.8	864.6	32.25	27.809	
7,600.0	7,304.2	7,182.4	7,062.8	19.5	15.8	-77.08	429.9	-220.5	923.6	890.4	33.14	27.871	
7,700.0	7,320.7	7,348.0	7,130.7	20.1	16.6	-78.14	448.6	-71.8	933.0	897.7	35.29	26.437	
7,800.0	7,321.4	7,411.5	7,140.5	21.2	17.2	-78.67	451.3	-9.3	934.4	897.1	37.24	25.089	
7,900.0	7,321.4	7,483.0	7,141.6	22.7	18.1	-78.78	456.0	62.1	939.8	900.2	39.60	23.732	
8,000.0	7,321.4	7,570.0	7,139.8	24.5	19.4	-78.75	462.3	148.8	946.9	904.3	42.59	22.236	
8,100.0	7,321.4	7,652.2	7,135.6	26.4	20.9	-78.59	469.7	230.6	956.3	910.5	45.85	20.859	
8,200.0	7,321.4	7,808.6	7,131.3	28.5	24.0	-78.45	480.5	386.5	963.4	912.5	50.90	18.928	
8,300.0	7,321.4	7,919.8	7,128.0	30.7	26.4	-78.28	482.7	497.6	965.5	910.1	55.41	17.425	
8,400.0	7,321.4	8,054.4	7,127.0	33.0	29.5	-78.25	484.8	632.2	967.0	906.3	60.70	15.930	
8,500.0	7,321.4	8,164.9	7,127.1	35.3	32.1	-78.23	483.5	742.6	965.5	899.9	65.63	14.711	
8,600.0	7,321.4	8,288.9	7,129.2	37.8	35.1	-78.30	479.3	866.6	961.3	890.3	71.05	13.530	
8,700.0	7,321.4	8,359.1	7,128.8	40.2	36.9	-78.24	477.2	936.8	958.2	883.0	75.20	12.741	
8,800.0	7,321.4	8,459.6	7,127.8	42.7	39.4	-78.17	476.3	1,037.3	957.1	876.9	80.17	11.939	
8,900.0	7,321.4	8,573.4	7,127.9	45.3	42.4	-78.14	473.5	1,151.0	954.3	868.7	85.56	11.153	
9,000.0	7,321.4	8,656.2	7,127.2	47.8	44.5	-78.07	471.6	1,233.8	951.8	861.7	90.19	10.554	
9,048.8	7,321.4	8,692.6	7,126.4	49.1	45.5	-78.02	471.3	1,270.1	951.5	859.2	92.35	10.304	
9,100.0	7,321.4	8,733.0	7,125.3	50.4	46.5	-77.95	471.5	1,310.5	951.9	857.2	94.68	10.054	
9,200.0	7,321.4	8,845.9	7,123.3	53.1	49.5	-77.84	472.3	1,423.5	952.6	852.5	100.14	9.513	
9,279.5	7,321.4	8,923.3	7,122.5	55.2	51.6	-77.78	472.1	1,500.9	952.3	848.1	104.20	9.139	
9,300.0	7,321.4	8,937.2	7,122.5	55.7	51.9	-77.78	472.2	1,514.7	952.4	847.3	105.09	9.062	
9,400.0	7,321.4	9,031.0	7,123.2	58.3	54.4	-77.84	474.0	1,608.5	953.7	843.5	110.17	8.656	
9,500.0	7,321.4	9,133.9	7,123.2	61.0	57.2	-77.86	475.7	1,711.4	954.9	839.4	115.50	8.268	
9,600.0	7,321.4	9,255.8	7,124.2	63.7	60.5	-77.92	476.4	1,833.3	955.0	833.6	121.38	7.868	
9,700.0	7,321.4	9,359.1	7,124.2	66.4	63.3	-77.90	474.8	1,936.5	953.1	826.3	126.76	7.519	
9,800.0	7,321.4	9,475.0	7,123.8	69.1	66.4	-77.85	472.9	2,052.5	951.3	818.8	132.47	7.181	
9,900.0	7,321.4	9,570.1	7,123.0	71.8	69.0	-77.75	470.1	2,147.5	948.2	810.6	137.63	6.890	
10,000.0	7,321.4	9,663.4	7,119.9	74.5	71.6	-77.54	467.8	2,240.7	946.2	803.5	142.68	6.632	
10,100.0	7,321.4	9,748.0	7,119.4	77.2	73.9	-77.49	466.7	2,325.3	944.6	797.0	147.58	6.401	
10,114.0	7,321.4	9,758.1	7,119.4	77.6	74.1	-77.49	466.7	2,335.4	944.6	796.4	148.22	6.373	
10,200.0	7,321.4	9,842.3	7,118.8	79.9	76.4	-77.45	467.2	2,419.6	944.9	792.2	152.76	6.186	
10,300.0	7,321.4	9,944.9	7,117.5	82.6	79.3	-77.37	467.0	2,522.2	944.6	786.5	158.14	5.973	
10,304.6	7,321.4	9,948.7	7,117.4	82.8	79.4	-77.37	467.0	2,526.0	944.6	786.2	158.37	5.965	
10,400.0	7,321.4	10,047.0	7,118.4	85.4	82.1	-77.43	467.6	2,624.2	944.7	781.1	163.60	5.774	
10,434.4	7,321.4	10,078.5	7,119.0	86.3	82.9	-77.47	467.8	2,655.8	944.6	779.2	165.39	5.711	
10,500.0	7,321.4	10,134.5	7,119.4	88.1	84.5	-77.49	468.4	2,711.8	944.9	776.3	168.67	5.602	
10,600.0	7,321.4	10,207.8	7,119.2	90.9	86.5	-77.51	470.4	2,785.0	947.3	774.0	173.33	5.465	
10,700.0	7,321.4	10,311.2	7,118.8	93.6	89.3	-77.54	475.3	2,888.3	951.7	772.8	178.82	5.322	
10,800.0	7,321.4	10,415.8	7,119.0	96.4	92.2	-77.59	478.4	2,992.9	954.1	769.8	184.36	5.175	
10,900.0	7,321.4	10,535.8	7,117.8	99.1	95.5	-77.55	481.5	3,112.8	956.6	766.3	190.27	5.027	
11,000.0	7,321.4	10,653.3	7,118.0	101.9	98.8	-77.55	481.3	3,230.3	955.9	759.8	196.15	4.873	
11,100.0	7,321.4	10,763.0	7,117.8	104.6	101.8	-77.53	480.3	3,340.1	954.7	752.9	201.82	4.731	
11,200.0	7,321.4	10,859.5	7,118.3	107.4	104.5	-77.54	479.6	3,436.5	953.5	746.4	207.15	4.603	
11,300.0	7,321.4	10,951.3	7,119.6	110.1	107.0	-77.60	479.1	3,528.3	952.3	739.9	212.39	4.484	
11,349.9	7,321.4	10,994.2	7,120.1	111.5	108.2	-77.64	479.2	3,571.2	952.1	737.2	214.93	4.430	
11,400.0	7,321.4	11,036.8	7,120.6	112.9	109.4	-77.67	479.7	3,613.8	952.3	734.9	217.46	4.379	
11,500.0	7,321.4	11,129.6	7,120.3	115.7	112.0	-77.67	481.2	3,706.6	953.7	731.0	222.69	4.282	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle IC 11-4HN - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0ft

Survey Program: 229-MWD — **Offset Well Error:** 0.0ft

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
11,600.0	7,321.4	11,220.8	7,117.9	118.4	114.5	-77.54	482.9	3,797.7	955.7	727.9	227.78	4.196	
11,700.0	7,321.4	11,336.8	7,115.5	121.2	117.7	-77.43	485.0	3,913.6	957.6	724.0	233.54	4.100	
11,800.0	7,321.4	11,432.8	7,113.3	124.0	120.4	-77.30	486.1	4,009.6	958.8	720.0	238.75	4.016	
11,900.0	7,321.4	11,530.0	7,113.1	126.8	123.1	-77.30	487.6	4,106.8	960.0	715.9	244.10	3.933	
12,000.0	7,321.4	11,639.7	7,115.1	129.5	126.1	-77.44	488.9	4,216.5	960.3	710.4	249.91	3.843	
12,083.0	7,321.4	11,715.0	7,115.1	131.8	128.2	-77.44	490.0	4,291.8	961.2	707.0	254.22	3.781	SF

