

Condor Energy, Weld County, CO

Well Name: **Waves 1H**

Surface Location: Waves 1H Pad Sec.23-T7N-R60W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

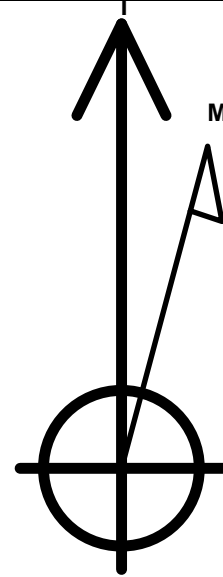
Ground Elevation: 4905.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1447886.57	3397653.25	40.554040	-104.068900	

Original Well Elev WELL @ 4918.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINE 600'	1.0	370.0	270.0	Polygon
SECTION LINE 230'S & 330'W	1.0	-230.0	-330.0	Polygon
Landing Point 845'FSL & 650'FWL	6152.4	615.7	333.5	Point
WP2	6159.8	2225.9	1523.6	Point
WP3	6159.8	3030.8	2118.5	Point
WP1	6161.2	1421.1	928.7	Point
WP4	6169.4	3835.6	2713.4	Point
BHL 1010'FNL & 2190'FEL	6170.0	4058.7	2878.4	Point



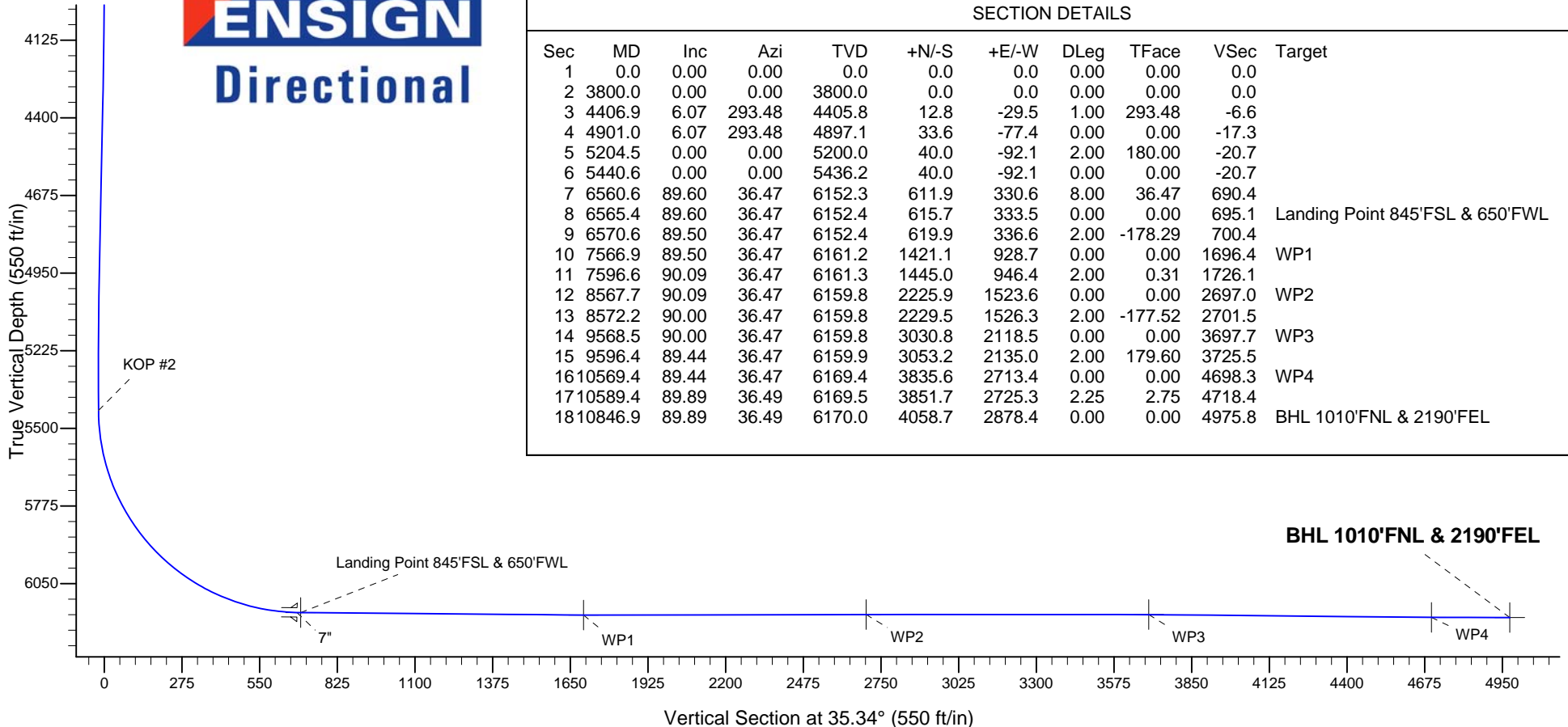
Azimuths to True North
Magnetic North: 8.33°

Magnetic Field
Strength: 53150.6nT
Dip Angle: 67.24°
Date: 9/18/2012
Model: IGRF2010

