

ENSIGN

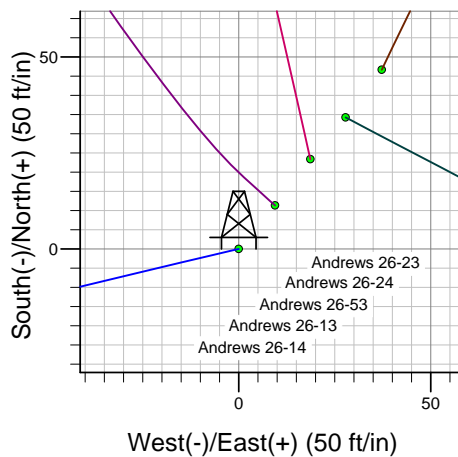
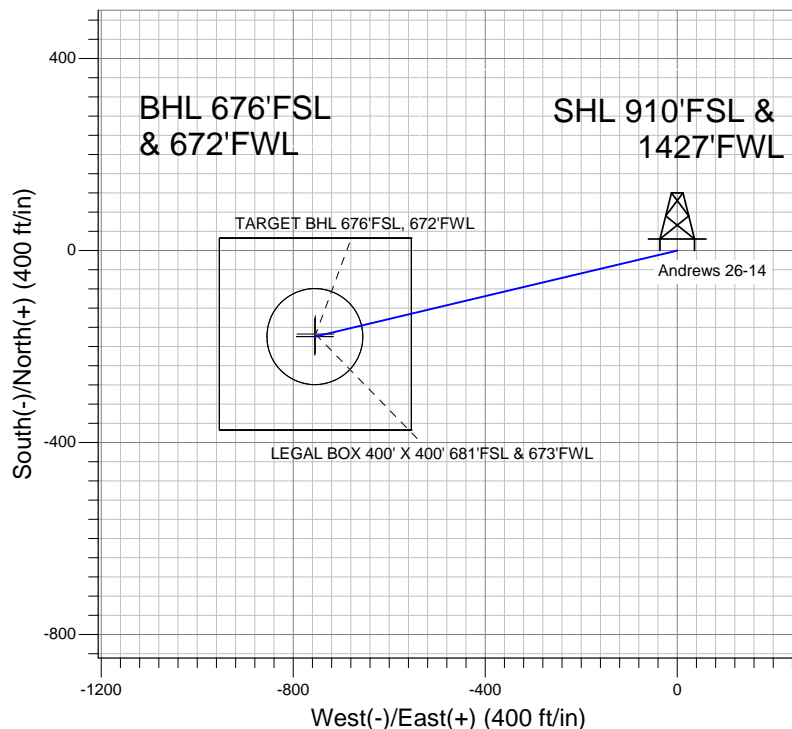
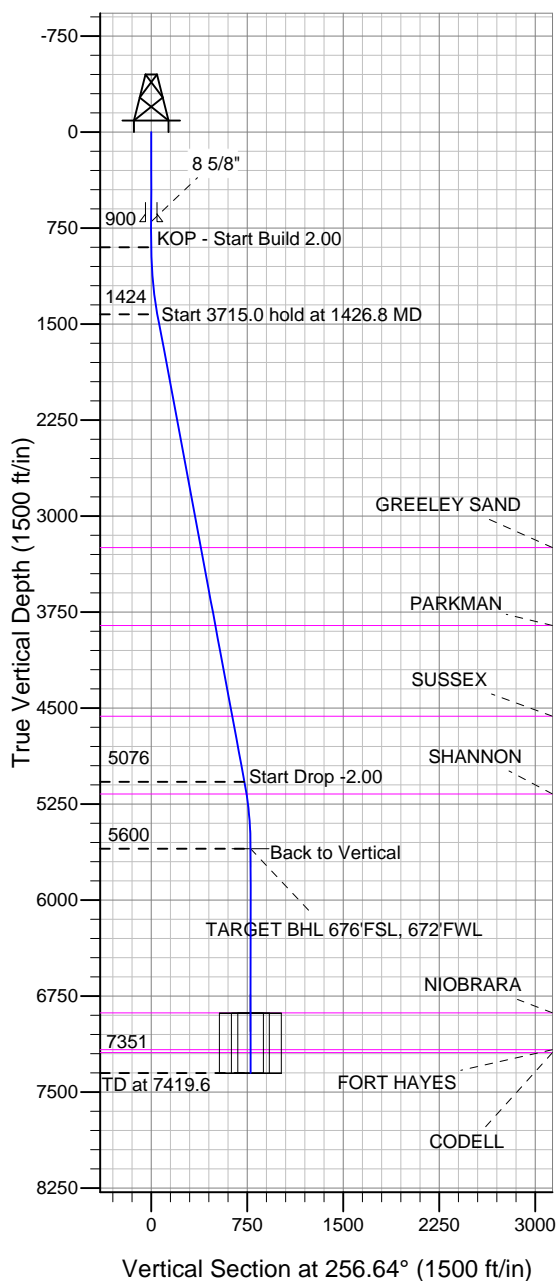
Directional

Well Name: Andrews 26-14

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	Latitude	Longitude	Slot
0.0	0.0	1441073.20	3240496.33	40.540925	-104.634678	
Original Well Elev				WELL @ 4885.0ft (Original Well Elev)		

Great Western



Andrews 26-23 Pad Sec.26-T7N-R65W
Andrews 26-14
Plan #2 (5-14-12)
8:01, May 17 2012



Azimuths to True North
Magnetic North: 8.68°
Magnetic Field
Strength: 53122.2snT
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 676'FSL, 672'FWL	5600.0	-179.2	-754.9	40.540433	-104.637394	Point
LEGAL BOX 400' X 400' 681'FSL & 673'FWL	6884.0	-174.2	-753.9	40.540447	-104.637390	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 676'FSL & 672'FWL	6884.0	-179.2	-754.9	40.540433	-104.637394	Circle (Radius: 100.0)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
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	1426.8	10.54	256.64	1423.8	-11.2	-47.0	2.00	256.64	48.3
4	5141.8	10.54	256.64	5076.2	-168.1	-707.9	0.00	0.00	727.6
5	5668.6	0.00	0.00	5600.0	-179.2	-754.9	2.00	180.00	775.9
6	7419.6	0.00	0.00	7351.0	-179.2	-754.9	0.00	0.00	775.9

TARGET BHL 676'FSL, 672'FWL



Great Western

SEC.26-T7N-R65W

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

Andrews 26-14

Wellbore #1

Plan: Plan #2 (5-14-12)

Standard Planning Report

17 May, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-12)		

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

Well	Andrews 26-14				
Well Position	+N/-S	-46.6 ft	Northing:	1,441,073.20 ft	Latitude: 40.540925
	+E/-W	-37.2 ft	Easting:	3,240,496.33 ft	Longitude: -104.634678
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level: 4,871.0 ft

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 #2 (5-14-12)			
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	256.64

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	
1,426.8	10.54	256.64	1,423.8	-11.2	-47.0	2.00	2.00	0.00	256.64	
5,141.8	10.54	256.64	5,076.2	-168.1	-707.9	0.00	0.00	0.00	0.00	
5,668.6	0.00	0.00	5,600.0	-179.2	-754.9	2.00	-2.00	0.00	180.00	TARGET BHL 676°
7,419.6	0.00	0.00	7,351.0	-179.2	-754.9	0.00	0.00	0.00	0.00	

Database: Landmark
Company: Great Western
Project: SEC.26-T7N-R65W
Site: Andrews 26-23 Pad Sec.26-T7N-R65W
Well: Andrews 26-14
Wellbore: Wellbore #1
Design: Plan #2 (5-14-12)

