ENSIGN Directional

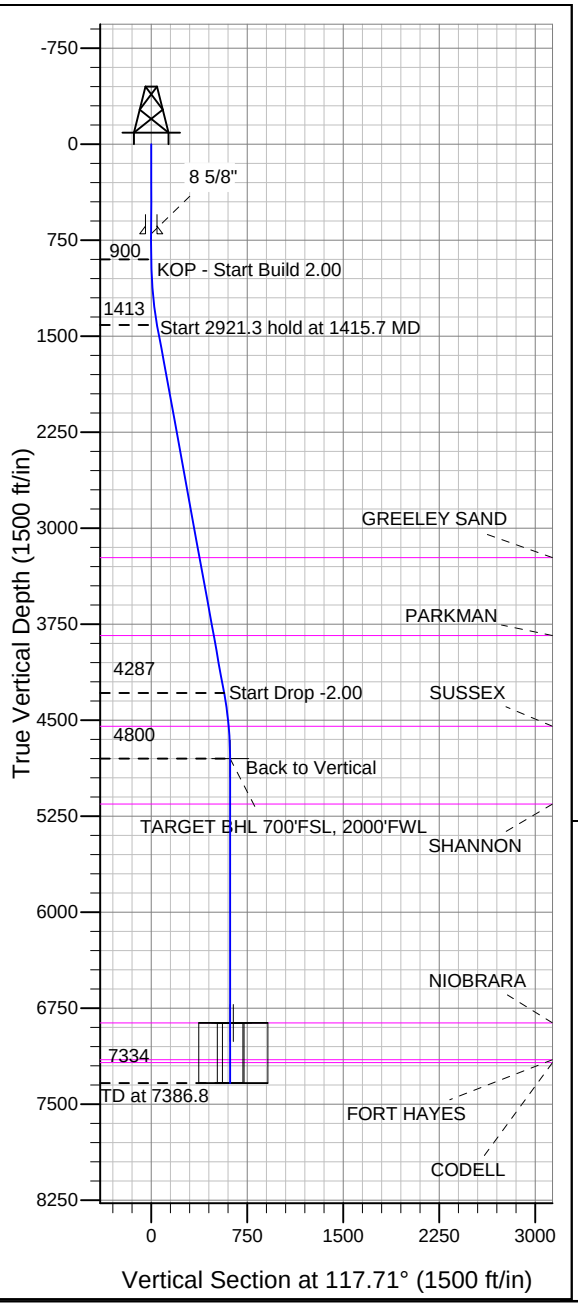
Well Name: Andrews 26-24

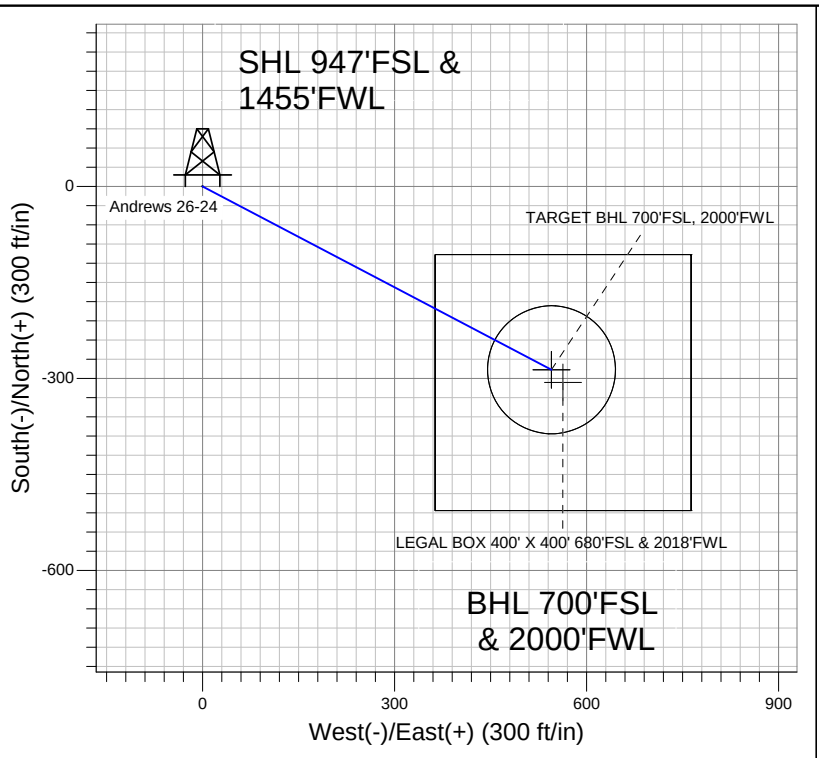
Surface Location: Andrews 26-23 Pad Sec.26-T7N-R65W
North American Datum 1983 , US State Plane 1983Colorado Northern Zone
Ground Elevation: 4871.0

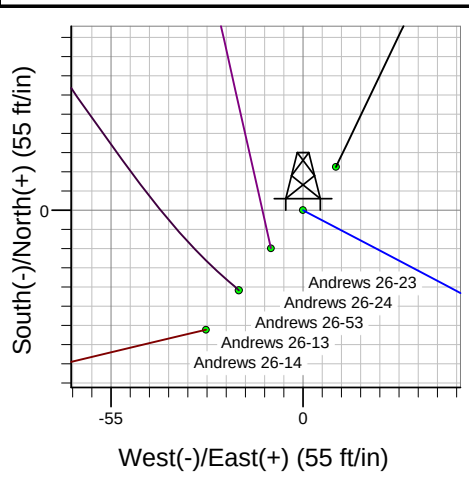
+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1441107.71	3240523.79	40.541019	-104.634578	

Original Well Elev — WELL @ 4885.0ft (Original Well Elev)

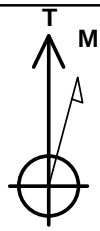
Great Western







Andrews 26-23 Pad Sec.26-T7N-R65W
Andrews 26-24
Plan #1 (5-11-12)
12:24, May 16 2012



Azimuths to True North
Magnetic North: 8.68°

Magnetic Field
Strength: 53122.3snT
Dip Angle: 67.15°
Date: 5/14/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 700'FSL, 2000'FWL	4800.0	-286.3	545.0	40.540233	-104.632617	Point
LEGAL BOX 400' X 400' 680'FSL & 2018'FWL	6865.0	-306.3	563.0	40.540178	-104.632552	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 700'FSL & 2000'FWL	6865.0	-286.3	545.0	40.540233	-104.632617	Circle (Radius: 100.0)