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle 1C 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle 1C 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle 1C 11-162HN - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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	-92.08	-1.1	-30.1	30.2				
100.0	100.0	100.0	100.0	0.1	0.1	-92.08	-1.1	-30.1	30.2	29.9	0.22	134.227	
200.0	200.0	200.0	200.0	0.3	0.3	-92.08	-1.1	-30.1	30.2	29.5	0.67	44.742	
300.0	300.0	300.0	300.0	0.6	0.6	-92.08	-1.1	-30.1	30.2	29.0	1.12	26.845	
400.0	400.0	400.0	400.0	0.8	0.8	-92.08	-1.1	-30.1	30.2	28.6	1.57	19.175	
500.0	500.0	500.0	500.0	1.0	1.0	-92.08	-1.1	-30.1	30.2	28.1	2.02	14.914	
600.0	600.0	600.0	600.0	1.2	1.2	-92.08	-1.1	-30.1	30.2	27.7	2.47	12.202	
700.0	700.0	700.0	700.0	1.5	1.5	-92.08	-1.1	-30.1	30.2	27.2	2.92	10.325	
800.0	800.0	800.0	800.0	1.7	1.7	-92.08	-1.1	-30.1	30.2	26.8	3.37	8.948	
900.0	900.0	900.0	900.0	1.9	1.9	-92.08	-1.1	-30.1	30.2	26.3	3.82	7.896	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-92.08	-1.1	-30.1	30.2	25.9	4.27	7.065	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-92.08	-1.1	-30.1	30.2	25.4	4.72	6.392	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-92.08	-1.1	-30.1	30.2	25.0	5.17	5.836	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-92.08	-1.1	-30.1	30.2	24.6	5.62	5.369	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-92.08	-1.1	-30.1	30.2	24.1	6.07	4.971	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-92.08	-1.1	-30.1	30.2	23.7	6.52	4.629	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-92.08	-1.1	-30.1	30.2	23.2	6.97	4.330	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-92.08	-1.1	-30.1	30.2	22.8	7.42	4.067	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-92.08	-1.1	-30.1	30.2	22.3	7.87	3.835	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-92.08	-1.1	-30.1	30.2	21.9	8.32	3.628	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-92.08	-1.1	-30.1	30.2	21.4	8.77	3.442	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-92.08	-1.1	-30.1	30.2	21.0	9.22	3.274	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-92.08	-1.1	-30.1	30.2	20.5	9.66	3.122	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-92.08	-1.1	-30.1	30.2	20.1	10.11	2.983	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-92.08	-1.1	-30.1	30.2	19.6	10.56	2.856	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-92.08	-1.1	-30.1	30.2	19.2	11.01	2.739	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-92.08	-1.1	-30.1	30.2	18.7	11.46	2.632	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-92.08	-1.1	-30.1	30.2	18.3	11.91	2.533	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-92.08	-1.1	-30.1	30.2	17.8	12.36	2.440	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-92.08	-1.1	-30.1	30.2	17.4	12.81	2.355	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-92.08	-1.1	-30.1	30.2	16.9	13.26	2.275	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-92.08	-1.1	-30.1	30.2	16.5	13.71	2.200	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-92.08	-1.1	-30.1	30.2	16.0	14.16	2.131	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-92.08	-1.1	-30.1	30.2	15.6	14.61	2.065	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-92.08	-1.1	-30.1	30.2	15.1	15.06	2.003	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-92.08	-1.1	-30.1	30.2	14.7	15.51	1.945	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-92.08	-1.1	-30.1	30.2	14.2	15.96	1.891	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-92.08	-1.1	-30.1	30.2	13.8	16.41	1.839	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-92.08	-1.1	-30.1	30.2	13.3	16.86	1.790	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-92.08	-1.1	-30.1	30.2	12.9	17.31	1.743	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-92.08	-1.1	-30.1	30.2	12.4	17.76	1.699	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-92.08	-1.1	-30.1	30.2	12.0	18.21	1.657	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-92.08	-1.1	-30.1	30.2	11.5	18.66	1.617	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-92.08	-1.1	-30.1	30.2	11.1	19.11	1.579	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-92.08	-1.1	-30.1	30.2	10.6	19.55	1.543	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-92.08	-1.1	-30.1	30.2	10.2	20.00	1.508	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-92.08	-1.1	-30.1	30.2	9.7	20.45	1.475	Level 3
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-92.08	-1.1	-30.1	30.2	9.3	20.90	1.443	Level 3
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-92.08	-1.1	-30.1	30.2	8.8	21.35	1.413	Level 3
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-92.08	-1.1	-30.1	30.2	8.4	21.80	1.384	Level 3, CC, ES, SF
5,000.0	5,000.0	4,999.1	4,999.1	11.1	11.1	-94.33	-2.4	-31.2	31.3	9.1	22.23	1.407	Level 3
5,100.0	5,100.0	5,097.6	5,097.4	11.4	11.3	-101.96	-7.5	-35.4	36.2	13.6	22.63	1.602	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-162HN - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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
5,200.0	5,200.0	5,195.2	5,194.2	11.6	11.5	-111.08	-16.4	-42.6	46.1	23.0	23.03	2.001	
5,300.0	5,300.0	5,291.3	5,289.0	11.8	11.6	-118.74	-29.0	-52.9	61.3	37.9	23.43	2.616	
