

ENSIGN

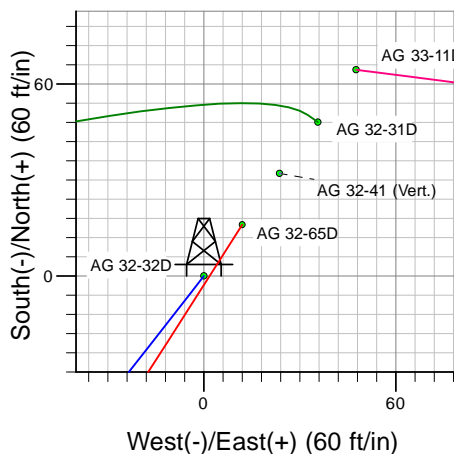
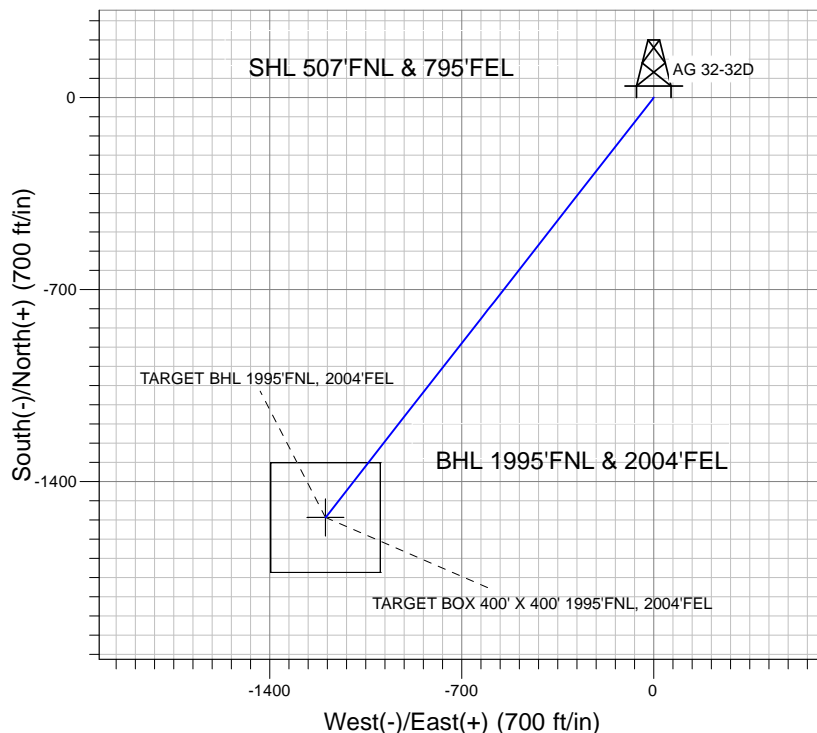
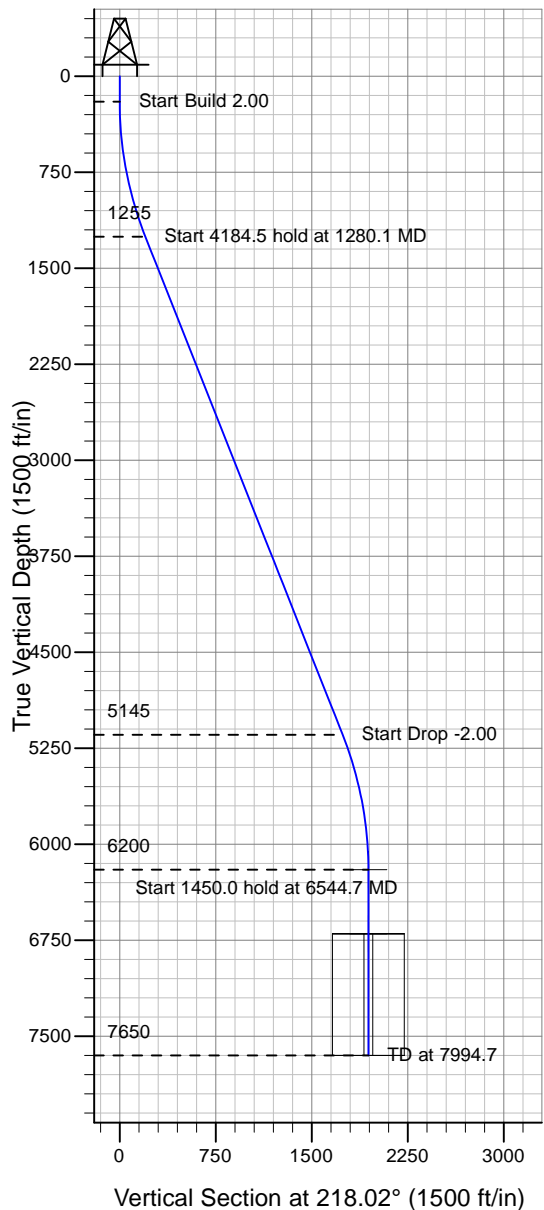
Directional

Well Name: AG 32-32D

Surface Location: AG 32-31D Pad Sec.32-T6N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4712.0

+N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1407742.67 3196128.51 40° 27' 1.857 N 104° 47' 42.943 W
 Original Well Elev WELL @ 4726.0ft (Original Well Elev)

ORR ENERGY



AG 32-31D Pad Sec.32-T6N-R66W
 AG 32-32D
 Plan #1 (2-9-10)
 14:59, February 10 2010



Azimuths to True North
 Magnetic North: 9.04°
 Magnetic Field
 Strength: 53328.2snT
 Dip Angle: 67.14°
 Date: 12/31/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1995'FNL, 2004'FEL	6200.0	-1530.7	-1196.8	40° 26' 46.732 N	104° 47' 58.422 W	Point
TARGET BOX 400' X 400' 1995'FNL, 2004'FEL	6700.0	-1530.7	-1196.8	40° 26' 46.731 N	104° 47' 58.423 W	Rectangle (Sides: L400.0 W400.0)

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	1280.1	21.60	218.02	1254.7	-158.5	-123.9	2.00	218.02	201.2	
4	5464.6	21.60	218.02	5145.3	-1372.2	-1072.8	0.00	0.00	1741.8	
5	6544.7	0.00	0.00	6200.0	-1530.7	-1196.8	2.00	180.00	1943.0	TARGET BHL 1995'FNL, 2004'FEL
6	7994.7	0.00	0.00	7650.0	-1530.7	-1196.8	0.00	0.00	1943.0	



ORR ENERGY

SEC.32-T6N-R66W

AG 32-31D Pad Sec.32-T6N-R66W

AG 32-32D

Wellbore #1

Plan: Plan #1 (2-9-10)

Standard Planning Report

10 February, 2010

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
Company:	ORR ENERGY	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

Project	SEC.32-T6N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						AG 32-31D Pad Sec.32-T6N-R66W											
Site Position:						Northing:			1,407,791.05ft			Latitude:			40° 27' 2.333 N		
From:			Lat/Long			Easting:			3,196,163.75ft			Longitude:			104° 47' 42.482 W		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.46 °		

Well	AG 32-32D					
Well Position	+N-S	-48.1 ft	Northing:	1,407,742.67 ft	Latitude:	40° 27' 1.857 N
	+E-W	-35.6 ft	Easting:	3,196,128.51 ft	Longitude:	104° 47' 42.943 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,712.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.04	67.14	53,328

Design	Plan #1 (2-9-10)			
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	218.02

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	
1,280.1	21.60	218.02	1,254.7	-158.5	-123.9	2.00	2.00	0.00	218.02	
5,464.6	21.60	218.02	5,145.3	-1,372.2	-1,072.8	0.00	0.00	0.00	0.00	
6,544.7	0.00	0.00	6,200.0	-1,530.7	-1,196.8	2.00	-2.00	0.00	180.00	TARGET BHL 1995
7,994.7	0.00	0.00	7,650.0	-1,530.7	-1,196.8	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
Company:	ORR ENERGY	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

