



COG PRODUCTION LLC

LEA COUNTY, NM
BULLDOG
AZORES FEDERAL #6H

OWB

Plan: PWP0

Survey Report - Geographic

16 February, 2017

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COG PRODUCTION LLC

Survey Report - Geographic

Company: COG PRODUCTION LLC
Project: LEA COUNTY, NM
Site: BULLDOG
Well: AZORES FEDERAL #6H
Wellbore: OWB
Design: PWP0

Local Co-ordinate Reference: Well AZORES FEDERAL #6H
TVD Reference: RKB=3496.6+20 @ 3516.6usft (PATRIOT 2)
MD Reference: RKB=3496.6+20 @ 3516.6usft (PATRIOT 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Project	LEA COUNTY, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	BULLDOG				
Site Position:		Northing:	398,637.10 usft	Latitude:	32° 5' 36.820 N
From:	Map	Easting:	741,887.40 usft	Longitude:	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	AZORES FEDERAL #6H					
Well Position	+N/-S	0.0 usft	Northing:	430,388.10 usf	Latitude:	32° 10' 53.891 N
	+E/-W	0.0 usft	Easting:	697,906.90 usf	Longitude:	103° 41' 37.157 W
Position Uncertainty	3.0 usft	Wellhead Elevation:	usf	Ground Level:	3,496.6 usf	

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	2/16/2017	7.06	60.00	47,923.14539275

Design	PWP0				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	1.93	

Survey Tool Program	Date 2/16/2017				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,894.3	PWP0 (OWB)	MWD	OWSG MWD - Standard	

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
100.0	0.00	0.00	100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
200.0	0.00	0.00	200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
300.0	0.00	0.00	300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
400.0	0.00	0.00	400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
500.0	0.00	0.00	500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
600.0	0.00	0.00	600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
700.0	0.00	0.00	700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
800.0	0.00	0.00	800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
900.0	0.00	0.00	900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W



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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,100.0	0.00	0.00	3,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,200.0	0.00	0.00	3,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,300.0	0.00	0.00	3,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,400.0	0.00	0.00	3,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,500.0	0.00	0.00	3,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,600.0	0.00	0.00	3,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,700.0	0.00	0.00	3,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,800.0	0.00	0.00	3,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
3,900.0	0.00	0.00	3,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,000.0	0.00	0.00	4,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,100.0	0.00	0.00	4,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,200.0	0.00	0.00	4,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,300.0	0.00	0.00	4,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,400.0	0.00	0.00	4,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,500.0	0.00	0.00	4,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,600.0	0.00	0.00	4,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,700.0	0.00	0.00	4,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,800.0	0.00	0.00	4,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
4,900.0	0.00	0.00	4,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,000.0	0.00	0.00	5,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,100.0	0.00	0.00	5,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,200.0	0.00	0.00	5,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,300.0	0.00	0.00	5,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,400.0	0.00	0.00	5,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,500.0	0.00	0.00	5,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,600.0	0.00	0.00	5,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,700.0	0.00	0.00	5,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,800.0	0.00	0.00	5,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
5,900.0	0.00	0.00	5,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,000.0	0.00	0.00	6,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,100.0	0.00	0.00	6,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,200.0	0.00	0.00	6,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,300.0	0.00	0.00	6,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,400.0	0.00	0.00	6,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,500.0	0.00	0.00	6,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,600.0	0.00	0.00	6,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W