Local Co-ordinate Reference: Well Andrews 26-14
TVD Reference: WELL @ 4885.0ft (Original Well Elev)
MD Reference: WELL @ 4885.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	256.64	920.0	0.0	-0.1	0.1	2.00	2.00	0.00
960.0	1.20	256.64	960.0	-0.1	-0.6	0.6	2.00	2.00	0.00
1,000.0	2.00	256.64	1,000.0	-0.4	-1.7	1.7	2.00	2.00	0.00
1,040.0	2.80	256.64	1,039.9	-0.8	-3.3	3.4	2.00	2.00	0.00
1,080.0	3.60	256.64	1,079.9	-1.3	-5.5	5.7	2.00	2.00	0.00
1,120.0	4.40	256.64	1,119.8	-2.0	-8.2	8.4	2.00	2.00	0.00
1,160.0	5.20	256.64	1,159.6	-2.7	-11.5	11.8	2.00	2.00	0.00
1,200.0	6.00	256.64	1,199.5	-3.6	-15.3	15.7	2.00	2.00	0.00
1,240.0	6.80	256.64	1,239.2	-4.7	-19.6	20.2	2.00	2.00	0.00
1,280.0	7.60	256.64	1,278.9	-5.8	-24.5	25.2	2.00	2.00	0.00
1,320.0	8.40	256.64	1,318.5	-7.1	-29.9	30.7	2.00	2.00	0.00
1,360.0	9.20	256.64	1,358.0	-8.5	-35.9	36.9	2.00	2.00	0.00
1,400.0	10.00	256.64	1,397.5	-10.1	-42.3	43.5	2.00	2.00	0.00
1,426.8	10.54	256.64	1,423.8	-11.2	-47.0	48.3	2.00	2.00	0.00
Start 3715.0 hold at 1426.8 MD									
1,440.0	10.54	256.64	1,436.8	-11.7	-49.3	50.7	0.00	0.00	0.00
1,480.0	10.54	256.64	1,476.1	-13.4	-56.5	58.0	0.00	0.00	0.00
1,520.0	10.54	256.64	1,515.5	-15.1	-63.6	65.3	0.00	0.00	0.00
1,560.0	10.54	256.64	1,554.8	-16.8	-70.7	72.7	0.00	0.00	0.00
1,600.0	10.54	256.64	1,594.1	-18.5	-77.8	80.0	0.00	0.00	0.00
1,640.0	10.54	256.64	1,633.4	-20.2	-84.9	87.3	0.00	0.00	0.00
1,680.0	10.54	256.64	1,672.8	-21.9	-92.0	94.6	0.00	0.00	0.00
1,720.0	10.54	256.64	1,712.1	-23.5	-99.2	101.9	0.00	0.00	0.00
1,760.0	10.54	256.64	1,751.4	-25.2	-106.3	109.2	0.00	0.00	0.00
1,800.0	10.54	256.64	1,790.7	-26.9	-113.4	116.5	0.00	0.00	0.00
1,840.0	10.54	256.64	1,830.1	-28.6	-120.5	123.9	0.00	0.00	0.00

Database: Landmark
Company: Great Western
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Site: Andrews 26-23 Pad Sec.26-T7N-R65W
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Wellbore: Wellbore #1
Design: Plan #2 (5-14-12)

Local Co-ordinate Reference: Well Andrews 26-14
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North Reference: True
Survey Calculation Method: Minimum Curvature

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	10.54	256.64	1,869.4	-30.3	-127.6	131.2	0.00	0.00	0.00
1,920.0	10.54	256.64	1,908.7	-32.0	-134.7	138.5	0.00	0.00	0.00
1,960.0	10.54	256.64	1,948.0	-33.7	-141.9	145.8	0.00	0.00	0.00
2,000.0	10.54	256.64	1,987.4	-35.4	-149.0	153.1	0.00	0.00	0.00
2,040.0	10.54	256.64	2,026.7	-37.1	-156.1	160.4	0.00	0.00	0.00
2,080.0	10.54	256.64	2,066.0	-38.7	-163.2	167.7	0.00	0.00	0.00
2,120.0	10.54	256.64	2,105.3	-40.4	-170.3	175.1	0.00	0.00	0.00
2,160.0	10.54	256.64	2,144.7	-42.1	-177.4	182.4	0.00	0.00	0.00
2,200.0	10.54	256.64	2,184.0	-43.8	-184.5	189.7	0.00	0.00	0.00
2,240.0	10.54	256.64	2,223.3	-45.5	-191.7	197.0	0.00	0.00	0.00
2,280.0	10.54	256.64	2,262.7	-47.2	-198.8	204.3	0.00	0.00	0.00
2,320.0	10.54	256.64	2,302.0	-48.9	-205.9	211.6	0.00	0.00	0.00
2,360.0	10.54	256.64	2,341.3	-50.6	-213.0	218.9	0.00	0.00	0.00
2,400.0	10.54	256.64	2,380.6	-52.3	-220.1	226.2	0.00	0.00	0.00
2,440.0	10.54	256.64	2,420.0	-54.0	-227.2	233.6	0.00	0.00	0.00
2,480.0	10.54	256.64	2,459.3	-55.6	-234.4	240.9	0.00	0.00	0.00
2,520.0	10.54	256.64	2,498.6	-57.3	-241.5	248.2	0.00	0.00	0.00
2,560.0	10.54	256.64	2,537.9	-59.0	-248.6	255.5	0.00	0.00	0.00
2,600.0	10.54	256.64	2,577.3	-60.7	-255.7	262.8	0.00	0.00	0.00
2,640.0	10.54	256.64	2,616.6	-62.4	-262.8	270.1	0.00	0.00	0.00
2,680.0	10.54	256.64	2,655.9	-64.1	-269.9	277.4	0.00	0.00	0.00
2,720.0	10.54	256.64	2,695.2	-65.8	-277.1	284.8	0.00	0.00	0.00
2,760.0	10.54	256.64	2,734.6	-67.5	-284.2	292.1	0.00	0.00	0.00
2,800.0	10.54	256.64	2,773.9	-69.2	-291.3	299.4	0.00	0.00	0.00
2,840.0	10.54	256.64	2,813.2	-70.8	-298.4	306.7	0.00	0.00	0.00
2,880.0	10.54	256.64	2,852.5	-72.5	-305.5	314.0	0.00	0.00	0.00
2,920.0	10.54	256.64	2,891.9	-74.2	-312.6	321.3	0.00	0.00	0.00
2,960.0	10.54	256.64	2,931.2	-75.9	-319.8	328.6	0.00	0.00	0.00
3,000.0	10.54	256.64	2,970.5	-77.6	-326.9	336.0	0.00	0.00	0.00
3,040.0	10.54	256.64	3,009.8	-79.3	-334.0	343.3	0.00	0.00	0.00
3,080.0	10.54	256.64	3,049.2	-81.0	-341.1	350.6	0.00	0.00	0.00
3,120.0	10.54	256.64	3,088.5	-82.7	-348.2	357.9	0.00	0.00	0.00
3,160.0	10.54	256.64	3,127.8	-84.4	-355.3	365.2	0.00	0.00	0.00
3,200.0	10.54	256.64	3,167.1	-86.1	-362.5	372.5	0.00	0.00	0.00
3,240.0	10.54	256.64	3,206.5	-87.7	-369.6	379.8	0.00	0.00	0.00
3,280.0	10.54	256.64	3,245.8	-89.4	-376.7	387.2	0.00	0.00	0.00
3,280.2	10.54	256.64	3,246.0	-89.4	-376.7	387.2	0.00	0.00	0.00
GREELEY SAND									
3,320.0	10.54	256.64	3,285.1	-91.1	-383.8	394.5	0.00	0.00	0.00
3,360.0	10.54	256.64	3,324.4	-92.8	-390.9	401.8	0.00	0.00	0.00
3,400.0	10.54	256.64	3,363.8	-94.5	-398.0	409.1	0.00	0.00	0.00
3,440.0	10.54	256.64	3,403.1	-96.2	-405.1	416.4	0.00	0.00	0.00
3,480.0	10.54	256.64	3,442.4	-97.9	-412.3	423.7	0.00	0.00	0.00
3,520.0	10.54	256.64	3,481.7	-99.6	-419.4	431.0	0.00	0.00	0.00
3,560.0	10.54	256.64	3,521.1	-101.3	-426.5	438.4	0.00	0.00	0.00
3,600.0	10.54	256.64	3,560.4	-102.9	-433.6	445.7	0.00	0.00	0.00
3,640.0	10.54	256.64	3,599.7	-104.6	-440.7	453.0	0.00	0.00	0.00
3,680.0	10.54	256.64	3,639.0	-106.3	-447.8	460.3	0.00	0.00	0.00
3,720.0	10.54	256.64	3,678.4	-108.0	-455.0	467.6	0.00	0.00	0.00
3,760.0	10.54	256.64	3,717.7	-109.7	-462.1	474.9	0.00	0.00	0.00
3,800.0	10.54	256.64	3,757.0	-111.4	-469.2	482.2	0.00	0.00	0.00
3,840.0	10.54	256.64	3,796.4	-113.1	-476.3	489.6	0.00	0.00	0.00
3,880.0	10.54	256.64	3,835.7	-114.8	-483.4	496.9	0.00	0.00	0.00
3,899.7	10.54	256.64	3,855.0	-115.6	-486.9	500.5	0.00	0.00	0.00

