



COG PRODUCTION LLC

LEA COUNTY, NM

BULLDOG

AZORES FED COM #1H

OWB

Plan: PWP1

Survey Report - Geographic

28 February, 2017



COG PRODUCTION LLC

Survey Report - Geographic

Company: COG PRODUCTION LLC
Project: LEA COUNTY, NM
Site: BULLDOG
Well: AZORES FED COM #1H
Wellbore: OWB
Design: PWP1

Local Co-ordinate Reference: Well AZORES FED COM #1H
TVD Reference: RKB=3508.8+26 @ 3534.8usft (MCVAY 8)
MD Reference: RKB=3508.8+26 @ 3534.8usft (MCVAY 8)
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: **From:** Map **Northing:** 398,637.10 usft **Latitude:** 32° 5' 36.820 N
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 FED COM #1H
Well Position **+N/-S** 0.0 usft **Northing:** 430,404.90 usf **Latitude:** 32° 10' 53.967 N
+E/-W 0.0 usft **Easting:** 699,426.80 usf **Longitude:** 103° 41' 19.471 W
Position Uncertainty 3.0 usft **Wellhead Elevation:** usf **Ground Level:** 3,508.8 usf

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	2/27/2017	7.06	60.00	47,920.36655884

Design PWP1
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 0.0 358.99

Survey Tool Program **Date** 2/28/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	10,000.0	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
10,000.0	15,408.0	PWP1 (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	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
100.0	0.00	0.00	100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
200.0	0.00	0.00	200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
300.0	0.00	0.00	300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
400.0	0.00	0.00	400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
500.0	0.00	0.00	500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
600.0	0.00	0.00	600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
700.0	0.00	0.00	700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
800.0	0.00	0.00	800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
900.0	0.00	0.00	900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,100.0	0.00	0.00	3,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,200.0	0.00	0.00	3,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,300.0	0.00	0.00	3,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,400.0	0.00	0.00	3,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,500.0	0.00	0.00	3,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,600.0	0.00	0.00	3,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,700.0	0.00	0.00	3,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,800.0	0.00	0.00	3,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
3,900.0	0.00	0.00	3,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,000.0	0.00	0.00	4,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,100.0	0.00	0.00	4,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,200.0	0.00	0.00	4,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,300.0	0.00	0.00	4,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,400.0	0.00	0.00	4,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,500.0	0.00	0.00	4,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,600.0	0.00	0.00	4,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,700.0	0.00	0.00	4,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,800.0	0.00	0.00	4,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
4,900.0	0.00	0.00	4,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,000.0	0.00	0.00	5,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,100.0	0.00	0.00	5,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,200.0	0.00	0.00	5,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,300.0	0.00	0.00	5,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,400.0	0.00	0.00	5,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,500.0	0.00	0.00	5,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,600.0	0.00	0.00	5,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,700.0	0.00	0.00	5,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,800.0	0.00	0.00	5,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
5,900.0	0.00	0.00	5,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,000.0	0.00	0.00	6,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,100.0	0.00	0.00	6,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,200.0	0.00	0.00	6,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,300.0	0.00	0.00	6,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,400.0	0.00	0.00	6,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,500.0	0.00	0.00	6,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W