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	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1415.7	10.31	117.71	1413.0	-21.5	41.0	2.00	117.71	46.3	
4	4337.0	10.31	117.71	4287.0	-264.8	504.1	0.00	0.00	569.4	
5	4852.8	0.00	0.00	4800.0	-286.3	545.0	2.00	180.00	615.7	TARGET BHL 700'FSL, 2000'FWL
6	7386.8	0.00	0.00	7334.0	-286.3	545.0	0.00	0.00	615.7	

Great Western

SEC.26-T7N-R65W
Andrews 26-23 Pad Sec.26-T7N-R65W
Andrews 26-24

Wellbore #1

Plan: Plan #1 (5-11-12)

Standard Planning Report

16 May, 2012

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
Company:	Great Western	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Project:	SEC.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

Project SEC.26-T7N-R65W, 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 Andrews 26-23 Pad Sec.26-T7N-R65W

Site Position:		**Northing:**	1,441,120.20 ft	**Latitude:**	40.541053
From:	Lat/Long	**Easting:**	3,240,533.12 ft	**Longitude:**	-104.634544
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.56 °

Well Andrews 26-24

Well Position	**+N/-S**	-12.4 ft	**Northing:**	1,441,107.71 ft	**Latitude:**	40.541019
	+E/-W	-9.4 ft	**Easting:**	3,240,523.79 ft	**Longitude:**	-104.634578
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,871.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/14/2012	8.68	67.15	53,122

Design Plan #1 (5-11-12)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	117.71

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,415.7	10.31	117.71	1,413.0	-21.5	41.0	2.00	2.00	0.00	117.71	
4,337.0	10.31	117.71	4,287.0	-264.8	504.1	0.00	0.00	0.00	0.00	
4,852.8	0.00	0.00	4,800.0	-286.3	545.0	2.00	-2.00	0.00	180.00	TARGET BHL 700'I
7,386.8	0.00	0.00	7,334.0	-286.3	545.0	0.00	0.00	0.00	0.00	

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
Company:	Great Western	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Project:	SEC.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

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
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
920.0	0.40	117.71	920.0	0.0	0.1	0.1	2.00	2.00	0.00
960.0	1.20	117.71	960.0	-0.3	0.6	0.6	2.00	2.00	0.00
1,000.0	2.00	117.71	1,000.0	-0.8	1.5	1.7	2.00	2.00	0.00
1,040.0	2.80	117.71	1,039.9	-1.6	3.0	3.4	2.00	2.00	0.00
1,080.0	3.60	117.71	1,079.9	-2.6	5.0	5.7	2.00	2.00	0.00
1,120.0	4.40	117.71	1,119.8	-3.9	7.5	8.4	2.00	2.00	0.00
1,160.0	5.20	117.71	1,159.6	-5.5	10.4	11.8	2.00	2.00	0.00
1,200.0	6.00	117.71	1,199.5	-7.3	13.9	15.7	2.00	2.00	0.00
1,240.0	6.80	117.71	1,239.2	-9.4	17.8	20.2	2.00	2.00	0.00
1,280.0	7.60	117.71	1,278.9	-11.7	22.3	25.2	2.00	2.00	0.00
1,320.0	8.40	117.71	1,318.5	-14.3	27.2	30.7	2.00	2.00	0.00
1,360.0	9.20	117.71	1,358.0	-17.1	32.6	36.9	2.00	2.00	0.00
1,400.0	10.00	117.71	1,397.5	-20.2	38.5	43.5	2.00	2.00	0.00
1,415.7	10.31	117.71	1,413.0	-21.5	41.0	46.3	2.00	2.00	0.00
Start 2921.3 hold at 1415.7 MD									
1,440.0	10.31	117.71	1,436.8	-23.6	44.8	50.6	0.00	0.00	0.00
1,480.0	10.31	117.71	1,476.2	-26.9	51.2	57.8	0.00	0.00	0.00
1,520.0	10.31	117.71	1,515.5	-30.2	57.5	65.0	0.00	0.00	0.00
1,560.0	10.31	117.71	1,554.9	-33.5	63.9	72.1	0.00	0.00	0.00
1,600.0	10.31	117.71	1,594.2	-36.9	70.2	79.3	0.00	0.00	0.00
1,640.0	10.31	117.71	1,633.6	-40.2	76.5	86.5	0.00	0.00	0.00
1,680.0	10.31	117.71	1,672.9	-43.5	82.9	93.6	0.00	0.00	0.00
1,720.0	10.31	117.71	1,712.3	-46.9	89.2	100.8	0.00	0.00	0.00
1,760.0	10.31	117.71	1,751.7	-50.2	95.6	107.9	0.00	0.00	0.00
1,800.0	10.31	117.71	1,791.0	-53.5	101.9	115.1	0.00	0.00	0.00
1,840.0	10.31	117.71	1,830.4	-56.9	108.2	122.3	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
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Project:	SEC.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