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Design: Plan #2 (5-14-12)

Local Co-ordinate Reference: Well Andrews 26-14
TVD Reference: WELL @ 4885.0ft (Original Well Elev)
MD Reference: WELL @ 4885.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	10.54	256.64	3,875.0	-116.5	-490.5	504.2	0.00	0.00	0.00
3,960.0	10.54	256.64	3,914.3	-118.2	-497.7	511.5	0.00	0.00	0.00
4,000.0	10.54	256.64	3,953.7	-119.8	-504.8	518.8	0.00	0.00	0.00
4,040.0	10.54	256.64	3,993.0	-121.5	-511.9	526.1	0.00	0.00	0.00
4,080.0	10.54	256.64	4,032.3	-123.2	-519.0	533.4	0.00	0.00	0.00
4,120.0	10.54	256.64	4,071.6	-124.9	-526.1	540.7	0.00	0.00	0.00
4,160.0	10.54	256.64	4,111.0	-126.6	-533.2	548.1	0.00	0.00	0.00
4,200.0	10.54	256.64	4,150.3	-128.3	-540.4	555.4	0.00	0.00	0.00
4,240.0	10.54	256.64	4,189.6	-130.0	-547.5	562.7	0.00	0.00	0.00
4,280.0	10.54	256.64	4,228.9	-131.7	-554.6	570.0	0.00	0.00	0.00
4,320.0	10.54	256.64	4,268.3	-133.4	-561.7	577.3	0.00	0.00	0.00
4,360.0	10.54	256.64	4,307.6	-135.0	-568.8	584.6	0.00	0.00	0.00
4,400.0	10.54	256.64	4,346.9	-136.7	-575.9	591.9	0.00	0.00	0.00
4,440.0	10.54	256.64	4,386.2	-138.4	-583.1	599.3	0.00	0.00	0.00
4,480.0	10.54	256.64	4,425.6	-140.1	-590.2	606.6	0.00	0.00	0.00
4,520.0	10.54	256.64	4,464.9	-141.8	-597.3	613.9	0.00	0.00	0.00
4,560.0	10.54	256.64	4,504.2	-143.5	-604.4	621.2	0.00	0.00	0.00
4,600.0	10.54	256.64	4,543.5	-145.2	-611.5	628.5	0.00	0.00	0.00
4,620.8	10.54	256.64	4,564.0	-146.1	-615.2	632.3	0.00	0.00	0.00
SUSSEX									
4,640.0	10.54	256.64	4,582.9	-146.9	-618.6	635.8	0.00	0.00	0.00
4,680.0	10.54	256.64	4,622.2	-148.6	-625.7	643.1	0.00	0.00	0.00
4,720.0	10.54	256.64	4,661.5	-150.3	-632.9	650.5	0.00	0.00	0.00
4,760.0	10.54	256.64	4,700.8	-151.9	-640.0	657.8	0.00	0.00	0.00
4,800.0	10.54	256.64	4,740.2	-153.6	-647.1	665.1	0.00	0.00	0.00
4,840.0	10.54	256.64	4,779.5	-155.3	-654.2	672.4	0.00	0.00	0.00
4,880.0	10.54	256.64	4,818.8	-157.0	-661.3	679.7	0.00	0.00	0.00
4,920.0	10.54	256.64	4,858.1	-158.7	-668.4	687.0	0.00	0.00	0.00
4,960.0	10.54	256.64	4,897.5	-160.4	-675.6	694.3	0.00	0.00	0.00
5,000.0	10.54	256.64	4,936.8	-162.1	-682.7	701.7	0.00	0.00	0.00
5,040.0	10.54	256.64	4,976.1	-163.8	-689.8	709.0	0.00	0.00	0.00
5,080.0	10.54	256.64	5,015.4	-165.5	-696.9	716.3	0.00	0.00	0.00
5,120.0	10.54	256.64	5,054.8	-167.2	-704.0	723.6	0.00	0.00	0.00
5,141.8	10.54	256.64	5,076.2	-168.1	-707.9	727.6	0.00	0.00	0.00
Start Drop -2.00									
5,160.0	10.17	256.64	5,094.1	-168.8	-711.1	730.9	2.00	-2.00	0.00
5,200.0	9.37	256.64	5,133.5	-170.4	-717.7	737.6	2.00	-2.00	0.00
5,238.9	8.59	256.64	5,172.0	-171.8	-723.6	743.7	2.00	-2.00	0.00
SHANNON									
5,240.0	8.57	256.64	5,173.0	-171.8	-723.8	743.9	2.00	-2.00	0.00
5,280.0	7.77	256.64	5,212.6	-173.1	-729.3	749.6	2.00	-2.00	0.00
5,320.0	6.97	256.64	5,252.3	-174.3	-734.3	754.7	2.00	-2.00	0.00
5,360.0	6.17	256.64	5,292.0	-175.4	-738.7	759.3	2.00	-2.00	0.00
5,400.0	5.37	256.64	5,331.8	-176.3	-742.7	763.3	2.00	-2.00	0.00
5,440.0	4.57	256.64	5,371.7	-177.1	-746.0	766.8	2.00	-2.00	0.00
5,480.0	3.77	256.64	5,411.6	-177.8	-748.9	769.7	2.00	-2.00	0.00
5,520.0	2.97	256.64	5,451.5	-178.3	-751.1	772.0	2.00	-2.00	0.00
5,560.0	2.17	256.64	5,491.5	-178.8	-752.9	773.8	2.00	-2.00	0.00
5,600.0	1.37	256.64	5,531.4	-179.0	-754.1	775.1	2.00	-2.00	0.00
5,640.0	0.57	256.64	5,571.4	-179.2	-754.8	775.7	2.00	-2.00	0.00
5,668.6	0.00	0.00	5,600.0	-179.2	-754.9	775.9	2.00	-2.00	361.91
Back to Vertical - TARGET BHL 676'FSL, 672'FWL									

Database: Landmark
Company: Great Western
Project: SEC.26-T7N-R65W
Site: Andrews 26-23 Pad Sec.26-T7N-R65W
Well: Andrews 26-14
Wellbore: Wellbore #1
Design: Plan #2 (5-14-12)