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	0.80	218.02	240.0	-0.2	-0.2	0.3	2.00	2.00	0.00
280.0	1.60	218.02	280.0	-0.9	-0.7	1.1	2.00	2.00	0.00
320.0	2.40	218.02	320.0	-2.0	-1.5	2.5	2.00	2.00	0.00
360.0	3.20	218.02	359.9	-3.5	-2.8	4.5	2.00	2.00	0.00
400.0	4.00	218.02	399.8	-5.5	-4.3	7.0	2.00	2.00	0.00
440.0	4.80	218.02	439.7	-7.9	-6.2	10.0	2.00	2.00	0.00
480.0	5.60	218.02	479.6	-10.8	-8.4	13.7	2.00	2.00	0.00
520.0	6.40	218.02	519.3	-14.1	-11.0	17.9	2.00	2.00	0.00
560.0	7.20	218.02	559.1	-17.8	-13.9	22.6	2.00	2.00	0.00
600.0	8.00	218.02	598.7	-22.0	-17.2	27.9	2.00	2.00	0.00
640.0	8.80	218.02	638.3	-26.6	-20.8	33.7	2.00	2.00	0.00
680.0	9.60	218.02	677.8	-31.6	-24.7	40.1	2.00	2.00	0.00
720.0	10.40	218.02	717.1	-37.1	-29.0	47.1	2.00	2.00	0.00
760.0	11.20	218.02	756.4	-43.0	-33.6	54.6	2.00	2.00	0.00
800.0	12.00	218.02	795.6	-49.3	-38.6	62.6	2.00	2.00	0.00
840.0	12.80	218.02	834.7	-56.1	-43.8	71.2	2.00	2.00	0.00
880.0	13.60	218.02	873.6	-63.3	-49.5	80.3	2.00	2.00	0.00
920.0	14.40	218.02	912.4	-70.9	-55.4	90.0	2.00	2.00	0.00
960.0	15.20	218.02	951.1	-79.0	-61.7	100.2	2.00	2.00	0.00
1,000.0	16.00	218.02	989.6	-87.4	-68.4	111.0	2.00	2.00	0.00
1,040.0	16.80	218.02	1,028.0	-96.3	-75.3	122.3	2.00	2.00	0.00
1,080.0	17.60	218.02	1,066.2	-105.6	-82.6	134.1	2.00	2.00	0.00
1,120.0	18.40	218.02	1,104.3	-115.4	-90.2	146.5	2.00	2.00	0.00
1,160.0	19.20	218.02	1,142.1	-125.5	-98.1	159.3	2.00	2.00	0.00
1,200.0	20.00	218.02	1,179.8	-136.1	-106.4	172.8	2.00	2.00	0.00
1,240.0	20.80	218.02	1,217.3	-147.1	-115.0	186.7	2.00	2.00	0.00
1,280.0	21.60	218.02	1,254.6	-158.5	-123.9	201.2	2.00	2.00	0.00
1,280.1	21.60	218.02	1,254.7	-158.5	-123.9	201.2	2.00	2.00	0.00
1,320.0	21.60	218.02	1,291.8	-170.1	-133.0	215.9	0.00	0.00	0.00
1,360.0	21.60	218.02	1,329.0	-181.7	-142.1	230.6	0.00	0.00	0.00
1,400.0	21.60	218.02	1,366.2	-193.3	-151.1	245.4	0.00	0.00	0.00
1,440.0	21.60	218.02	1,403.4	-204.9	-160.2	260.1	0.00	0.00	0.00
1,480.0	21.60	218.02	1,440.6	-216.5	-169.3	274.8	0.00	0.00	0.00
1,520.0	21.60	218.02	1,477.7	-228.1	-178.3	289.5	0.00	0.00	0.00
1,560.0	21.60	218.02	1,514.9	-239.7	-187.4	304.3	0.00	0.00	0.00
1,600.0	21.60	218.02	1,552.1	-251.3	-196.5	319.0	0.00	0.00	0.00
1,640.0	21.60	218.02	1,589.3	-262.9	-205.5	333.7	0.00	0.00	0.00
1,680.0	21.60	218.02	1,626.5	-274.5	-214.6	348.4	0.00	0.00	0.00
1,720.0	21.60	218.02	1,663.7	-286.1	-223.7	363.2	0.00	0.00	0.00
1,760.0	21.60	218.02	1,700.9	-297.7	-232.8	377.9	0.00	0.00	0.00
1,800.0	21.60	218.02	1,738.1	-309.3	-241.8	392.6	0.00	0.00	0.00
1,840.0	21.60	218.02	1,775.3	-320.9	-250.9	407.3	0.00	0.00	0.00
1,880.0	21.60	218.02	1,812.5	-332.5	-260.0	422.1	0.00	0.00	0.00
1,920.0	21.60	218.02	1,849.6	-344.1	-269.0	436.8	0.00	0.00	0.00
1,960.0	21.60	218.02	1,886.8	-355.7	-278.1	451.5	0.00	0.00	0.00
2,000.0	21.60	218.02	1,924.0	-367.3	-287.2	466.3	0.00	0.00	0.00
2,040.0	21.60	218.02	1,961.2	-378.9	-296.3	481.0	0.00	0.00	0.00
2,080.0	21.60	218.02	1,998.4	-390.5	-305.3	495.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
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Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,120.0	21.60	218.02	2,035.6	-402.1	-314.4	510.4	0.00	0.00	0.00
2,160.0	21.60	218.02	2,072.8	-413.7	-323.5	525.2	0.00	0.00	0.00
2,200.0	21.60	218.02	2,110.0	-425.3	-332.5	539.9	0.00	0.00	0.00
2,240.0	21.60	218.02	2,147.2	-436.9	-341.6	554.6	0.00	0.00	0.00
2,280.0	21.60	218.02	2,184.4	-448.5	-350.7	569.3	0.00	0.00	0.00
2,320.0	21.60	218.02	2,221.6	-460.1	-359.7	584.1	0.00	0.00	0.00
2,360.0	21.60	218.02	2,258.7	-471.7	-368.8	598.8	0.00	0.00	0.00
2,400.0	21.60	218.02	2,295.9	-483.3	-377.9	613.5	0.00	0.00	0.00
2,440.0	21.60	218.02	2,333.1	-494.9	-387.0	628.2	0.00	0.00	0.00
2,480.0	21.60	218.02	2,370.3	-506.5	-396.0	643.0	0.00	0.00	0.00
2,520.0	21.60	218.02	2,407.5	-518.1	-405.1	657.7	0.00	0.00	0.00
2,560.0	21.60	218.02	2,444.7	-529.7	-414.2	672.4	0.00	0.00	0.00
2,600.0	21.60	218.02	2,481.9	-541.3	-423.2	687.1	0.00	0.00	0.00
2,640.0	21.60	218.02	2,519.1	-552.9	-432.3	701.9	0.00	0.00	0.00
2,680.0	21.60	218.02	2,556.3	-564.5	-441.4	716.6	0.00	0.00	0.00
2,720.0	21.60	218.02	2,593.5	-576.1	-450.5	731.3	0.00	0.00	0.00
2,760.0	21.60	218.02	2,630.6	-587.7	-459.5	746.1	0.00	0.00	0.00
2,800.0	21.60	218.02	2,667.8	-599.3	-468.6	760.8	0.00	0.00	0.00
2,840.0	21.60	218.02	2,705.0	-610.9	-477.7	775.5	0.00	0.00	0.00
2,880.0	21.60	218.02	2,742.2	-622.5	-486.7	790.2	0.00	0.00	0.00
2,920.0	21.60	218.02	2,779.4	-634.1	-495.8	805.0	0.00	0.00	0.00
2,960.0	21.60	218.02	2,816.6	-645.7	-504.9	819.7	0.00	0.00	0.00
3,000.0	21.60	218.02	2,853.8	-657.3	-513.9	834.4	0.00	0.00	0.00
3,040.0	21.60	218.02	2,891.0	-668.9	-523.0	849.1	0.00	0.00	0.00
3,080.0	21.60	218.02	2,928.2	-680.5	-532.1	863.9	0.00	0.00	0.00
3,120.0	21.60	218.02	2,965.4	-692.1	-541.2	878.6	0.00	0.00	0.00
3,160.0	21.60	218.02	3,002.6	-703.8	-550.2	893.3	0.00	0.00	0.00
3,200.0	21.60	218.02	3,039.7	-715.4	-559.3	908.0	0.00	0.00	0.00
3,240.0	21.60	218.02	3,076.9	-727.0	-568.4	922.8	0.00	0.00	0.00
3,280.0	21.60	218.02	3,114.1	-738.6	-577.4	937.5	0.00	0.00	0.00
3,320.0	21.60	218.02	3,151.3	-750.2	-586.5	952.2	0.00	0.00	0.00
3,360.0	21.60	218.02	3,188.5	-761.8	-595.6	966.9	0.00	0.00	0.00
3,400.0	21.60	218.02	3,225.7	-773.4	-604.6	981.7	0.00	0.00	0.00
3,440.0	21.60	218.02	3,262.9	-785.0	-613.7	996.4	0.00	0.00	0.00