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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,700.0	0.00	0.00	6,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,800.0	0.00	0.00	6,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
6,900.0	0.00	0.00	6,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,000.0	0.00	0.00	7,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,100.0	0.00	0.00	7,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,200.0	0.00	0.00	7,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,300.0	0.00	0.00	7,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,400.0	0.00	0.00	7,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,500.0	0.00	0.00	7,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,600.0	0.00	0.00	7,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,700.0	0.00	0.00	7,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,800.0	0.00	0.00	7,800.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
7,900.0	0.00	0.00	7,900.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,000.0	0.00	0.00	8,000.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,100.0	0.00	0.00	8,100.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,200.0	0.00	0.00	8,200.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,300.0	0.00	0.00	8,300.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,400.0	0.00	0.00	8,400.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,500.0	0.00	0.00	8,500.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,600.0	0.00	0.00	8,600.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,700.0	0.00	0.00	8,700.0	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,722.5	0.00	0.01	8,722.5	0.0	0.0	430,388.10	697,906.90	32° 10' 53.891 N	103° 41' 37.157 W
8,800.0	9.30	16.45	8,799.7	6.0	1.8	430,394.12	697,908.67	32° 10' 53.950 N	103° 41' 37.135 W
8,900.0	21.30	16.45	8,895.9	31.3	9.2	430,419.38	697,916.13	32° 10' 54.200 N	103° 41' 37.047 W
9,000.0	33.30	16.45	8,984.6	75.2	22.2	430,463.28	697,929.09	32° 10' 54.634 N	103° 41' 36.893 W
9,100.0	45.30	16.45	9,061.9	135.8	40.1	430,523.91	697,947.00	32° 10' 55.232 N	103° 41' 36.681 W
9,200.0	57.30	16.45	9,124.3	210.5	62.2	430,598.62	697,969.05	32° 10' 55.970 N	103° 41' 36.419 W
9,300.0	69.29	16.45	9,169.2	296.0	87.4	430,684.14	697,994.31	32° 10' 56.815 N	103° 41' 36.119 W
9,400.0	81.29	16.45	9,194.5	388.6	114.8	430,776.74	698,021.65	32° 10' 57.730 N	103° 41' 35.795 W
9,472.6	90.00	16.45	9,200.0	458.0	135.2	430,846.05	698,042.11	32° 10' 58.415 N	103° 41' 35.552 W
9,500.0	90.01	15.35	9,200.0	484.3	142.7	430,872.45	698,049.63	32° 10' 58.675 N	103° 41' 35.462 W
9,600.0	90.04	11.35	9,200.0	581.6	165.8	430,969.73	698,072.72	32° 10' 59.637 N	103° 41' 35.187 W
9,700.0	90.07	7.35	9,199.9	680.3	182.1	431,068.38	698,088.97	32° 11' 0.612 N	103° 41' 34.991 W
9,800.0	90.11	3.35	9,199.7	779.8	191.4	431,167.92	698,098.30	32° 11' 1.597 N	103° 41' 34.876 W
9,894.5	90.14	359.57	9,199.5	874.2	193.8	431,262.33	698,100.71	32° 11' 2.531 N	103° 41' 34.841 W
9,900.0	90.14	359.57	9,199.5	879.8	193.8	431,267.87	698,100.67	32° 11' 2.585 N	103° 41' 34.841 W
10,000.0	90.14	359.57	9,199.2	979.8	193.0	431,367.87	698,099.92	32° 11' 3.575 N	103° 41' 34.843 W
10,100.0	90.14	359.57	9,199.0	1,079.8	192.3	431,467.87	698,099.18	32° 11' 4.565 N	103° 41' 34.844 W
10,200.0	90.14	359.57	9,198.8	1,179.8	191.5	431,567.86	698,098.44	32° 11' 5.554 N	103° 41' 34.846 W
10,300.0	90.14	359.57	9,198.5	1,279.8	190.8	431,667.86	698,097.70	32° 11' 6.544 N	103° 41' 34.848 W
10,400.0	90.14	359.57	9,198.3	1,379.8	190.1	431,767.86	698,096.95	32° 11' 7.533 N	103° 41' 34.850 W
10,500.0	90.14	359.57	9,198.1	1,479.8	189.3	431,867.85	698,096.21	32° 11' 8.523 N	103° 41' 34.851 W
10,600.0	90.14	359.57	9,197.8	1,579.8	188.6	431,967.85	698,095.47	32° 11' 9.513 N	103° 41' 34.853 W
10,700.0	90.14	359.57	9,197.6	1,679.7	187.8	432,067.85	698,094.72	32° 11' 10.502 N	103° 41' 34.855 W
10,800.0	90.14	359.57	9,197.3	1,779.7	187.1	432,167.84	698,093.98	32° 11' 11.492 N	103° 41' 34.857 W
10,900.0	90.14	359.57	9,197.1	1,879.7	186.3	432,267.84	698,093.24	32° 11' 12.481 N	103° 41' 34.858 W
11,000.0	90.14	359.57	9,196.9	1,979.7	185.6	432,367.84	698,092.50	32° 11' 13.471 N	103° 41' 34.860 W
11,100.0	90.14	359.57	9,196.6	2,079.7	184.9	432,467.84	698,091.75	32° 11' 14.461 N	103° 41' 34.862 W
11,200.0	90.14	359.57	9,196.4	2,179.7	184.1	432,567.83	698,091.01	32° 11' 15.450 N	103° 41' 34.863 W
11,300.0	90.14	359.57	9,196.2	2,279.7	183.4	432,667.83	698,090.27	32° 11' 16.440 N	103° 41' 34.865 W
11,400.0	90.14	359.57	9,195.9	2,379.7	182.6	432,767.83	698,089.52	32° 11' 17.429 N	103° 41' 34.867 W
11,500.0	90.14	359.57	9,195.7	2,479.7	181.9	432,867.82	698,088.78	32° 11' 18.419 N	103° 41' 34.869 W
11,600.0	90.14	359.57	9,195.4	2,579.7	181.1	432,967.82	698,088.04	32° 11' 19.409 N	103° 41' 34.870 W
11,700.0	90.14	359.57	9,195.2	2,679.7	180.4	433,067.82	698,087.30	32° 11' 20.398 N	103° 41' 34.872 W
11,800.0	90.14	359.57	9,195.0	2,779.7	179.7	433,167.81	698,086.55	32° 11' 21.388 N	103° 41' 34.874 W