Waves 1H Pad Sec.23-T7N-R60W
Waves 1H
Plan #2 (9-21-12)
14:06, September 21 2012

ANNOTATIONS

TVD	MD	Annotation
3800.0	3800.0	KOP #1
5436.1	5440.6	KOP #2





Surface Location: Waves 1H

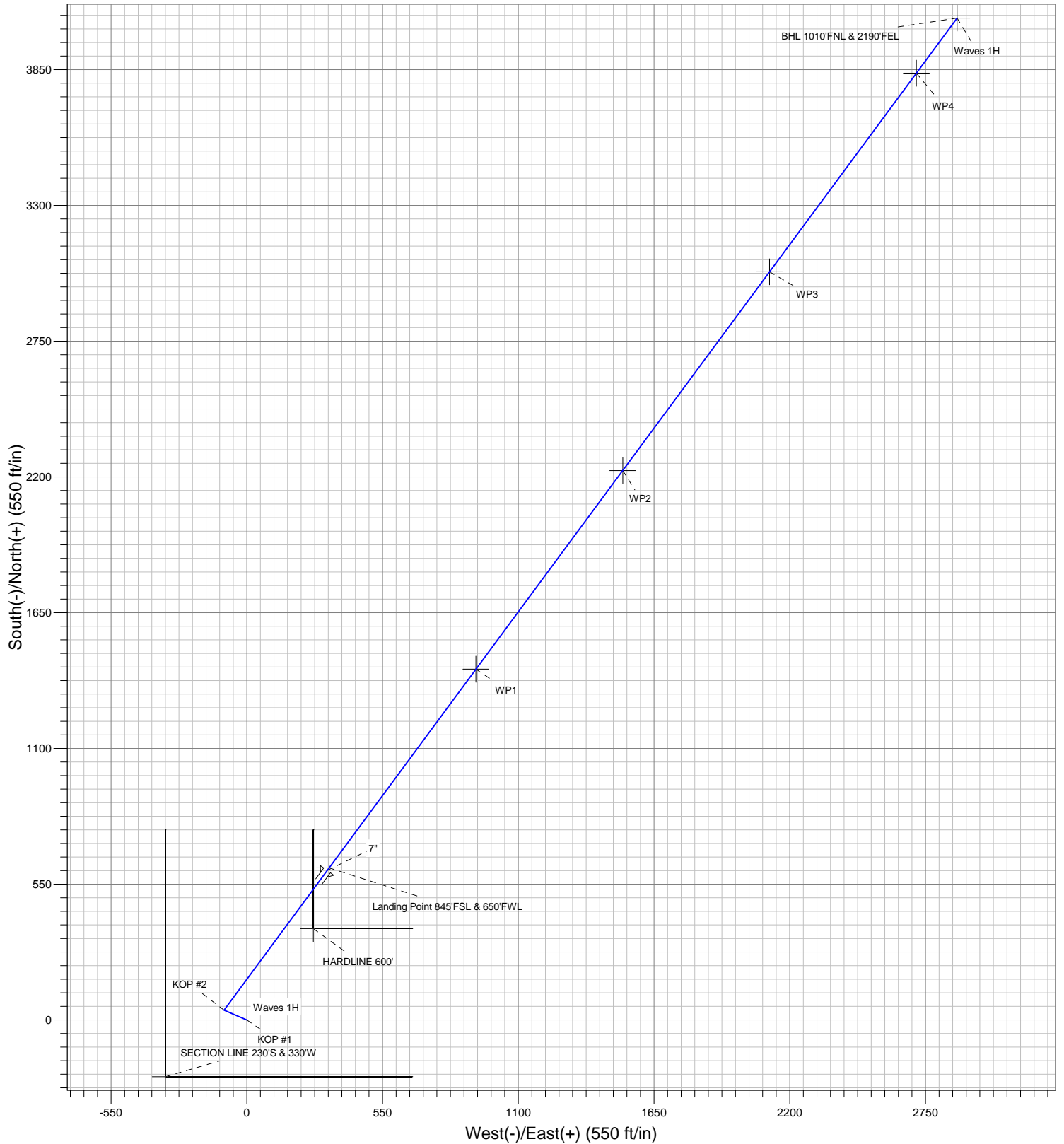
Waves 1H Pad Sec.23-T7N-R60W

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

Ground Elevation: 4905.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1447886.57	3397653.25	40.554040	-104.068900	

Design Version: Plan #2 (9-21-12)





Condor Energy, Weld County, CO

SEC.23-T7N-R60W

Waves 1H Pad Sec.23-T7N-R60W

Waves 1H

Wellbore #1

Plan: Plan #2 (9-21-12)

Standard Planning Report

21 September, 2012

Design	Plan #2 (9-21-12)			
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	35.34