3,480.0	21.60	218.02	3,300.1	-796.6	-622.8	1,011.1	0.00	0.00	0.00
3,520.0	21.60	218.02	3,337.3	-808.2	-631.9	1,025.9	0.00	0.00	0.00
3,560.0	21.60	218.02	3,374.5	-819.8	-640.9	1,040.6	0.00	0.00	0.00
3,600.0	21.60	218.02	3,411.6	-831.4	-650.0	1,055.3	0.00	0.00	0.00
3,640.0	21.60	218.02	3,448.8	-843.0	-659.1	1,070.0	0.00	0.00	0.00
3,680.0	21.60	218.02	3,486.0	-854.6	-668.1	1,084.8	0.00	0.00	0.00
3,720.0	21.60	218.02	3,523.2	-866.2	-677.2	1,099.5	0.00	0.00	0.00
3,760.0	21.60	218.02	3,560.4	-877.8	-686.3	1,114.2	0.00	0.00	0.00
3,800.0	21.60	218.02	3,597.6	-889.4	-695.4	1,128.9	0.00	0.00	0.00
3,840.0	21.60	218.02	3,634.8	-901.0	-704.4	1,143.7	0.00	0.00	0.00
3,880.0	21.60	218.02	3,672.0	-912.6	-713.5	1,158.4	0.00	0.00	0.00
3,920.0	21.60	218.02	3,709.2	-924.2	-722.6	1,173.1	0.00	0.00	0.00
3,960.0	21.60	218.02	3,746.4	-935.8	-731.6	1,187.8	0.00	0.00	0.00
4,000.0	21.60	218.02	3,783.6	-947.4	-740.7	1,202.6	0.00	0.00	0.00
4,040.0	21.60	218.02	3,820.7	-959.0	-749.8	1,217.3	0.00	0.00	0.00
4,080.0	21.60	218.02	3,857.9	-970.6	-758.8	1,232.0	0.00	0.00	0.00
4,120.0	21.60	218.02	3,895.1	-982.2	-767.9	1,246.8	0.00	0.00	0.00
4,160.0	21.60	218.02	3,932.3	-993.8	-777.0	1,261.5	0.00	0.00	0.00
4,200.0	21.60	218.02	3,969.5	-1,005.4	-786.1	1,276.2	0.00	0.00	0.00
4,240.0	21.60	218.02	4,006.7	-1,017.0	-795.1	1,290.9	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
Company:	ORR ENERGY	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,280.0	21.60	218.02	4,043.9	-1,028.6	-804.2	1,305.7	0.00	0.00	0.00
4,320.0	21.60	218.02	4,081.1	-1,040.2	-813.3	1,320.4	0.00	0.00	0.00
4,360.0	21.60	218.02	4,118.3	-1,051.8	-822.3	1,335.1	0.00	0.00	0.00
4,400.0	21.60	218.02	4,155.5	-1,063.4	-831.4	1,349.8	0.00	0.00	0.00
4,440.0	21.60	218.02	4,192.6	-1,075.0	-840.5	1,364.6	0.00	0.00	0.00
4,480.0	21.60	218.02	4,229.8	-1,086.6	-849.6	1,379.3	0.00	0.00	0.00
4,520.0	21.60	218.02	4,267.0	-1,098.2	-858.6	1,394.0	0.00	0.00	0.00
4,560.0	21.60	218.02	4,304.2	-1,109.8	-867.7	1,408.7	0.00	0.00	0.00
4,600.0	21.60	218.02	4,341.4	-1,121.4	-876.8	1,423.5	0.00	0.00	0.00
4,640.0	21.60	218.02	4,378.6	-1,133.0	-885.8	1,438.2	0.00	0.00	0.00
4,680.0	21.60	218.02	4,415.8	-1,144.6	-894.9	1,452.9	0.00	0.00	0.00
4,720.0	21.60	218.02	4,453.0	-1,156.2	-904.0	1,467.6	0.00	0.00	0.00
4,760.0	21.60	218.02	4,490.2	-1,167.8	-913.0	1,482.4	0.00	0.00	0.00
4,800.0	21.60	218.02	4,527.4	-1,179.4	-922.1	1,497.1	0.00	0.00	0.00
4,840.0	21.60	218.02	4,564.6	-1,191.0	-931.2	1,511.8	0.00	0.00	0.00
4,880.0	21.60	218.02	4,601.7	-1,202.6	-940.3	1,526.6	0.00	0.00	0.00
4,920.0	21.60	218.02	4,638.9	-1,214.2	-949.3	1,541.3	0.00	0.00	0.00
4,960.0	21.60	218.02	4,676.1	-1,225.8	-958.4	1,556.0	0.00	0.00	0.00
5,000.0	21.60	218.02	4,713.3	-1,237.4	-967.5	1,570.7	0.00	0.00	0.00
5,040.0	21.60	218.02	4,750.5	-1,249.0	-976.5	1,585.5	0.00	0.00	0.00
5,080.0	21.60	218.02	4,787.7	-1,260.6	-985.6	1,600.2	0.00	0.00	0.00
5,120.0	21.60	218.02	4,824.9	-1,272.2	-994.7	1,614.9	0.00	0.00	0.00
5,160.0	21.60	218.02	4,862.1	-1,283.8	-1,003.8	1,629.6	0.00	0.00	0.00
5,200.0	21.60	218.02	4,899.3	-1,295.4	-1,012.8	1,644.4	0.00	0.00	0.00
5,240.0	21.60	218.02	4,936.5	-1,307.0	-1,021.9	1,659.1	0.00	0.00	0.00
5,280.0	21.60	218.02	4,973.6	-1,318.6	-1,031.0	1,673.8	0.00	0.00	0.00
5,320.0	21.60	218.02	5,010.8	-1,330.2	-1,040.0	1,688.5	0.00	0.00	0.00
5,360.0	21.60	218.02	5,048.0	-1,341.8	-1,049.1	1,703.3	0.00	0.00	0.00
5,400.0	21.60	218.02	5,085.2	-1,353.4	-1,058.2	1,718.0	0.00	0.00	0.00
5,440.0	21.60	218.02	5,122.4	-1,365.0	-1,067.2	1,732.7	0.00	0.00	0.00
5,464.6	21.60	218.02	5,145.3	-1,372.2	-1,072.8	1,741.8	0.00	0.00	0.00
5,480.0	21.29	218.02	5,159.6	-1,376.6	-1,076.3	1,747.4	2.00	-2.00	0.00
5,520.0	20.49	218.02	5,197.0	-1,387.8	-1,085.1	1,761.7	2.00	-2.00	0.00
5,560.0	19.69	218.02	5,234.6	-1,398.7	-1,093.5	1,775.4	2.00	-2.00	0.00
5,600.0	18.89	218.02	5,272.3	-1,409.1	-1,101.7	1,788.6	2.00	-2.00	0.00
5,640.0	18.09	218.02	5,310.2	-1,419.1	-1,109.5	1,801.3	2.00	-2.00	0.00
5,680.0	17.29	218.02	5,348.3	-1,428.7	-1,117.0	1,813.5	2.00	-2.00	0.00
5,720.0	16.49	218.02	5,386.6	-1,437.8	-1,124.1	1,825.1	2.00	-2.00	0.00
5,760.0	15.69	218.02	5,425.0	-1,446.5	-1,131.0	1,836.2	2.00	-2.00	0.00
5,800.0	14.89	218.02	5,463.6	-1,454.9	-1,137.5	1,846.7	2.00	-2.00	0.00
5,840.0	14.09	218.02	5,502.4	-1,462.7	-1,143.6	1,856.8	2.00	-2.00	0.00
5,880.0	13.29	218.02	5,541.2	-1,470.2	-1,149.5	1,866.2	2.00	-2.00	0.00
5,920.0	12.49	218.02	5,580.2	-1,477.2	-1,155.0	1,875.2	2.00	-2.00	0.00
5,960.0	11.69	218.02	5,619.3	-1,483.8	-1,160.1	1,883.5	2.00	-2.00	0.00
6,000.0	10.89	218.02	5,658.5	-1,490.0	-1,165.0	1,891.4	2.00	-2.00	0.00
6,040.0	10.09	218.02	5,697.9	-1,495.8	-1,169.4	1,898.7	2.00	-2.00	0.00
6,080.0	9.29	218.02	5,737.3	-1,501.1	-1,173.6	1,905.4	2.00	-2.00	0.00
6,120.0	8.49	218.02	5,776.8	-1,505.9	-1,177.4	1,911.6	2.00	-2.00	0.00
6,160.0	7.69	218.02	5,816.4	-1,510.4	-1,180.9	1,917.2	2.00	-2.00	0.00
6,200.0	6.89	218.02	5,856.1	-1,514.4	-1,184.0	1,922.3	2.00	-2.00	0.00
6,240.0	6.09	218.02	5,895.8	-1,517.9	-1,186.8	1,926.8	2.00	-2.00	0.00
6,280.0	5.29	218.02	5,935.6	-1,521.1	-1,189.2	1,930.8	2.00	-2.00	0.00
6,320.0	4.49	218.02	5,975.5	-1,523.7	-1,191.3	1,934.2	2.00	-2.00	0.00
6,360.0	3.69	218.02	6,015.4	-1,526.0	-1,193.1	1,937.0	2.00	-2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
Company:	ORR ENERGY	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