5,400.0	5,400.0	5,386.1	5,381.5	12.0	11.8	-2.34	-45.0	-65.9	79.3	55.6	23.76	3.339	
5,500.0	5,499.6	5,480.0	5,472.0	12.2	12.0	-6.72	-64.3	-81.6	97.5	73.5	24.03	4.058	
5,600.0	5,598.8	5,572.9	5,560.3	12.4	12.3	-10.41	-86.8	-99.9	115.8	91.5	24.26	4.773	
5,700.0	5,697.1	5,664.9	5,646.2	12.6	12.6	-13.67	-112.3	-120.7	134.2	109.7	24.45	5.488	
5,800.0	5,794.3	5,756.0	5,729.6	12.8	12.9	-16.64	-140.7	-143.9	152.8	128.1	24.62	6.206	
5,900.0	5,890.2	5,846.2	5,810.3	13.1	13.3	-19.39	-171.8	-169.2	171.5	146.8	24.77	6.926	
6,000.0	5,984.4	5,936.3	5,889.0	13.3	13.7	-21.99	-205.8	-196.9	190.5	165.6	24.92	7.645	
6,100.0	6,076.8	6,034.4	5,973.8	13.7	14.2	-24.81	-244.1	-228.1	207.1	181.9	25.12	8.241	
6,200.0	6,167.1	6,132.9	6,058.9	14.1	14.8	-27.84	-282.5	-259.4	219.5	194.1	25.41	8.639	
6,300.0	6,254.9	6,231.5	6,144.2	14.6	15.4	-31.21	-321.0	-290.7	228.1	202.3	25.83	8.830	
6,400.0	6,341.2	6,330.2	6,229.4	15.1	16.1	-34.87	-359.5	-322.0	234.9	208.2	26.74	8.786	
6,500.0	6,427.5	6,428.8	6,314.7	15.8	16.8	-38.33	-398.0	-353.4	242.6	214.8	27.80	8.725	
6,600.0	6,513.8	6,527.5	6,399.9	16.4	17.6	-41.57	-436.4	-384.7	251.1	222.1	28.99	8.662	
6,700.0	6,600.1	6,626.1	6,485.2	17.1	18.3	-44.59	-474.9	-416.1	260.4	230.1	30.29	8.596	
6,800.0	6,686.4	6,724.7	6,570.4	17.9	19.1	-47.40	-513.4	-447.4	270.3	238.6	31.69	8.529	
6,900.0	6,774.3	6,824.5	6,657.1	18.6	19.9	-40.22	-552.5	-477.4	281.2	248.0	33.18	8.473	
7,000.0	6,867.9	6,924.6	6,747.6	19.0	20.4	-13.15	-593.3	-489.3	293.1	258.8	34.32	8.539	
7,100.0	6,963.2	7,023.2	6,836.7	19.2	20.8	23.75	-633.4	-478.9	305.4	270.4	35.02	8.721	
7,200.0	7,055.2	7,120.4	6,920.6	19.3	21.0	45.31	-671.0	-447.7	317.4	282.2	35.27	9.001	
7,300.0	7,139.3	7,216.6	6,995.4	19.3	21.1	54.51	-704.5	-397.7	328.5	293.4	35.15	9.345	
7,400.0	7,211.2	7,312.0	7,058.1	19.3	21.1	58.52	-732.6	-331.8	338.0	303.1	34.90	9.687	
7,500.0	7,267.1	7,406.8	7,106.2	19.3	21.1	60.32	-754.0	-253.2	345.5	310.6	34.84	9.916	
7,600.0	7,304.2	7,501.3	7,137.9	19.5	20.9	61.10	-768.0	-165.5	350.4	315.1	35.35	9.914	
7,700.0	7,320.7	7,595.6	7,151.8	20.1	20.7	61.37	-773.9	-72.6	352.7	316.0	36.67	9.617	
7,800.0	7,321.4	7,694.1	7,152.4	21.2	20.5	61.38	-773.9	25.9	352.8	314.0	38.82	9.089	
7,900.0	7,321.4	7,794.1	7,152.4	22.7	22.0	61.38	-773.6	125.9	352.8	311.3	41.50	8.503	
8,000.0	7,321.4	7,894.1	7,152.4	24.5	23.8	61.38	-773.2	225.9	352.9	308.3	44.57	7.917	
8,100.0	7,321.4	7,994.1	7,152.4	26.4	25.8	61.39	-772.9	325.9	352.9	304.9	47.96	7.358	
8,200.0	7,321.4	8,094.1	7,152.4	28.5	27.9	61.39	-772.5	425.9	352.9	301.3	51.61	6.838	
8,300.0	7,321.4	8,194.1	7,152.4	30.7	30.2	61.39	-772.2	525.9	353.0	297.5	55.47	6.364	
8,400.0	7,321.4	8,294.1	7,152.4	33.0	32.5	61.40	-771.9	625.9	353.0	293.5	59.49	5.934	
8,500.0	7,321.4	8,394.1	7,152.4	35.3	34.8	61.40	-771.5	725.9	353.1	289.4	63.65	5.547	
8,600.0	7,321.4	8,494.1	7,152.4	37.8	37.3	61.40	-771.2	825.9	353.1	285.2	67.91	5.199	
8,700.0	7,321.4	8,594.1	7,152.4	40.2	39.8	61.41	-770.9	925.9	353.1	280.9	72.27	4.886	
8,800.0	7,321.4	8,694.1	7,152.4	42.7	42.3	61.41	-770.5	1,025.9	353.2	276.5	76.70	4.604	
8,900.0	7,321.4	8,794.1	7,152.4	45.3	44.8	61.41	-770.2	1,125.9	353.2	272.0	81.20	4.350	
9,000.0	7,321.4	8,894.1	7,152.4	47.8	47.4	61.42	-769.9	1,225.9	353.2	267.5	85.74	4.120	
9,100.0	7,321.4	8,994.1	7,152.4	50.4	50.0	61.42	-769.5	1,325.9	353.3	262.9	90.34	3.911	
9,200.0	7,321.4	9,094.1	7,152.4	53.1	52.6	61.42	-769.2	1,425.9	353.3	258.3	94.97	3.720	
9,300.0	7,321.4	9,194.1	7,152.4	55.7	55.2	61.43	-768.9	1,525.9	353.3	253.7	99.63	3.547	
9,400.0	7,321.4	9,294.1	7,152.4	58.3	57.9	61.43	-768.5	1,625.9	353.4	249.1	104.32	3.387	
9,500.0	7,321.4	9,394.1	7,152.4	61.0	60.6	61.43	-768.2	1,725.9	353.4	244.4	109.04	3.241	
9,600.0	7,321.4	9,494.1	7,152.4	63.7	63.2	61.44	-767.9	1,825.9	353.5	239.7	113.78	3.106	
9,700.0	7,321.4	9,594.1	7,152.4	66.4	65.9	61.44	-767.5	1,925.9	353.5	234.9	118.54	2.982	
9,800.0	7,321.4	9,694.1	7,152.4	69.1	68.6	61.44	-767.2	2,025.9	353.5	230.2	123.32	2.867	
9,900.0	7,321.4	9,794.1	7,152.4	71.8	71.3	61.45	-766.9	2,125.9	353.6	225.5	128.11	2.760	
10,000.0	7,321.4	9,894.1	7,152.4	74.5	74.0	61.45	-766.5	2,225.9	353.6	220.7	132.92	2.660	
10,100.0	7,321.4	9,994.1	7,152.4	77.2	76.7	61.45	-766.2	2,325.9	353.6	215.9	137.74	2.567	
10,200.0	7,321.4	10,094.1	7,152.4	79.9	79.5	61.46	-765.8	2,425.9	353.7	211.1	142.57	2.481	
10,300.0	7,321.4	10,194.1	7,152.4	82.6	82.2	61.46	-765.5	2,525.9	353.7	206.3	147.41	2.400	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-162HN - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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
10,400.0	7,321.4	10,294.1	7,152.4	85.4	84.9	61.46	-765.2	2,625.9	353.7	201.5	152.25	2.323	
10,500.0	7,321.4	10,394.1	7,152.4	88.1	87.7	61.47	-764.8	2,725.9	353.8	196.7	157.11	2.252	
10,600.0	7,321.4	10,494.1	7,152.4	90.9	90.4	61.47	-764.5	2,825.9	353.8	191.8	161.98	2.184	
10,700.0	7,321.4	10,594.1	7,152.4	93.6	93.2	61.47	-764.2	2,925.9	353.9	187.0	166.85	2.121	
10,800.0	7,321.4	10,694.1	7,152.4	96.4	95.9	61.47	-763.8	3,025.9	353.9	182.2	171.72	2.061	
10,900.0	7,321.4	10,794.1	7,152.4	99.1	98.7	61.48	-763.5	3,125.9	353.9	177.3	176.61	2.004	