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

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	
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,406.9	6.07	293.48	4,405.8	12.8	-29.5	1.00	1.00	0.00	293.48	
4,901.0	6.07	293.48	4,897.1	33.6	-77.4	0.00	0.00	0.00	0.00	
5,204.5	0.00	0.00	5,200.0	40.0	-92.1	2.00	-2.00	0.00	180.00	
5,440.6	0.00	0.00	5,436.2	40.0	-92.1	0.00	0.00	0.00	0.00	
6,560.6	89.60	36.47	6,152.3	611.9	330.6	8.00	8.00	0.00	36.47	
6,565.4	89.60	36.47	6,152.4	615.7	333.5	0.00	0.00	0.00	0.00	Landing Point 845'F
6,570.6	89.50	36.47	6,152.4	619.9	336.6	2.00	-2.00	-0.06	-178.29	
7,566.9	89.50	36.47	6,161.2	1,421.1	928.7	0.00	0.00	0.00	0.00	WP1
7,596.6	90.09	36.47	6,161.3	1,445.0	946.4	2.00	2.00	0.01	0.31	
8,567.7	90.09	36.47	6,159.8	2,225.9	1,523.6	0.00	0.00	0.00	0.00	WP2
8,572.2	90.00	36.47	6,159.8	2,229.5	1,526.3	2.00	-2.00	-0.09	-177.52	
9,568.5	90.00	36.47	6,159.8	3,030.8	2,118.5	0.00	0.00	0.00	0.00	WP3
9,596.4	89.44	36.47	6,159.9	3,053.2	2,135.0	2.00	-2.00	0.01	179.60	
10,569.4	89.44	36.47	6,169.4	3,835.6	2,713.4	0.00	0.00	0.00	0.00	WP4
10,589.4	89.89	36.49	6,169.5	3,851.7	2,725.3	2.25	2.25	0.11	2.75	
10,846.9	89.89	36.49	6,170.0	4,058.7	2,878.4	0.00	0.00	0.00	0.00	BHL 1010'FNL & 21

Planned Survey		Survey Data							
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
HARDLINE 600' - SECTION LINE 230'S & 330'W									
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
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
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,040.0	0.00	0.00	2,040.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

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)
2,080.0	0.00	0.00	2,080.0	0.0	0.0	0.0	0.00	0.00	0.00
2,120.0	0.00	0.00	2,120.0	0.0	0.0	0.0	0.00	0.00	0.00
2,160.0	0.00	0.00	2,160.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,240.0	0.00	0.00	2,240.0	0.0	0.0	0.0	0.00	0.00	0.00
2,280.0	0.00	0.00	2,280.0	0.0	0.0	0.0	0.00	0.00	0.00
2,320.0	0.00	0.00	2,320.0	0.0	0.0	0.0	0.00	0.00	0.00
2,360.0	0.00	0.00	2,360.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,440.0	0.00	0.00	2,440.0	0.0	0.0	0.0	0.00	0.00	0.00
2,480.0	0.00	0.00	2,480.0	0.0	0.0	0.0	0.00	0.00	0.00
2,520.0	0.00	0.00	2,520.0	0.0	0.0	0.0	0.00	0.00	0.00
2,560.0	0.00	0.00	2,560.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,640.0	0.00	0.00	2,640.0	0.0	0.0	0.0	0.00	0.00	0.00
2,680.0	0.00	0.00	2,680.0	0.0	0.0	0.0	0.00	0.00	0.00
2,720.0	0.00	0.00	2,720.0	0.0	0.0	0.0	0.00	0.00	0.00
2,760.0	0.00	0.00	2,760.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,840.0	0.00	0.00	2,840.0	0.0	0.0	0.0	0.00	0.00	0.00
2,880.0	0.00	0.00	2,880.0	0.0	0.0	0.0	0.00	0.00	0.00
2,920.0	0.00	0.00	2,920.0	0.0	0.0	0.0	0.00	0.00	0.00
2,960.0	0.00	0.00	2,960.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,040.0	0.00	0.00	3,040.0	0.0	0.0	0.0	0.00	0.00	0.00
3,080.0	0.00	0.00	3,080.0	0.0	0.0	0.0	0.00	0.00	0.00
3,120.0	0.00	0.00	3,120.0	0.0	0.0	0.0	0.00	0.00	0.00
3,160.0	0.00	0.00	3,160.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,240.0	0.00	0.00	3,240.0	0.0	0.0	0.0	0.00	0.00	0.00
3,280.0	0.00	0.00	3,280.0	0.0	0.0	0.0	0.00	0.00	0.00
3,320.0	0.00	0.00	3,320.0	0.0	0.0	0.0	0.00	0.00	0.00
3,360.0	0.00	0.00	3,360.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,440.0	0.00	0.00	3,440.0	0.0	0.0	0.0	0.00	0.00	0.00
3,480.0	0.00	0.00	3,480.0	0.0	0.0	0.0	0.00	0.00	0.00
3,520.0	0.00	0.00	3,520.0	0.0	0.0	0.0	0.00	0.00	0.00
3,560.0	0.00	0.00	3,560.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,640.0	0.00	0.00	3,640.0	0.0	0.0	0.0	0.00	0.00	0.00
3,680.0	0.00	0.00	3,680.0	0.0	0.0	0.0	0.00	0.00	0.00
3,720.0	0.00	0.00	3,720.0	0.0	0.0	0.0	0.00	0.00	0.00
3,760.0	0.00	0.00	3,760.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
3,840.0	0.40	293.48	3,840.0	0.1	-0.1	0.0	1.00	1.00	0.00
3,880.0	0.80	293.48	3,880.0	0.2	-0.5	-0.1	1.00	1.00	0.00
3,920.0	1.20	293.48	3,920.0	0.5	-1.2	-0.3	1.00	1.00	0.00
3,960.0	1.60	293.48	3,960.0	0.9	-2.0	-0.5	1.00	1.00	0.00
4,000.0	2.00	293.48	4,000.0	1.4	-3.2	-0.7	1.00	1.00	0.00
4,040.0	2.40	293.48	4,039.9	2.0	-4.6	-1.0	1.00	1.00	0.00
4,080.0	2.80	293.48	4,079.9	2.7	-6.3	-1.4	1.00	1.00	0.00
4,120.0	3.20	293.48	4,119.8	3.6	-8.2	-1.8	1.00	1.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

