

Well Name: Postle IC 11-22D

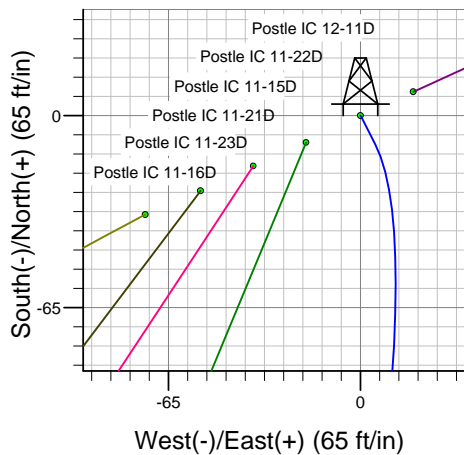
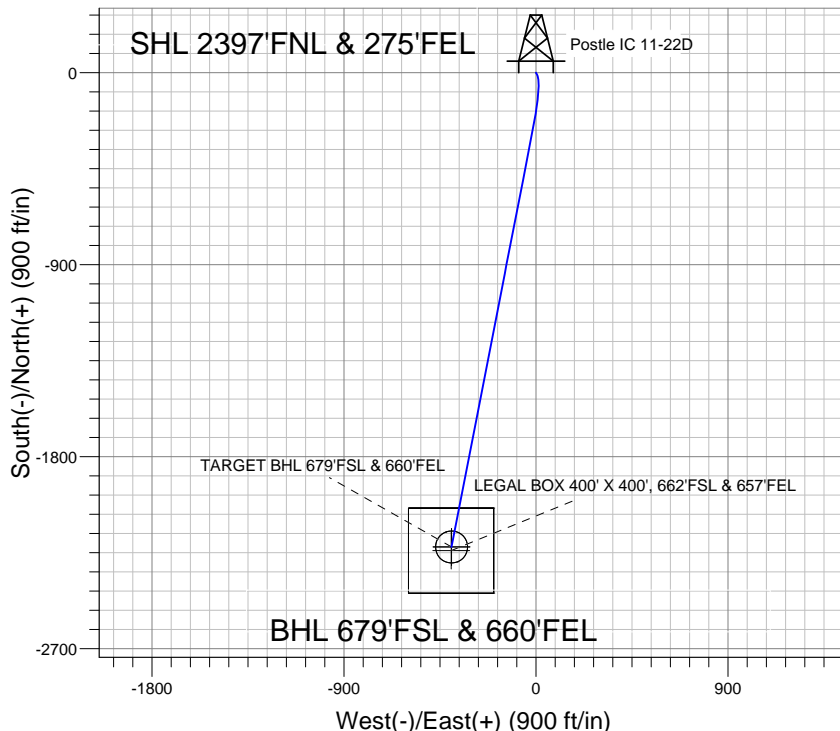
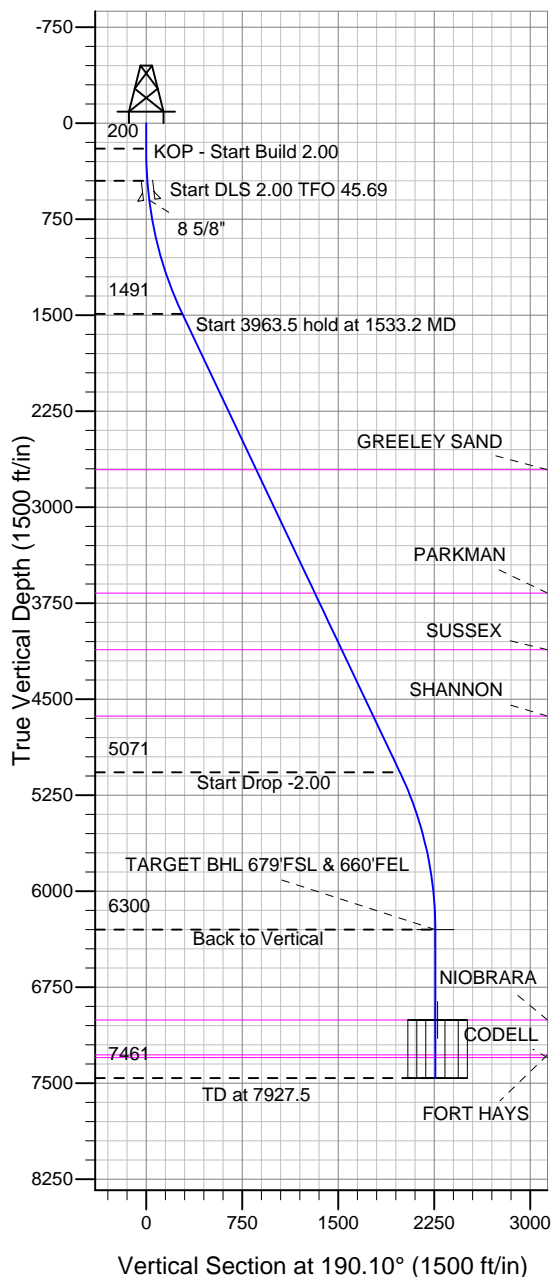
Surface Location: Postle IC 11-16D Pad Sec.11-T3N-R68W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4950.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1331259.03	3150236.09	40.241453	-104.961828	

Original Well Elev WELL @ 4964.0ft (Original Well Elev)

Great Western



Postle IC 11-16D Pad Sec.11-T3N-R68W
Postle IC 11-22D
Plan #1 (9-18-12)
12:02, September 20 2012



Azimuths to True North
Magnetic North: 8.79°
Magnetic Field
Strength: 52893.0snT
Dip Angle: 66.85°
Date: 9/18/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 679'FSL & 660'FEL	6300.0	-2223.3	-396.2	40.235350	-104.963247	Point
LEGAL BOX 400' X 400', 662'FSL & 657'FEL	7007.0	-2240.3	-398.2	40.235303	-104.963254	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 679'FSL & 660'FEL	7007.0	-2223.3	-396.2	40.235350	-104.963247	Circle (Radius: 75.0)

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	450.0	5.00	153.00	449.7	-9.7	4.9	2.00	153.00	8.7	
4	1533.2	25.40	191.02	1490.9	-283.0	-18.3	2.00	45.69	281.9	
5	5496.6	25.40	191.02	5071.3	-1951.6	-343.3	0.00	0.00	1981.5	
6	6766.5	0.00	0.00	6300.0	-2223.3	-396.2	2.00	180.00	2258.3	TARGET BHL 679'FSL & 660'FEL
7	7927.5	0.00	0.00	7461.0	-2223.3	-396.2	0.00	0.00	2258.3	



Great Western

SEC.11-T3N-R68W

Postle IC 11-16D Pad Sec.11-T3N-R68W

Postle IC 11-22D

Wellbore #1

Plan: Plan #1 (9-18-12)