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6,600.0	0.00	0.00	6,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,700.0	0.00	0.00	6,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,800.0	0.00	0.00	6,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
6,900.0	0.00	0.00	6,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,000.0	0.00	0.00	7,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,100.0	0.00	0.00	7,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,200.0	0.00	0.00	7,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,300.0	0.00	0.00	7,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,400.0	0.00	0.00	7,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,500.0	0.00	0.00	7,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,600.0	0.00	0.00	7,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,700.0	0.00	0.00	7,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,800.0	0.00	0.00	7,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
7,900.0	0.00	0.00	7,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,000.0	0.00	0.00	8,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,100.0	0.00	0.00	8,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,200.0	0.00	0.00	8,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,300.0	0.00	0.00	8,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,400.0	0.00	0.00	8,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,500.0	0.00	0.00	8,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,600.0	0.00	0.00	8,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,700.0	0.00	0.00	8,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,800.0	0.00	0.00	8,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
8,900.0	0.00	0.00	8,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,000.0	0.00	0.00	9,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,100.0	0.00	0.00	9,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,200.0	0.00	0.00	9,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,300.0	0.00	0.00	9,300.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,400.0	0.00	0.00	9,400.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,500.0	0.00	0.00	9,500.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,600.0	0.00	0.00	9,600.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,700.0	0.00	0.00	9,700.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,800.0	0.00	0.00	9,800.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
9,900.0	0.00	0.00	9,900.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
10,000.0	0.00	0.00	10,000.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
10,100.0	0.00	0.00	10,100.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
10,200.0	0.00	0.00	10,200.0	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
10,262.5	0.00	0.00	10,262.5	0.0	0.0	430,404.90	699,426.80	32° 10' 53.967 N	103° 41' 19.471 W
10,300.0	4.50	358.99	10,300.0	1.5	0.0	430,406.37	699,426.77	32° 10' 53.982 N	103° 41' 19.471 W
10,400.0	16.50	358.99	10,398.1	19.7	-0.3	430,424.56	699,426.45	32° 10' 54.162 N	103° 41' 19.473 W
10,500.0	28.50	358.99	10,490.3	57.8	-1.0	430,462.75	699,425.78	32° 10' 54.540 N	103° 41' 19.479 W
10,600.0	40.50	358.99	10,572.6	114.4	-2.0	430,519.27	699,424.78	32° 10' 55.099 N	103° 41' 19.486 W
10,700.0	52.50	358.99	10,641.3	186.8	-3.3	430,591.66	699,423.50	32° 10' 55.816 N	103° 41' 19.496 W
10,800.0	64.50	358.99	10,693.5	271.9	-4.8	430,676.75	699,422.00	32° 10' 56.658 N	103° 41' 19.508 W
10,900.0	76.49	358.99	10,726.8	365.9	-6.5	430,770.83	699,420.34	32° 10' 57.589 N	103° 41' 19.520 W
11,000.0	88.49	358.99	10,739.8	464.9	-8.2	430,869.77	699,418.60	32° 10' 58.568 N	103° 41' 19.534 W
11,012.6	90.00	358.99	10,740.0	477.4	-8.4	430,882.33	699,418.38	32° 10' 58.692 N	103° 41' 19.535 W
11,017.4	90.20	358.99	10,740.0	482.3	-8.5	430,887.22	699,418.29	32° 10' 58.741 N	103° 41' 19.536 W
11,100.0	90.20	358.99	10,739.7	564.9	-10.0	430,969.76	699,416.84	32° 10' 59.558 N	103° 41' 19.547 W
11,200.0	90.20	358.99	10,739.4	664.8	-11.7	431,069.74	699,415.07	32° 11' 0.547 N	103° 41' 19.561 W
11,300.0	90.20	358.99	10,739.0	764.8	-13.5	431,169.72	699,413.31	32° 11' 1.537 N	103° 41' 19.574 W
11,400.0	90.20	358.99	10,738.7	864.8	-15.3	431,269.71	699,411.54	32° 11' 2.526 N	103° 41' 19.588 W
11,500.0	90.20	358.99	10,738.3	964.8	-17.0	431,369.69	699,409.78	32° 11' 3.516 N	103° 41' 19.602 W
11,600.0	90.20	358.99	10,738.0	1,064.8	-18.8	431,469.68	699,408.01	32° 11' 4.505 N	103° 41' 19.615 W
11,700.0	90.20	358.99	10,737.7	1,164.8	-20.6	431,569.66	699,406.24	32° 11' 5.495 N	103° 41' 19.629 W



COG PRODUCTION LLC

Survey Report - Geographic

Company: COG PRODUCTION LLC
Project: LEA COUNTY, NM
Site: BULLDOG
Well: AZORES FED COM #1H
Wellbore: OWB
Design: PWP1