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)
4,160.0	3.60	293.48	4,159.8	4.5	-10.4	-2.3	1.00	1.00	0.00
4,200.0	4.00	293.48	4,199.7	5.6	-12.8	-2.9	1.00	1.00	0.00
4,240.0	4.40	293.48	4,239.6	6.7	-15.5	-3.5	1.00	1.00	0.00
4,280.0	4.80	293.48	4,279.4	8.0	-18.4	-4.1	1.00	1.00	0.00
4,320.0	5.20	293.48	4,319.3	9.4	-21.6	-4.8	1.00	1.00	0.00
4,360.0	5.60	293.48	4,359.1	10.9	-25.1	-5.6	1.00	1.00	0.00
4,400.0	6.00	293.48	4,398.9	12.5	-28.8	-6.5	1.00	1.00	0.00
4,406.9	6.07	293.48	4,405.8	12.8	-29.5	-6.6	1.00	1.00	0.00
4,440.0	6.07	293.48	4,438.7	14.2	-32.7	-7.3	0.00	0.00	0.00
4,480.0	6.07	293.48	4,478.5	15.9	-36.5	-8.2	0.00	0.00	0.00
4,520.0	6.07	293.48	4,518.2	17.6	-40.4	-9.1	0.00	0.00	0.00
4,560.0	6.07	293.48	4,558.0	19.2	-44.3	-9.9	0.00	0.00	0.00
4,600.0	6.07	293.48	4,597.8	20.9	-48.2	-10.8	0.00	0.00	0.00
4,640.0	6.07	293.48	4,637.6	22.6	-52.1	-11.7	0.00	0.00	0.00
4,680.0	6.07	293.48	4,677.3	24.3	-55.9	-12.5	0.00	0.00	0.00
4,720.0	6.07	293.48	4,717.1	26.0	-59.8	-13.4	0.00	0.00	0.00
4,760.0	6.07	293.48	4,756.9	27.7	-63.7	-14.3	0.00	0.00	0.00
4,800.0	6.07	293.48	4,796.7	29.3	-67.6	-15.2	0.00	0.00	0.00
4,840.0	6.07	293.48	4,836.4	31.0	-71.5	-16.0	0.00	0.00	0.00
4,880.0	6.07	293.48	4,876.2	32.7	-75.3	-16.9	0.00	0.00	0.00
4,901.0	6.07	293.48	4,897.1	33.6	-77.4	-17.3	0.00	0.00	0.00
4,920.0	5.69	293.48	4,916.0	34.4	-79.2	-17.7	2.00	-2.00	0.00
4,960.0	4.89	293.48	4,955.8	35.8	-82.5	-18.5	2.00	-2.00	0.00
5,000.0	4.09	293.48	4,995.7	37.1	-85.4	-19.2	2.00	-2.00	0.00
5,040.0	3.29	293.48	5,035.6	38.1	-87.8	-19.7	2.00	-2.00	0.00
5,080.0	2.49	293.48	5,075.6	38.9	-89.6	-20.1	2.00	-2.00	0.00
5,120.0	1.69	293.48	5,115.5	39.5	-91.0	-20.4	2.00	-2.00	0.00
5,160.0	0.89	293.48	5,155.5	39.9	-91.8	-20.6	2.00	-2.00	0.00
5,200.0	0.09	293.48	5,195.5	40.0	-92.1	-20.7	2.00	-2.00	0.00
5,204.5	0.00	0.00	5,200.0	40.0	-92.1	-20.7	2.00	-2.00	0.00
5,240.0	0.00	0.00	5,235.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,280.0	0.00	0.00	5,275.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,320.0	0.00	0.00	5,315.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,360.0	0.00	0.00	5,355.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,400.0	0.00	0.00	5,395.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,440.0	0.00	0.00	5,435.5	40.0	-92.1	-20.7	0.00	0.00	0.00
5,440.6	0.00	0.00	5,436.1	40.0	-92.1	-20.7	0.00	0.00	0.00
KOP #2									
5,480.0	3.15	36.47	5,475.5	40.9	-91.5	-19.6	7.99	7.99	0.00
5,520.0	6.35	36.47	5,515.4	43.5	-89.5	-16.3	8.00	8.00	0.00
5,560.0	9.55	36.47	5,555.0	48.0	-86.2	-10.7	8.00	8.00	0.00
5,600.0	12.75	36.47	5,594.2	54.2	-81.6	-3.0	8.00	8.00	0.00
5,640.0	15.95	36.47	5,633.0	62.2	-75.7	6.9	8.00	8.00	0.00
5,680.0	19.15	36.47	5,671.1	71.9	-68.5	19.0	8.00	8.00	0.00
5,720.0	22.35	36.47	5,708.5	83.3	-60.1	33.1	8.00	8.00	0.00
5,760.0	25.55	36.47	5,745.0	96.3	-50.5	49.4	8.00	8.00	0.00
5,800.0	28.75	36.47	5,780.6	111.0	-39.6	67.6	8.00	8.00	0.00
5,840.0	31.95	36.47	5,815.2	127.2	-27.6	87.8	8.00	8.00	0.00
5,880.0	35.15	36.47	5,848.5	145.0	-14.5	109.9	8.00	8.00	0.00
5,920.0	38.35	36.47	5,880.5	164.3	-0.2	133.8	8.00	8.00	0.00
5,960.0	41.55	36.47	5,911.2	184.9	15.0	159.5	8.00	8.00	0.00
6,000.0	44.75	36.47	5,940.4	206.9	31.3	186.9	8.00	8.00	0.00
6,040.0	47.95	36.47	5,968.0	230.2	48.5	215.8	8.00	8.00	0.00
6,080.0	51.15	36.47	5,993.9	254.7	66.6	246.2	8.00	8.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