Standard Planning Report

20 September, 2012

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
450.0	5.00	153.00	449.7	-9.7	4.9	2.00	2.00	0.00	153.00	
1,533.2	25.40	191.02	1,490.9	-283.0	-18.3	2.00	1.88	3.51	45.69	
5,496.6	25.40	191.02	5,071.3	-1,951.6	-343.3	0.00	0.00	0.00	0.00	
6,766.5	0.00	0.00	6,300.0	-2,223.3	-396.2	2.00	-2.00	0.00	180.00	TARGET BHL 679°
7,927.5	0.00	0.00	7,461.0	-2,223.3	-396.2	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Postle IC 11-22D
Company:	Great Western	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Project:	SEC.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
240.0	0.80	153.00	240.0	-0.2	0.1	0.2	2.00	2.00	0.00
280.0	1.60	153.00	280.0	-1.0	0.5	0.9	2.00	2.00	0.00
320.0	2.40	153.00	320.0	-2.2	1.1	2.0	2.00	2.00	0.00
360.0	3.20	153.00	359.9	-4.0	2.0	3.6	2.00	2.00	0.00
400.0	4.00	153.00	399.8	-6.2	3.2	5.6	2.00	2.00	0.00
440.0	4.80	153.00	439.7	-9.0	4.6	8.0	2.00	2.00	0.00
450.0	5.00	153.00	449.7	-9.7	4.9	8.7	2.00	2.00	0.00
Start DLS 2.00 TFO 45.69									
480.0	5.44	157.54	479.6	-12.2	6.1	10.9	2.00	1.45	15.12
520.0	6.06	162.53	519.4	-16.0	7.4	14.4	2.00	1.56	12.49
560.0	6.72	166.57	559.1	-20.2	8.6	18.4	2.00	1.66	10.10
600.0	7.41	169.88	598.8	-25.1	9.6	23.0	2.00	1.72	8.26
601.2	7.43	169.97	600.0	-25.2	9.6	23.1	2.00	1.75	7.47
8 5/8"									
640.0	8.12	172.61	638.4	-30.4	10.4	28.1	2.00	1.77	6.83
680.0	8.85	174.91	678.0	-36.3	11.1	33.8	2.00	1.81	5.74
720.0	9.58	176.86	717.5	-42.7	11.5	40.0	2.00	1.84	4.87
760.0	10.33	178.53	756.9	-49.6	11.8	46.7	2.00	1.87	4.18
800.0	11.08	179.98	796.2	-57.0	11.9	54.0	2.00	1.88	3.62
840.0	11.84	181.25	835.4	-65.0	11.8	61.9	2.00	1.90	3.16
880.0	12.61	182.36	874.5	-73.4	11.5	70.3	2.00	1.91	2.78
920.0	13.38	183.35	913.5	-82.4	11.1	79.2	2.00	1.92	2.47
960.0	14.15	184.23	952.3	-91.9	10.5	88.6	2.00	1.93	2.21
1,000.0	14.92	185.02	991.0	-101.9	9.6	98.6	2.00	1.94	1.98
1,040.0	15.70	185.74	1,029.6	-112.4	8.7	109.1	2.00	1.94	1.79
1,080.0	16.48	186.39	1,068.0	-123.4	7.5	120.2	2.00	1.95	1.63
1,120.0	17.26	186.98	1,106.3	-135.0	6.1	131.8	2.00	1.95	1.48
1,160.0	18.04	187.52	1,144.4	-147.0	4.6	143.9	2.00	1.96	1.36
1,200.0	18.83	188.02	1,182.4	-159.5	2.9	156.5	2.00	1.96	1.25
1,240.0	19.61	188.48	1,220.2	-172.6	1.0	169.7	2.00	1.96	1.15
1,280.0	20.40	188.91	1,257.7	-186.1	-1.1	183.4	2.00	1.97	1.07
1,320.0	21.19	189.31	1,295.1	-200.1	-3.3	197.6	2.00	1.97	0.99
1,360.0	21.98	189.68	1,332.3	-214.6	-5.8	212.3	2.00	1.97	0.92
1,400.0	22.76	190.02	1,369.3	-229.6	-8.4	227.5	2.00	1.97	0.86
1,440.0	23.55	190.34	1,406.1	-245.1	-11.1	243.3	2.00	1.97	0.81
1,480.0	24.35	190.65	1,442.6	-261.1	-14.1	259.5	2.00	1.98	0.76
1,520.0	25.14	190.93	1,479.0	-277.5	-17.2	276.2	2.00	1.98	0.71
1,533.2	25.40	191.02	1,490.9	-283.0	-18.3	281.9	2.00	1.98	0.68
Start 3963.5 hold at 1533.2 MD									
1,560.0	25.40	191.02	1,515.1	-294.3	-20.5	293.4	0.00	0.00	0.00
1,600.0	25.40	191.02	1,551.3	-311.2	-23.8	310.5	0.00	0.00	0.00
1,640.0	25.40	191.02	1,587.4	-328.0	-27.1	327.7	0.00	0.00	0.00
1,680.0	25.40	191.02	1,623.5	-344.8	-30.3	344.8	0.00	0.00	0.00
1,720.0	25.40	191.02	1,659.7	-361.7	-33.6	362.0	0.00	0.00	0.00
1,760.0	25.40	191.02	1,695.8	-378.5	-36.9	379.1	0.00	0.00	0.00
1,800.0	25.40	191.02	1,731.9	-395.4	-40.2	396.3	0.00	0.00	0.00
1,840.0	25.40	191.02	1,768.1	-412.2	-43.5	413.4	0.00	0.00	0.00