11,000.0	7,321.4	10,894.1	7,152.4	101.9	101.4	61.48	-763.2	3,225.9	354.0	172.5	181.50	1.950	
11,100.0	7,321.4	10,994.1	7,152.4	104.6	104.2	61.48	-762.8	3,325.9	354.0	167.6	186.39	1.899	
11,200.0	7,321.4	11,094.1	7,152.4	107.4	106.9	61.49	-762.5	3,425.9	354.0	162.8	191.29	1.851	
11,300.0	7,321.4	11,194.1	7,152.4	110.1	109.7	61.49	-762.2	3,525.9	354.1	157.9	196.19	1.805	
11,400.0	7,321.4	11,294.1	7,152.4	112.9	112.5	61.49	-761.8	3,625.9	354.1	153.0	201.10	1.761	
11,500.0	7,321.4	11,394.1	7,152.4	115.7	115.2	61.50	-761.5	3,725.9	354.1	148.1	206.01	1.719	
11,600.0	7,321.4	11,494.1	7,152.4	118.4	118.0	61.50	-761.2	3,825.9	354.2	143.3	210.92	1.679	
11,700.0	7,321.4	11,594.1	7,152.4	121.2	120.8	61.50	-760.8	3,925.9	354.2	138.4	215.84	1.641	
11,800.0	7,321.4	11,694.1	7,152.4	124.0	123.5	61.51	-760.5	4,025.9	354.3	133.5	220.76	1.605	
11,900.0	7,321.4	11,794.1	7,152.4	126.8	126.3	61.51	-760.2	4,125.9	354.3	128.6	225.68	1.570	
12,000.0	7,321.4	11,894.1	7,152.4	129.5	129.1	61.51	-759.8	4,225.9	354.3	123.7	230.61	1.536	
12,046.7	7,321.4	11,940.8	7,152.4	130.8	130.0	61.51	-759.7	4,272.6	354.3	121.8	232.54	1.524	
12,083.0	7,321.4	11,974.5	7,152.4	131.8	130.6	61.52	-759.5	4,306.3	354.4	120.4	233.97	1.515	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-239HN - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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	-93.14	-3.3	-59.7	59.8				
100.0	100.0	100.0	100.0	0.1	0.1	-93.14	-3.3	-59.7	59.8	59.6	0.22	266.193	
200.0	200.0	200.0	200.0	0.3	0.3	-93.14	-3.3	-59.7	59.8	59.2	0.67	88.731	
300.0	300.0	300.0	300.0	0.6	0.6	-93.14	-3.3	-59.7	59.8	58.7	1.12	53.239	
400.0	400.0	400.0	400.0	0.8	0.8	-93.14	-3.3	-59.7	59.8	58.3	1.57	38.028	
500.0	500.0	500.0	500.0	1.0	1.0	-93.14	-3.3	-59.7	59.8	57.8	2.02	29.577	
600.0	600.0	600.0	600.0	1.2	1.2	-93.14	-3.3	-59.7	59.8	57.4	2.47	24.199	
700.0	700.0	700.0	700.0	1.5	1.5	-93.14	-3.3	-59.7	59.8	56.9	2.92	20.476	
800.0	800.0	800.0	800.0	1.7	1.7	-93.14	-3.3	-59.7	59.8	56.5	3.37	17.746	
900.0	900.0	900.0	900.0	1.9	1.9	-93.14	-3.3	-59.7	59.8	56.0	3.82	15.658	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-93.14	-3.3	-59.7	59.8	55.6	4.27	14.010	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-93.14	-3.3	-59.7	59.8	55.1	4.72	12.676	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-93.14	-3.3	-59.7	59.8	54.7	5.17	11.574	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-93.14	-3.3	-59.7	59.8	54.2	5.62	10.648	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-93.14	-3.3	-59.7	59.8	53.8	6.07	9.859	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-93.14	-3.3	-59.7	59.8	53.3	6.52	9.179	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-93.14	-3.3	-59.7	59.8	52.9	6.97	8.587	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-93.14	-3.3	-59.7	59.8	52.4	7.42	8.066	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-93.14	-3.3	-59.7	59.8	52.0	7.87	7.606	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-93.14	-3.3	-59.7	59.8	51.5	8.32	7.194	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-93.14	-3.3	-59.7	59.8	51.1	8.77	6.825	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-93.14	-3.3	-59.7	59.8	50.6	9.22	6.493	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-93.14	-3.3	-59.7	59.8	50.2	9.66	6.191	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-93.14	-3.3	-59.7	59.8	49.7	10.11	5.915	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-93.14	-3.3	-59.7	59.8	49.3	10.56	5.664	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-93.14	-3.3	-59.7	59.8	48.8	11.01	5.433	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-93.14	-3.3	-59.7	59.8	48.4	11.46	5.219	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-93.14	-3.3	-59.7	59.8	47.9	11.91	5.023	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-93.14	-3.3	-59.7	59.8	47.5	12.36	4.840	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-93.14	-3.3	-59.7	59.8	47.0	12.81	4.670	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-93.14	-3.3	-59.7	59.8	46.6	13.26	4.512	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-93.14	-3.3	-59.7	59.8	46.1	13.71	4.364	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-93.14	-3.3	-59.7	59.8	45.7	14.16	4.225	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-93.14	-3.3	-59.7	59.8	45.2	14.61	4.095	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-93.14	-3.3	-59.7	59.8	44.8	15.06	3.973	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-93.14	-3.3	-59.7	59.8	44.3	15.51	3.858	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-93.14	-3.3	-59.7	59.8	43.9	15.96	3.749	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-93.14	-3.3	-59.7	59.8	43.4	16.41	3.646	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-93.14	-3.3	-59.7	59.8	43.0	16.86	3.549	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-93.14	-3.3	-59.7	59.8	42.5	17.31	3.457	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-93.14	-3.3	-59.7	59.8	42.1	17.76	3.370	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-93.14	-3.3	-59.7	59.8	41.6	18.21	3.286	CC, ES
4,200.0	4,200.0	4,198.7	4,198.6	9.3	9.3	-95.35	-5.7	-60.6	60.9	42.3	18.62	3.270	SF