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	10.31	117.71	1,869.7	-60.2	114.6	129.4	0.00	0.00	0.00
1,920.0	10.31	117.71	1,909.1	-63.5	120.9	136.6	0.00	0.00	0.00
1,960.0	10.31	117.71	1,948.4	-66.9	127.3	143.8	0.00	0.00	0.00
2,000.0	10.31	117.71	1,987.8	-70.2	133.6	150.9	0.00	0.00	0.00
2,040.0	10.31	117.71	2,027.1	-73.5	139.9	158.1	0.00	0.00	0.00
2,080.0	10.31	117.71	2,066.5	-76.8	146.3	165.2	0.00	0.00	0.00
2,120.0	10.31	117.71	2,105.8	-80.2	152.6	172.4	0.00	0.00	0.00
2,160.0	10.31	117.71	2,145.2	-83.5	159.0	179.6	0.00	0.00	0.00
2,200.0	10.31	117.71	2,184.5	-86.8	165.3	186.7	0.00	0.00	0.00
2,240.0	10.31	117.71	2,223.9	-90.2	171.6	193.9	0.00	0.00	0.00
2,280.0	10.31	117.71	2,263.3	-93.5	178.0	201.1	0.00	0.00	0.00
2,320.0	10.31	117.71	2,302.6	-96.8	184.3	208.2	0.00	0.00	0.00
2,360.0	10.31	117.71	2,342.0	-100.2	190.7	215.4	0.00	0.00	0.00
2,400.0	10.31	117.71	2,381.3	-103.5	197.0	222.5	0.00	0.00	0.00
2,440.0	10.31	117.71	2,420.7	-106.8	203.3	229.7	0.00	0.00	0.00
2,480.0	10.31	117.71	2,460.0	-110.2	209.7	236.9	0.00	0.00	0.00
2,520.0	10.31	117.71	2,499.4	-113.5	216.0	244.0	0.00	0.00	0.00
2,560.0	10.31	117.71	2,538.7	-116.8	222.4	251.2	0.00	0.00	0.00
2,600.0	10.31	117.71	2,578.1	-120.2	228.7	258.4	0.00	0.00	0.00
2,640.0	10.31	117.71	2,617.4	-123.5	235.1	265.5	0.00	0.00	0.00
2,680.0	10.31	117.71	2,656.8	-126.8	241.4	272.7	0.00	0.00	0.00
2,720.0	10.31	117.71	2,696.1	-130.1	247.7	279.8	0.00	0.00	0.00
2,760.0	10.31	117.71	2,735.5	-133.5	254.1	287.0	0.00	0.00	0.00
2,800.0	10.31	117.71	2,774.8	-136.8	260.4	294.2	0.00	0.00	0.00
2,840.0	10.31	117.71	2,814.2	-140.1	266.8	301.3	0.00	0.00	0.00
2,880.0	10.31	117.71	2,853.6	-143.5	273.1	308.5	0.00	0.00	0.00
2,920.0	10.31	117.71	2,892.9	-146.8	279.4	315.6	0.00	0.00	0.00
2,960.0	10.31	117.71	2,932.3	-150.1	285.8	322.8	0.00	0.00	0.00
3,000.0	10.31	117.71	2,971.6	-153.5	292.1	330.0	0.00	0.00	0.00
3,040.0	10.31	117.71	3,011.0	-156.8	298.5	337.1	0.00	0.00	0.00
3,080.0	10.31	117.71	3,050.3	-160.1	304.8	344.3	0.00	0.00	0.00
3,120.0	10.31	117.71	3,089.7	-163.5	311.1	351.5	0.00	0.00	0.00
3,160.0	10.31	117.71	3,129.0	-166.8	317.5	358.6	0.00	0.00	0.00
3,200.0	10.31	117.71	3,168.4	-170.1	323.8	365.8	0.00	0.00	0.00
3,240.0	10.31	117.71	3,207.7	-173.4	330.2	372.9	0.00	0.00	0.00
3,261.6	10.31	117.71	3,229.0	-175.2	333.6	376.8	0.00	0.00	0.00
GREELEY SAND									
3,280.0	10.31	117.71	3,247.1	-176.8	336.5	380.1	0.00	0.00	0.00
3,320.0	10.31	117.71	3,286.4	-180.1	342.8	387.3	0.00	0.00	0.00
3,360.0	10.31	117.71	3,325.8	-183.4	349.2	394.4	0.00	0.00	0.00
3,400.0	10.31	117.71	3,365.1	-186.8	355.5	401.6	0.00	0.00	0.00
3,440.0	10.31	117.71	3,404.5	-190.1	361.9	408.8	0.00	0.00	0.00
3,480.0	10.31	117.71	3,443.9	-193.4	368.2	415.9	0.00	0.00	0.00
3,520.0	10.31	117.71	3,483.2	-196.8	374.5	423.1	0.00	0.00	0.00
3,560.0	10.31	117.71	3,522.6	-200.1	380.9	430.2	0.00	0.00	0.00
3,600.0	10.31	117.71	3,561.9	-203.4	387.2	437.4	0.00	0.00	0.00
3,640.0	10.31	117.71	3,601.3	-206.8	393.6	444.6	0.00	0.00	0.00
3,680.0	10.31	117.71	3,640.6	-210.1	399.9	451.7	0.00	0.00	0.00
3,720.0	10.31	117.71	3,680.0	-213.4	406.2	458.9	0.00	0.00	0.00
3,760.0	10.31	117.71	3,719.3	-216.7	412.6	466.1	0.00	0.00	0.00
3,800.0	10.31	117.71	3,758.7	-220.1	418.9	473.2	0.00	0.00	0.00
3,840.0	10.31	117.71	3,798.0	-223.4	425.3	480.4	0.00	0.00	0.00
3,880.0	10.31	117.71	3,837.4	-226.7	431.6	487.5	0.00	0.00	0.00
3,880.6	10.31	117.71	3,838.0	-226.8	431.7	487.7	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
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Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