Local Co-ordinate Reference: Well Andrews 26-14
TVD Reference: WELL @ 4885.0ft (Original Well Elev)
MD Reference: WELL @ 4885.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	5,611.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,720.0	0.00	0.00	5,651.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,760.0	0.00	0.00	5,691.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,731.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,840.0	0.00	0.00	5,771.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,880.0	0.00	0.00	5,811.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,920.0	0.00	0.00	5,851.4	-179.2	-754.9	775.9	0.00	0.00	0.00
5,960.0	0.00	0.00	5,891.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,000.0	0.00	0.00	5,931.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,040.0	0.00	0.00	5,971.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,080.0	0.00	0.00	6,011.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,120.0	0.00	0.00	6,051.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,160.0	0.00	0.00	6,091.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,200.0	0.00	0.00	6,131.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,240.0	0.00	0.00	6,171.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,280.0	0.00	0.00	6,211.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,320.0	0.00	0.00	6,251.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,360.0	0.00	0.00	6,291.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,331.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,440.0	0.00	0.00	6,371.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,480.0	0.00	0.00	6,411.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,520.0	0.00	0.00	6,451.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,560.0	0.00	0.00	6,491.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,531.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,640.0	0.00	0.00	6,571.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,680.0	0.00	0.00	6,611.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,720.0	0.00	0.00	6,651.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,760.0	0.00	0.00	6,691.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,800.0	0.00	0.00	6,731.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,840.0	0.00	0.00	6,771.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,880.0	0.00	0.00	6,811.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,920.0	0.00	0.00	6,851.4	-179.2	-754.9	775.9	0.00	0.00	0.00
6,950.6	0.00	0.00	6,882.0	-179.2	-754.9	775.9	0.00	0.00	0.00
NIOBRARA									
6,952.6	0.00	0.00	6,884.0	-179.2	-754.9	775.9	0.00	0.00	0.00
TARGET CIRCLE 676'FSL & 672'FWL - LEGAL BOX 400' X 400' 681'FSL & 673'FWL									
6,960.0	0.00	0.00	6,891.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,931.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,040.0	0.00	0.00	6,971.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,080.0	0.00	0.00	7,011.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,120.0	0.00	0.00	7,051.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,160.0	0.00	0.00	7,091.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,131.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,236.6	0.00	0.00	7,168.0	-179.2	-754.9	775.9	0.00	0.00	0.00
FORT HAYES									
7,240.0	0.00	0.00	7,171.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,259.6	0.00	0.00	7,191.0	-179.2	-754.9	775.9	0.00	0.00	0.00
CODELL									
7,280.0	0.00	0.00	7,211.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,320.0	0.00	0.00	7,251.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,360.0	0.00	0.00	7,291.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,331.4	-179.2	-754.9	775.9	0.00	0.00	0.00
7,419.6	0.00	0.00	7,351.0	-179.2	-754.9	775.9	0.00	0.00	0.00
TD at 7419.6									

Database:	Landmark	Local Co-ordinate Reference:	Well Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-12)		

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)

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									
TARGET CIRCLE 676' - plan hits target center - Circle (radius 100.0)	0.00	0.00	6,884.0	-179.2	-754.9	1,440,886.62	3,239,743.25	40.540433	-104.637394
LEGAL BOX 400' X 400' - plan misses target center by 5.1ft at 6952.6ft MD (6884.0 TVD, -179.2 N, -754.9 E) - Rectangle (sides W400.0 H400.0 D469.0)	0.00	0.00	6,884.0	-174.2	-753.9	1,440,891.66	3,239,744.19	40.540447	-104.637390
TARGET BHL 676'FS - plan hits target center - Point	0.00	0.00	5,600.0	-179.2	-754.9	1,440,886.62	3,239,743.25	40.540433	-104.637394

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 (°)
3,280.2	3,246.0	GREELEY SAND		0.00	
3,899.7	3,855.0	PARKMAN		0.00	
4,620.8	4,564.0	SUSSEX		0.00	
5,238.9	5,172.0	SHANNON		0.00	
6,950.6	6,882.0	NIOBRARA		0.00	
7,236.6	7,168.0	FORT HAYES		0.00	
7,259.6	7,191.0	CODELL		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
900.0	900.0	0.0	0.0	KOP - Start Build 2.00
1,426.8	1,423.8	-11.2	-47.0	Start 3715.0 hold at 1426.8 MD
5,141.8	5,076.2	-168.1	-707.9	Start Drop -2.00
5,668.6	5,600.0	-179.2	-754.9	Back to Vertical
7,419.6	7,351.0	-179.2	-754.9	TD at 7419.6



Great Western

SEC.26-T7N-R65W

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

Andrews 26-14

Wellbore #1

Plan #2 (5-14-12)

Anticollision Report

17 May, 2012

Company:	Great Western	Local Co-ordinate Reference:	Well Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (5-14-12)		
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	7,419.6	Plan #2 (5-14-12) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Andrews 26-23 Pad Sec.26-T7N-R65W						
Andrews 26-13 - Wellbore #1 - Plan #2 (5-14-12)	200.0	200.0	14.7	14.0	21.834	CC
Andrews 26-13 - Wellbore #1 - Plan #2 (5-14-12)	300.0	299.9	14.9	13.8	13.261	ES
Andrews 26-13 - Wellbore #1 - Plan #2 (5-14-12)	400.0	399.6	16.5	14.9	10.466	SF
Andrews 26-24 - Wellbore #1 - Plan #1 (5-11-12)	900.0	900.0	44.1	40.3	11.541	CC, ES
Andrews 26-24 - Wellbore #1 - Plan #1 (5-11-12)	1,000.0	999.6	45.9	41.7	10.844	SF

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-13 - Wellbore #1 - Plan #2 (5-14-12)													Offset Site Error: 0.0ft
Survey Program: 0-MWD													Offset Well Error: 0.0ft
Reference Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	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	39.93	11.3	9.4	14.7	14.7	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	39.93	11.3	9.4	14.7	14.5	0.22	65.503	
200.0	200.0	200.0	200.0	0.3	0.3	39.93	11.3	9.4	14.7	14.0	0.67	21.834	CC
206.6	206.6	206.6	206.6	0.4	0.4	39.90	11.3	9.4	14.7	14.0	0.70	20.914	
300.0	300.0	299.9	299.9	0.6	0.6	33.21	12.5	8.2	14.9	13.8	1.12	13.261	ES
400.0	400.0	399.6	399.5	0.8	0.8	15.04	15.9	4.3	16.5	14.9	1.58	10.466	SF
500.0	500.0	498.8	498.2	1.0	1.0	-5.23	21.8	-2.0	22.0	19.9	2.04	10.762	
600.0	600.0	597.2	595.9	1.2	1.3	-17.90	30.5	-9.9	32.3	29.8	2.52	12.820	
700.0	700.0	694.7	692.3	1.5	1.6	-24.40	42.1	-19.1	46.9	43.9	3.05	15.396	
800.0	800.0	791.1	787.0	1.7	2.0	-27.73	56.5	-29.7	65.2	61.5	3.62	18.017	
900.0	900.0	886.1	879.8	1.9	2.4	-29.48	73.5	-41.5	86.8	82.6	4.23	20.514	
1,000.0	1,000.0	979.9	970.6	2.1	2.8	73.33	92.9	-54.5	111.2	106.8	4.40	25.290	
1,100.0	1,099.8	1,074.5	1,061.5	2.3	3.3	74.25	114.8	-68.8	137.4	132.5	4.86	28.255	
1,200.0	1,199.5	1,170.9	1,154.0	2.5	3.9	75.96	137.5	-83.4	163.2	157.8	5.35	30.508	
1,300.0	1,298.7	1,267.3	1,246.6	2.8	4.4	78.12	160.2	-98.1	188.5	182.6	5.88	32.062	
1,400.0	1,397.5	1,363.6	1,339.0	3.1	4.9	80.60	182.9	-112.8	213.5	207.1	6.47	33.027	
1,500.0	1,495.8	1,459.7	1,431.2	3.4	5.5	83.43	205.5	-127.4	238.7	231.6	7.12	33.536	
1,600.0	1,594.1	1,555.8	1,523.5	3.7	6.0	85.87	228.1	-142.1	264.4	256.6	7.81	33.860	
1,700.0	1,692.4	1,651.8	1,615.7	4.1	6.6	87.87	250.7	-156.7	290.5	281.9	8.52	34.075	
1,800.0	1,790.7	1,747.9	1,707.9	4.4	7.1	89.55	273.3	-171.3	316.8	307.5	9.26	34.217	
1,900.0	1,889.1	1,844.0	1,800.2	4.8	7.7	90.97	295.9	-186.0	343.3	333.3	10.01	34.311	
2,000.0	1,987.4	1,940.1	1,892.4	5.2	8.2	92.19	318.5	-200.6	370.0	359.3	10.77	34.373	