4,300.0	4,300.0	4,296.9	4,296.5	9.6	9.5	-101.44	-12.8	-63.2	64.6	45.6	19.02	3.397	
4,400.0	4,400.0	4,394.0	4,392.8	9.8	9.6	-109.93	-24.5	-67.5	72.2	52.8	19.41	3.718	
4,500.0	4,500.0	4,489.6	4,486.9	10.0	9.8	-118.87	-40.5	-73.4	84.8	65.0	19.81	4.281	
4,600.0	4,600.0	4,583.3	4,578.2	10.2	10.0	-126.82	-60.4	-80.7	103.1	82.9	20.21	5.102	
4,700.0	4,700.0	4,674.7	4,666.0	10.5	10.2	-133.20	-83.8	-89.3	127.1	106.5	20.62	6.164	
4,800.0	4,800.0	4,763.4	4,750.1	10.7	10.4	-138.11	-110.4	-99.0	156.4	135.4	21.04	7.434	
4,900.0	4,900.0	4,849.3	4,830.2	10.9	10.7	-141.83	-139.5	-109.7	190.7	169.2	21.49	8.875	
5,000.0	5,000.0	4,932.0	4,906.0	11.1	11.0	-144.65	-170.8	-121.1	229.5	207.6	21.95	10.455	
5,100.0	5,100.0	5,011.6	4,977.4	11.4	11.3	-146.82	-203.7	-133.2	272.5	250.1	22.44	12.144	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-239HN - Wellbore #1 - Plan #1 (12-10-13) — Offset Site Error: 0.0ft

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

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
5,200.0	5,200.0	5,087.9	5,044.4	11.6	11.7	-148.50	-237.9	-145.7	319.4	296.5	22.96	13.914	
5,300.0	5,300.0	5,170.1	5,115.4	11.8	12.2	-149.97	-276.8	-160.0	369.1	345.6	23.53	15.687	
5,400.0	5,400.0	5,257.3	5,190.7	12.0	12.7	-28.54	-318.2	-175.2	417.2	393.9	23.29	17.911	
5,500.0	5,499.6	5,346.5	5,267.6	12.2	13.2	-29.27	-360.5	-190.7	461.4	437.8	23.63	19.526	
5,600.0	5,598.8	5,437.2	5,345.9	12.4	13.9	-30.14	-403.6	-206.5	501.7	477.8	23.95	20.950	
5,700.0	5,697.1	5,529.3	5,425.3	12.6	14.5	-31.14	-447.3	-222.5	538.2	514.0	24.25	22.190	
5,800.0	5,794.3	5,622.5	5,505.7	12.8	15.2	-32.28	-491.6	-238.7	570.9	546.3	24.55	23.251	
5,900.0	5,890.2	5,716.5	5,586.8	13.1	15.9	-33.57	-536.2	-255.1	599.8	575.0	24.85	24.133	
6,000.0	5,984.4	5,811.2	5,668.5	13.3	16.6	-35.02	-581.2	-271.6	625.2	600.0	25.18	24.830	
6,100.0	6,076.8	5,906.2	5,750.4	13.7	17.4	-36.63	-626.3	-288.1	647.0	621.5	25.54	25.333	
6,200.0	6,167.1	6,001.2	5,832.4	14.1	18.2	-38.42	-671.4	-304.7	665.7	639.7	25.98	25.624	
6,300.0	6,254.9	6,096.1	5,914.3	14.6	19.0	-40.39	-716.4	-321.2	681.3	654.8	26.52	25.687	
6,400.0	6,341.2	6,190.7	5,995.9	15.1	19.8	-42.69	-761.4	-337.7	695.7	668.3	27.40	25.390	
6,500.0	6,427.5	6,285.3	6,077.5	15.8	20.6	-44.93	-806.3	-354.1	711.2	682.8	28.40	25.047	
6,600.0	6,513.8	6,380.0	6,159.2	16.4	21.4	-47.08	-851.2	-370.6	727.9	698.4	29.48	24.688	
6,700.0	6,600.1	6,474.6	6,240.8	17.1	22.3	-49.14	-896.2	-387.1	745.5	714.9	30.66	24.319	
6,800.0	6,686.4	6,569.2	6,322.4	17.9	23.1	-51.10	-941.1	-403.5	764.2	732.3	31.91	23.945	
6,900.0	6,774.3	6,664.7	6,404.8	18.6	24.0	-44.13	-986.5	-420.2	783.8	750.4	33.41	23.460	
7,000.0	6,867.9	6,762.5	6,489.2	19.0	24.9	-16.69	-1,032.9	-437.2	803.6	768.9	34.64	23.195	
7,100.0	6,963.2	6,858.1	6,571.6	19.2	25.7	22.09	-1,078.3	-453.8	822.7	787.3	35.36	23.268	
7,200.0	7,055.2	6,946.4	6,647.8	19.3	26.5	46.42	-1,120.2	-469.2	841.7	806.0	35.66	23.600	
7,300.0	7,139.3	7,026.6	6,717.0	19.3	27.3	58.51	-1,158.3	-482.6	862.5	826.7	35.82	24.081	
7,400.0	7,211.2	7,122.2	6,800.7	19.3	27.9	65.55	-1,204.3	-484.4	885.9	849.9	35.99	24.612	
7,500.0	7,267.1	7,244.9	6,905.0	19.3	28.6	70.66	-1,261.6	-456.5	910.4	874.0	36.38	25.024	
7,600.0	7,304.2	7,421.4	7,034.5	19.5	29.3	75.53	-1,332.6	-362.1	933.0	895.8	37.16	25.110	
7,700.0	7,320.7	7,687.3	7,144.8	20.1	29.6	79.45	-1,392.7	-132.2	946.6	907.4	39.20	24.146	
7,800.0	7,321.4	7,847.2	7,152.4	21.2	29.6	79.73	-1,396.6	27.1	947.5	905.5	42.03	22.542	
7,900.0	7,321.4	7,947.2	7,152.4	22.7	29.8	79.73	-1,396.3	127.1	947.7	902.8	44.88	21.115	
8,000.0	7,321.4	8,047.2	7,152.4	24.5	30.1	79.73	-1,396.1	227.1	947.8	899.6	48.20	19.666	
8,100.0	7,321.4	8,147.2	7,152.4	26.4	30.8	79.73	-1,395.8	327.1	947.9	896.1	51.89	18.269	
8,200.0	7,321.4	8,247.2	7,152.4	28.5	31.8	79.73	-1,395.6	427.1	948.1	892.2	55.89	16.965	
8,300.0	7,321.4	8,347.2	7,152.4	30.7	33.2	79.73	-1,395.3	527.1	948.2	888.1	60.12	15.771	
8,400.0	7,321.4	8,447.2	7,152.4	33.0	35.0	79.73	-1,395.1	627.1	948.3	883.8	64.56	14.689	
8,500.0	7,321.4	8,547.2	7,152.4	35.3	36.9	79.74	-1,394.8	727.1	948.5	879.3	69.15	13.716	
8,600.0	7,321.4	8,647.2	7,152.4	37.8	39.1	79.74	-1,394.6	827.1	948.6	874.7	73.87	12.841	
8,700.0	7,321.4	8,747.2	7,152.4	40.2	41.3	79.74	-1,394.4	927.1	948.7	870.0	78.70	12.056	
8,800.0	7,321.4	8,847.2	7,152.4	42.7	43.6	79.74	-1,394.1	1,027.1	948.9	865.2	83.61	11.349	
8,900.0	7,321.4	8,947.2	7,152.4	45.3	46.0	79.74	-1,393.9	1,127.1	949.0	860.4	88.59	10.712	
9,000.0	7,321.4	9,047.2	7,152.4	47.8	48.5	79.74	-1,393.6	1,227.1	949.1	855.5	93.64	10.136	
9,100.0	7,321.4	9,147.2	7,152.4	50.4	51.0	79.74	-1,393.4	1,327.1	949.2	850.5	98.73	9.614	
9,200.0	7,321.4	9,247.2	7,152.4	53.1	53.5	79.75	-1,393.1	1,427.1	949.4	845.5	103.87	9.140	
9,300.0	7,321.4	9,347.2	7,152.4	55.7	56.0	79.75	-1,392.9	1,527.1	949.5	840.5	109.05	8.707	
9,400.0	7,321.4	9,447.2	7,152.4	58.3	58.6	79.75	-1,392.7	1,627.1	949.6	835.4	114.26	8.311	
9,500.0	7,321.4	9,547.2	7,152.4	61.0	61.2	79.75	-1,392.4	1,727.1	949.8	830.3	119.50	7.948	
9,600.0	7,321.4	9,647.2	7,152.4	63.7	63.8	79.75	-1,392.2	1,827.1	949.9	825.1	124.77	7.613	