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)
PARKMAN									
3,920.0	10.31	117.71	3,876.7	-230.1	438.0	494.7	0.00	0.00	0.00
3,960.0	10.31	117.71	3,916.1	-233.4	444.3	501.9	0.00	0.00	0.00
4,000.0	10.31	117.71	3,955.5	-236.7	450.6	509.0	0.00	0.00	0.00
4,040.0	10.31	117.71	3,994.8	-240.1	457.0	516.2	0.00	0.00	0.00
4,080.0	10.31	117.71	4,034.2	-243.4	463.3	523.4	0.00	0.00	0.00
4,120.0	10.31	117.71	4,073.5	-246.7	469.7	530.5	0.00	0.00	0.00
4,160.0	10.31	117.71	4,112.9	-250.1	476.0	537.7	0.00	0.00	0.00
4,200.0	10.31	117.71	4,152.2	-253.4	482.3	544.8	0.00	0.00	0.00
4,240.0	10.31	117.71	4,191.6	-256.7	488.7	552.0	0.00	0.00	0.00
4,280.0	10.31	117.71	4,230.9	-260.1	495.0	559.2	0.00	0.00	0.00
4,320.0	10.31	117.71	4,270.3	-263.4	501.4	566.3	0.00	0.00	0.00
4,337.0	10.31	117.71	4,287.0	-264.8	504.1	569.4	0.00	0.00	0.00
Start Drop -2.00									
4,360.0	9.86	117.71	4,309.7	-266.7	507.6	573.4	2.00	-2.00	0.00
4,400.0	9.06	117.71	4,349.1	-269.7	513.4	580.0	2.00	-2.00	0.00
4,440.0	8.26	117.71	4,388.7	-272.5	518.8	586.0	2.00	-2.00	0.00
4,480.0	7.46	117.71	4,428.3	-275.1	523.6	591.5	2.00	-2.00	0.00
4,520.0	6.66	117.71	4,468.0	-277.4	528.0	596.4	2.00	-2.00	0.00
4,560.0	5.86	117.71	4,507.7	-279.4	531.8	600.7	2.00	-2.00	0.00
4,599.4	5.07	117.71	4,547.0	-281.1	535.1	604.5	2.00	-2.00	0.00
SUSSEX									
4,600.0	5.06	117.71	4,547.6	-281.2	535.2	604.5	2.00	-2.00	0.00
4,640.0	4.26	117.71	4,587.4	-282.7	538.1	607.8	2.00	-2.00	0.00
4,680.0	3.46	117.71	4,627.3	-283.9	540.4	610.5	2.00	-2.00	0.00
4,720.0	2.66	117.71	4,667.3	-284.9	542.3	612.6	2.00	-2.00	0.00
4,760.0	1.86	117.71	4,707.2	-285.6	543.7	614.2	2.00	-2.00	0.00
4,800.0	1.06	117.71	4,747.2	-286.1	544.6	615.2	2.00	-2.00	0.00
4,840.0	0.26	117.71	4,787.2	-286.3	545.0	615.7	2.00	-2.00	0.00
4,852.8	0.00	0.00	4,800.0	-286.3	545.0	615.7	2.00	-2.00	-921.40
Back to Vertical - TARGET BHL 700'FSL, 2000'FWL									
4,880.0	0.00	0.00	4,827.2	-286.3	545.0	615.7	0.00	0.00	0.00
4,920.0	0.00	0.00	4,867.2	-286.3	545.0	615.7	0.00	0.00	0.00
4,960.0	0.00	0.00	4,907.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,000.0	0.00	0.00	4,947.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,040.0	0.00	0.00	4,987.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,080.0	0.00	0.00	5,027.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,120.0	0.00	0.00	5,067.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,160.0	0.00	0.00	5,107.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,200.0	0.00	0.00	5,147.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,207.8	0.00	0.00	5,155.0	-286.3	545.0	615.7	0.00	0.00	0.00
SHANNON									
5,240.0	0.00	0.00	5,187.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,280.0	0.00	0.00	5,227.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,320.0	0.00	0.00	5,267.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,360.0	0.00	0.00	5,307.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,400.0	0.00	0.00	5,347.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,440.0	0.00	0.00	5,387.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,480.0	0.00	0.00	5,427.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,520.0	0.00	0.00	5,467.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,560.0	0.00	0.00	5,507.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,547.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,640.0	0.00	0.00	5,587.2	-286.3	545.0	615.7	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
Company:	Great Western	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Project:	SEC.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

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)
5,680.0	0.00	0.00	5,627.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,720.0	0.00	0.00	5,667.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,760.0	0.00	0.00	5,707.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,747.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,840.0	0.00	0.00	5,787.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,880.0	0.00	0.00	5,827.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,920.0	0.00	0.00	5,867.2	-286.3	545.0	615.7	0.00	0.00	0.00
5,960.0	0.00	0.00	5,907.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,947.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,040.0	0.00	0.00	5,987.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,080.0	0.00	0.00	6,027.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,120.0	0.00	0.00	6,067.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,160.0	0.00	0.00	6,107.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,147.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,187.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,227.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,267.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,307.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,347.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,387.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,427.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,467.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,507.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,547.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,587.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,627.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,667.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,707.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,747.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,787.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,827.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,917.8	0.00	0.00	6,865.0	-286.3	545.0	615.7	0.00	0.00	0.00
NIOBRARA - LEGAL BOX 400' X 400' 680'FSL & 2018'FWL - TARGET CIRCLE 700'FSL & 2000'FWL									
6,920.0	0.00	0.00	6,867.2	-286.3	545.0	615.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,907.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,947.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,987.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,080.0	0.00	0.00	7,027.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,120.0	0.00	0.00	7,067.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,160.0	0.00	0.00	7,107.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,147.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,203.8	0.00	0.00	7,151.0	-286.3	545.0	615.7	0.00	0.00	0.00
FORT HAYES									
7,226.8	0.00	0.00	7,174.0	-286.3	545.0	615.7	0.00	0.00	0.00
CODELL									
7,240.0	0.00	0.00	7,187.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,227.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,267.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,307.2	-286.3	545.0	615.7	0.00	0.00	0.00
7,386.8	0.00	0.00	7,334.0	-286.3	545.0	615.7	0.00	0.00	0.00
TD at 7386.8									

Database:	Landmark	**Local Co-ordinate Reference:**	Well Andrews 26-24
Company:	Great Western	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Project:	SEC.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**North Reference:**	True
Well:	Andrews 26-24	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-11-12)		

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
LEGAL BOX 400' X 4(- plan misses target center by 26.8ft at 6917.8ft MD (6865.0 TVD, -286.3 N, 545.0 E) - Rectangle (sides W400.0 H400.0 D469.0)	0.00	0.00	6,865.0	-306.3	563.0	1,440,806.93	3,241,089.73	40.540178	-104.632552
TARGET CIRCLE 70(- plan hits target center - Circle (radius 100.0)	0.00	0.00	6,865.0	-286.3	545.0	1,440,826.72	3,241,071.59	40.540233	-104.632617
TARGET BHL 700'FS - plan hits target center - Point	0.00	0.00	4,800.0	-286.3	545.0	1,440,826.72	3,241,071.59	40.540233	-104.632617

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
700.0	700.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,261.6	3,229.0	GREELEY SAND		0.00	
3,880.6	3,838.0	PARKMAN		0.00	
4,599.4	4,547.0	SUSSEX		0.00	
5,207.8	5,155.0	SHANNON		0.00	
6,917.8	6,865.0	NIOBRARA		0.00	
7,203.8	7,151.0	FORT HAYES		0.00	
7,226.8	7,174.0	CODELL		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
900.0	900.0	0.0	0.0	KOP - Start Build 2.00
1,415.7	1,413.0	-21.5	41.0	Start 2921.3 hold at 1415.7 MD
4,337.0	4,287.0	-264.8	504.1	Start Drop -2.00
4,852.8	4,800.0	-286.3	545.0	Back to Vertical
7,386.8	7,334.0	-286.3	545.0	TD at 7386.8