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)
6,400.0	2.89	218.02	6,055.3	-1,527.8	-1,194.5	1,939.3	2.00	-2.00	0.00
6,440.0	2.09	218.02	6,095.3	-1,529.2	-1,195.6	1,941.1	2.00	-2.00	0.00
6,480.0	1.29	218.02	6,135.3	-1,530.1	-1,196.3	1,942.3	2.00	-2.00	0.00
6,520.0	0.49	218.02	6,175.3	-1,530.6	-1,196.7	1,942.9	2.00	-2.00	0.00
6,544.7	0.00	0.00	6,200.0	-1,530.7	-1,196.8	1,943.0	2.00	-2.00	0.00
TARGET BHL 1995'FNL, 2004'FEL									
6,560.0	0.00	0.00	6,215.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,255.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,295.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,335.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,375.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,415.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,455.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,495.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,535.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,575.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,615.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,655.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,695.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,044.7	0.00	0.00	6,700.0	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
TARGET BOX 400' X 400' 1995'FNL, 2004'FEL									
7,080.0	0.00	0.00	6,735.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,775.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,160.0	0.00	0.00	6,815.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,200.0	0.00	0.00	6,855.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,240.0	0.00	0.00	6,895.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,280.0	0.00	0.00	6,935.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,320.0	0.00	0.00	6,975.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,015.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,055.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,095.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,135.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,175.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,215.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,255.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,295.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,335.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,375.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,760.0	0.00	0.00	7,415.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,455.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,840.0	0.00	0.00	7,495.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,880.0	0.00	0.00	7,535.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,920.0	0.00	0.00	7,575.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,960.0	0.00	0.00	7,615.3	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00
7,994.7	0.00	0.00	7,650.0	-1,530.7	-1,196.8	1,943.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well AG 32-32D
Company:	ORR ENERGY	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Project:	SEC.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site:	AG 32-31D Pad Sec.32-T6N-R66W	North Reference:	True
Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (2-9-10)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
TARGET BHL 1995'F	0.00	0.00	6,200.0	-1,530.7	-1,196.8	1,406,202.58	3,194,944.00	40° 26' 46.732 N	104° 47' 58.422 W
- plan hits target center									
- Point									
TARGET BOX 400' X	0.00	0.00	6,700.0	-1,530.7	-1,196.8	1,406,202.57	3,194,943.96	40° 26' 46.731 N	104° 47' 58.423 W
- plan hits target center									
- Rectangle (sides W400.0 H400.0 D950.0)									