9,700.0	7,321.4	9,747.2	7,152.4	66.4	66.5	79.75	-1,391.9	1,927.1	950.0	820.0	130.05	7.305	
9,800.0	7,321.4	9,847.2	7,152.4	69.1	69.1	79.75	-1,391.7	2,027.1	950.2	814.8	135.36	7.020	
9,900.0	7,321.4	9,947.2	7,152.4	71.8	71.8	79.76	-1,391.4	2,127.1	950.3	809.6	140.68	6.755	
10,000.0	7,321.4	10,047.2	7,152.4	74.5	74.4	79.76	-1,391.2	2,227.1	950.4	804.4	146.02	6.509	
10,100.0	7,321.4	10,147.2	7,152.4	77.2	77.1	79.76	-1,391.0	2,327.1	950.6	799.2	151.37	6.280	
10,200.0	7,321.4	10,247.2	7,152.4	79.9	79.8	79.76	-1,390.7	2,427.1	950.7	794.0	156.73	6.066	
10,300.0	7,321.4	10,347.2	7,152.4	82.6	82.5	79.76	-1,390.5	2,527.1	950.8	788.7	162.10	5.866	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-239HN - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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
10,400.0	7,321.4	10,447.2	7,152.4	85.4	85.2	79.76	-1,390.2	2,627.1	951.0	783.5	167.49	5.678	
10,500.0	7,321.4	10,547.2	7,152.4	88.1	87.9	79.76	-1,390.0	2,727.1	951.1	778.2	172.88	5.501	
10,600.0	7,321.4	10,647.2	7,152.4	90.9	90.6	79.77	-1,389.7	2,827.1	951.2	772.9	178.28	5.336	
10,700.0	7,321.4	10,747.2	7,152.4	93.6	93.3	79.77	-1,389.5	2,927.1	951.3	767.7	183.69	5.179	
10,800.0	7,321.4	10,847.2	7,152.4	96.4	96.1	79.77	-1,389.2	3,027.1	951.5	762.4	189.10	5.032	
10,900.0	7,321.4	10,947.2	7,152.4	99.1	98.8	79.77	-1,389.0	3,127.1	951.6	757.1	194.52	4.892	
11,000.0	7,321.4	11,047.2	7,152.4	101.9	101.5	79.77	-1,388.8	3,227.1	951.7	751.8	199.95	4.760	
11,100.0	7,321.4	11,147.2	7,152.4	104.6	104.2	79.77	-1,388.5	3,327.1	951.9	746.5	205.38	4.635	
11,200.0	7,321.4	11,247.2	7,152.4	107.4	107.0	79.77	-1,388.3	3,427.1	952.0	741.2	210.82	4.516	
11,300.0	7,321.4	11,347.2	7,152.4	110.1	109.7	79.78	-1,388.0	3,527.1	952.1	735.9	216.26	4.403	
11,400.0	7,321.4	11,447.2	7,152.4	112.9	112.5	79.78	-1,387.8	3,627.1	952.3	730.6	221.71	4.295	
11,500.0	7,321.4	11,547.2	7,152.4	115.7	115.2	79.78	-1,387.5	3,727.1	952.4	725.2	227.16	4.193	
11,600.0	7,321.4	11,647.2	7,152.4	118.4	118.0	79.78	-1,387.3	3,827.1	952.5	719.9	232.61	4.095	
11,700.0	7,321.4	11,747.2	7,152.4	121.2	120.7	79.78	-1,387.1	3,927.1	952.7	714.6	238.07	4.002	
11,800.0	7,321.4	11,847.2	7,152.4	124.0	123.5	79.78	-1,386.8	4,027.1	952.8	709.3	243.53	3.912	
11,900.0	7,321.4	11,947.2	7,152.4	126.8	126.2	79.78	-1,386.6	4,127.1	952.9	703.9	248.99	3.827	
12,000.0	7,321.4	12,047.2	7,152.4	129.5	129.0	79.79	-1,386.3	4,227.1	953.0	698.6	254.46	3.745	
12,036.5	7,321.4	12,083.7	7,152.4	130.5	130.0	79.79	-1,386.2	4,263.6	953.1	696.6	256.45	3.716	
12,083.0	7,321.4	12,123.4	7,152.4	131.8	130.9	79.79	-1,386.1	4,303.3	953.2	694.6	258.58	3.686	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-259HC - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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	-92.55	-4.0	-89.9	90.0				
100.0	100.0	100.0	100.0	0.1	0.1	-92.55	-4.0	-89.9	90.0	89.8	0.22	400.329	
200.0	200.0	200.0	200.0	0.3	0.3	-92.55	-4.0	-89.9	90.0	89.3	0.67	133.443	
300.0	300.0	300.0	300.0	0.6	0.6	-92.55	-4.0	-89.9	90.0	88.9	1.12	80.066	
400.0	400.0	400.0	400.0	0.8	0.8	-92.55	-4.0	-89.9	90.0	88.4	1.57	57.190	
500.0	500.0	500.0	500.0	1.0	1.0	-92.55	-4.0	-89.9	90.0	88.0	2.02	44.481	
600.0	600.0	600.0	600.0	1.2	1.2	-92.55	-4.0	-89.9	90.0	87.5	2.47	36.394	
700.0	700.0	700.0	700.0	1.5	1.5	-92.55	-4.0	-89.9	90.0	87.1	2.92	30.795	
800.0	800.0	800.0	800.0	1.7	1.7	-92.55	-4.0	-89.9	90.0	86.6	3.37	26.689	
900.0	900.0	900.0	900.0	1.9	1.9	-92.55	-4.0	-89.9	90.0	86.2	3.82	23.549	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-92.55	-4.0	-89.9	90.0	85.7	4.27	21.070	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-92.55	-4.0	-89.9	90.0	85.3	4.72	19.063	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-92.55	-4.0	-89.9	90.0	84.8	5.17	17.406	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-92.55	-4.0	-89.9	90.0	84.4	5.62	16.013	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-92.55	-4.0	-89.9	90.0	83.9	6.07	14.827	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-92.55	-4.0	-89.9	90.0	83.5	6.52	13.804	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-92.55	-4.0	-89.9	90.0	83.0	6.97	12.914	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-92.55	-4.0	-89.9	90.0	82.6	7.42	12.131	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-92.55	-4.0	-89.9	90.0	82.1	7.87	11.438	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-92.55	-4.0	-89.9	90.0	81.7	8.32	10.820	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-92.55	-4.0	-89.9	90.0	81.2	8.77	10.265	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-92.55	-4.0	-89.9	90.0	80.8	9.22	9.764	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-92.55	-4.0	-89.9	90.0	80.3	9.66	9.310	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-92.55	-4.0	-89.9	90.0	79.9	10.11	8.896	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-92.55	-4.0	-89.9	90.0	79.4	10.56	8.518	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-92.55	-4.0	-89.9	90.0	79.0	11.01	8.170	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-92.55	-4.0	-89.9	90.0	78.5	11.46	7.850	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-92.55	-4.0	-89.9	90.0	78.1	11.91	7.553	