ENSIGN Directional

Great Western

SEC.26-T7N-R65W
Andrews 26-23 Pad Sec.26-T7N-R65W
Andrews 26-24

Wellbore #1
Plan #1 (5-11-12)

Anticollision Report

16 May, 2012

Company:	Great Western	**Local Co-ordinate Reference:**	Well Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Reference Plan #1 (5-11-12)

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** 5/16/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	7,386.8	Plan #1 (5-11-12) (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
Andrews 26-23 Pad Sec.26-T7N-R65W						
Andrews 26-23 - Wellbore #1 - Plan #1 (5-11-12)	200.0	200.0	15.6	14.9	23.120	CC, ES
Andrews 26-23 - Wellbore #1 - Plan #1 (5-11-12)	400.0	398.6	22.4	20.9	14.242	SF
Andrews 26-53 - Wellbore #1 - Plan #1 (5-14-12)	900.0	900.0	14.3	10.4	3.733	CC, ES
Andrews 26-53 - Wellbore #1 - Plan #1 (5-14-12)	1,000.0	1,000.0	14.7	10.5	3.466	SF

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-23 - Wellbore #1 - Plan #1 (5-11-12)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	37.31	12.4	9.4	15.6	15.6	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	37.31	12.4	9.4	15.6	15.4	0.22	69.360	
200.0	200.0	200.0	200.0	0.3	0.3	37.31	12.4	9.4	15.6	14.9	0.67	23.120	CC, ES
300.0	300.0	299.4	299.4	0.6	0.6	36.15	14.0	10.2	17.3	16.2	1.12	15.421	
400.0	400.0	398.6	398.5	0.8	0.8	33.73	18.6	12.4	22.4	20.9	1.57	14.242	SF
500.0	500.0	497.3	496.8	1.0	1.0	31.49	26.3	16.1	31.0	29.0	2.04	15.172	
600.0	600.0	595.4	594.1	1.2	1.3	29.86	37.0	21.2	43.0	40.5	2.54	16.958	
700.0	700.0	692.4	690.0	1.5	1.6	28.75	50.5	27.7	58.4	55.4	3.06	19.090	
800.0	800.0	788.4	784.3	1.7	2.0	28.00	66.7	35.5	77.2	73.5	3.62	21.323	
900.0	900.0	883.0	876.6	1.9	2.4	27.49	85.5	44.5	99.2	95.0	4.21	23.538	
1,000.0	1,000.0	979.5	970.2	2.1	2.8	-90.93	106.4	54.5	123.3	118.9	4.38	28.161	
1,100.0	1,099.8	1,076.4	1,064.2	2.3	3.3	-92.63	127.5	64.6	147.6	142.8	4.82	30.634	
1,200.0	1,199.5	1,173.0	1,158.0	2.5	3.7	-94.89	148.5	74.7	172.3	167.1	5.28	32.629	
1,300.0	1,298.7	1,269.2	1,251.3	2.8	4.2	-97.46	169.5	84.7	197.8	192.0	5.78	34.230	
1,400.0	1,397.5	1,364.9	1,344.2	3.0	4.7	-100.19	190.3	94.7	224.3	218.0	6.32	35.500	
1,500.0	1,495.9	1,460.2	1,436.7	3.3	5.1	-103.20	211.0	104.6	251.8	244.9	6.91	36.462	
1,600.0	1,594.2	1,555.6	1,529.2	3.7	5.6	-105.69	231.8	114.6	279.9	272.4	7.52	37.209	
1,700.0	1,692.6	1,650.9	1,621.7	4.0	6.1	-107.74	252.5	124.5	308.5	300.3	8.16	37.803	
1,800.0	1,791.0	1,746.2	1,714.2	4.4	6.6	-109.44	273.3	134.5	337.3	328.4	8.81	38.285	
1,900.0	1,889.4	1,841.5	1,806.7	4.7	7.0	-110.87	294.0	144.4	366.3	356.8	9.47	38.684	
2,000.0	1,987.8	1,936.8	1,899.2	5.1	7.5	-112.09	314.7	154.3	395.5	385.4	10.14	39.018	
2,100.0	2,086.2	2,032.1	1,991.7	5.5	8.0	-113.15	335.5	164.3	424.9	414.1	10.81	39.302	
2,200.0	2,184.5	2,127.5	2,084.2	5.9	8.4	-114.06	356.2	174.2	454.4	442.9	11.49	39.546	