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)
6,120.0	54.35	36.47	6,018.1	280.3	85.5	278.1	8.00	8.00	0.00
6,160.0	57.55	36.47	6,040.5	306.9	105.2	311.2	8.00	8.00	0.00
6,200.0	60.75	36.47	6,061.0	334.5	125.6	345.5	8.00	8.00	0.00
6,240.0	63.95	36.47	6,079.6	363.0	146.7	380.9	8.00	8.00	0.00
6,280.0	67.15	36.47	6,096.1	392.3	168.3	417.3	8.00	8.00	0.00
6,320.0	70.35	36.47	6,110.6	422.3	190.5	454.6	8.00	8.00	0.00
6,360.0	73.55	36.47	6,123.0	452.8	213.1	492.6	8.00	8.00	0.00
6,400.0	76.75	36.47	6,133.3	483.9	236.0	531.3	8.00	8.00	0.00
6,440.0	79.95	36.47	6,141.4	515.4	259.3	570.4	8.00	8.00	0.00
6,480.0	83.15	36.47	6,147.2	547.2	282.8	610.0	8.00	8.00	0.00
6,520.0	86.35	36.47	6,150.9	579.3	306.5	649.8	8.00	8.00	0.00
6,552.4	88.94	36.47	6,152.2	605.3	325.8	682.2	8.00	8.00	0.00
7"									
6,560.0	89.55	36.47	6,152.3	611.4	330.3	689.8	8.00	8.00	0.00
6,560.6	89.60	36.47	6,152.3	611.9	330.6	690.4	8.00	8.00	0.00
6,565.4	89.60	36.47	6,152.4	615.7	333.5	695.1	0.00	0.00	0.00
Landing Point 845'FSL & 650'FWL									
6,570.6	89.50	36.47	6,152.4	619.9	336.6	700.4	2.00	-2.00	-0.06
6,600.0	89.50	36.47	6,152.7	643.6	354.0	729.8	0.00	0.00	0.00
6,640.0	89.50	36.47	6,153.0	675.7	377.8	769.8	0.00	0.00	0.00
6,680.0	89.50	36.47	6,153.4	707.9	401.6	809.8	0.00	0.00	0.00
6,720.0	89.50	36.47	6,153.7	740.1	425.4	849.7	0.00	0.00	0.00
6,760.0	89.50	36.47	6,154.1	772.2	449.1	889.7	0.00	0.00	0.00
6,800.0	89.50	36.47	6,154.4	804.4	472.9	929.7	0.00	0.00	0.00
6,840.0	89.50	36.47	6,154.8	836.6	496.7	969.7	0.00	0.00	0.00
6,880.0	89.50	36.47	6,155.1	868.7	520.5	1,009.7	0.00	0.00	0.00
6,920.0	89.50	36.47	6,155.5	900.9	544.2	1,049.7	0.00	0.00	0.00
6,960.0	89.50	36.47	6,155.8	933.1	568.0	1,089.7	0.00	0.00	0.00
7,000.0	89.50	36.47	6,156.2	965.2	591.8	1,129.7	0.00	0.00	0.00
7,040.0	89.50	36.47	6,156.5	997.4	615.6	1,169.7	0.00	0.00	0.00
7,080.0	89.50	36.47	6,156.9	1,029.6	639.3	1,209.7	0.00	0.00	0.00
7,120.0	89.50	36.47	6,157.3	1,061.7	663.1	1,249.7	0.00	0.00	0.00
7,160.0	89.50	36.47	6,157.6	1,093.9	686.9	1,289.6	0.00	0.00	0.00
7,200.0	89.50	36.47	6,158.0	1,126.1	710.7	1,329.6	0.00	0.00	0.00
7,240.0	89.50	36.47	6,158.3	1,158.2	734.4	1,369.6	0.00	0.00	0.00
7,280.0	89.50	36.47	6,158.7	1,190.4	758.2	1,409.6	0.00	0.00	0.00
7,320.0	89.50	36.47	6,159.0	1,222.6	782.0	1,449.6	0.00	0.00	0.00
7,360.0	89.50	36.47	6,159.4	1,254.7	805.8	1,489.6	0.00	0.00	0.00
7,400.0	89.50	36.47	6,159.7	1,286.9	829.5	1,529.6	0.00	0.00	0.00
7,440.0	89.50	36.47	6,160.1	1,319.1	853.3	1,569.6	0.00	0.00	0.00
7,480.0	89.50	36.47	6,160.4	1,351.2	877.1	1,609.6	0.00	0.00	0.00
7,520.0	89.50	36.47	6,160.8	1,383.4	900.8	1,649.6	0.00	0.00	0.00
7,560.0	89.50	36.47	6,161.1	1,415.6	924.6	1,689.6	0.00	0.00	0.00
7,566.9	89.50	36.47	6,161.2	1,421.1	928.7	1,696.4	0.00	0.00	0.00
WP1									
7,596.6	90.09	36.47	6,161.3	1,445.0	946.4	1,726.1	2.00	2.00	0.01
7,600.0	90.09	36.47	6,161.3	1,447.7	948.4	1,729.5	0.00	0.00	0.00
7,640.0	90.09	36.47	6,161.2	1,479.9	972.2	1,769.5	0.00	0.00	0.00
7,680.0	90.09	36.47	6,161.2	1,512.1	996.0	1,809.5	0.00	0.00	0.00
7,720.0	90.09	36.47	6,161.1	1,544.2	1,019.7	1,849.5	0.00	0.00	0.00
7,760.0	90.09	36.47	6,161.0	1,576.4	1,043.5	1,889.5	0.00	0.00	0.00
7,800.0	90.09	36.47	6,161.0	1,608.6	1,067.3	1,929.5	0.00	0.00	0.00
7,840.0	90.09	36.47	6,160.9	1,640.7	1,091.1	1,969.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,880.0	90.09	36.47	6,160.9	1,672.9	1,114.8	2,009.5	0.00	0.00	0.00
7,920.0	90.09	36.47	6,160.8	1,705.1	1,138.6	2,049.5	0.00	0.00	0.00