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 Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	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						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	
2,100.0	2,085.7	2,036.2	1,984.6	5.6	8.8	93.24	341.2	-215.3	396.9	385.4	11.53	34.413	
2,200.0	2,184.0	2,132.3	2,076.9	6.0	9.3	94.16	363.8	-229.9	423.9	411.5	12.31	34.439	
2,300.0	2,282.3	2,228.4	2,169.1	6.4	9.9	94.97	386.4	-244.5	450.9	437.8	13.09	34.454	
2,400.0	2,380.6	2,324.5	2,261.4	6.8	10.5	95.69	409.0	-259.2	478.0	464.1	13.87	34.463	
2,500.0	2,478.9	2,420.6	2,353.6	7.2	11.0	96.33	431.6	-273.8	505.2	490.5	14.66	34.466	
2,600.0	2,577.3	2,516.6	2,445.8	7.6	11.6	96.91	454.2	-288.4	532.4	517.0	15.45	34.466	
2,700.0	2,675.6	2,612.7	2,538.1	8.0	12.1	97.43	476.8	-303.1	559.7	543.5	16.24	34.464	
2,800.0	2,773.9	2,708.8	2,630.3	8.4	12.7	97.90	499.4	-317.7	587.0	570.0	17.04	34.460	
2,900.0	2,872.2	2,804.9	2,722.5	8.8	13.2	98.33	522.0	-332.4	614.4	596.6	17.83	34.455	
3,000.0	2,970.5	2,901.0	2,814.8	9.2	13.8	98.72	544.7	-347.0	641.8	623.1	18.63	34.449	
3,100.0	3,068.8	2,997.1	2,907.0	9.6	14.3	99.08	567.3	-361.6	669.2	649.8	19.43	34.442	
3,200.0	3,167.1	3,093.2	2,999.2	10.0	14.9	99.42	589.9	-376.3	696.6	676.4	20.23	34.436	
3,300.0	3,265.5	3,189.3	3,091.5	10.4	15.5	99.72	612.5	-390.9	724.1	703.0	21.03	34.429	
3,400.0	3,363.8	3,285.3	3,183.7	10.8	16.0	100.01	635.1	-405.5	751.5	729.7	21.83	34.422	
3,500.0	3,462.1	3,381.4	3,275.9	11.3	16.6	100.27	657.7	-420.2	779.0	756.4	22.64	34.415	
3,600.0	3,560.4	3,477.5	3,368.2	11.7	17.1	100.52	680.3	-434.8	806.5	783.1	23.44	34.408	
3,700.0	3,658.7	3,573.6	3,460.4	12.1	17.7	100.75	702.9	-449.4	834.0	809.8	24.24	34.401	
3,800.0	3,757.0	3,669.7	3,552.7	12.5	18.3	100.97	725.6	-464.1	861.6	836.5	25.05	34.395	
3,900.0	3,855.3	3,765.8	3,644.9	12.9	18.8	101.17	748.2	-478.7	889.1	863.2	25.85	34.388	
4,000.0	3,953.7	3,861.9	3,737.1	13.3	19.4	101.36	770.8	-493.4	916.6	890.0	26.66	34.382	
4,100.0	4,052.0	3,958.0	3,829.4	13.8	19.9	101.54	793.4	-508.0	944.2	916.7	27.47	34.376	
4,200.0	4,150.3	4,054.1	3,921.6	14.2	20.5	101.71	816.0	-522.6	971.8	943.5	28.27	34.370	
4,300.0	4,248.6	4,150.1	4,013.8	14.6	21.0	101.87	838.6	-537.3	999.3	970.2	29.08	34.365	
4,400.0	4,346.9	4,246.2	4,106.1	15.0	21.6	102.02	861.2	-551.9	1,026.9	997.0	29.89	34.359	
4,500.0	4,445.2	4,342.3	4,198.3	15.4	22.2	102.17	883.8	-566.5	1,054.5	1,023.8	30.69	34.354	
4,600.0	4,543.5	4,438.4	4,290.5	15.8	22.7	102.30	906.4	-581.2	1,082.1	1,050.6	31.50	34.348	
4,700.0	4,641.9	4,534.5	4,382.8	16.3	23.3	102.43	929.1	-595.8	1,109.7	1,077.3	32.31	34.343	
4,800.0	4,740.2	4,630.6	4,475.0	16.7	23.8	102.55	951.7	-610.4	1,137.3	1,104.1	33.12	34.338	
4,900.0	4,838.5	4,726.7	4,567.2	17.1	24.4	102.67	974.3	-625.1	1,164.9	1,130.9	33.93	34.333	
5,000.0	4,936.8	4,822.8	4,659.5	17.5	25.0	102.78	996.9	-639.7	1,192.5	1,157.7	34.74	34.329	
5,100.0	5,035.1	4,918.8	4,751.7	17.9	25.5	102.89	1,019.5	-654.4	1,220.1	1,184.5	35.55	34.324	
5,200.0	5,133.5	5,015.0	4,844.0	18.3	26.1	103.29	1,042.1	-669.0	1,247.6	1,211.2	36.39	34.284	
5,300.0	5,232.5	5,111.3	4,936.5	18.6	26.6	103.75	1,064.8	-683.7	1,274.3	1,237.2	37.16	34.297	
5,400.0	5,331.8	5,228.0	5,048.6	18.8	27.2	104.00	1,091.9	-701.2	1,300.1	1,262.2	37.89	34.311	
5,500.0	5,431.5	5,385.4	5,201.6	19.0	27.9	104.02	1,123.0	-721.3	1,321.6	1,283.0	38.56	34.271	
5,600.0	5,531.4	5,546.2	5,359.7	19.2	28.4	103.91	1,147.5	-737.2	1,337.7	1,298.6	39.11	34.203	
5,700.0	5,631.4	5,709.5	5,521.7	19.3	28.8	0.28	1,164.7	-748.3	1,348.4	1,308.9	39.53	34.110	
5,800.0	5,731.4	5,874.6	5,686.3	19.4	29.1	0.02	1,174.2	-754.5	1,354.1	1,314.3	39.87	33.962	
5,900.0	5,831.4	6,019.7	5,831.4	19.6	29.2	-0.03	1,176.0	-755.7	1,355.3	1,315.1	40.18	33.733	
6,000.0	5,931.4	6,119.7	5,931.4	19.7	29.3	-0.03	1,176.0	-755.7	1,355.3	1,314.8	40.45	33.507	
6,100.0	6,031.4	6,219.7	6,031.4	19.8	29.4	-0.03	1,176.0	-755.7	1,355.3	1,314.6	40.72	33.281	
6,200.0	6,131.4	6,319.7	6,131.4	20.0	29.5	-0.03	1,176.0	-755.7	1,355.3	1,314.3	41.00	33.055	
6,300.0	6,231.4	6,419.7	6,231.4	20.1	29.6	-0.03	1,176.0	-755.7	1,355.3	1,314.0	41.28	32.830	
6,400.0	6,331.4	6,519.7	6,331.4	20.3	29.7	-0.03	1,176.0	-755.7	1,355.3	1,313.7	41.56	32.606	
6,500.0	6,431.4	6,619.7	6,431.4	20.4	29.8	-0.03	1,176.0	-755.7	1,355.3	1,313.4	41.85	32.383	
6,600.0	6,531.4	6,719.7	6,531.4	20.5	29.9	-0.03	1,176.0	-755.7	1,355.3	1,313.1	42.14	32.161	
6,700.0	6,631.4	6,819.7	6,631.4	20.7	30.0	-0.03	1,176.0	-755.7	1,355.3	1,312.8	42.43	31.939	
6,800.0	6,731.4	6,919.7	6,731.4	20.8	30.1	-0.03	1,176.0	-755.7	1,355.3	1,312.5	42.73	31.719	
6,900.0	6,831.4	7,019.7	6,831.4	21.0	30.2	-0.03	1,176.0	-755.7	1,355.3	1,312.2	43.03	31.499	
7,000.0	6,931.4	7,119.7	6,931.4	21.1	30.3	-0.03	1,176.0	-755.7	1,355.3	1,311.9	43.33	31.281	
7,100.0	7,031.4	7,219.7	7,031.4	21.3	30.4	-0.03	1,176.0	-755.7	1,355.3	1,311.6	43.63	31.064	
7,200.0	7,131.4	7,319.7	7,131.4	21.4	30.5	-0.03	1,176.0	-755.7	1,355.3	1,311.3	43.93	30.848	