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 Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-23 - Wellbore #1 - Plan #1 (5-11-12)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,300.0	2,282.9	2,222.8	2,176.8	6.3	8.9	-114.87	377.0	184.1	483.9	471.8	12.17	39.759	
2,400.0	2,381.3	2,318.1	2,269.3	6.7	9.4	-115.59	397.7	194.1	513.6	500.7	12.86	39.946	
2,500.0	2,479.7	2,413.4	2,361.8	7.1	9.9	-116.22	418.4	204.0	543.3	529.7	13.54	40.111	
2,600.0	2,578.1	2,508.7	2,454.3	7.5	10.3	-116.79	439.2	214.0	573.1	558.8	14.23	40.259	
2,700.0	2,676.5	2,604.0	2,546.8	7.9	10.8	-117.31	459.9	223.9	602.9	587.9	14.93	40.391	
2,800.0	2,774.8	2,699.4	2,639.3	8.3	11.3	-117.78	480.7	233.8	632.7	617.1	15.62	40.510	
2,900.0	2,873.2	2,794.7	2,731.8	8.7	11.8	-118.20	501.4	243.8	662.6	646.3	16.31	40.618	
3,000.0	2,971.6	2,890.0	2,824.3	9.1	12.3	-118.59	522.1	253.7	692.5	675.5	17.01	40.717	
3,100.0	3,070.0	2,985.3	2,916.8	9.5	12.7	-118.94	542.9	263.7	722.5	704.8	17.70	40.807	
3,200.0	3,168.4	3,080.6	3,009.3	9.9	13.2	-119.27	563.6	273.6	752.5	734.1	18.40	40.890	
3,300.0	3,266.8	3,176.0	3,101.8	10.3	13.7	-119.57	584.4	283.5	782.5	763.4	19.10	40.967	
3,400.0	3,365.1	3,271.3	3,194.3	10.7	14.2	-119.85	605.1	293.5	812.5	792.7	19.80	41.037	
3,500.0	3,463.5	3,366.6	3,286.8	11.1	14.6	-120.11	625.8	303.4	842.5	822.0	20.50	41.103	
3,600.0	3,561.9	3,461.9	3,379.3	11.5	15.1	-120.35	646.6	313.4	872.5	851.3	21.20	41.164	
3,700.0	3,660.3	3,557.2	3,471.8	11.9	15.6	-120.58	667.3	323.3	902.6	880.7	21.90	41.221	
3,800.0	3,758.7	3,652.5	3,564.3	12.3	16.1	-120.79	688.1	333.2	932.7	910.1	22.60	41.274	
3,900.0	3,857.1	3,747.9	3,656.8	12.7	16.5	-120.99	708.8	343.2	962.7	939.4	23.30	41.323	
4,000.0	3,955.5	3,843.2	3,749.3	13.1	17.0	-121.18	729.5	353.1	992.8	968.8	24.00	41.370	
4,100.0	4,053.8	3,938.5	3,841.8	13.5	17.5	-121.35	750.3	363.0	1,022.9	998.2	24.70	41.414	
4,200.0	4,152.2	4,033.8	3,934.3	14.0	18.0	-121.52	771.0	373.0	1,053.0	1,027.6	25.40	41.455	
4,300.0	4,250.6	4,129.1	4,026.8	14.4	18.5	-121.67	791.8	382.9	1,083.1	1,057.0	26.10	41.494	
4,400.0	4,349.1	4,224.6	4,119.4	14.7	18.9	-122.12	812.5	392.9	1,112.9	1,086.1	26.84	41.468	
4,500.0	4,448.1	4,320.5	4,212.5	15.0	19.4	-122.58	833.4	402.9	1,141.0	1,113.5	27.52	41.467	
4,600.0	4,547.6	4,416.9	4,306.1	15.2	19.9	-122.86	854.4	412.9	1,167.3	1,139.2	28.15	41.470	
4,700.0	4,647.3	4,513.7	4,400.0	15.4	20.4	-122.96	875.4	423.0	1,191.8	1,163.1	28.73	41.480	
4,800.0	4,747.2	4,610.6	4,494.1	15.6	20.9	-122.91	896.5	433.1	1,214.5	1,185.3	29.27	41.500	
4,900.0	4,847.2	4,707.7	4,588.2	15.7	21.4	-4.83	917.6	443.2	1,235.7	1,206.0	29.73	41.559	
5,000.0	4,947.2	4,804.7	4,682.4	15.9	21.8	-4.28	938.7	453.4	1,256.7	1,226.6	30.17	41.652	
5,100.0	5,047.2	4,901.8	4,776.6	16.0	22.3	-3.74	959.9	463.5	1,277.8	1,247.2	30.61	41.748	
5,200.0	5,147.2	4,998.8	4,870.8	16.1	22.8	-3.23	981.0	473.6	1,299.1	1,268.0	31.04	41.845	
5,300.0	5,247.2	5,095.8	4,964.9	16.3	23.3	-2.73	1,002.1	483.7	1,320.4	1,288.9	31.48	41.945	
5,400.0	5,347.2	5,229.9	5,095.4	16.4	23.9	-2.09	1,030.1	497.1	1,341.1	1,309.1	31.97	41.947	
5,500.0	5,447.2	5,399.4	5,262.0	16.6	24.4	-1.47	1,057.9	510.5	1,357.4	1,324.9	32.46	41.816	
5,600.0	5,547.2	5,572.0	5,433.3	16.7	24.9	-1.07	1,077.0	519.6	1,368.4	1,335.4	32.91	41.575	
5,700.0	5,647.2	5,746.6	5,607.5	16.9	25.2	-0.86	1,086.9	524.4	1,374.0	1,340.6	33.33	41.222	
5,800.0	5,747.2	5,886.4	5,747.2	17.0	25.3	-0.84	1,088.2	525.0	1,374.7	1,341.0	33.68	40.818	
5,900.0	5,847.2	5,986.4	5,847.2	17.2	25.4	-0.84	1,088.2	525.0	1,374.7	1,340.7	33.99	40.439	
6,000.0	5,947.2	6,086.4	5,947.2	17.3	25.5	-0.84	1,088.2	525.0	1,374.7	1,340.4	34.32	40.062	
6,100.0	6,047.2	6,186.4	6,047.2	17.5	25.6	-0.84	1,088.2	525.0	1,374.7	1,340.1	34.64	39.688	
6,200.0	6,147.2	6,286.4	6,147.2	17.6	25.7	-0.84	1,088.2	525.0	1,374.7	1,339.8	34.96	39.318	
6,300.0	6,247.2	6,386.4	6,247.2	17.8	25.9	-0.84	1,088.2	525.0	1,374.7	1,339.4	35.29	38.951	
6,400.0	6,347.2	6,486.4	6,347.2	18.0	26.0	-0.84	1,088.2	525.0	1,374.7	1,339.1	35.62	38.589	
6,500.0	6,447.2	6,586.4	6,447.2	18.1	26.1	-0.84	1,088.2	525.0	1,374.7	1,338.8	35.96	38.231	
6,600.0	6,547.2	6,686.4	6,547.2	18.3	26.2	-0.84	1,088.2	525.0	1,374.7	1,338.4	36.30	37.876	
6,700.0	6,647.2	6,786.4	6,647.2	18.4	26.3	-0.84	1,088.2	525.0	1,374.7	1,338.1	36.63	37.526	
6,800.0	6,747.2	6,886.4	6,747.2	18.6	26.4	-0.84	1,088.2	525.0	1,374.7	1,337.8	36.98	37.180	
6,900.0	6,847.2	6,986.4	6,847.2	18.8	26.6	-0.84	1,088.2	525.0	1,374.7	1,337.4	37.32	36.837	
7,000.0	6,947.2	7,086.4	6,947.2	18.9	26.7	-0.84	1,088.2	525.0	1,374.7	1,337.1	37.66	36.499	
7,100.0	7,047.2	7,186.4	7,047.2	19.1	26.8	-0.84	1,088.2	525.0	1,374.7	1,336.7	38.01	36.165	
7,200.0	7,147.2	7,286.4	7,147.2	19.3	26.9	-0.84	1,088.2	525.0	1,374.7	1,336.4	38.36	35.835	