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Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,880.0	25.40	191.02	1,804.2	-429.0	-46.7	430.6	0.00	0.00	0.00
1,920.0	25.40	191.02	1,840.3	-445.9	-50.0	447.7	0.00	0.00	0.00
1,960.0	25.40	191.02	1,876.5	-462.7	-53.3	464.9	0.00	0.00	0.00
2,000.0	25.40	191.02	1,912.6	-479.6	-56.6	482.0	0.00	0.00	0.00
2,040.0	25.40	191.02	1,948.7	-496.4	-59.9	499.2	0.00	0.00	0.00
2,080.0	25.40	191.02	1,984.9	-513.2	-63.1	516.3	0.00	0.00	0.00
2,120.0	25.40	191.02	2,021.0	-530.1	-66.4	533.5	0.00	0.00	0.00
2,160.0	25.40	191.02	2,057.1	-546.9	-69.7	550.7	0.00	0.00	0.00
2,200.0	25.40	191.02	2,093.3	-563.7	-73.0	567.8	0.00	0.00	0.00
2,240.0	25.40	191.02	2,129.4	-580.6	-76.3	585.0	0.00	0.00	0.00
2,280.0	25.40	191.02	2,165.5	-597.4	-79.5	602.1	0.00	0.00	0.00
2,320.0	25.40	191.02	2,201.7	-614.3	-82.8	619.3	0.00	0.00	0.00
2,360.0	25.40	191.02	2,237.8	-631.1	-86.1	636.4	0.00	0.00	0.00
2,400.0	25.40	191.02	2,273.9	-647.9	-89.4	653.6	0.00	0.00	0.00
2,440.0	25.40	191.02	2,310.1	-664.8	-92.7	670.7	0.00	0.00	0.00
2,480.0	25.40	191.02	2,346.2	-681.6	-95.9	687.9	0.00	0.00	0.00
2,520.0	25.40	191.02	2,382.3	-698.5	-99.2	705.0	0.00	0.00	0.00
2,560.0	25.40	191.02	2,418.5	-715.3	-102.5	722.2	0.00	0.00	0.00
2,600.0	25.40	191.02	2,454.6	-732.1	-105.8	739.3	0.00	0.00	0.00
2,640.0	25.40	191.02	2,490.7	-749.0	-109.0	756.5	0.00	0.00	0.00
2,680.0	25.40	191.02	2,526.9	-765.8	-112.3	773.6	0.00	0.00	0.00
2,720.0	25.40	191.02	2,563.0	-782.7	-115.6	790.8	0.00	0.00	0.00
2,760.0	25.40	191.02	2,599.2	-799.5	-118.9	808.0	0.00	0.00	0.00
2,800.0	25.40	191.02	2,635.3	-816.3	-122.2	825.1	0.00	0.00	0.00
2,840.0	25.40	191.02	2,671.4	-833.2	-125.4	842.3	0.00	0.00	0.00
2,880.0	25.40	191.02	2,707.6	-850.0	-128.7	859.4	0.00	0.00	0.00
2,880.5	25.40	191.02	2,708.0	-850.2	-128.8	859.6	0.00	0.00	0.00
GREELEY SAND									
2,920.0	25.40	191.02	2,743.7	-866.9	-132.0	876.6	0.00	0.00	0.00
2,960.0	25.40	191.02	2,779.8	-883.7	-135.3	893.7	0.00	0.00	0.00
3,000.0	25.40	191.02	2,816.0	-900.5	-138.6	910.9	0.00	0.00	0.00
3,040.0	25.40	191.02	2,852.1	-917.4	-141.8	928.0	0.00	0.00	0.00
3,080.0	25.40	191.02	2,888.2	-934.2	-145.1	945.2	0.00	0.00	0.00
3,120.0	25.40	191.02	2,924.4	-951.0	-148.4	962.3	0.00	0.00	0.00
3,160.0	25.40	191.02	2,960.5	-967.9	-151.7	979.5	0.00	0.00	0.00
3,200.0	25.40	191.02	2,996.6	-984.7	-155.0	996.6	0.00	0.00	0.00
3,240.0	25.40	191.02	3,032.8	-1,001.6	-158.2	1,013.8	0.00	0.00	0.00
3,280.0	25.40	191.02	3,068.9	-1,018.4	-161.5	1,030.9	0.00	0.00	0.00
3,320.0	25.40	191.02	3,105.0	-1,035.2	-164.8	1,048.1	0.00	0.00	0.00
3,360.0	25.40	191.02	3,141.2	-1,052.1	-168.1	1,065.3	0.00	0.00	0.00
3,400.0	25.40	191.02	3,177.3	-1,068.9	-171.4	1,082.4	0.00	0.00	0.00
3,440.0	25.40	191.02	3,213.4	-1,085.8	-174.6	1,099.6	0.00	0.00	0.00
3,480.0	25.40	191.02	3,249.6	-1,102.6	-177.9	1,116.7	0.00	0.00	0.00
3,520.0	25.40	191.02	3,285.7	-1,119.4	-181.2	1,133.9	0.00	0.00	0.00
3,560.0	25.40	191.02	3,321.8	-1,136.3	-184.5	1,151.0	0.00	0.00	0.00
3,600.0	25.40	191.02	3,358.0	-1,153.1	-187.8	1,168.2	0.00	0.00	0.00
3,640.0	25.40	191.02	3,394.1	-1,170.0	-191.0	1,185.3	0.00	0.00	0.00
3,680.0	25.40	191.02	3,430.2	-1,186.8	-194.3	1,202.5	0.00	0.00	0.00
3,720.0	25.40	191.02	3,466.4	-1,203.6	-197.6	1,219.6	0.00	0.00	0.00
3,760.0	25.40	191.02	3,502.5	-1,220.5	-200.9	1,236.8	0.00	0.00	0.00
3,800.0	25.40	191.02	3,538.6	-1,237.3	-204.2	1,253.9	0.00	0.00	0.00
3,840.0	25.40	191.02	3,574.8	-1,254.2	-207.4	1,271.1	0.00	0.00	0.00
3,880.0	25.40	191.02	3,610.9	-1,271.0	-210.7	1,288.2	0.00	0.00	0.00