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 Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	Offset TVD Reference:	Offset Datum

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-13 - Wellbore #1 - Plan #2 (5-14-12)												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
7,300.0	7,231.4	7,419.7	7,231.4	21.6	30.7	-0.03	1,176.0	-755.7	1,355.3	1,311.0	44.24	30.633	
7,400.0	7,331.4	7,519.7	7,331.4	21.7	30.8	-0.03	1,176.0	-755.7	1,355.3	1,310.7	44.55	30.420	
7,419.6	7,351.0	7,539.3	7,351.0	21.8	30.8	-0.03	1,176.0	-755.7	1,355.3	1,310.7	44.61	30.378	

Company:	Great Western	Local Co-ordinate Reference:	Well Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	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							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		
0.0	0.0	0.0	0.0	0.0	0.0	39.07	34.2	27.8	44.1					
100.0	100.0	100.0	100.0	0.1	0.1	39.07	34.2	27.8	44.1	43.9	0.22	196.201		
200.0	200.0	200.0	200.0	0.3	0.3	39.07	34.2	27.8	44.1	43.4	0.67	65.400		
300.0	300.0	300.0	300.0	0.6	0.6	39.07	34.2	27.8	44.1	43.0	1.12	39.240		
400.0	400.0	400.0	400.0	0.8	0.8	39.07	34.2	27.8	44.1	42.5	1.57	28.029		
500.0	500.0	500.0	500.0	1.0	1.0	39.07	34.2	27.8	44.1	42.1	2.02	21.800		
600.0	600.0	600.0	600.0	1.2	1.2	39.07	34.2	27.8	44.1	41.6	2.47	17.836		
700.0	700.0	700.0	700.0	1.5	1.5	39.07	34.2	27.8	44.1	41.2	2.92	15.092		
800.0	800.0	800.0	800.0	1.7	1.7	39.07	34.2	27.8	44.1	40.7	3.37	13.080		
900.0	900.0	900.0	900.0	1.9	1.9	39.07	34.2	27.8	44.1	40.3	3.82	11.541 CC, ES		
1,000.0	1,000.0	999.6	999.6	2.1	2.1	145.85	33.4	29.3	45.9	41.7	4.23	10.844 SF		
1,100.0	1,099.8	1,098.6	1,098.4	2.3	2.3	154.50	31.0	33.9	52.2	47.6	4.62	11.290		
1,200.0	1,199.5	1,196.3	1,195.7	2.5	2.5	164.68	27.1	41.3	64.5	59.5	5.02	12.843		
1,300.0	1,298.7	1,292.1	1,290.9	2.8	2.7	173.47	21.8	51.5	83.9	78.5	5.44	15.433		
1,400.0	1,397.5	1,385.7	1,383.3	3.1	3.0	-179.95	15.1	64.1	110.3	104.5	5.86	18.841		
1,500.0	1,495.8	1,479.1	1,475.3	3.4	3.3	-175.32	7.4	78.8	142.0	135.7	6.30	22.553		
1,600.0	1,594.1	1,573.3	1,568.0	3.7	3.6	-172.31	-0.4	93.8	174.5	167.7	6.75	25.864		
1,700.0	1,692.4	1,667.6	1,660.7	4.1	3.9	-170.25	-8.3	108.7	207.2	200.0	7.21	28.756		
1,800.0	1,790.7	1,761.8	1,753.5	4.4	4.2	-168.75	-16.1	123.6	240.2	232.5	7.68	31.284		
1,900.0	1,889.1	1,856.1	1,846.2	4.8	4.6	-167.61	-24.0	138.6	273.2	265.1	8.16	33.488		
2,000.0	1,987.4	1,950.4	1,938.9	5.2	4.9	-166.72	-31.8	153.5	306.4	297.7	8.65	35.434		
2,100.0	2,085.7	2,044.6	2,031.7	5.6	5.3	-166.00	-39.7	168.5	339.5	330.4	9.14	37.151		
2,200.0	2,184.0	2,138.9	2,124.4	6.0	5.6	-165.40	-47.5	183.4	372.8	363.1	9.64	38.674		
2,300.0	2,282.3	2,233.1	2,217.1	6.4	6.0	-164.91	-55.4	198.4	406.0	395.9	10.14	40.031		
2,400.0	2,380.6	2,327.4	2,309.9	6.8	6.4	-164.49	-63.2	213.3	439.3	428.6	10.65	41.247		
2,500.0	2,478.9	2,421.6	2,402.6	7.2	6.8	-164.13	-71.1	228.2	472.6	461.4	11.16	42.341		
2,600.0	2,577.3	2,515.9	2,495.3	7.6	7.1	-163.82	-78.9	243.2	505.9	494.2	11.68	43.328		
2,700.0	2,675.6	2,610.2	2,588.1	8.0	7.5	-163.54	-86.8	258.1	539.2	527.0	12.19	44.224		
2,800.0	2,773.9	2,704.4	2,680.8	8.4	7.9	-163.30	-94.6	273.1	572.5	559.8	12.71	45.039		
2,900.0	2,872.2	2,798.7	2,773.5	8.8	8.3	-163.08	-102.5	288.0	605.9	592.6	13.23	45.784		
3,000.0	2,970.5	2,892.9	2,866.3	9.2	8.6	-162.89	-110.3	302.9	639.2	625.5	13.76	46.466		
3,100.0	3,068.8	2,987.2	2,959.0	9.6	9.0	-162.72	-118.2	317.9	672.6	658.3	14.28	47.093		
3,200.0	3,167.1	3,081.4	3,051.7	10.0	9.4	-162.56	-126.0	332.8	705.9	691.1	14.81	47.671		
3,300.0	3,265.5	3,175.7	3,144.5	10.4	9.8	-162.41	-133.9	347.8	739.3	723.9	15.34	48.206		
3,400.0	3,363.8	3,270.0	3,237.2	10.8	10.2	-162.28	-141.7	362.7	772.6	756.8	15.86	48.702		
3,500.0	3,462.1	3,364.2	3,329.9	11.3	10.5	-162.16	-149.6	377.6	806.0	789.6	16.39	49.162		
3,600.0	3,560.4	3,458.5	3,422.7	11.7	10.9	-162.05	-157.4	392.6	839.4	822.4	16.93	49.591		
3,700.0	3,658.7	3,552.7	3,515.4	12.1	11.3	-161.95	-165.3	407.5	872.7	855.3	17.46	49.991		
3,800.0	3,757.0	3,647.0	3,608.1	12.5	11.7	-161.85	-173.1	422.5	906.1	888.1	17.99	50.365		
3,900.0	3,855.3	3,741.2	3,700.9	12.9	12.1	-161.77	-180.9	437.4	939.5	921.0	18.52	50.716		
4,000.0	3,953.7	3,835.5	3,793.6	13.3	12.5	-161.68	-188.8	452.4	972.9	953.8	19.06	51.045		
4,100.0	4,052.0	3,929.8	3,886.3	13.8	12.9	-161.61	-196.6	467.3	1,006.2	986.6	19.59	51.355		
4,200.0	4,150.3	4,024.0	3,979.1	14.2	13.2	-161.54	-204.5	482.2	1,039.6	1,019.5	20.13	51.646		
4,300.0	4,248.6	4,118.3	4,071.8	14.6	13.6	-161.47	-212.3	497.2	1,073.0	1,052.3	20.67	51.921		
4,400.0	4,346.9	4,212.5	4,164.5	15.0	14.0	-161.41	-220.2	512.1	1,106.4	1,085.2	21.20	52.181		
4,500.0	4,445.2	4,306.8	4,257.3	15.4	14.4	-161.35	-228.0	527.1	1,139.8	1,118.0	21.74	52.427		
4,600.0	4,543.5	4,439.8	4,388.4	15.8	14.8	-161.31	-238.3	546.5	1,172.1	1,149.8	22.33	52.481		
4,700.0	4,641.9	4,595.0	4,542.6	16.3	15.2	-161.41	-246.7	562.6	1,200.0	1,177.1	22.91	52.366		
4,800.0	4,740.2	4,754.2	4,701.5	16.7	15.5	-161.67	-251.3	571.3	1,223.0	1,199.5	23.47	52.101		
4,900.0	4,838.5	4,891.3	4,838.5	17.1	15.7	-162.01	-252.1	572.8	1,241.3	1,217.3	23.98	51.763		
5,000.0	4,936.8	4,989.6	4,936.8	17.5	15.8	-162.26	-252.1	572.8	1,258.7	1,234.3	24.43	51.534		
5,100.0	5,035.1	5,087.9	5,035.1	17.9	16.0	-162.51	-252.1	572.8	1,276.2	1,251.3	24.87	51.313		