Local Co-ordinate Reference: Well AZORES FED COM #1H
TVD Reference: RKB=3508.8+26 @ 3534.8usft (MCVAY 8)
MD Reference: RKB=3508.8+26 @ 3534.8usft (MCVAY 8)
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
11,800.0	90.20	358.99	10,737.3	1,264.7	-22.3	431,669.64	699,404.48	32° 11' 6.484 N	103° 41' 19.642 W
11,900.0	90.20	358.99	10,737.0	1,364.7	-24.1	431,769.63	699,402.71	32° 11' 7.474 N	103° 41' 19.656 W
12,000.0	90.20	358.99	10,736.6	1,464.7	-25.8	431,869.61	699,400.95	32° 11' 8.463 N	103° 41' 19.669 W
12,100.0	90.20	358.99	10,736.3	1,564.7	-27.6	431,969.59	699,399.18	32° 11' 9.453 N	103° 41' 19.683 W
12,200.0	90.20	358.99	10,736.0	1,664.7	-29.4	432,069.58	699,397.42	32° 11' 10.442 N	103° 41' 19.697 W
12,300.0	90.20	358.99	10,735.6	1,764.7	-31.1	432,169.56	699,395.65	32° 11' 11.432 N	103° 41' 19.710 W
12,400.0	90.20	358.99	10,735.3	1,864.6	-32.9	432,269.55	699,393.89	32° 11' 12.421 N	103° 41' 19.724 W
12,500.0	90.20	358.99	10,734.9	1,964.6	-34.7	432,369.53	699,392.12	32° 11' 13.411 N	103° 41' 19.737 W
12,600.0	90.20	358.99	10,734.6	2,064.6	-36.4	432,469.51	699,390.36	32° 11' 14.400 N	103° 41' 19.751 W
12,700.0	90.20	358.99	10,734.2	2,164.6	-38.2	432,569.50	699,388.59	32° 11' 15.390 N	103° 41' 19.764 W
12,800.0	90.20	358.99	10,733.9	2,264.6	-40.0	432,669.48	699,386.83	32° 11' 16.380 N	103° 41' 19.778 W
12,900.0	90.20	358.99	10,733.6	2,364.6	-41.7	432,769.47	699,385.06	32° 11' 17.369 N	103° 41' 19.792 W
13,000.0	90.20	358.99	10,733.2	2,464.5	-43.5	432,869.45	699,383.30	32° 11' 18.359 N	103° 41' 19.805 W
13,100.0	90.20	358.99	10,732.9	2,564.5	-45.3	432,969.43	699,381.53	32° 11' 19.348 N	103° 41' 19.819 W
13,200.0	90.20	358.99	10,732.5	2,664.5	-47.0	433,069.42	699,379.77	32° 11' 20.338 N	103° 41' 19.832 W
13,300.0	90.20	358.99	10,732.2	2,764.5	-48.8	433,169.40	699,378.00	32° 11' 21.327 N	103° 41' 19.846 W
13,400.0	90.20	358.99	10,731.9	2,864.5	-50.6	433,269.38	699,376.24	32° 11' 22.317 N	103° 41' 19.859 W
13,500.0	90.20	358.99	10,731.5	2,964.5	-52.3	433,369.37	699,374.47	32° 11' 23.306 N	103° 41' 19.873 W
13,600.0	90.20	358.99	10,731.2	3,064.5	-54.1	433,469.35	699,372.71	32° 11' 24.296 N	103° 41' 19.887 W
13,700.0	90.20	358.99	10,730.8	3,164.4	-55.9	433,569.34	699,370.94	32° 11' 25.285 N	103° 41' 19.900 W
13,800.0	90.20	358.99	10,730.5	3,264.4	-57.6	433,669.32	699,369.18	32° 11' 26.275 N	103° 41' 19.914 W
13,900.0	90.20	358.99	10,730.1	3,364.4	-59.4	433,769.30	699,367.41	32° 11' 27.264 N	103° 41' 19.927 W