7,300.0	7,247.2	7,386.4	7,247.2	19.5	27.0	-0.84	1,088.2	525.0	1,374.7	1,336.0	38.71	35.509	
7,386.8	7,334.0	7,473.1	7,334.0	19.6	27.2	-0.84	1,088.2	525.0	1,374.7	1,335.7	39.02	35.230	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Company:	Great Western	**Local Co-ordinate Reference:**	Well Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-53 - Wellbore #1 - Plan #1 (5-14-12)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-139.98	-10.9	-9.2	14.3	14.3	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	-139.98	-10.9	-9.2	14.3	14.0	0.22	63.453	
200.0	200.0	200.0	200.0	0.3	0.3	-139.98	-10.9	-9.2	14.3	13.6	0.67	21.151	
300.0	300.0	300.0	300.0	0.6	0.6	-139.98	-10.9	-9.2	14.3	13.1	1.12	12.691	
400.0	400.0	400.0	400.0	0.8	0.8	-139.98	-10.9	-9.2	14.3	12.7	1.57	9.065	
500.0	500.0	500.0	500.0	1.0	1.0	-139.98	-10.9	-9.2	14.3	12.2	2.02	7.050	
600.0	600.0	600.0	600.0	1.2	1.2	-139.98	-10.9	-9.2	14.3	11.8	2.47	5.768	
700.0	700.0	700.0	700.0	1.5	1.5	-139.98	-10.9	-9.2	14.3	11.3	2.92	4.881	
800.0	800.0	800.0	800.0	1.7	1.7	-139.98	-10.9	-9.2	14.3	10.9	3.37	4.230	
900.0	900.0	900.0	900.0	1.9	1.9	-139.98	-10.9	-9.2	14.3	10.4	3.82	3.733	CC, ES
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	108.94	-10.9	-9.2	14.7	10.5	4.25	3.466	SF
1,100.0	1,099.8	1,099.8	1,099.8	2.3	2.4	125.65	-10.9	-9.2	17.2	12.5	4.67	3.678	
1,200.0	1,199.5	1,199.5	1,199.5	2.5	2.6	143.21	-10.9	-9.2	23.3	18.3	5.08	4.593	
1,300.0	1,298.7	1,298.7	1,298.7	2.8	2.8	155.53	-10.9	-9.2	33.9	28.4	5.50	6.168	
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	163.10	-10.9	-9.2	48.6	42.7	5.91	8.221	
1,500.0	1,495.9	1,495.9	1,495.9	3.3	3.2	167.60	-10.9	-9.2	65.9	59.6	6.34	10.394	
1,600.0	1,594.2	1,592.8	1,592.8	3.7	3.5	171.10	-9.5	-9.5	84.3	77.5	6.78	12.438	
1,700.0	1,692.6	1,688.8	1,688.6	4.0	3.7	174.84	-4.9	-10.5	104.7	97.5	7.21	14.520	
1,800.0	1,791.0	1,783.5	1,783.1	4.4	3.9	178.49	2.8	-12.3	127.5	119.9	7.66	16.657	
1,900.0	1,889.4	1,876.9	1,875.8	4.7	4.1	-178.08	13.2	-14.6	152.8	144.7	8.10	18.852	
2,000.0	1,987.8	1,968.8	1,966.7	5.1	4.3	-174.95	26.4	-17.6	180.6	172.1	8.56	21.095	
2,100.0	2,086.2	2,062.1	2,058.6	5.5	4.6	-172.13	42.1	-21.1	210.7	201.7	9.04	23.317	
2,200.0	2,184.5	2,157.0	2,152.0	5.9	4.9	-169.94	58.3	-24.8	241.3	231.8	9.52	25.346	
2,300.0	2,282.9	2,251.8	2,245.4	6.3	5.2	-168.25	74.5	-28.4	272.2	262.2	10.01	27.184	
2,400.0	2,381.3	2,346.6	2,338.8	6.7	5.5	-166.90	90.6	-32.0	303.2	292.7	10.51	28.851	
2,500.0	2,479.7	2,441.5	2,432.2	7.1	5.8	-165.80	106.8	-35.7	334.4	323.4	11.01	30.366	
2,600.0	2,578.1	2,536.3	2,525.5	7.5	6.1	-164.88	123.0	-39.3	365.7	354.1	11.52	31.744	
2,700.0	2,676.5	2,631.2	2,618.9	7.9	6.4	-164.11	139.1	-43.0	397.0	385.0	12.03	33.001	
2,800.0	2,774.8	2,726.0	2,712.3	8.3	6.7	-163.45	155.3	-46.6	428.4	415.8	12.54	34.152	
2,900.0	2,873.2	2,820.8	2,805.7	8.7	7.0	-162.89	171.5	-50.2	459.8	446.7	13.06	35.207	
3,000.0	2,971.6	2,915.7	2,899.1	9.1	7.4	-162.39	187.6	-53.9	491.3	477.7	13.58	36.179	
3,100.0	3,070.0	3,010.5	2,992.4	9.5	7.7	-161.95	203.8	-57.5	522.7	508.6	14.10	37.075	
3,200.0	3,168.4	3,105.4	3,085.8	9.9	8.1	-161.57	220.0	-61.2	554.3	539.6	14.62	37.904	
3,300.0	3,266.8	3,200.2	3,179.2	10.3	8.4	-161.22	236.2	-64.8	585.8	570.6	15.15	38.673	
3,400.0	3,365.1	3,295.1	3,272.6	10.7	8.7	-160.91	252.3	-68.4	617.3	601.7	15.67	39.387	
3,500.0	3,463.5	3,389.9	3,366.0	11.1	9.1	-160.63	268.5	-72.1	648.9	632.7	16.20	40.052	
3,600.0	3,561.9	3,484.7	3,459.4	11.5	9.4	-160.38	284.7	-75.7	680.5	663.8	16.73	40.673	
3,700.0	3,660.3	3,579.6	3,552.7	11.9	9.8	-160.15	300.8	-79.4	712.1	694.8	17.26	41.253	
3,800.0	3,758.7	3,674.4	3,646.1	12.3	10.1	-159.94	317.0	-83.0	743.7	725.9	17.79	41.797	
3,900.0	3,857.1	3,769.3	3,739.5	12.7	10.5	-159.74	333.2	-86.6	775.3	757.0	18.32	42.308	
4,000.0	3,955.5	3,864.1	3,832.9	13.1	10.9	-159.56	349.3	-90.3	806.9	788.0	18.86	42.788	
4,100.0	4,053.8	3,958.9	3,926.3	13.5	11.2	-159.40	365.5	-93.9	838.5	819.1	19.39	43.240	
4,200.0	4,152.2	4,061.2	4,027.0	14.0	11.6	-159.24	382.8	-97.8	870.1	850.1	19.94	43.638	
4,300.0	4,250.6	4,192.2	4,156.6	14.4	12.0	-159.18	401.0	-101.9	899.0	878.5	20.49	43.866	
4,400.0	4,349.1	4,326.4	4,290.2	14.7	12.3	-159.41	413.7	-104.8	923.4	902.3	21.05	43.857	
4,500.0	4,448.1	4,463.8	4,427.4	15.0	12.5	-159.74	420.3	-106.2	940.8	919.2	21.58	43.606	
4,600.0	4,547.6	4,584.0	4,547.6	15.2	12.7	-160.06	421.2	-106.4	951.3	929.3	22.03	43.185	
4,700.0	4,647.3	4,683.7	4,647.3	15.4	12.9	-160.25	421.2	-106.4	957.9	935.5	22.44	42.688	
4,800.0	4,747.2	4,783.6	4,747.2	15.6	13.0	-160.34	421.2	-106.4	961.3	938.5	22.83	42.116	
4,900.0	4,847.2	4,883.6	4,847.2	15.7	13.2	-42.64	421.2	-106.4	961.8	938.6	23.20	41.459	
5,000.0	4,947.2	4,983.6	4,947.2	15.9	13.4	-42.64	421.2	-106.4	961.8	938.2	23.58	40.790	
5,100.0	5,047.2	5,083.6	5,047.2	16.0	13.6	-42.64	421.2	-106.4	961.8	937.8	23.96	40.139	