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Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,920.0	25.40	191.02	3,647.0	-1,287.8	-214.0	1,305.4	0.00	0.00	0.00
3,947.6	25.40	191.02	3,672.0	-1,299.5	-216.3	1,317.2	0.00	0.00	0.00
PARKMAN									
3,960.0	25.40	191.02	3,683.2	-1,304.7	-217.3	1,322.6	0.00	0.00	0.00
4,000.0	25.40	191.02	3,719.3	-1,321.5	-220.6	1,339.7	0.00	0.00	0.00
4,040.0	25.40	191.02	3,755.5	-1,338.3	-223.8	1,356.9	0.00	0.00	0.00
4,080.0	25.40	191.02	3,791.6	-1,355.2	-227.1	1,374.0	0.00	0.00	0.00
4,120.0	25.40	191.02	3,827.7	-1,372.0	-230.4	1,391.2	0.00	0.00	0.00
4,160.0	25.40	191.02	3,863.9	-1,388.9	-233.7	1,408.3	0.00	0.00	0.00
4,200.0	25.40	191.02	3,900.0	-1,405.7	-236.9	1,425.5	0.00	0.00	0.00
4,240.0	25.40	191.02	3,936.1	-1,422.5	-240.2	1,442.6	0.00	0.00	0.00
4,280.0	25.40	191.02	3,972.3	-1,439.4	-243.5	1,459.8	0.00	0.00	0.00
4,320.0	25.40	191.02	4,008.4	-1,456.2	-246.8	1,476.9	0.00	0.00	0.00
4,360.0	25.40	191.02	4,044.5	-1,473.1	-250.1	1,494.1	0.00	0.00	0.00
4,400.0	25.40	191.02	4,080.7	-1,489.9	-253.3	1,511.2	0.00	0.00	0.00
4,438.0	25.40	191.02	4,115.0	-1,505.9	-256.5	1,527.5	0.00	0.00	0.00
SUSSEX									
4,440.0	25.40	191.02	4,116.8	-1,506.7	-256.6	1,528.4	0.00	0.00	0.00
4,480.0	25.40	191.02	4,152.9	-1,523.6	-259.9	1,545.5	0.00	0.00	0.00
4,520.0	25.40	191.02	4,189.1	-1,540.4	-263.2	1,562.7	0.00	0.00	0.00
4,560.0	25.40	191.02	4,225.2	-1,557.3	-266.5	1,579.9	0.00	0.00	0.00
4,600.0	25.40	191.02	4,261.3	-1,574.1	-269.7	1,597.0	0.00	0.00	0.00
4,640.0	25.40	191.02	4,297.5	-1,590.9	-273.0	1,614.2	0.00	0.00	0.00
4,680.0	25.40	191.02	4,333.6	-1,607.8	-276.3	1,631.3	0.00	0.00	0.00
4,720.0	25.40	191.02	4,369.7	-1,624.6	-279.6	1,648.5	0.00	0.00	0.00
4,760.0	25.40	191.02	4,405.9	-1,641.5	-282.9	1,665.6	0.00	0.00	0.00
4,800.0	25.40	191.02	4,442.0	-1,658.3	-286.1	1,682.8	0.00	0.00	0.00
4,840.0	25.40	191.02	4,478.1	-1,675.1	-289.4	1,699.9	0.00	0.00	0.00
4,880.0	25.40	191.02	4,514.3	-1,692.0	-292.7	1,717.1	0.00	0.00	0.00
4,920.0	25.40	191.02	4,550.4	-1,708.8	-296.0	1,734.2	0.00	0.00	0.00
4,960.0	25.40	191.02	4,586.5	-1,725.6	-299.3	1,751.4	0.00	0.00	0.00
5,000.0	25.40	191.02	4,622.7	-1,742.5	-302.5	1,768.5	0.00	0.00	0.00
5,011.4	25.40	191.02	4,633.0	-1,747.3	-303.5	1,773.4	0.00	0.00	0.00
SHANNON									
5,040.0	25.40	191.02	4,658.8	-1,759.3	-305.8	1,785.7	0.00	0.00	0.00
5,080.0	25.40	191.02	4,694.9	-1,776.2	-309.1	1,802.8	0.00	0.00	0.00
5,120.0	25.40	191.02	4,731.1	-1,793.0	-312.4	1,820.0	0.00	0.00	0.00
5,160.0	25.40	191.02	4,767.2	-1,809.8	-315.7	1,837.2	0.00	0.00	0.00
5,200.0	25.40	191.02	4,803.3	-1,826.7	-318.9	1,854.3	0.00	0.00	0.00
5,240.0	25.40	191.02	4,839.5	-1,843.5	-322.2	1,871.5	0.00	0.00	0.00
5,280.0	25.40	191.02	4,875.6	-1,860.4	-325.5	1,888.6	0.00	0.00	0.00
5,320.0	25.40	191.02	4,911.7	-1,877.2	-328.8	1,905.8	0.00	0.00	0.00
5,360.0	25.40	191.02	4,947.9	-1,894.0	-332.1	1,922.9	0.00	0.00	0.00
5,400.0	25.40	191.02	4,984.0	-1,910.9	-335.3	1,940.1	0.00	0.00	0.00
5,440.0	25.40	191.02	5,020.2	-1,927.7	-338.6	1,957.2	0.00	0.00	0.00
5,480.0	25.40	191.02	5,056.3	-1,944.6	-341.9	1,974.4	0.00	0.00	0.00
5,496.6	25.40	191.02	5,071.3	-1,951.6	-343.3	1,981.5	0.00	0.00	0.00
Start Drop -2.00									
5,520.0	24.93	191.02	5,092.5	-1,961.3	-345.2	1,991.4	2.00	-2.00	0.00
5,560.0	24.13	191.02	5,128.9	-1,977.6	-348.3	2,008.1	2.00	-2.00	0.00
5,600.0	23.33	191.02	5,165.5	-1,993.4	-351.4	2,024.1	2.00	-2.00	0.00
5,640.0	22.53	191.02	5,202.3	-2,008.7	-354.4	2,039.7	2.00	-2.00	0.00
5,680.0	21.73	191.02	5,239.4	-2,023.5	-357.3	2,054.8	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Postle IC 11-22D
Company:	Great Western	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Project:	SEC.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,720.0	20.93	191.02	5,276.6	-2,037.8	-360.0	2,069.3	2.00	-2.00	0.00
5,760.0	20.13	191.02	5,314.1	-2,051.5	-362.7	2,083.4	2.00	-2.00	0.00
5,800.0	19.33	191.02	5,351.7	-2,064.8	-365.3	2,096.9	2.00	-2.00	0.00
5,840.0	18.53	191.02	5,389.6	-2,077.5	-367.8	2,109.8	2.00	-2.00	0.00
5,880.0	17.73	191.02	5,427.6	-2,089.8	-370.2	2,122.3	2.00	-2.00	0.00
5,920.0	16.93	191.02	5,465.8	-2,101.5	-372.4	2,134.2	2.00	-2.00	0.00
5,960.0	16.13	191.02	5,504.1	-2,112.6	-374.6	2,145.6	2.00	-2.00	0.00
6,000.0	15.33	191.02	5,542.6	-2,123.3	-376.7	2,156.4	2.00	-2.00	0.00
6,040.0	14.53	191.02	5,581.3	-2,133.4	-378.7	2,166.7	2.00	-2.00	0.00
6,080.0	13.73	191.02	5,620.1	-2,143.0	-380.5	2,176.5	2.00	-2.00	0.00
6,120.0	12.93	191.02	5,659.0	-2,152.0	-382.3	2,185.7	2.00	-2.00	0.00
6,160.0	12.13	191.02	5,698.0	-2,160.5	-384.0	2,194.4	2.00	-2.00	0.00
6,200.0	11.33	191.02	5,737.2	-2,168.5	-385.5	2,202.5	2.00	-2.00	0.00
6,240.0	10.53	191.02	5,776.5	-2,176.0	-387.0	2,210.1	2.00	-2.00	0.00
6,280.0	9.73	191.02	5,815.8	-2,182.9	-388.3	2,217.1	2.00	-2.00	0.00
6,320.0	8.93	191.02	5,855.3	-2,189.2	-389.5	2,223.6	2.00	-2.00	0.00
6,360.0	8.13	191.02	5,894.9	-2,195.1	-390.7	2,229.6	2.00	-2.00	0.00
6,400.0	7.33	191.02	5,934.5	-2,200.3	-391.7	2,234.9	2.00	-2.00	0.00
6,440.0	6.53	191.02	5,974.2	-2,205.1	-392.6	2,239.8	2.00	-2.00	0.00