ORR ENERGY

SEC.32-T6N-R66W

AG 32-31D Pad Sec.32-T6N-R66W

AG 32-32D

Wellbore #1

Plan #1 (2-9-10)

Anticollision Report

10 February, 2010

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (2-9-10)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCSWA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 2,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	2/10/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,994.7	Plan #1 (2-9-10) (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
AG 32-31D Pad Sec.32-T6N-R66W						
AG 32-41 (Vert.) - Wellbore #1 - Design #1	200.0	200.0	39.9	39.2	61.998	CC, ES
AG 32-41 (Vert.) - Wellbore #1 - Design #1	600.0	598.7	67.7	65.3	27.977	SF
AG 32-65D - Wellbore #1 - Plan #1 (2-9-10)	200.0	200.0	20.0	19.4	31.119	CC, ES
AG 32-65D - Wellbore #1 - Plan #1 (2-9-10)	400.0	399.8	27.0	25.5	17.783	SF

AG 32-31D Pad Sec.32-T6N-R66W - AG 32-41 (Vert.) - Wellbore #1 - Design #1												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	36.35	32.1	23.6	39.9					
100.0	100.0	100.0	100.0	0.1	0.1	36.35	32.1	23.6	39.9	39.7	0.19	206.180		
200.0	200.0	200.0	200.0	0.3	0.3	36.35	32.1	23.6	39.9	39.2	0.64	61.998 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	178.40	32.1	23.6	41.6	40.5	1.08	38.541		
400.0	399.8	399.8	399.8	0.7	0.8	178.58	32.1	23.6	46.8	45.3	1.52	30.864		
500.0	499.5	499.5	499.5	1.0	1.0	178.80	32.1	23.6	55.5	53.6	1.97	28.248		
600.0	598.7	598.7	598.7	1.3	1.2	179.01	32.1	23.6	67.7	65.3	2.42	27.977 SF		
700.0	697.5	697.5	697.5	1.6	1.4	179.19	32.1	23.6	83.4	80.5	2.88	28.955		
800.0	795.6	795.6	795.6	2.0	1.7	179.34	32.1	23.6	102.4	99.1	3.34	30.664		
900.0	893.1	893.1	893.1	2.5	1.9	179.45	32.1	23.6	124.9	121.1	3.81	32.830		
1,000.0	989.6	989.6	989.6	3.0	2.1	179.54	32.1	23.6	150.8	146.5	4.27	35.292		
1,100.0	1,085.3	1,085.3	1,085.3	3.5	2.3	179.61	32.1	23.6	180.1	175.3	4.74	37.952		
1,200.0	1,179.8	1,179.8	1,179.8	4.2	2.5	179.67	32.1	23.6	212.6	207.4	5.22	40.745		
1,300.0	1,273.2	1,273.2	1,273.2	4.9	2.7	179.71	32.1	23.6	248.4	242.7	5.70	43.581		
1,400.0	1,366.2	1,366.2	1,366.2	5.6	2.9	179.75	32.1	23.6	285.2	279.0	6.21	45.957		
1,500.0	1,459.1	1,459.1	1,459.1	6.3	3.2	179.78	32.1	23.6	322.0	315.3	6.72	47.933		
1,600.0	1,552.1	1,552.1	1,552.1	7.1	3.4	179.80	32.1	23.6	358.8	351.6	7.23	49.600		
1,700.0	1,645.1	1,645.1	1,645.1	7.8	3.6	179.82	32.1	23.6	395.6	387.9	7.75	51.023		
1,800.0	1,738.1	1,738.1	1,738.1	8.6	3.8	179.83	32.1	23.6	432.5	424.2	8.28	52.249		
1,900.0	1,831.1	1,831.1	1,831.1	9.3	4.0	179.85	32.1	23.6	469.3	460.5	8.80	53.315		
2,000.0	1,924.0	1,924.0	1,924.0	10.0	4.2	179.86	32.1	23.6	506.1	496.8	9.33	54.251		
2,100.0	2,017.0	2,017.0	2,017.0	10.8	4.4	179.87	32.1	23.6	542.9	533.0	9.86	55.078		
2,200.0	2,110.0	2,110.0	2,110.0	11.5	4.6	179.88	32.1	23.6	579.7	569.3	10.39	55.814		

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

AG 32-31D Pad Sec.32-T6N-R66W - AG 32-41 (Vert.) - Wellbore #1 - Design #1													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		
2,300.0	2,203.0	2,203.0	2,203.0	12.3	4.8	179.88	32.1	23.6	616.5	605.6	10.92	56.472		
2,400.0	2,295.9	2,295.9	2,295.9	13.0	5.0	179.89	32.1	23.6	653.4	641.9	11.45	57.065		
2,500.0	2,388.9	2,388.9	2,388.9	13.8	5.2	179.90	32.1	23.6	690.2	678.2	11.98	57.600		
2,600.0	2,481.9	2,481.9	2,481.9	14.5	5.5	179.90	32.1	23.6	727.0	714.5	12.52	58.087		
2,700.0	2,574.9	2,574.9	2,574.9	15.3	5.7	179.91	32.1	23.6	763.8	750.8	13.05	58.530		
2,800.0	2,667.8	2,667.8	2,667.8	16.1	5.9	179.91	32.1	23.6	800.6	787.0	13.58	58.936		
2,900.0	2,760.8	2,760.8	2,760.8	16.8	6.1	179.91	32.1	23.6	837.4	823.3	14.12	59.309		
3,000.0	2,853.8	2,853.8	2,853.8	17.6	6.3	179.92	32.1	23.6	874.2	859.6	14.66	59.653		
3,100.0	2,946.8	2,946.8	2,946.8	18.3	6.5	179.92	32.1	23.6	911.1	895.9	15.19	59.971		
3,200.0	3,039.7	3,039.7	3,039.7	19.1	6.7	179.92	32.1	23.6	947.9	932.2	15.73	60.265		
3,300.0	3,132.7	3,132.7	3,132.7	19.8	6.9	179.93	32.1	23.6	984.7	968.4	16.27	60.538		
3,400.0	3,225.7	3,225.7	3,225.7	20.6	7.1	179.93	32.1	23.6	1,021.5	1,004.7	16.80	60.793		
3,500.0	3,318.7	3,318.7	3,318.7	21.3	7.3	179.93	32.1	23.6	1,058.3	1,041.0	17.34	61.030		
3,600.0	3,411.6	3,411.6	3,411.6	22.1	7.5	179.93	32.1	23.6	1,095.1	1,077.3	17.88	61.253		
3,700.0	3,504.6	3,504.6	3,504.6	22.8	7.7	179.94	32.1	23.6	1,132.0	1,113.5	18.42	61.461		
3,800.0	3,597.6	3,597.6	3,597.6	23.6	8.0	179.94	32.1	23.6	1,168.8	1,149.8	18.96	61.656		
3,900.0	3,690.6	3,690.6	3,690.6	24.3	8.2	179.94	32.1	23.6	1,205.6	1,186.1	19.50	61.840		
4,000.0	3,783.6	3,783.6	3,783.6	25.1	8.4	179.94	32.1	23.6	1,242.4	1,222.4	20.03	62.013		
4,100.0	3,876.5	3,876.5	3,876.5	25.8	8.6	179.94	32.1	23.6	1,279.2	1,258.7	20.57	62.176		
4,200.0	3,969.5	3,969.5	3,969.5	26.6	8.8	179.95	32.1	23.6	1,316.0	1,294.9	21.11	62.330		
4,300.0	4,062.5	4,062.5	4,062.5	27.4	9.0	179.95	32.1	23.6	1,352.9	1,331.2	21.65	62.475		
4,400.0	4,155.5	4,155.5	4,155.5	28.1	9.2	179.95	32.1	23.6	1,389.7	1,367.5	22.19	62.613		
4,500.0	4,248.4	4,248.4	4,248.4	28.9	9.4	179.95	32.1	23.6	1,426.5	1,403.8	22.74	62.744		
4,600.0	4,341.4	4,341.4	4,341.4	29.6	9.6	179.95	32.1	23.6	1,463.3	1,440.0	23.28	62.868		
4,700.0	4,434.4	4,434.4	4,434.4	30.4	9.8	179.95	32.1	23.6	1,500.1	1,476.3	23.82	62.986		
4,800.0	4,527.4	4,527.4	4,527.4	31.1	10.0	179.95	32.1	23.6	1,536.9	1,512.6	24.36	63.098		
4,900.0	4,620.3	4,620.3	4,620.3	31.9	10.3	179.95	32.1	23.6	1,573.8	1,548.9	24.90	63.204		
5,000.0	4,713.3	4,713.3	4,713.3	32.6	10.5	179.96	32.1	23.6	1,610.6	1,585.1	25.44	63.306		
5,100.0	4,806.3	4,806.3	4,806.3	33.4	10.7	179.96	32.1	23.6	1,647.4	1,621.4	25.98	63.402		
5,200.0	4,899.3	4,899.3	4,899.3	34.2	10.9	179.96	32.1	23.6	1,684.2	1,657.7	26.53	63.495		
5,300.0	4,992.2	4,992.2	4,992.2	34.9	11.1	179.96	32.1	23.6	1,721.0	1,693.9	27.07	63.583		
5,400.0	5,085.2	5,085.2	5,085.2	35.7	11.3	179.96	32.1	23.6	1,757.8	1,730.2	27.61	63.667		
5,500.0	5,178.3	5,178.3	5,178.3	36.4	11.5	179.96	32.1	23.6	1,794.4	1,766.3	28.19	63.652		
5,600.0	5,272.3	5,272.3	5,272.3	36.9	11.7	179.96	32.1	23.6	1,828.5	1,799.7	28.80	63.486		
5,700.0	5,367.5	5,367.5	5,367.5	37.3	11.9	179.96	32.1	23.6	1,859.2	1,829.8	29.37	63.303		
5,800.0	5,463.6	5,463.6	5,463.6	37.8	12.2	179.96	32.1	23.6	1,886.6	1,856.7	29.90	63.104		
5,900.0	5,560.7	5,560.7	5,560.7	38.2	12.4	179.96	32.1	23.6	1,910.6	1,880.2	30.38	62.892		
6,000.0	5,658.5	5,658.5	5,658.5	38.5	12.6	179.96	32.1	23.6	1,931.2	1,900.4	30.82	62.668		
6,100.0	5,757.1	5,757.1	5,757.1	38.8	12.8	179.97	32.1	23.6	1,948.4	1,917.2	31.21	62.433		
6,200.0	5,856.1	5,856.1	5,856.1	39.0	13.0	179.97	32.1	23.6	1,962.1	1,930.6	31.55	62.188		
6,300.0	5,955.6	5,955.6	5,955.6	39.2	13.3	179.97	32.1	23.6	1,972.4	1,940.5	31.85	61.933		
6,400.0	6,055.3	6,055.3	6,055.3	39.4	13.5	179.97	32.1	23.6	1,979.2	1,947.1	32.09	61.668		
6,500.0	6,155.3	6,155.3	6,155.3	39.5	13.7	179.97	32.1	23.6	1,982.5	1,950.2	32.29	61.393		
6,600.0	6,255.3	6,255.3	6,255.3	39.5	13.9	37.99	32.1	23.6	1,982.8	1,950.3	32.57	60.880		
6,700.0	6,355.3	6,355.3	6,355.3	39.6	14.2	37.99	32.1	23.6	1,982.8	1,949.9	32.92	60.225		
6,800.0	6,455.3	6,455.3	6,455.3	39.6	14.4	37.99	32.1	23.6	1,982.8	1,949.6	33.28	59.580		
6,900.0	6,555.3	6,555.3	6,555.3	39.7	14.6	37.99	32.1	23.6	1,982.8	1,949.2	33.64	58.946		
7,000.0	6,655.3	6,655.3	6,655.3	39.8	14.8	37.99	32.1	23.6	1,982.8	1,948.8	34.00	58.322		
7,100.0	6,755.3	6,755.3	6,755.3	39.8	15.1	37.99	32.1	23.6	1,982.8	1,948.5	34.36	57.709		
7,200.0	6,855.3	6,855.3	6,855.3	39.9	15.3	37.99	32.1	23.6	1,982.8	1,948.1	34.72	57.106		
7,300.0	6,955.3	6,955.3	6,955.3	40.0	15.5	37.99	32.1	23.6	1,982.8	1,947.8	35.09	56.513		
7,325.5	6,980.7	6,980.7	6,980.7	40.0	15.6	37.99	32.1	23.6	1,982.8	1,947.7	35.18	56.363		