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

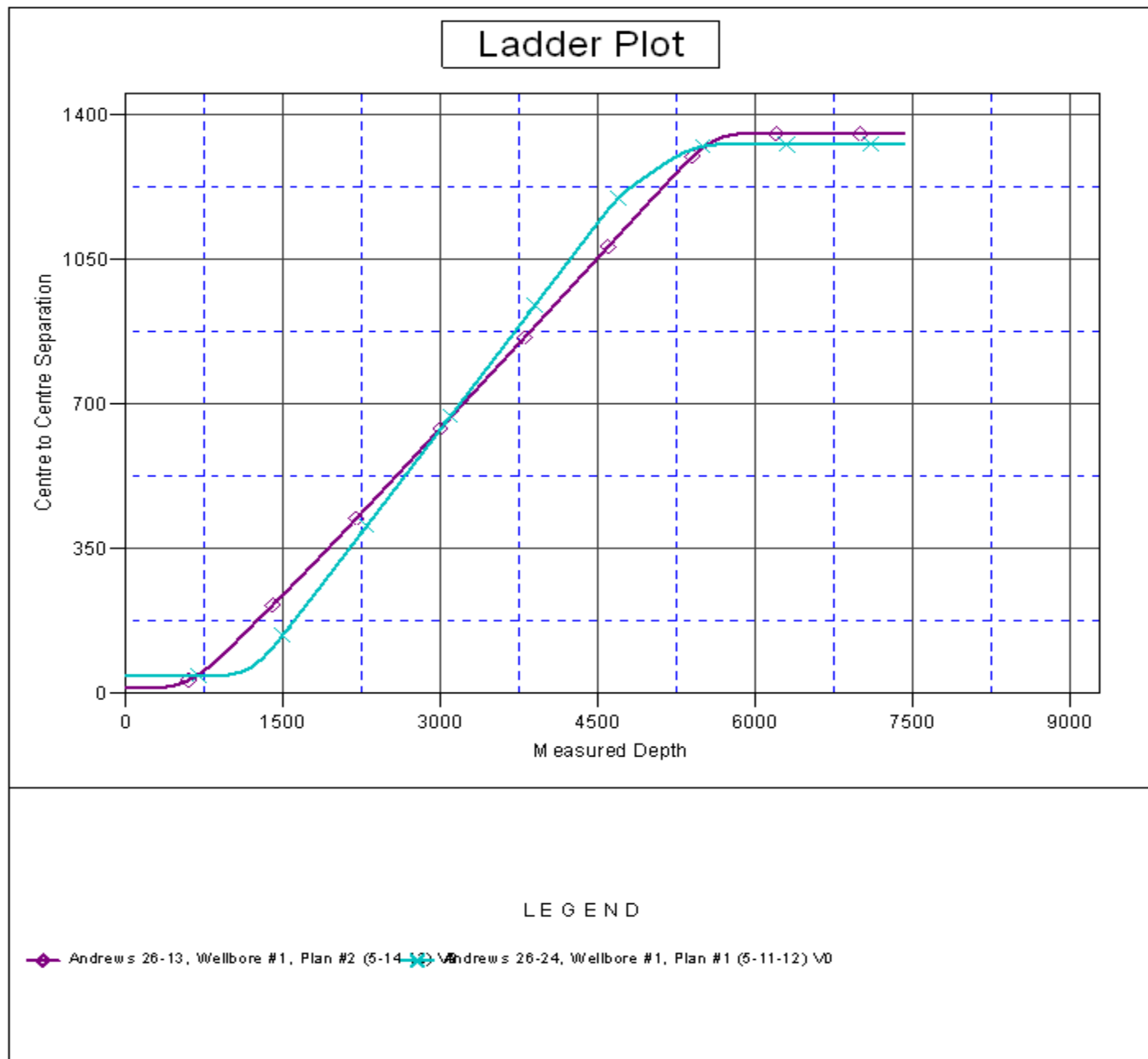
Company:	Great Western	Local Co-ordinate Reference:	Well Andrews 26-14
Project:	SEC.26-T7N-R65W	TVD Reference:	WELL @ 4885.0ft (Original Well Elev)
Reference Site:	Andrews 26-23 Pad Sec.26-T7N-R65W	MD Reference:	WELL @ 4885.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Andrews 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	Offset TVD Reference:	Offset Datum