6,480.0	5.73	191.02	6,014.0	-2,209.3	-393.4	2,244.0	2.00	-2.00	0.00
6,520.0	4.93	191.02	6,053.8	-2,212.9	-394.2	2,247.7	2.00	-2.00	0.00
6,560.0	4.13	191.02	6,093.7	-2,216.0	-394.8	2,250.9	2.00	-2.00	0.00
6,600.0	3.33	191.02	6,133.6	-2,218.6	-395.3	2,253.5	2.00	-2.00	0.00
6,640.0	2.53	191.02	6,173.5	-2,220.6	-395.7	2,255.5	2.00	-2.00	0.00
6,680.0	1.73	191.02	6,213.5	-2,222.0	-395.9	2,257.0	2.00	-2.00	0.00
6,720.0	0.93	191.02	6,253.5	-2,222.9	-396.1	2,258.0	2.00	-2.00	0.00
6,760.0	0.13	191.02	6,293.5	-2,223.3	-396.2	2,258.3	2.00	-2.00	0.00
6,766.5	0.00	0.00	6,300.0	-2,223.3	-396.2	2,258.3	2.00	-2.00	0.00
Back to Vertical - TARGET BHL 679'FSL & 660'FEL									
6,800.0	0.00	0.00	6,333.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
6,840.0	0.00	0.00	6,373.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
6,880.0	0.00	0.00	6,413.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
6,920.0	0.00	0.00	6,453.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
6,960.0	0.00	0.00	6,493.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,533.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,040.0	0.00	0.00	6,573.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,080.0	0.00	0.00	6,613.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,120.0	0.00	0.00	6,653.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,160.0	0.00	0.00	6,693.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,733.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,240.0	0.00	0.00	6,773.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,280.0	0.00	0.00	6,813.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,320.0	0.00	0.00	6,853.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,360.0	0.00	0.00	6,893.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,400.0	0.00	0.00	6,933.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,440.0	0.00	0.00	6,973.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,473.5	0.00	0.00	7,007.0	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
NIOBRARA - LEGAL BOX 400' X 400', 662'FSL & 657'FEL - TARGET CIRCLE 679'FSL & 660'FEL									
7,480.0	0.00	0.00	7,013.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,520.0	0.00	0.00	7,053.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,560.0	0.00	0.00	7,093.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,133.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,640.0	0.00	0.00	7,173.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,680.0	0.00	0.00	7,213.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Postle IC 11-22D
Company:	Great Western	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Project:	SEC.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,720.0	0.00	0.00	7,253.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,745.5	0.00	0.00	7,279.0	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
FORT HAYS									
7,760.0	0.00	0.00	7,293.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,767.5	0.00	0.00	7,301.0	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
CODELL									
7,800.0	0.00	0.00	7,333.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,840.0	0.00	0.00	7,373.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,880.0	0.00	0.00	7,413.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,920.0	0.00	0.00	7,453.5	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
7,927.5	0.00	0.00	7,461.0	-2,223.3	-396.2	2,258.3	0.00	0.00	0.00
TD at 7927.5									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
LEGAL BOX 400' X 400'	0.00	0.00	7,007.0	-2,240.3	-398.2	1,329,016.46	3,149,851.51	40.235303	-104.963254
- plan misses target center by 17.1ft at 7473.5ft MD (7007.0 TVD, -2223.3 N, -396.2 E)									
- Rectangle (sides W400.0 H400.0 D454.0)									
TARGET BHL 679'FS	0.00	0.00	6,300.0	-2,223.3	-396.2	1,329,033.44	3,149,853.42	40.235350	-104.963247
- plan hits target center									
- Point									
TARGET CIRCLE 675'	0.00	0.00	7,007.0	-2,223.3	-396.2	1,329,033.44	3,149,853.42	40.235350	-104.963247
- plan hits target center									
- Circle (radius 75.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
601.2	600.0	8 5/8"	8-5/8	12-1/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,880.5	2,708.0	GREELEY SAND		0.00	
3,947.6	3,672.0	PARKMAN		0.00	
4,438.0	4,115.0	SUSSEX		0.00	
5,011.4	4,633.0	SHANNON		0.00	
7,473.5	7,007.0	NIOBRARA		0.00	
7,745.5	7,279.0	FORT HAYS		0.00	
7,767.5	7,301.0	CODELL		0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Postle IC 11-22D
Company:	Great Western	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Project:	SEC.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	North Reference:	True
Well:	Postle IC 11-22D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-18-12)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP - Start Build 2.00
450.0	449.7	-9.7	4.9	Start DLS 2.00 TFO 45.69
1,533.2	1,490.9	-283.0	-18.3	Start 3963.5 hold at 1533.2 MD
5,496.6	5,071.3	-1,951.6	-343.3	Start Drop -2.00
6,766.5	6,300.0	-2,223.3	-396.2	Back to Vertical
7,927.5	7,461.0	-2,223.3	-396.2	TD at 7927.5