14,000.0	90.20	358.99	10,729.8	3,464.4	-61.1	433,869.29	699,365.65	32° 11' 28.254 N	103° 41' 19.941 W
14,100.0	90.20	358.99	10,729.5	3,564.4	-62.9	433,969.27	699,363.88	32° 11' 29.243 N	103° 41' 19.954 W
14,200.0	90.20	358.99	10,729.1	3,664.4	-64.7	434,069.26	699,362.12	32° 11' 30.233 N	103° 41' 19.968 W
14,300.0	90.20	358.99	10,728.8	3,764.3	-66.4	434,169.24	699,360.35	32° 11' 31.222 N	103° 41' 19.981 W
14,400.0	90.20	358.99	10,728.4	3,864.3	-68.2	434,269.22	699,358.59	32° 11' 32.212 N	103° 41' 19.995 W
14,500.0	90.20	358.99	10,728.1	3,964.3	-70.0	434,369.21	699,356.82	32° 11' 33.201 N	103° 41' 20.009 W
14,600.0	90.20	358.99	10,727.8	4,064.3	-71.7	434,469.19	699,355.06	32° 11' 34.191 N	103° 41' 20.022 W
14,700.0	90.20	358.99	10,727.4	4,164.3	-73.5	434,569.17	699,353.29	32° 11' 35.181 N	103° 41' 20.036 W
14,800.0	90.20	358.99	10,727.1	4,264.3	-75.3	434,669.16	699,351.53	32° 11' 36.170 N	103° 41' 20.049 W
14,900.0	90.20	358.99	10,726.7	4,364.2	-77.0	434,769.14	699,349.76	32° 11' 37.160 N	103° 41' 20.063 W
15,000.0	90.20	358.99	10,726.4	4,464.2	-78.8	434,869.13	699,348.00	32° 11' 38.149 N	103° 41' 20.076 W
15,100.0	90.20	358.99	10,726.1	4,564.2	-80.6	434,969.11	699,346.23	32° 11' 39.139 N	103° 41' 20.090 W
15,200.0	90.20	358.99	10,725.7	4,664.2	-82.3	435,069.09	699,344.47	32° 11' 40.128 N	103° 41' 20.104 W
15,300.0	90.20	358.99	10,725.4	4,764.2	-84.1	435,169.08	699,342.70	32° 11' 41.118 N	103° 41' 20.117 W
15,400.0	90.20	358.99	10,725.0	4,864.2	-85.9	435,269.06	699,340.94	32° 11' 42.107 N	103° 41' 20.131 W
15,408.0	90.20	358.99	10,725.0	4,872.2	-86.0	435,277.10	699,340.80	32° 11' 42.187 N	103° 41' 20.132 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	10,725.0	4,872.2	-86.0	435,277.10	699,340.80	32° 11' 42.187 N	103° 41' 20.132 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: AZORES FED COM #1H
 Wellbore: OWB
 Design: PWP1

WELL DETAILS:AZORES FED COM #1H

3508.8
 Northing 430404.90 Easting 699426.80 Latitude 32° 10' 53.967 N Longitude 103° 41' 19.471 W

Sec	MD	Inc	Azi	TVD	SECTION DETAILS					Vsect	Annotation
					+N/-S	+E/-W	Dleg	TFace			
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	10262.5	0.00	0.00	10262.5	0.0	0.0	0.00	0.00	0.0		
3	11012.6	90.00	358.99	10740.0	477.4	-8.4	12.00	358.99	477.5		
4	11017.4	90.20	358.99	10740.0	482.3	-8.5	4.00	-0.40	482.4		
5	15408.0	90.20	358.99	10725.0	4872.2	-86.0	0.00	0.00	4873.0		

LEGEND

- △ AZORES FED COM #10H, OWB, PWP0 V0
- AZORES FED COM #5H, OWB, PWP0 V0
- ⊕ PWP1