Offset Design Andrews 26-23 Pad Sec.26-T7N-R65W - Andrews 26-24 - Wellbore #1 - Plan #1 (5-11-12)													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		
5,200.0	5,133.5	5,186.3	5,133.5	18.3	16.1	-162.81	-252.1	572.8	1,293.1	1,267.8	25.36	50.989		
5,300.0	5,232.5	5,285.2	5,232.5	18.6	16.3	-163.08	-252.1	572.8	1,307.0	1,281.2	25.83	50.607		
5,400.0	5,331.8	5,384.6	5,331.8	18.8	16.4	-163.28	-252.1	572.8	1,317.7	1,291.4	26.26	50.176		
5,500.0	5,431.5	5,484.3	5,431.5	19.0	16.5	-163.41	-252.1	572.8	1,325.0	1,298.3	26.66	49.698		
5,600.0	5,531.4	5,584.2	5,531.4	19.2	16.7	-163.49	-252.1	572.8	1,328.9	1,301.9	27.02	49.175		
5,700.0	5,631.4	5,684.2	5,631.4	19.3	16.8	93.14	-252.1	572.8	1,329.7	1,302.4	27.37	48.580		
5,800.0	5,731.4	5,784.2	5,731.4	19.4	17.0	93.14	-252.1	572.8	1,329.7	1,302.0	27.73	47.957		
5,900.0	5,831.4	5,884.2	5,831.4	19.6	17.1	93.14	-252.1	572.8	1,329.7	1,301.6	28.09	47.345		
6,000.0	5,931.4	5,984.2	5,931.4	19.7	17.3	93.14	-252.1	572.8	1,329.7	1,301.3	28.45	46.744		
6,100.0	6,031.4	6,084.2	6,031.4	19.8	17.5	93.14	-252.1	572.8	1,329.7	1,300.9	28.81	46.154		
6,200.0	6,131.4	6,184.2	6,131.4	20.0	17.6	93.14	-252.1	572.8	1,329.7	1,300.6	29.18	45.576		
6,300.0	6,231.4	6,284.2	6,231.4	20.1	17.8	93.14	-252.1	572.8	1,329.7	1,300.2	29.54	45.008		
6,400.0	6,331.4	6,384.2	6,331.4	20.3	17.9	93.14	-252.1	572.8	1,329.7	1,299.8	29.91	44.450		
6,500.0	6,431.4	6,484.2	6,431.4	20.4	18.1	93.14	-252.1	572.8	1,329.7	1,299.4	30.29	43.904		
6,600.0	6,531.4	6,584.2	6,531.4	20.5	18.3	93.14	-252.1	572.8	1,329.7	1,299.1	30.66	43.367		
6,700.0	6,631.4	6,684.2	6,631.4	20.7	18.4	93.14	-252.1	572.8	1,329.7	1,298.7	31.04	42.841		
6,800.0	6,731.4	6,784.2	6,731.4	20.8	18.6	93.14	-252.1	572.8	1,329.7	1,298.3	31.42	42.325		
6,900.0	6,831.4	6,884.2	6,831.4	21.0	18.7	93.14	-252.1	572.8	1,329.7	1,297.9	31.80	41.819		
7,000.0	6,931.4	6,984.2	6,931.4	21.1	18.9	93.14	-252.1	572.8	1,329.7	1,297.6	32.18	41.322		
7,100.0	7,031.4	7,084.2	7,031.4	21.3	19.1	93.14	-252.1	572.8	1,329.7	1,297.2	32.56	40.835		
7,200.0	7,131.4	7,184.2	7,131.4	21.4	19.3	93.14	-252.1	572.8	1,329.7	1,296.8	32.95	40.357		
7,300.0	7,231.4	7,284.2	7,231.4	21.6	19.4	93.14	-252.1	572.8	1,329.7	1,296.4	33.34	39.889		
7,400.0	7,331.4	7,384.2	7,331.4	21.7	19.6	93.14	-252.1	572.8	1,329.7	1,296.0	33.72	39.429		
7,419.6	7,351.0	7,386.8	7,334.0	21.8	19.6	93.14	-252.1	572.8	1,329.8	1,296.1	33.77	39.382		

Company: Great Western
Project: SEC.26-T7N-R65W
Reference Site: Andrews 26-23 Pad Sec.26-T7N-R65W
Site Error: 0.0ft
Reference Well: Andrews 26-14
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #2 (5-14-12)

Local Co-ordinate Reference: Well Andrews 26-14
TVD Reference: WELL @ 4885.0ft (Original Well Elev)
MD Reference: WELL @ 4885.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

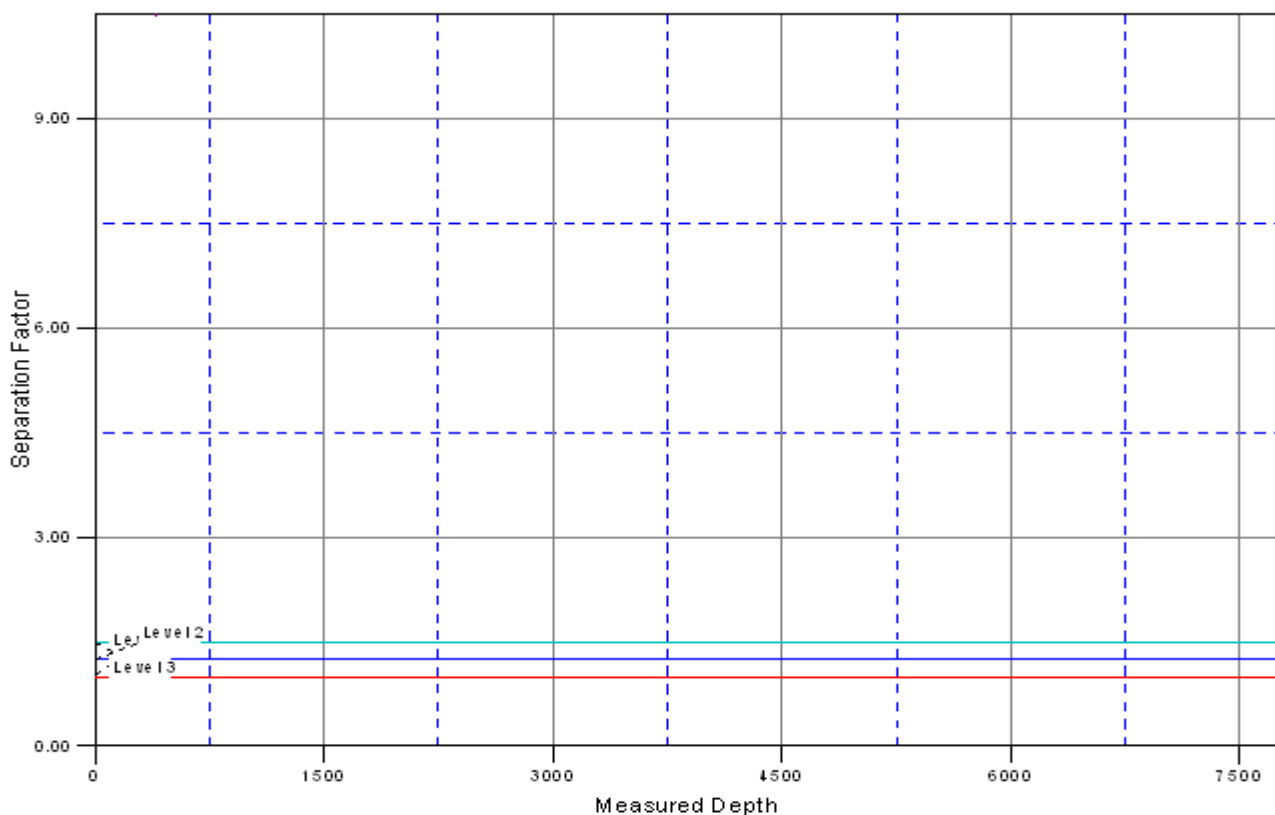
Reference Depths are relative to WELL @ 4885.0ft (Original Well Elev) Coordinates are relative to: Andrews 26-14
 Offset Depths are relative to Offset Datum
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 °
 Grid Convergence at Surface is: 0.56°



Company:	Great Western	Local Co-ordinate Reference:	Well Andrews 26-14
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 26-14	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (5-14-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4885.0ft (Original Well Elev) Coordinates are relative to: Andrews 26-14
 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°

Separation Factor Plot



LEGEND

—◆— Andrews 26-13, Wellbore #1, Plan #2 (5-14-12) V0
 —◆— Andrews 26-24, Wellbore #1, Plan #1 (5-11-12) V0