7,960.0	90.09	36.47	6,160.7	1,737.2	1,162.4	2,089.5	0.00	0.00	0.00
8,000.0	90.09	36.47	6,160.7	1,769.4	1,186.2	2,129.5	0.00	0.00	0.00
8,040.0	90.09	36.47	6,160.6	1,801.6	1,209.9	2,169.5	0.00	0.00	0.00
8,080.0	90.09	36.47	6,160.5	1,833.7	1,233.7	2,209.4	0.00	0.00	0.00
8,120.0	90.09	36.47	6,160.5	1,865.9	1,257.5	2,249.4	0.00	0.00	0.00
8,160.0	90.09	36.47	6,160.4	1,898.1	1,281.3	2,289.4	0.00	0.00	0.00
8,200.0	90.09	36.47	6,160.4	1,930.2	1,305.0	2,329.4	0.00	0.00	0.00
8,240.0	90.09	36.47	6,160.3	1,962.4	1,328.8	2,369.4	0.00	0.00	0.00
8,280.0	90.09	36.47	6,160.2	1,994.6	1,352.6	2,409.4	0.00	0.00	0.00
8,320.0	90.09	36.47	6,160.2	2,026.7	1,376.4	2,449.4	0.00	0.00	0.00
8,360.0	90.09	36.47	6,160.1	2,058.9	1,400.2	2,489.4	0.00	0.00	0.00
8,400.0	90.09	36.47	6,160.1	2,091.1	1,423.9	2,529.4	0.00	0.00	0.00
8,440.0	90.09	36.47	6,160.0	2,123.2	1,447.7	2,569.4	0.00	0.00	0.00
8,480.0	90.09	36.47	6,159.9	2,155.4	1,471.5	2,609.4	0.00	0.00	0.00
8,520.0	90.09	36.47	6,159.9	2,187.6	1,495.3	2,649.4	0.00	0.00	0.00
8,560.0	90.09	36.47	6,159.8	2,219.7	1,519.0	2,689.4	0.00	0.00	0.00
8,567.7	90.09	36.47	6,159.8	2,225.9	1,523.6	2,697.0	0.00	0.00	0.00
WP2									
8,572.2	90.00	36.47	6,159.8	2,229.5	1,526.3	2,701.5	2.00	-2.00	-0.09
8,600.0	90.00	36.47	6,159.8	2,251.9	1,542.8	2,729.3	0.00	0.00	0.00
8,640.0	90.00	36.47	6,159.8	2,284.1	1,566.6	2,769.3	0.00	0.00	0.00
8,680.0	90.00	36.47	6,159.8	2,316.2	1,590.4	2,809.3	0.00	0.00	0.00
8,720.0	90.00	36.47	6,159.8	2,348.4	1,614.1	2,849.3	0.00	0.00	0.00
8,760.0	90.00	36.47	6,159.8	2,380.6	1,637.9	2,889.3	0.00	0.00	0.00
8,800.0	90.00	36.47	6,159.8	2,412.7	1,661.7	2,929.3	0.00	0.00	0.00
8,840.0	90.00	36.47	6,159.8	2,444.9	1,685.5	2,969.3	0.00	0.00	0.00
8,880.0	90.00	36.47	6,159.8	2,477.1	1,709.2	3,009.3	0.00	0.00	0.00
8,920.0	90.00	36.47	6,159.8	2,509.2	1,733.0	3,049.3	0.00	0.00	0.00
8,960.0	90.00	36.47	6,159.8	2,541.4	1,756.8	3,089.3	0.00	0.00	0.00
9,000.0	90.00	36.47	6,159.8	2,573.6	1,780.6	3,129.3	0.00	0.00	0.00
9,040.0	90.00	36.47	6,159.8	2,605.7	1,804.3	3,169.3	0.00	0.00	0.00
9,080.0	90.00	36.47	6,159.8	2,637.9	1,828.1	3,209.3	0.00	0.00	0.00
9,120.0	90.00	36.47	6,159.8	2,670.1	1,851.9	3,249.2	0.00	0.00	0.00
9,160.0	90.00	36.47	6,159.8	2,702.2	1,875.7	3,289.2	0.00	0.00	0.00
9,200.0	90.00	36.47	6,159.8	2,734.4	1,899.4	3,329.2	0.00	0.00	0.00
9,240.0	90.00	36.47	6,159.8	2,766.6	1,923.2	3,369.2	0.00	0.00	0.00
9,280.0	90.00	36.47	6,159.8	2,798.7	1,947.0	3,409.2	0.00	0.00	0.00
9,320.0	90.00	36.47	6,159.8	2,830.9	1,970.8	3,449.2	0.00	0.00	0.00
9,360.0	90.00	36.47	6,159.8	2,863.1	1,994.5	3,489.2	0.00	0.00	0.00
9,400.0	90.00	36.47	6,159.8	2,895.3	2,018.3	3,529.2	0.00	0.00	0.00
9,440.0	90.00	36.47	6,159.8	2,927.4	2,042.1	3,569.2	0.00	0.00	0.00
9,480.0	90.00	36.47	6,159.8	2,959.6	2,065.8	3,609.2	0.00	0.00	0.00
9,520.0	90.00	36.47	6,159.8	2,991.8	2,089.6	3,649.2	0.00	0.00	0.00
9,560.0	90.00	36.47	6,159.8	3,023.9	2,113.4	3,689.2	0.00	0.00	0.00
9,568.5	90.00	36.47	6,159.8	3,030.8	2,118.5	3,697.7	0.00	0.00	0.00
WP3									
9,596.4	89.44	36.47	6,159.9	3,053.2	2,135.0	3,725.5	2.00	-2.00	0.01
9,600.0	89.44	36.47	6,160.0	3,056.1	2,137.2	3,729.2	0.00	0.00	0.00
9,640.0	89.44	36.47	6,160.4	3,088.3	2,160.9	3,769.1	0.00	0.00	0.00
9,680.0	89.44	36.47	6,160.8	3,120.4	2,184.7	3,809.1	0.00	0.00	0.00
9,720.0	89.44	36.47	6,161.1	3,152.6	2,208.5	3,849.1	0.00	0.00	0.00
9,760.0	89.44	36.47	6,161.5	3,184.8	2,232.3	3,889.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