Great Western

SEC.11-T3N-R68W

Postle IC 11-16D Pad Sec.11-T3N-R68W

Postle IC 11-22D

Wellbore #1

Plan #1 (9-18-12)

Anticollision Report

20 September, 2012

Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Offset Design Postle IC 11-16D Pad Sec.11-T3N-R68W - Postle IC 11-15D - Wellbore #1 - Plan #1 (9-18-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,800.0	1,731.9	1,795.1	1,780.9	8.5	4.6	160.65	-147.6	-75.8	255.0	246.2	8.82	28.926		
1,900.0	1,822.3	1,892.5	1,875.9	9.3	5.1	161.31	-167.6	-84.1	277.4	267.9	9.48	29.254		
2,000.0	1,912.6	1,989.9	1,970.9	10.1	5.5	161.86	-187.6	-92.4	299.9	289.7	10.16	29.527		
2,100.0	2,002.9	2,087.3	2,065.8	10.9	5.9	162.34	-207.5	-100.7	322.3	311.5	10.83	29.758		
2,200.0	2,093.3	2,184.7	2,160.8	11.8	6.4	162.76	-227.5	-108.9	344.8	333.3	11.51	29.955		
2,300.0	2,183.6	2,282.1	2,255.8	12.6	6.8	163.13	-247.5	-117.2	367.3	355.1	12.19	30.125		
2,400.0	2,273.9	2,379.5	2,350.8	13.4	7.3	163.45	-267.4	-125.5	389.9	377.0	12.88	30.273		
2,500.0	2,364.3	2,476.9	2,445.8	14.3	7.7	163.74	-287.4	-133.8	412.4	398.8	13.56	30.402		
2,600.0	2,454.6	2,574.3	2,540.7	15.1	8.2	164.00	-307.4	-142.0	434.9	420.7	14.25	30.516		
2,700.0	2,545.0	2,671.7	2,635.7	15.9	8.6	164.23	-327.3	-150.3	457.5	442.5	14.94	30.617		
2,800.0	2,635.3	2,769.1	2,730.7	16.8	9.1	164.45	-347.3	-158.6	480.0	464.4	15.63	30.708		
2,900.0	2,725.6	2,866.6	2,825.7	17.6	9.5	164.64	-367.3	-166.8	502.6	486.3	16.32	30.789		
3,000.0	2,816.0	2,964.0	2,920.7	18.5	10.0	164.82	-387.2	-175.1	525.1	508.1	17.02	30.862		
3,100.0	2,906.3	3,061.4	3,015.7	19.3	10.4	164.98	-407.2	-183.4	547.7	530.0	17.71	30.928		
3,200.0	2,996.6	3,158.8	3,110.6	20.1	10.9	165.13	-427.2	-191.7	570.3	551.9	18.40	30.988		
3,300.0	3,087.0	3,256.2	3,205.6	21.0	11.4	165.26	-447.1	-199.9	592.9	573.8	19.10	31.043		
3,400.0	3,177.3	3,353.6	3,300.6	21.8	11.8	165.39	-467.1	-208.2	615.4	595.6	19.79	31.094		
3,500.0	3,267.6	3,451.0	3,395.6	22.7	12.3	165.51	-487.1	-216.5	638.0	617.5	20.49	31.140		
3,600.0	3,358.0	3,548.4	3,490.6	23.5	12.7	165.62	-507.0	-224.8	660.6	639.4	21.18	31.183		
3,700.0	3,448.3	3,645.8	3,585.5	24.3	13.2	165.72	-527.0	-233.0	683.2	661.3	21.88	31.222		
3,800.0	3,538.6	3,743.2	3,680.5	25.2	13.7	165.82	-547.0	-241.3	705.8	683.2	22.58	31.259		
3,900.0	3,629.0	3,840.6	3,775.5	26.0	14.1	165.91	-566.9	-249.6	728.3	705.1	23.28	31.292		
4,000.0	3,719.3	3,938.1	3,870.5	26.9	14.6	165.99	-586.9	-257.9	750.9	727.0	23.97	31.324		
4,100.0	3,809.7	4,035.5	3,965.5	27.7	15.1	166.07	-606.9	-266.1	773.5	748.9	24.67	31.354		
4,200.0	3,900.0	4,132.9	4,060.5	28.5	15.5	166.15	-626.8	-274.4	796.1	770.8	25.37	31.381		
4,300.0	3,990.3	4,230.3	4,155.4	29.4	16.0	166.22	-646.8	-282.7	818.7	792.6	26.07	31.407		
4,400.0	4,080.7	4,327.7	4,250.4	30.2	16.5	166.29	-666.8	-290.9	841.3	814.5	26.77	31.431		
4,500.0	4,171.0	4,425.1	4,345.4	31.1	16.9	166.35	-686.7	-299.2	863.9	836.4	27.47	31.454		
4,600.0	4,261.3	4,522.5	4,440.4	31.9	17.4	166.41	-706.7	-307.5	886.5	858.3	28.17	31.475		
4,700.0	4,351.7	4,619.9	4,535.4	32.8	17.9	166.47	-726.7	-315.8	909.1	880.2	28.86	31.495		
4,800.0	4,442.0	4,717.3	4,630.3	33.6	18.3	166.53	-746.6	-324.0	931.7	902.1	29.56	31.514		
4,900.0	4,532.3	4,814.7	4,725.3	34.4	18.8	166.58	-766.6	-332.3	954.3	924.0	30.26	31.532		
5,000.0	4,622.7	4,912.2	4,820.3	35.3	19.3	166.63	-786.5	-340.6	976.9	945.9	30.96	31.549		
5,100.0	4,713.0	5,009.6	4,915.3	36.1	19.7	166.68	-806.5	-348.9	999.5	967.8	31.66	31.565		
5,200.0	4,803.3	5,107.0	5,010.3	37.0	20.2	166.72	-826.5	-357.1	1,022.1	989.7	32.36	31.580		
5,300.0	4,893.7	5,193.9	5,095.1	37.8	20.6	166.76	-844.1	-364.5	1,044.9	1,011.9	33.02	31.641		
5,400.0	4,984.0	5,266.4	5,166.1	38.7	20.8	166.83	-857.5	-370.0	1,069.6	1,036.0	33.59	31.843		
5,496.6	5,071.3	5,335.6	5,234.2	39.5	21.0	166.94	-868.6	-374.6	1,095.6	1,061.5	34.11	32.115		
5,500.0	5,074.4	5,337.9	5,236.6	39.5	21.0	166.94	-869.0	-374.7	1,096.5	1,062.4	34.13	32.124		
5,600.0	5,165.5	5,400.0	5,297.9	40.1	21.2	167.18	-877.6	-378.3	1,123.9	1,089.3	34.65	32.433		
5,700.0	5,258.0	5,479.6	5,376.9	40.6	21.4	167.44	-886.9	-382.2	1,150.2	1,115.0	35.14	32.728		
5,800.0	5,351.7	5,550.1	5,447.0	41.1	21.5	167.68	-893.5	-384.9	1,175.4	1,139.8	35.56	33.049		
5,900.0	5,446.7	5,620.3	5,517.0	41.6	21.6	167.91	-898.4	-386.9	1,199.4	1,163.5	35.93	33.385		
6,000.0	5,542.6	5,700.0	5,596.6	42.0	21.8	168.15	-902.1	-388.5	1,222.4	1,186.2	36.24	33.730		
6,100.0	5,639.5	5,760.2	5,656.8	42.4	21.9	168.36	-903.5	-389.1	1,244.2	1,207.7	36.48	34.107		
6,200.0	5,737.2	5,840.6	5,737.2	42.7	22.0	168.60	-903.8	-389.2	1,264.7	1,228.0	36.68	34.475		
6,300.0	5,835.6	5,939.0	5,835.6	43.0	22.1	168.82	-903.8	-389.2	1,282.3	1,245.4	36.86	34.788		
6,400.0	5,934.5	6,037.9	5,934.5	43.2	22.2	169.00	-903.8	-389.2	1,296.5	1,259.5	36.99	35.047		
6,500.0	6,033.9	6,137.3	6,033.9	43.4	22.3	169.14	-903.8	-389.2	1,307.4	1,270.3	37.09	35.247		
6,600.0	6,133.6	6,237.0	6,133.6	43.6	22.4	169.23	-903.8	-389.2	1,314.8	1,277.6	37.15	35.390		
6,700.0	6,233.5	6,336.9	6,233.5	43.7	22.5	169.27	-903.8	-389.2	1,318.8	1,281.6	37.17	35.477		
6,766.5	6,300.0	6,403.4	6,300.0	43.8	22.6	0.30	-903.8	-389.2	1,319.5	1,282.3	37.17	35.498		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Offset Design Postle IC 11-16D Pad Sec.11-T3N-R68W - Postle IC 11-15D - Wellbore #1 - Plan #1 (9-18-12)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,800.0	6,333.5	6,436.9	6,333.5	43.8	22.6	0.30	-903.8	-389.2	1,319.5	1,282.3	37.27	35.408	
6,900.0	6,433.5	6,536.9	6,433.5	43.8	22.7	0.30	-903.8	-389.2	1,319.5	1,282.0	37.54	35.149	
7,000.0	6,533.5	6,636.9	6,533.5	43.9	22.8	0.30	-903.8	-389.2	1,319.5	1,281.7	37.82	34.891	
7,100.0	6,633.5	6,736.9	6,633.5	43.9	22.9	0.30	-903.8	-389.2	1,319.5	1,281.4	38.10	34.633	
7,200.0	6,733.5	6,836.9	6,733.5	44.0	23.1	0.30	-903.8	-389.2	1,319.5	1,281.1	38.38	34.377	
7,300.0	6,833.5	6,936.9	6,833.5	44.1	23.2	0.30	-903.8	-389.2	1,319.5	1,280.8	38.67	34.121	
7,400.0	6,933.5	7,036.9	6,933.5	44.1	23.3	0.30	-903.8	-389.2	1,319.5	1,280.6	38.96	33.867	
7,500.0	7,033.5	7,136.9	7,033.5	44.2	23.4	0.30	-903.8	-389.2	1,319.5	1,280.3	39.25	33.614	
7,600.0	7,133.5	7,236.9	7,133.5	44.2	23.5	0.30	-903.8	-389.2	1,319.5	1,280.0	39.55	33.363	
7,700.0	7,233.5	7,336.9	7,233.5	44.3	23.7	0.30	-903.8	-389.2	1,319.5	1,279.7	39.85	33.113	
7,800.0	7,333.5	7,436.9	7,333.5	44.4	23.8	0.30	-903.8	-389.2	1,319.5	1,279.4	40.15	32.864	
7,900.0	7,433.5	7,536.9	7,433.5	44.4	23.9	0.30	-903.8	-389.2	1,319.5	1,279.1	40.46	32.617	
7,917.2	7,450.7	7,554.1	7,450.7	44.4	23.9	0.30	-903.8	-389.2	1,319.5	1,279.0	40.51	32.574	
7,927.5	7,461.0	7,561.4	7,458.0	44.4	23.9	0.30	-903.8	-389.2	1,319.5	1,279.0	40.53	32.553	

Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	65.83	8.0	17.9	19.6	19.6	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	65.83	8.0	17.9	19.6	19.4	0.22	87.131	
200.0	200.0	200.0	200.0	0.3	0.3	65.83	8.0	17.9	19.6	18.9	0.67	29.044	
274.4	274.4	274.4	274.4	0.5	0.5	-90.00	8.0	17.9	19.6	18.6	0.99	19.709 CC	
300.0	300.0	300.0	300.0	0.5	0.6	-92.28	8.0	17.9	19.6	18.5	1.10	17.769 ES	
400.0	399.8	399.8	399.8	0.8	0.8	-107.05	8.0	17.9	20.5	18.9	1.54	13.317	
450.0	449.7	449.7	449.7	0.9	0.9	-116.84	8.0	17.9	21.9	20.2	1.77	12.420	
500.0	499.5	499.5	499.5	1.0	1.0	-133.32	8.0	17.9	24.7	22.7	2.00	12.333 SF	
600.0	598.8	598.8	598.8	1.3	1.2	-155.70	8.0	17.9	34.1	31.6	2.46	13.868	
700.0	697.8	697.8	697.8	1.6	1.5	-167.91	8.0	17.9	47.9	45.0	2.91	16.434	
800.0	796.2	796.2	796.2	1.9	1.7	-174.63	8.0	17.9	65.3	61.9	3.37	19.394	
900.0	894.0	894.0	894.0	2.4	1.9	-178.48	8.0	17.9	86.1	82.3	3.82	22.526	
1,000.0	991.0	991.0	991.0	2.8	2.1	179.23	8.0	17.9	110.2	105.9	4.28	25.744	
1,100.0	1,087.2	1,085.2	1,085.2	3.3	2.3	178.29	8.5	19.0	138.2	133.5	4.74	29.169	
1,200.0	1,182.4	1,177.0	1,176.9	3.9	2.5	178.59	10.3	22.8	171.1	165.9	5.20	32.868	
1,300.0	1,276.5	1,266.2	1,265.8	4.6	2.7	179.48	13.1	29.1	208.8	203.1	5.68	36.754	
1,400.0	1,369.3	1,352.4	1,351.5	5.3	2.9	-179.41	17.0	37.6	251.5	245.3	6.17	40.758	
1,500.0	1,460.8	1,435.2	1,433.5	6.0	3.1	-178.24	21.7	47.9	299.0	292.3	6.67	44.829	
1,533.2	1,490.9	1,461.9	1,459.9	6.3	3.2	-177.86	23.4	51.7	315.8	309.0	6.84	46.185	
1,600.0	1,551.3	1,514.8	1,512.0	6.8	3.4	-176.65	27.1	59.9	350.7	343.4	7.21	48.604	
1,700.0	1,641.6	1,592.1	1,587.9	7.6	3.6	-175.01	33.3	73.4	404.2	396.4	7.80	51.852	
1,800.0	1,731.9	1,667.4	1,661.4	8.5	3.9	-173.53	40.1	88.3	459.4	451.0	8.40	54.704	
1,900.0	1,822.3	1,744.3	1,736.0	9.3	4.2	-172.13	47.7	105.2	516.2	507.2	9.03	57.169	
2,000.0	1,912.6	1,825.7	1,814.9	10.1	4.5	-170.90	56.0	123.4	573.4	563.7	9.68	59.243	
2,100.0	2,002.9	1,907.2	1,893.9	10.9	4.8	-169.90	64.3	141.6	630.7	620.4	10.34	61.007	
2,200.0	2,093.3	1,988.7	1,972.9	11.8	5.2	-169.06	72.6	159.8	688.2	677.2	11.01	62.519	
2,300.0	2,183.6	2,070.1	2,051.8	12.6	5.6	-168.35	80.9	178.0	745.7	734.0	11.68	63.841	
2,400.0	2,273.9	2,151.6	2,130.8	13.4	6.0	-167.74	89.1	196.3	803.3	791.0	12.36	64.993	
2,500.0	2,364.3	2,233.0	2,209.8	14.3	6.3	-167.21	97.4	214.5	861.0	848.0	13.04	66.007	
2,600.0	2,454.6	2,314.5	2,288.7	15.1	6.7	-166.74	105.7	232.7	918.7	905.0	13.73	66.904	
2,700.0	2,545.0	2,395.9	2,367.7	15.9	7.1	-166.33	114.0	250.9	976.4	962.0	14.42	67.701	
2,800.0	2,635.3	2,477.4	2,446.7	16.8	7.5	-165.97	122.2	269.1	1,034.2	1,019.1	15.12	68.411	
2,900.0	2,725.6	2,558.9	2,525.6	17.6	7.9	-165.65	130.5	287.3	1,092.0	1,076.2	15.81	69.050	
3,000.0	2,816.0	2,640.3	2,604.6	18.5	8.3	-165.35	138.8	305.5	1,149.8	1,133.3	16.51	69.628	
3,100.0	2,906.3	2,721.8	2,683.6	19.3	8.7	-165.09	147.1	323.7	1,207.7	1,190.4	17.21	70.152	
3,200.0	2,996.6	2,803.2	2,762.5	20.1	9.1	-164.85	155.4	341.9	1,265.5	1,247.6	17.92	70.629	
3,300.0	3,087.0	2,884.7	2,841.5	21.0	9.5	-164.63	163.6	360.1	1,323.4	1,304.7	18.62	71.063	
3,400.0	3,177.3	2,966.2	2,920.5	21.8	9.9	-164.43	171.9	378.3	1,381.2	1,361.9	19.33	71.461	
3,500.0	3,267.6	3,047.6	2,999.4	22.7	10.4	-164.24	180.2	396.5	1,439.1	1,419.1	20.04	71.827	
3,600.0	3,358.0	3,129.1	3,078.4	23.5	10.8	-164.07	188.5	414.7	1,497.0	1,476.3	20.74	72.164	
3,700.0	3,448.3	3,210.5	3,157.3	24.3	11.2	-163.92	196.8	433.0	1,554.9	1,533.5	21.45	72.476	
3,800.0	3,538.6	3,292.0	3,236.3	25.2	11.6	-163.77	205.0	451.2	1,612.8	1,590.7	22.16	72.765	
3,900.0	3,629.0	3,373.5	3,315.3	26.0	12.0	-163.63	213.3	469.4	1,670.7	1,647.9	22.88	73.033	
4,000.0	3,719.3	3,454.9	3,394.2	26.9	12.4	-163.51	221.6	487.6	1,728.7	1,705.1	23.59	73.283	
4,100.0	3,809.7	3,536.4	3,473.2	27.7	12.8	-163.39	229.9	505.8	1,786.6	1,762.3	24.30	73.515	
4,200.0	3,900.0	3,617.8	3,552.2	28.5	13.3	-163.27	238.2	524.0	1,844.5	1,819.5	25.02	73.733	
4,300.0	3,990.3	3,699.3	3,631.1	29.4	13.7	-163.17	246.4	542.2	1,902.5	1,876.7	25.73	73.937	
4,400.0	4,080.7	3,780.7	3,710.1	30.2	14.1	-163.07	254.7	560.4	1,960.4	1,934.0	26.45	74.128	
4,500.0	4,171.0	3,862.2	3,789.1	31.1	14.5	-162.98	263.0	578.6	2,018.4	1,991.2	27.16	74.307	
4,600.0	4,261.3	3,943.7	3,868.0	31.9	14.9	-162.89	271.3	596.8	2,076.3	2,048.4	27.88	74.475	
4,700.0	4,351.7	4,025.1	3,947.0	32.8	15.4	-162.81	279.6	615.0	2,134.3	2,105.7	28.60	74.634	
4,800.0	4,442.0	4,106.6	4,026.0	33.6	15.8	-162.73	287.8	633.2	2,192.2	2,162.9	29.31	74.784	