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

Offset Design AG 32-31D Pad Sec.32-T6N-R66W - AG 32-41 (Vert.) - Wellbore #1 - Design #1												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	
7,400.0	7,055.3	7,000.0	7,000.0	40.1	15.6	37.99	32.1	23.6	1,983.6	1,948.3	35.33	56.147	
7,500.0	7,155.3	7,000.0	7,000.0	40.1	15.6	37.99	32.1	23.6	1,988.9	1,953.4	35.47	56.071	
7,600.0	7,255.3	7,000.0	7,000.0	40.2	15.6	37.99	32.1	23.6	1,999.2	1,963.6	35.62	56.132	

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

AG 32-31D Pad Sec.32-T6N-R66W - AG 32-65D - Wellbore #1 - Plan #1 (2-9-10)													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	36.74	16.0	12.0	20.0					
100.0	100.0	100.0	100.0	0.1	0.1	36.74	16.0	12.0	20.0	19.8	0.19	103.490		
200.0	200.0	200.0	200.0	0.3	0.3	36.74	16.0	12.0	20.0	19.4	0.64	31.119 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	178.83	16.0	12.0	21.7	20.7	1.08	20.150		
400.0	399.8	399.8	399.8	0.7	0.8	179.05	16.0	12.0	27.0	25.5	1.52	17.783 SF		
500.0	499.5	499.5	499.5	1.0	1.0	179.28	16.0	12.0	35.7	33.7	1.97	18.154		
600.0	598.7	598.7	598.7	1.3	1.2	179.46	16.0	12.0	47.9	45.5	2.42	19.779		
700.0	697.5	697.5	697.5	1.6	1.4	179.59	16.0	12.0	63.5	60.6	2.88	22.063		
800.0	795.6	795.6	795.6	2.0	1.7	179.68	16.0	12.0	82.6	79.3	3.34	24.725		
900.0	893.1	893.1	893.1	2.5	1.9	179.75	16.0	12.0	105.1	101.3	3.81	27.616		
1,000.0	989.6	989.6	989.6	3.0	2.1	179.80	16.0	12.0	131.0	126.7	4.27	30.649		
1,100.0	1,085.3	1,085.3	1,085.3	3.5	2.3	179.83	16.0	12.0	160.2	155.5	4.74	33.769		
1,200.0	1,179.8	1,179.8	1,179.8	4.2	2.5	179.86	16.0	12.0	192.8	187.5	5.22	36.943		
1,300.0	1,273.2	1,279.5	1,279.5	4.9	2.7	179.91	15.1	11.4	227.5	221.8	5.69	40.009		
1,400.0	1,366.2	1,382.8	1,382.7	5.6	2.9	-179.97	11.1	8.8	260.1	253.9	6.16	42.230		
1,500.0	1,459.1	1,488.6	1,488.1	6.3	3.1	-179.80	3.8	4.2	289.2	282.5	6.65	43.512		
1,600.0	1,552.1	1,596.6	1,595.3	7.1	3.3	-179.59	-7.1	-2.8	314.7	307.5	7.15	43.988		
1,700.0	1,645.1	1,706.6	1,704.0	7.8	3.6	-179.33	-21.6	-12.0	336.5	328.9	7.68	43.793		
1,800.0	1,738.1	1,818.4	1,813.6	8.6	3.9	-179.03	-40.0	-23.8	354.6	346.4	8.24	43.043		
1,900.0	1,831.1	1,931.5	1,923.6	9.3	4.3	-178.67	-62.3	-38.0	368.9	360.1	8.82	41.840		
2,000.0	1,924.0	2,041.9	2,029.9	10.0	4.8	-178.28	-87.5	-54.0	379.3	369.9	9.41	40.323		
2,100.0	2,017.0	2,141.5	2,125.4	10.8	5.2	-177.92	-111.1	-69.0	388.7	378.8	9.99	38.919		
2,200.0	2,110.0	2,241.0	2,220.9	11.5	5.7	-177.58	-134.7	-84.1	398.2	387.6	10.58	37.617		
2,300.0	2,203.0	2,340.5	2,316.4	12.3	6.2	-177.26	-158.3	-99.1	407.6	396.4	11.19	36.425		
2,400.0	2,295.9	2,440.0	2,411.9	13.0	6.7	-176.95	-181.9	-114.1	417.0	405.2	11.80	35.333		
2,500.0	2,388.9	2,539.6	2,507.5	13.8	7.2	-176.65	-205.5	-129.2	426.5	414.0	12.42	34.330		
2,600.0	2,481.9	2,639.1	2,603.0	14.5	7.8	-176.37	-229.1	-144.2	435.9	422.9	13.05	33.407		
2,700.0	2,574.9	2,738.6	2,698.5	15.3	8.3	-176.10	-252.7	-159.3	445.4	431.7	13.68	32.554		
2,800.0	2,667.8	2,838.2	2,794.0	16.1	8.9	-175.84	-276.3	-174.3	454.9	440.5	14.32	31.766		
2,900.0	2,760.8	2,937.7	2,889.5	16.8	9.4	-175.59	-299.9	-189.3	464.4	449.4	14.96	31.035		
3,000.0	2,853.8	3,037.2	2,985.0	17.6	10.0	-175.35	-323.5	-204.4	473.8	458.2	15.61	30.355		
3,100.0	2,946.8	3,136.7	3,080.5	18.3	10.5	-175.12	-347.1	-219.4	483.4	467.1	16.26	29.723		
3,200.0	3,039.7	3,236.3	3,176.1	19.1	11.1	-174.90	-370.7	-234.5	492.9	475.9	16.92	29.133		
3,300.0	3,132.7	3,335.8	3,271.6	19.8	11.6	-174.69	-394.3	-249.5	502.4	484.8	17.58	28.582		
3,400.0	3,225.7	3,435.3	3,367.1	20.6	12.2	-174.49	-417.9	-264.5	511.9	493.7	18.24	28.065		
3,500.0	3,318.7	3,534.9	3,462.6	21.3	12.8	-174.29	-441.5	-279.6	521.4	502.5	18.91	27.580		
3,600.0	3,411.6	3,634.4	3,558.1	22.1	13.3	-174.10	-465.1	-294.6	531.0	511.4	19.58	27.125		
3,700.0	3,504.6	3,733.9	3,653.6	22.8	13.9	-173.92	-488.7	-309.7	540.5	520.3	20.25	26.696		
3,800.0	3,597.6	3,833.5	3,749.1	23.6	14.5	-173.74	-512.3	-324.7	550.1	529.1	20.92	26.291		
3,900.0	3,690.6	3,933.0	3,844.7	24.3	15.0	-173.57	-535.9	-339.7	559.6	538.0	21.60	25.909		
4,000.0	3,783.6	4,032.5	3,940.2	25.1	15.6	-173.40	-559.5	-354.8	569.2	546.9	22.28	25.548		
4,100.0	3,876.5	4,132.0	4,035.7	25.8	16.2	-173.24	-583.1	-369.8	578.7	555.8	22.96	25.206		
4,200.0	3,969.5	4,231.6	4,131.2	26.6	16.8	-173.09	-606.7	-384.9	588.3	564.7	23.64	24.882		
4,300.0	4,062.5	4,331.1	4,226.7	27.4	17.3	-172.94	-630.3	-399.9	597.9	573.5	24.33	24.573		
4,400.0	4,155.5	4,430.6	4,322.2	28.1	17.9	-172.79	-653.9	-414.9	607.4	582.4	25.02	24.281		
4,500.0	4,248.4	4,530.2	4,417.7	28.9	18.5	-172.65	-677.5	-430.0	617.0	591.3	25.71	24.002		
4,600.0	4,341.4	4,629.7	4,513.3	29.6	19.1	-172.52	-701.1	-445.0	626.6	600.2	26.40	23.736		
4,700.0	4,434.4	4,729.2	4,608.8	30.4	19.7	-172.39	-724.7	-460.1	636.2	609.1	27.09	23.483		
4,800.0	4,527.4	4,826.9	4,702.5	31.1	20.2	-172.26	-747.8	-474.8	645.8	618.0	27.78	23.248		
4,900.0	4,620.3	4,900.0	4,773.0	31.9	20.6	-172.19	-764.2	-485.3	657.1	628.7	28.36	23.170		
5,000.0	4,713.3	4,989.0	4,859.4	32.6	20.9	-172.16	-782.1	-496.7	671.0	642.1	28.95	23.176		
5,100.0	4,806.3	5,069.1	4,937.7	33.4	21.2	-172.18	-796.3	-505.7	687.7	658.2	29.50	23.310		