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)
9,800.0	89.44	36.47	6,161.9	3,216.9	2,256.1	3,929.1	0.00	0.00	0.00
9,840.0	89.44	36.47	6,162.3	3,249.1	2,279.8	3,969.1	0.00	0.00	0.00
9,880.0	89.44	36.47	6,162.7	3,281.2	2,303.6	4,009.1	0.00	0.00	0.00
9,920.0	89.44	36.47	6,163.1	3,313.4	2,327.4	4,049.1	0.00	0.00	0.00
9,960.0	89.44	36.47	6,163.5	3,345.6	2,351.2	4,089.1	0.00	0.00	0.00
10,000.0	89.44	36.47	6,163.9	3,377.7	2,374.9	4,129.1	0.00	0.00	0.00
10,040.0	89.44	36.47	6,164.3	3,409.9	2,398.7	4,169.0	0.00	0.00	0.00
10,080.0	89.44	36.47	6,164.7	3,442.1	2,422.5	4,209.0	0.00	0.00	0.00
10,120.0	89.44	36.47	6,165.0	3,474.2	2,446.3	4,249.0	0.00	0.00	0.00
10,160.0	89.44	36.47	6,165.4	3,506.4	2,470.0	4,289.0	0.00	0.00	0.00
10,200.0	89.44	36.47	6,165.8	3,538.6	2,493.8	4,329.0	0.00	0.00	0.00
10,240.0	89.44	36.47	6,166.2	3,570.7	2,517.6	4,369.0	0.00	0.00	0.00
10,280.0	89.44	36.47	6,166.6	3,602.9	2,541.4	4,409.0	0.00	0.00	0.00
10,320.0	89.44	36.47	6,167.0	3,635.1	2,565.1	4,449.0	0.00	0.00	0.00
10,360.0	89.44	36.47	6,167.4	3,667.2	2,588.9	4,489.0	0.00	0.00	0.00
10,400.0	89.44	36.47	6,167.8	3,699.4	2,612.7	4,529.0	0.00	0.00	0.00
10,440.0	89.44	36.47	6,168.2	3,731.6	2,636.5	4,569.0	0.00	0.00	0.00
10,480.0	89.44	36.47	6,168.5	3,763.7	2,660.2	4,608.9	0.00	0.00	0.00
10,520.0	89.44	36.47	6,168.9	3,795.9	2,684.0	4,648.9	0.00	0.00	0.00
10,560.0	89.44	36.47	6,169.3	3,828.0	2,707.8	4,688.9	0.00	0.00	0.00
10,569.4	89.44	36.47	6,169.4	3,835.6	2,713.4	4,698.3	0.00	0.00	0.00
WP4									
10,589.4	89.89	36.49	6,169.5	3,851.7	2,725.3	4,718.4	2.25	2.25	0.11
10,600.0	89.89	36.49	6,169.6	3,860.2	2,731.6	4,728.9	0.00	0.00	0.00
10,640.0	89.89	36.49	6,169.6	3,892.4	2,755.4	4,768.9	0.00	0.00	0.00
10,680.0	89.89	36.49	6,169.7	3,924.5	2,779.1	4,808.9	0.00	0.00	0.00
10,720.0	89.89	36.49	6,169.8	3,956.7	2,802.9	4,848.9	0.00	0.00	0.00
10,760.0	89.89	36.49	6,169.9	3,988.8	2,826.7	4,888.9	0.00	0.00	0.00
10,800.0	89.89	36.49	6,169.9	4,021.0	2,850.5	4,928.9	0.00	0.00	0.00
10,840.0	89.89	36.49	6,170.0	4,053.2	2,874.3	4,968.9	0.00	0.00	0.00
10,846.9	89.89	36.49	6,170.0	4,058.7	2,878.4	4,975.8	0.00	0.00	0.00
BHL 1010'FNL & 2190'FEL									