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 Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-53 - Wellbore #1 - Plan #1 (5-14-12)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,147.2	5,183.6	5,147.2	16.1	13.7	-42.64	421.2	-106.4	961.8	937.4	24.35	39.504	
5,300.0	5,247.2	5,283.6	5,247.2	16.3	13.9	-42.64	421.2	-106.4	961.8	937.0	24.73	38.886	
5,400.0	5,347.2	5,383.6	5,347.2	16.4	14.1	-42.64	421.2	-106.4	961.8	936.7	25.12	38.284	
5,500.0	5,447.2	5,483.6	5,447.2	16.6	14.3	-42.64	421.2	-106.4	961.8	936.3	25.51	37.697	
5,600.0	5,547.2	5,583.6	5,547.2	16.7	14.5	-42.64	421.2	-106.4	961.8	935.9	25.91	37.125	
5,700.0	5,647.2	5,683.6	5,647.2	16.9	14.7	-42.64	421.2	-106.4	961.8	935.5	26.30	36.568	
5,800.0	5,747.2	5,783.6	5,747.2	17.0	14.8	-42.64	421.2	-106.4	961.8	935.1	26.70	36.025	
5,900.0	5,847.2	5,883.6	5,847.2	17.2	15.0	-42.64	421.2	-106.4	961.8	934.7	27.10	35.495	
6,000.0	5,947.2	5,983.6	5,947.2	17.3	15.2	-42.64	421.2	-106.4	961.8	934.3	27.50	34.979	
6,100.0	6,047.2	6,083.6	6,047.2	17.5	15.4	-42.64	421.2	-106.4	961.8	933.9	27.90	34.476	
6,200.0	6,147.2	6,183.6	6,147.2	17.6	15.6	-42.64	421.2	-106.4	961.8	933.5	28.30	33.986	
6,300.0	6,247.2	6,283.6	6,247.2	17.8	15.8	-42.64	421.2	-106.4	961.8	933.1	28.70	33.507	
6,400.0	6,347.2	6,383.6	6,347.2	18.0	16.0	-42.64	421.2	-106.4	961.8	932.7	29.11	33.041	
6,500.0	6,447.2	6,483.6	6,447.2	18.1	16.2	-42.64	421.2	-106.4	961.8	932.3	29.52	32.586	
6,600.0	6,547.2	6,583.6	6,547.2	18.3	16.4	-42.64	421.2	-106.4	961.8	931.9	29.92	32.141	
6,700.0	6,647.2	6,683.6	6,647.2	18.4	16.6	-42.64	421.2	-106.4	961.8	931.4	30.33	31.708	
6,800.0	6,747.2	6,783.6	6,747.2	18.6	16.8	-42.64	421.2	-106.4	961.8	931.0	30.74	31.285	
6,900.0	6,847.2	6,883.6	6,847.2	18.8	16.9	-42.64	421.2	-106.4	961.8	930.6	31.15	30.872	
7,000.0	6,947.2	6,983.6	6,947.2	18.9	17.1	-42.64	421.2	-106.4	961.8	930.2	31.57	30.469	
7,100.0	7,047.2	7,083.6	7,047.2	19.1	17.3	-42.64	421.2	-106.4	961.8	929.8	31.98	30.075	
7,200.0	7,147.2	7,183.6	7,147.2	19.3	17.5	-42.64	421.2	-106.4	961.8	929.4	32.39	29.690	
7,300.0	7,247.2	7,283.6	7,247.2	19.5	17.7	-42.64	421.2	-106.4	961.8	929.0	32.81	29.315	
7,386.8	7,334.0	7,370.4	7,334.0	19.6	17.9	-42.64	421.2	-106.4	961.8	928.6	33.17	28.996	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4885.0ft (Original Well Elev) Coordinates are relative to: Andrews 26-24
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: 0.56°

Company:	Great Western	**Local Co-ordinate Reference:**	Well Andrews 26-24
Project:	SEC.26-T7N-R65W	**TVD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	**MD Reference:**	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Andrews 26-24	**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 (5-11-12)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4885.0ft (Original Well Elev) Coordinates are relative to: Andrews 26-24
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: 0.56°