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

AG 32-31D Pad Sec.32-T6N-R66W - AG 32-65D - Wellbore #1 - Plan #1 (2-9-10)													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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	4,899.3	5,148.4	5,015.7	34.2	21.4	-172.24	-808.5	-513.5	707.1	677.0	30.03	23.543		
5,300.0	4,992.2	5,226.8	5,093.2	34.9	21.6	-172.33	-818.8	-520.1	729.0	698.5	30.54	23.869		
5,400.0	5,085.2	5,300.0	5,165.7	35.7	21.8	-172.45	-826.8	-525.2	753.6	722.6	31.03	24.287		
5,500.0	5,178.3	5,380.6	5,245.9	36.4	22.0	-172.63	-833.8	-529.6	780.5	749.0	31.52	24.760		
5,600.0	5,272.3	5,456.4	5,321.4	36.9	22.1	-172.85	-838.6	-532.7	807.2	775.3	31.97	25.253		
5,700.0	5,367.5	5,531.8	5,396.8	37.3	22.3	-173.07	-841.7	-534.7	833.1	800.8	32.36	25.749		
5,800.0	5,463.6	5,606.9	5,471.9	37.8	22.4	-173.28	-843.2	-535.6	858.2	825.5	32.69	26.249		
5,900.0	5,560.7	5,695.8	5,560.7	38.2	22.5	-173.50	-843.3	-535.7	881.9	848.9	33.00	26.725		
6,000.0	5,658.5	5,793.6	5,658.5	38.5	22.6	-173.69	-843.3	-535.7	902.4	869.1	33.27	27.125		
6,100.0	5,757.1	5,892.1	5,757.1	38.8	22.7	-173.84	-843.3	-535.7	919.4	885.9	33.50	27.450		
6,200.0	5,856.1	5,991.2	5,856.1	39.0	22.8	-173.96	-843.3	-535.7	933.1	899.4	33.68	27.701		
6,300.0	5,955.6	6,090.6	5,955.6	39.2	22.9	-174.05	-843.3	-535.7	943.3	909.5	33.83	27.883		
6,400.0	6,055.3	6,190.4	6,055.3	39.4	23.0	-174.11	-843.3	-535.7	950.1	916.1	33.93	27.997		
6,500.0	6,155.3	6,290.3	6,155.3	39.5	23.1	-174.13	-843.3	-535.7	953.4	919.4	34.00	28.043		
6,600.0	6,255.3	6,390.3	6,255.3	39.5	23.2	43.88	-843.3	-535.7	953.7	919.5	34.19	27.898		
6,700.0	6,355.3	6,490.3	6,355.3	39.6	23.3	43.88	-843.3	-535.7	953.7	919.2	34.48	27.656		
6,800.0	6,455.3	6,590.3	6,455.3	39.6	23.4	43.88	-843.3	-535.7	953.7	918.9	34.79	27.416		
6,900.0	6,555.3	6,690.3	6,555.3	39.7	23.5	43.88	-843.3	-535.7	953.7	918.6	35.09	27.177		
7,000.0	6,655.3	6,790.3	6,655.3	39.8	23.7	43.88	-843.3	-535.7	953.7	918.3	35.40	26.941		
7,100.0	6,755.3	6,890.3	6,755.3	39.8	23.8	43.88	-843.3	-535.7	953.7	918.0	35.71	26.706		
7,200.0	6,855.3	6,990.3	6,855.3	39.9	23.9	43.88	-843.3	-535.7	953.7	917.7	36.02	26.474		
7,300.0	6,955.3	7,090.3	6,955.3	40.0	24.0	43.88	-843.3	-535.7	953.7	917.4	36.34	26.243		
7,400.0	7,055.3	7,190.3	7,055.3	40.1	24.2	43.88	-843.3	-535.7	953.7	917.0	36.66	26.014		
7,500.0	7,155.3	7,290.3	7,155.3	40.1	24.3	43.88	-843.3	-535.7	953.7	916.7	36.98	25.788		
7,600.0	7,255.3	7,390.3	7,255.3	40.2	24.4	43.88	-843.3	-535.7	953.7	916.4	37.31	25.564		
7,700.0	7,355.3	7,490.3	7,355.3	40.3	24.5	43.88	-843.3	-535.7	953.7	916.1	37.63	25.342		
7,800.0	7,455.3	7,590.3	7,455.3	40.3	24.7	43.88	-843.3	-535.7	953.7	915.7	37.96	25.122		
7,900.0	7,555.3	7,690.3	7,555.3	40.4	24.8	43.88	-843.3	-535.7	953.7	915.4	38.29	24.904		
7,994.7	7,650.0	7,785.1	7,650.0	40.5	24.9	43.88	-843.3	-535.7	953.7	915.1	38.61	24.700		

Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

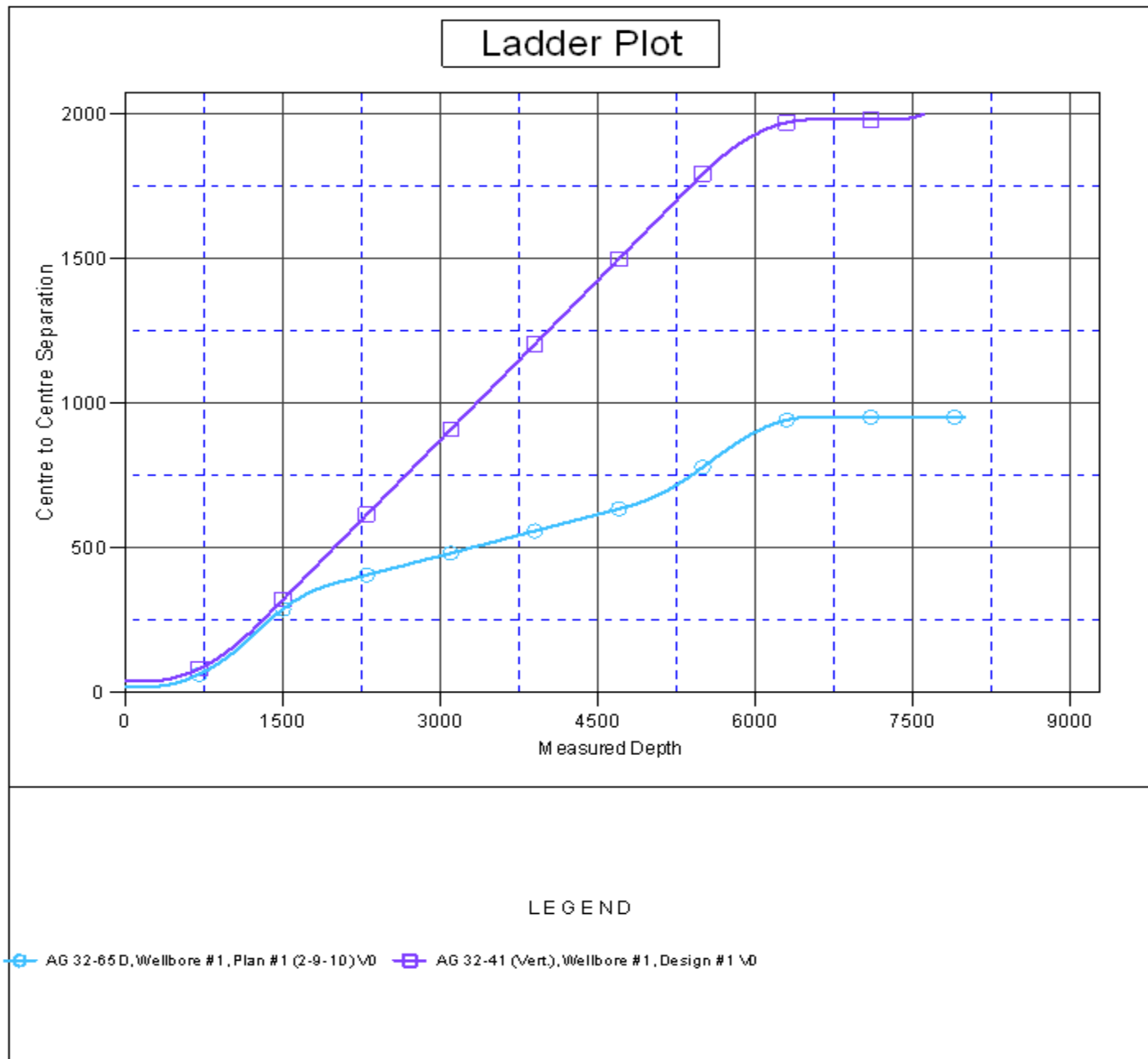
Reference Depths are relative to WELL @ 4726.0ft (Original Well Elev) Coordinates are relative to: AG 32-32D

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is 105° 30' 0.000 W °

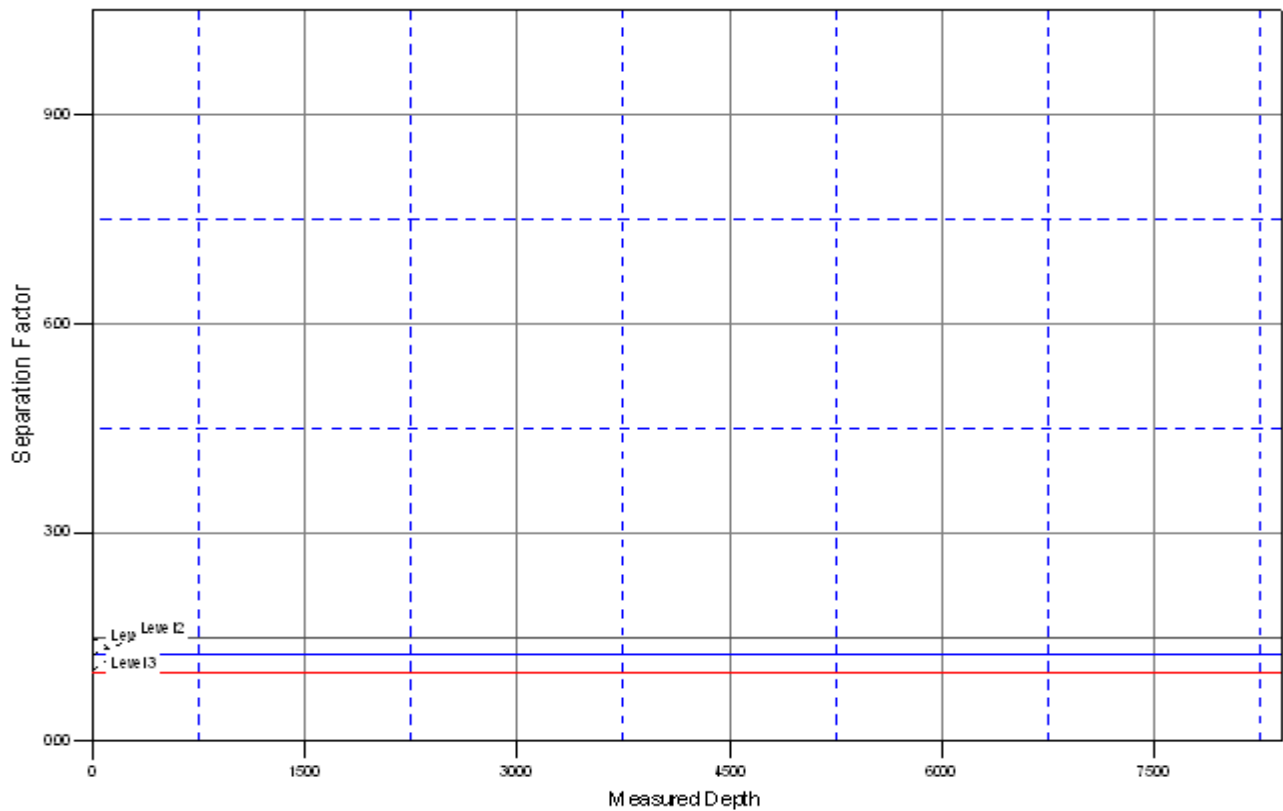
Grid Convergence at Surface is: 0.46°



Company:	ORR ENERGY	Local Co-ordinate Reference:	Well AG 32-32D
Project:	SEC.32-T6N-R66W	TVD Reference:	WELL @ 4726.0ft (Original Well Elev)
Reference Site:	AG 32-31D Pad Sec.32-T6N-R66W	MD Reference:	WELL @ 4726.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	AG 32-32D	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM den0-adp01 Server Data
Reference Design:	Plan #1 (2-9-10)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4726.0ft (Original Well Elev) Coordinates are relative to: AG 32-32D
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.46°

Separation Factor Plot



LEGEND

AG 32-65 D, Wellbore #1, Plan #1 (2-9-10) \0 AG 32-41 (Vert.), Wellbore #1, Design #1 \0