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-92.55	-4.0	-89.9	90.0	77.6	12.36	7.279	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-92.55	-4.0	-89.9	90.0	77.2	12.81	7.023	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-92.55	-4.0	-89.9	90.0	76.7	13.26	6.785	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-92.55	-4.0	-89.9	90.0	76.3	13.71	6.563	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-92.55	-4.0	-89.9	90.0	75.8	14.16	6.354	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-92.55	-4.0	-89.9	90.0	75.4	14.61	6.159	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-92.55	-4.0	-89.9	90.0	74.9	15.06	5.975	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-92.55	-4.0	-89.9	90.0	74.5	15.51	5.802	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-92.55	-4.0	-89.9	90.0	74.0	15.96	5.638	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-92.55	-4.0	-89.9	90.0	73.6	16.41	5.484	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-92.55	-4.0	-89.9	90.0	73.1	16.86	5.338	CC, ES
3,900.0	3,900.0	3,898.5	3,898.5	8.7	8.6	-94.08	-6.5	-90.5	90.8	73.5	17.28	5.256	
4,000.0	4,000.0	3,996.5	3,996.2	8.9	8.8	-98.46	-13.8	-92.5	93.6	75.9	17.67	5.298	
4,100.0	4,100.0	4,093.5	4,092.3	9.1	9.0	-105.05	-25.7	-95.7	99.4	81.4	18.06	5.505	
4,200.0	4,200.0	4,188.9	4,186.2	9.3	9.1	-112.82	-42.1	-100.1	109.5	91.0	18.46	5.932	
4,300.0	4,300.0	4,282.5	4,277.3	9.6	9.3	-120.64	-62.6	-105.6	124.8	106.0	18.85	6.620	
4,400.0	4,400.0	4,373.7	4,365.1	9.8	9.5	-127.70	-86.6	-112.0	145.9	126.6	19.25	7.575	
4,500.0	4,500.0	4,462.3	4,449.1	10.0	9.8	-133.64	-113.8	-119.3	172.6	152.9	19.67	8.775	
4,600.0	4,600.0	4,548.0	4,529.1	10.2	10.0	-138.45	-143.7	-127.4	204.7	184.6	20.10	10.184	
4,700.0	4,700.0	4,630.7	4,604.8	10.5	10.4	-142.28	-175.8	-136.0	241.8	221.2	20.56	11.762	
4,800.0	4,800.0	4,710.2	4,676.1	10.7	10.7	-145.31	-209.5	-145.0	283.4	262.3	21.03	13.471	
4,900.0	4,900.0	4,786.4	4,743.1	10.9	11.1	-147.73	-244.6	-154.4	329.1	307.5	21.54	15.277	
5,000.0	5,000.0	4,867.8	4,813.5	11.1	11.5	-149.86	-284.3	-165.1	378.0	355.9	22.11	17.099	
5,100.0	5,100.0	4,954.1	4,887.8	11.4	12.1	-151.62	-326.5	-176.4	427.5	404.8	22.73	18.812	

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

ENSIGN Directional

Anticollision Report

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-259HC - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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
5,200.0	5,200.0	5,040.3	4,962.1	11.6	12.6	-153.02	-368.7	-187.7	477.3	453.9	23.38	20.415	
5,300.0	5,300.0	5,126.5	5,036.4	11.8	13.2	-154.15	-410.9	-199.0	527.2	503.1	24.06	21.910	
5,400.0	5,400.0	5,213.6	5,111.5	12.0	13.8	-32.34	-453.5	-210.5	575.3	552.0	23.27	24.721	
5,500.0	5,499.6	5,302.5	5,188.1	12.2	14.5	-32.77	-497.0	-222.1	619.7	596.1	23.66	26.198	
5,600.0	5,598.8	5,392.8	5,266.0	12.4	15.2	-33.37	-541.2	-234.0	660.4	636.4	24.02	27.494	
5,700.0	5,697.1	5,484.3	5,344.9	12.6	15.9	-34.13	-586.0	-246.0	697.4	673.0	24.37	28.618	
5,800.0	5,794.3	5,576.8	5,424.6	12.8	16.7	-35.05	-631.3	-258.2	730.8	706.1	24.71	29.576	
5,900.0	5,890.2	5,669.9	5,504.9	13.1	17.4	-36.13	-676.9	-270.4	760.6	735.5	25.05	30.367	
6,000.0	5,984.4	5,763.6	5,585.6	13.3	18.2	-37.36	-722.7	-282.7	786.9	761.6	25.40	30.984	
6,100.0	6,076.8	5,857.4	5,666.5	13.7	19.0	-38.75	-768.6	-295.0	810.1	784.3	25.79	31.413	
6,200.0	6,167.1	5,951.2	5,747.4	14.1	19.9	-40.30	-814.5	-307.3	830.1	803.8	26.24	31.635	
6,300.0	6,254.9	6,044.6	5,827.9	14.6	20.7	-42.00	-860.3	-319.6	847.3	820.5	26.79	31.629	
6,400.0	6,341.2	6,137.8	5,908.2	15.1	21.5	-44.06	-905.9	-331.8	863.3	835.6	27.63	31.239	
6,500.0	6,427.5	6,230.9	5,988.5	15.8	22.3	-46.08	-951.4	-344.0	880.5	851.9	28.59	30.794	
6,600.0	6,513.8	6,324.0	6,068.8	16.4	23.2	-48.03	-997.0	-356.3	898.9	869.2	29.64	30.330	
6,700.0	6,600.1	6,417.2	6,149.1	17.1	24.0	-49.91	-1,042.6	-368.5	918.3	887.5	30.76	29.853	
6,800.0	6,686.4	6,510.3	6,229.4	17.9	24.9	-51.72	-1,088.2	-380.7	938.7	906.8	31.97	29.367	
6,900.0	6,774.3	6,604.5	6,310.6	18.6	25.7	-44.82	-1,134.3	-393.1	960.2	926.7	33.43	28.720	
7,000.0	6,867.9	6,701.9	6,394.5	19.0	26.6	-17.83	-1,182.0	-405.9	981.6	946.9	34.73	28.262	
7,100.0	6,963.2	6,797.9	6,477.3	19.2	27.5	20.34	-1,229.0	-418.5	1,001.8	966.2	35.54	28.189	
7,200.0	7,055.2	6,887.7	6,554.8	19.3	28.4	44.09	-1,272.9	-430.3	1,020.7	984.8	35.88	28.450	
7,300.0	7,139.3	6,966.7	6,622.8	19.3	29.1	55.67	-1,311.6	-440.6	1,039.8	1,003.8	35.97	28.908	
7,400.0	7,211.2	7,030.8	6,678.1	19.3	29.7	61.41	-1,342.9	-449.1	1,060.9	1,024.8	36.04	29.437	
7,500.0	7,267.1	7,076.7	6,717.7	19.3	30.1	63.50	-1,365.4	-455.1	1,085.6	1,049.5	36.17	30.014	
7,600.0	7,304.2	7,102.0	6,739.5	19.5	30.4	62.55	-1,377.8	-458.4	1,115.0	1,078.8	36.22	30.783	
7,700.0	7,320.7	7,105.6	6,742.6	20.1	30.4	58.87	-1,379.6	-458.9	1,148.5	1,112.6	35.89	31.997	
7,800.0	7,321.4	7,093.0	6,731.8	21.2	30.3	56.98	-1,373.4	-457.2	1,186.1	1,149.7	36.37	32.614	
7,900.0	7,321.4	7,079.7	6,720.3	22.7	30.2	56.29	-1,366.9	-455.5	1,230.3	1,192.9	37.43	32.872	
8,000.0	7,321.4	8,295.6	7,321.4	24.5	35.5	90.00	-1,706.5	227.8	1,243.0	1,194.5	48.57	25.594	