Database:	Landmark	Local Co-ordinate Reference:	Well Waves 1H
Company:	Condor Energy, Weld County, CO	TVD Reference:	WELL @ 4918.0ft (Original Well Elev)
Project:	SEC.23-T7N-R60W	MD Reference:	WELL @ 4918.0ft (Original Well Elev)
Site:	Waves 1H Pad Sec.23-T7N-R60W	North Reference:	True
Well:	Waves 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (9-21-12)		

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
									Latitude Longitude
HARDLINE 600'		0.00	0.00	1.0	370.0	270.0	1,448,260.87	3,397,917.23	40.555056 -104.067928
- plan misses target center by 458.0ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1				1.0	0.0	0.0	1,448,260.87	3,397,917.23	
Point 2				1.0	0.0	400.0	1,448,267.32	3,398,317.17	
Point 3				1.0	0.0	0.0	1,448,260.87	3,397,917.23	
Point 4				1.0	400.0	0.0	1,448,660.80	3,397,910.78	
Landing Point 845'FSI		0.00	0.00	6,152.4	615.7	333.5	1,448,507.57	3,397,976.71	40.555730 -104.067700
- plan hits target center									
- Point									
WP4		0.00	0.00	6,169.4	3,835.6	2,713.4	1,451,765.34	3,400,304.28	40.564568 -104.059134
- plan hits target center									
- Point									
SECTION LINE 230'S		0.00	0.00	1.0	-230.0	-330.0	1,447,651.28	3,397,327.01	40.553409 -104.070088
- plan misses target center by 402.2ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1				1.0	0.0	0.0	1,447,651.28	3,397,327.01	
Point 2				1.0	0.0	1,000.0	1,447,667.42	3,398,326.85	
Point 3				1.0	0.0	0.0	1,447,651.28	3,397,327.01	
Point 4				1.0	1,000.0	0.0	1,448,651.12	3,397,310.87	
BHL 1010'FNL & 219C		0.00	0.00	6,170.0	4,058.7	2,878.4	1,451,991.09	3,400,465.71	40.565180 -104.058540
- plan hits target center									
- Point									
WP1		0.00	0.00	6,161.2	1,421.1	928.7	1,449,322.43	3,398,558.87	40.557941 -104.065558
- plan hits target center									
- Point									
WP2		0.00	0.00	6,159.8	2,225.9	1,523.6	1,450,136.70	3,399,140.68	40.560150 -104.063417
- plan hits target center									
- Point									
WP3		0.00	0.00	6,159.8	3,030.8	2,118.5	1,450,951.07	3,399,722.47	40.562359 -104.061276
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,552.4	6,152.2	7"	7	7-1/2	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
3,800.0	3,800.0	0.0	0.0	KOP #1
5,440.6	5,436.1	40.0	-92.1	KOP #2