COG PRODUCTION LLC

Survey Report - Geographic

Company: COG PRODUCTION LLC
Project: LEA COUNTY, NM
Site: BULLDOG
Well: AZORES FEDERAL #6H
Wellbore: OWB
Design: PWP0

Local Co-ordinate Reference: Well AZORES FEDERAL #6H
TVD Reference: RKB=3496.6+20 @ 3516.6usft (PATRIOT 2)
MD Reference: RKB=3496.6+20 @ 3516.6usft (PATRIOT 2)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,900.0	90.14	359.57	9,194.7	2,879.7	178.9	433,267.81	698,085.81	32° 11' 22.377 N	103° 41' 34.875 W
12,000.0	90.14	359.57	9,194.5	2,979.7	178.2	433,367.81	698,085.07	32° 11' 23.367 N	103° 41' 34.877 W
12,100.0	90.14	359.57	9,194.3	3,079.7	177.4	433,467.80	698,084.32	32° 11' 24.357 N	103° 41' 34.879 W
12,200.0	90.14	359.57	9,194.0	3,179.7	176.7	433,567.80	698,083.58	32° 11' 25.346 N	103° 41' 34.881 W
12,300.0	90.14	359.57	9,193.8	3,279.7	175.9	433,667.80	698,082.84	32° 11' 26.336 N	103° 41' 34.882 W
12,400.0	90.14	359.57	9,193.5	3,379.7	175.2	433,767.80	698,082.10	32° 11' 27.325 N	103° 41' 34.884 W
12,500.0	90.14	359.57	9,193.3	3,479.7	174.5	433,867.79	698,081.35	32° 11' 28.315 N	103° 41' 34.886 W
12,600.0	90.14	359.57	9,193.1	3,579.7	173.7	433,967.79	698,080.61	32° 11' 29.305 N	103° 41' 34.887 W
12,700.0	90.14	359.57	9,192.8	3,679.7	173.0	434,067.79	698,079.87	32° 11' 30.294 N	103° 41' 34.889 W
12,800.0	90.14	359.57	9,192.6	3,779.7	172.2	434,167.78	698,079.13	32° 11' 31.284 N	103° 41' 34.891 W
12,900.0	90.14	359.57	9,192.4	3,879.7	171.5	434,267.78	698,078.38	32° 11' 32.273 N	103° 41' 34.893 W
13,000.0	90.14	359.57	9,192.1	3,979.7	170.7	434,367.78	698,077.64	32° 11' 33.263 N	103° 41' 34.894 W
13,100.0	90.14	359.57	9,191.9	4,079.7	170.0	434,467.77	698,076.90	32° 11' 34.253 N	103° 41' 34.896 W
13,200.0	90.14	359.57	9,191.6	4,179.7	169.3	434,567.77	698,076.15	32° 11' 35.242 N	103° 41' 34.898 W
13,300.0	90.14	359.57	9,191.4	4,279.7	168.5	434,667.77	698,075.41	32° 11' 36.232 N	103° 41' 34.899 W
13,400.0	90.14	359.57	9,191.2	4,379.7	167.8	434,767.77	698,074.67	32° 11' 37.221 N	103° 41' 34.901 W
13,500.0	90.14	359.57	9,190.9	4,479.7	167.0	434,867.76	698,073.93	32° 11' 38.211 N	103° 41' 34.903 W
13,600.0	90.14	359.57	9,190.7	4,579.7	166.3	434,967.76	698,073.18	32° 11' 39.201 N	103° 41' 34.905 W
13,700.0	90.14	359.57	9,190.5	4,679.7	165.5	435,067.76	698,072.44	32° 11' 40.190 N	103° 41' 34.906 W
13,800.0	90.14	359.57	9,190.2	4,779.7	164.8	435,167.75	698,071.70	32° 11' 41.180 N	103° 41' 34.908 W
13,894.4	90.14	359.57	9,190.0	4,874.1	164.1	435,262.20	698,071.00	32° 11' 42.114 N	103° 41' 34.910 W

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL- Azores Fed	0.00	0.00	9,190.0	4,874.1	164.1	435,262.20	698,071.00	32° 11' 42.114 N	103° 41' 34.910 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: **AZORES FEDERAL #6H**
 Wellbore: OWB
 Design: **PWP0**

WELL DETAILS AZORES FEDERAL #6H

3496.6
 Northing 430388.10 Easting 697906.90 Latitude 32° 10' 53.891 N Longitude 103° 41' 37.157 W

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	8722.5	0.00	0.00	8722.5	0.0	0.0	0.00	0.00	0.0
3	9472.6	90.00	16.45	9200.0	458.0	135.2	12.00	16.45	462.2
4	9894.5	90.14	359.57	9199.5	874.2	193.8	4.00	-89.53	880.3
5	13894.4	90.14	359.57	9190.0	4874.1	164.1	0.00	0.00	4876.9

LEGEND

- AZORES FEDERAL #2H, OWB, ACTUAL WELLATH V0
- PWP0