8,100.0	7,321.4	8,395.6	7,321.4	26.4	36.0	90.00	-1,706.2	327.8	1,243.2	1,190.9	52.28	23.779	
8,200.0	7,321.4	8,495.6	7,321.4	28.5	36.7	90.00	-1,706.0	427.8	1,243.3	1,187.0	56.31	22.081	
8,300.0	7,321.4	8,595.6	7,321.4	30.7	37.6	90.00	-1,705.8	527.8	1,243.5	1,182.9	60.59	20.524	
8,400.0	7,321.4	8,695.6	7,321.4	33.0	38.9	90.00	-1,705.5	627.8	1,243.6	1,178.5	65.07	19.112	
8,500.0	7,321.4	8,795.6	7,321.4	35.3	40.4	90.00	-1,705.3	727.8	1,243.7	1,174.0	69.71	17.841	
8,600.0	7,321.4	8,895.6	7,321.4	37.8	42.1	90.00	-1,705.1	827.8	1,243.9	1,169.4	74.49	16.698	
8,700.0	7,321.4	8,995.6	7,321.4	40.2	44.0	90.00	-1,704.8	927.8	1,244.0	1,164.6	79.38	15.672	
8,800.0	7,321.4	9,095.6	7,321.4	42.7	46.0	90.00	-1,704.6	1,027.8	1,244.2	1,159.8	84.36	14.749	
8,900.0	7,321.4	9,195.6	7,321.4	45.3	48.2	90.00	-1,704.4	1,127.8	1,244.3	1,154.9	89.41	13.917	
9,000.0	7,321.4	9,295.6	7,321.4	47.8	50.5	90.00	-1,704.1	1,227.8	1,244.4	1,149.9	94.53	13.165	
9,100.0	7,321.4	9,395.6	7,321.4	50.4	52.8	90.00	-1,703.9	1,327.8	1,244.6	1,144.9	99.69	12.484	
9,200.0	7,321.4	9,495.6	7,321.4	53.1	55.2	90.00	-1,703.6	1,427.8	1,244.7	1,139.8	104.91	11.865	
9,300.0	7,321.4	9,595.6	7,321.4	55.7	57.7	90.00	-1,703.4	1,527.8	1,244.9	1,134.7	110.16	11.300	
9,400.0	7,321.4	9,695.6	7,321.4	58.3	60.1	90.00	-1,703.2	1,627.8	1,245.0	1,129.6	115.45	10.784	
9,500.0	7,321.4	9,795.6	7,321.4	61.0	62.6	90.00	-1,702.9	1,727.8	1,245.1	1,124.4	120.76	10.311	
9,600.0	7,321.4	9,895.6	7,321.4	63.7	65.2	90.00	-1,702.7	1,827.8	1,245.3	1,119.2	126.11	9.875	
9,700.0	7,321.4	9,995.6	7,321.4	66.4	67.7	90.00	-1,702.5	1,927.8	1,245.4	1,114.0	131.47	9.473	
9,800.0	7,321.4	10,095.6	7,321.4	69.1	70.3	90.00	-1,702.2	2,027.8	1,245.6	1,108.7	136.85	9.101	
9,900.0	7,321.4	10,195.6	7,321.4	71.8	72.9	90.00	-1,702.0	2,127.8	1,245.7	1,103.5	142.25	8.757	
10,000.0	7,321.4	10,295.6	7,321.4	74.5	75.6	90.00	-1,701.8	2,227.8	1,245.9	1,098.2	147.67	8.437	
10,100.0	7,321.4	10,395.6	7,321.4	77.2	78.2	90.00	-1,701.5	2,327.8	1,246.0	1,092.9	153.10	8.138	
10,200.0	7,321.4	10,495.6	7,321.4	79.9	80.8	90.00	-1,701.3	2,427.8	1,246.1	1,087.6	158.55	7.860	
10,300.0	7,321.4	10,595.6	7,321.4	82.6	83.5	90.00	-1,701.1	2,527.8	1,246.3	1,082.3	164.00	7.599	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

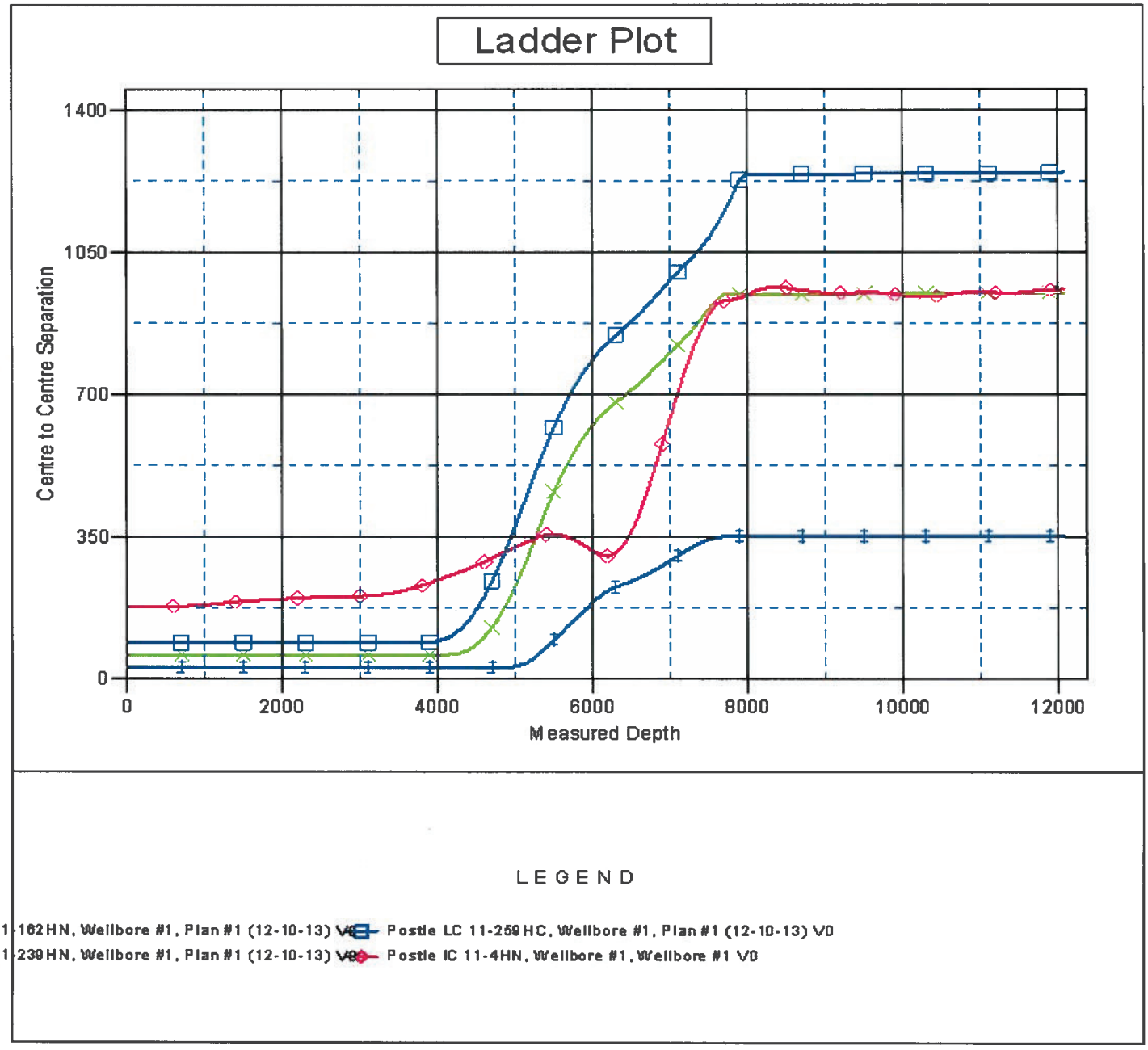
Offset Design Postle West Pad Sec.11-T3N-R68W - Postle LC 11-259HC - Wellbore #1 - Plan #1 (12-10-13) — **Offset Site Error:** 0.0ft

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

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
10,400.0	7,321.4	10,695.6	7,321.4	85.4	86.1	90.00	-1,700.8	2,627.8	1,246.4	1,077.0	169.46	7.355	
10,500.0	7,321.4	10,795.6	7,321.4	88.1	88.8	90.00	-1,700.6	2,727.8	1,246.6	1,071.6	174.94	7.126	
10,600.0	7,321.4	10,895.6	7,321.4	90.9	91.5	90.00	-1,700.4	2,827.8	1,246.7	1,066.3	180.42	6.910	
10,700.0	7,321.4	10,995.6	7,321.4	93.6	94.2	90.00	-1,700.1	2,927.8	1,246.8	1,060.9	185.91	6.707	
10,800.0	7,321.4	11,095.6	7,321.4	96.4	96.9	90.00	-1,699.9	3,027.8	1,247.0	1,055.6	191.41	6.515	
10,900.0	7,321.4	11,195.6	7,321.4	99.1	99.6	90.00	-1,699.6	3,127.8	1,247.1	1,050.2	196.91	6.333	
11,000.0	7,321.4	11,295.6	7,321.4	101.9	102.3	90.00	-1,699.4	3,227.8	1,247.3	1,044.8	202.42	6.162	
11,100.0	7,321.4	11,395.6	7,321.4	104.6	105.0	90.00	-1,699.2	3,327.8	1,247.4	1,039.5	207.93	5.999	
11,200.0	7,321.4	11,495.6	7,321.4	107.4	107.7	90.00	-1,698.9	3,427.8	1,247.5	1,034.1	213.45	5.845	
11,300.0	7,321.4	11,595.6	7,321.4	110.1	110.5	90.00	-1,698.7	3,527.8	1,247.7	1,028.7	218.98	5.698	
11,400.0	7,321.4	11,695.6	7,321.4	112.9	113.2	90.00	-1,698.5	3,627.8	1,247.8	1,023.3	224.51	5.558	
11,500.0	7,321.4	11,795.6	7,321.4	115.7	115.9	90.00	-1,698.2	3,727.8	1,248.0	1,017.9	230.04	5.425	
11,600.0	7,321.4	11,895.6	7,321.4	118.4	118.6	90.00	-1,698.0	3,827.8	1,248.1	1,012.5	235.57	5.298	
11,700.0	7,321.4	11,995.6	7,321.4	121.2	121.4	90.00	-1,697.8	3,927.8	1,248.3	1,007.1	241.11	5.177	
11,800.0	7,321.4	12,095.6	7,321.4	124.0	124.1	90.00	-1,697.5	4,027.8	1,248.4	1,001.7	246.66	5.061	
11,900.0	7,321.4	12,195.6	7,321.4	126.8	126.9	90.00	-1,697.3	4,127.8	1,248.5	996.3	252.20	4.951	
12,000.0	7,321.4	12,295.6	7,321.4	129.5	129.6	90.00	-1,697.1	4,227.8	1,248.7	990.9	257.75	4.845	
12,033.7	7,321.4	12,329.3	7,321.4	130.5	130.3	90.00	-1,697.0	4,261.5	1,248.7	989.4	259.33	4.815	
12,083.0	7,321.4	12,369.5	7,321.4	131.8	131.0	90.00	-1,696.9	4,301.7	1,248.8	987.4	261.41	4.777 SF	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Postle LC 11-159HC
Project:	SEC.11-T3N-R68W	**TVD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Reference Site:	Postle West Pad Sec.11-T3N-R68W	**MD Reference:**	WELL @ 4993.4ft (RKB - 16.5')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Postle LC 11-159HC	**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 (12-10-13)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4993.4ft (RKB - 16.5')	Coordinates are relative to: Postle LC 11-159HC
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: 0.34°



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Coordinates are relative to: Postle LC 11-159HC
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.34°