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

Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.0	4,532.3	4,188.0	4,104.9	34.4	16.2	-162.65	296.1	651.5	2,250.2	2,220.1	30.03	74.926	
5,000.0	4,622.7	4,269.5	4,183.9	35.3	16.6	-162.58	304.4	669.7	2,308.1	2,277.4	30.75	75.059	
5,100.0	4,713.0	4,351.0	4,262.9	36.1	17.0	-162.52	312.7	687.9	2,366.1	2,334.6	31.47	75.186	
5,200.0	4,803.3	4,432.4	4,341.8	37.0	17.5	-162.45	320.9	706.1	2,424.0	2,391.9	32.19	75.306	
5,300.0	4,893.7	4,513.9	4,420.8	37.8	17.9	-162.39	329.2	724.3	2,482.0	2,449.1	32.91	75.420	
5,400.0	4,984.0	4,595.3	4,499.7	38.7	18.3	-162.33	337.5	742.5	2,540.0	2,506.3	33.63	75.528	
5,496.6	5,071.3	4,674.1	4,576.1	39.5	18.7	-162.28	345.5	760.1	2,596.0	2,561.7	34.33	75.627	
5,500.0	5,074.4	4,676.8	4,578.7	39.5	18.7	-162.29	345.8	760.7	2,597.9	2,563.6	34.36	75.619	
5,600.0	5,165.5	4,759.2	4,658.6	40.1	19.1	-162.64	354.2	779.1	2,654.5	2,619.3	35.19	75.428	
5,700.0	5,258.0	4,843.5	4,740.3	40.6	19.6	-162.92	362.7	798.0	2,708.2	2,672.2	36.01	75.213	
5,800.0	5,351.7	4,929.4	4,823.6	41.1	20.0	-163.15	371.5	817.2	2,759.1	2,722.3	36.80	74.982	
5,900.0	5,446.7	5,017.0	4,908.5	41.6	20.5	-163.34	380.4	836.7	2,807.1	2,769.5	37.56	74.743	
6,000.0	5,542.6	5,106.0	4,994.8	42.0	20.9	-163.47	389.4	856.6	2,852.2	2,813.9	38.28	74.502	
6,100.0	5,639.5	5,530.4	5,412.3	42.4	22.3	-163.35	419.9	923.7	2,889.1	2,849.4	39.71	72.759	
6,200.0	5,737.2	5,855.7	5,737.2	42.7	22.8	-163.71	425.9	936.9	2,912.0	2,871.5	40.47	71.962	
6,300.0	5,835.6	5,954.1	5,835.6	43.0	22.9	-163.91	425.9	936.9	2,929.2	2,888.4	40.84	71.728	
6,400.0	5,934.5	6,053.0	5,934.5	43.2	23.1	-164.06	425.9	936.9	2,943.2	2,902.0	41.16	71.499	
6,500.0	6,033.9	6,152.4	6,033.9	43.4	23.2	-164.18	425.9	936.9	2,953.8	2,912.4	41.44	71.284	
6,600.0	6,133.6	6,252.1	6,133.6	43.6	23.3	-164.26	425.9	936.9	2,961.1	2,919.4	41.66	71.083	
6,700.0	6,233.5	6,352.0	6,233.5	43.7	23.4	-164.30	425.9	936.9	2,965.0	2,923.1	41.82	70.893	
6,766.5	6,300.0	6,418.5	6,300.0	43.8	23.5	26.71	425.9	936.9	2,965.7	2,923.8	41.91	70.761	
6,800.0	6,333.5	6,452.0	6,333.5	43.8	23.6	26.71	425.9	936.9	2,965.7	2,923.7	42.00	70.609	
6,900.0	6,433.5	6,552.0	6,433.5	43.8	23.7	26.71	425.9	936.9	2,965.7	2,923.4	42.26	70.174	
7,000.0	6,533.5	6,652.0	6,533.5	43.9	23.8	26.71	425.9	936.9	2,965.7	2,923.2	42.53	69.738	
7,100.0	6,633.5	6,752.0	6,633.5	43.9	24.0	26.71	425.9	936.9	2,965.7	2,922.9	42.79	69.304	
7,200.0	6,733.5	6,852.0	6,733.5	44.0	24.1	26.71	425.9	936.9	2,965.7	2,922.6	43.06	68.870	
7,300.0	6,833.5	6,952.0	6,833.5	44.1	24.2	26.71	425.9	936.9	2,965.7	2,922.4	43.34	68.437	
7,400.0	6,933.5	7,052.0	6,933.5	44.1	24.4	26.71	425.9	936.9	2,965.7	2,922.1	43.61	68.004	
7,500.0	7,033.5	7,152.0	7,033.5	44.2	24.5	26.71	425.9	936.9	2,965.7	2,921.8	43.89	67.573	
7,600.0	7,133.5	7,252.0	7,133.5	44.2	24.6	26.71	425.9	936.9	2,965.7	2,921.5	44.17	67.144	
7,700.0	7,233.5	7,352.0	7,233.5	44.3	24.8	26.71	425.9	936.9	2,965.7	2,921.3	44.45	66.715	
7,800.0	7,333.5	7,452.0	7,333.5	44.4	24.9	26.71	425.9	936.9	2,965.7	2,921.0	44.74	66.289	
7,900.0	7,433.5	7,552.0	7,433.5	44.4	25.1	26.71	425.9	936.9	2,965.7	2,920.7	45.03	65.864	
7,908.1	7,441.6	7,560.1	7,441.6	44.4	25.1	26.71	425.9	936.9	2,965.7	2,920.7	45.05	65.829	
7,927.5	7,461.0	7,569.5	7,451.0	44.4	25.1	26.71	425.9	936.9	2,965.7	2,920.6	45.09	65.772	

Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4964.0ft (Original Well Elev) Coordinates are relative to: Postle IC 11-22D
 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: 0.35°



Company:	Great Western	Local Co-ordinate Reference:	Well Postle IC 11-22D
Project:	SEC.11-T3N-R68W	TVD Reference:	WELL @ 4964.0ft (Original Well Elev)
Reference Site:	Postle IC 11-16D Pad Sec.11-T3N-R68W	MD Reference:	WELL @ 4964.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Postle IC 11-22D	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 (9-18-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4964.0ft (Original Well Elev) Coordinates are relative to: Postle IC 11-22D
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: 0.35°

