



HOBBS OCD

APR 21 2016

RECEIVED

COG Production LLC

Lea County, NM

Azores Federal

#7H

OH

Plan: Design #1

Standard Planning Report

09 February, 2016

APR 25 2016



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #7H
Company:	COG Production LLC	TVD Reference:	WELL @ 3509.3usft (Original Well Elev)
Project:	Lea County, NM	MD Reference:	WELL @ 3509.3usft (Original Well Elev)
Site:	Azores Federal	North Reference:	Grid
Well:	#7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

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		Azores Federal			
Site Position:		Northing:	430,370.30 usft	Latitude:	32° 10' 53.703 N
From:	Map	Easting:	698,107.40 usft	Longitude:	103° 41' 34.825 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.34 °

Well	#7H					
Well Position	+N/-S	-410.1 usft	Northings:	429,960.20 usft	Latitude:	32° 10' 49.697 N
	+E/-W	-897.2 usft	Easting:	697,210.20 usft	Longitude:	103° 41' 45.292 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,491.3 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/9/2016	7.15	60.02	48,037

Design					Design #1				
Audit Notes:									
Version:		Phase:		PLAN		Tie On Depth:		0.0	
Vertical Section:		Depth From (TVD) (usft)		+N/-S (usft)		+E/-W. (usft)		Direction (°)	
		0.0		0.0		0.0		357.06	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
8,707.5	0.00	0.00	8,707.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,457.6	90.00	357.06	9,185.0	476.9	-24.5	12.00	12.00	0.00	357.06	
14,145.7	90.00	357.06	9,185.0	5,158.8	-264.9	0.00	0.00	0.00	0.00	PBHL(AF#7H)



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Wellbore:	OH		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	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	
300.0	0.00	0.00	300.0	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	
500.0	0.00	0.00	500.0	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	
700.0	0.00	0.00	700.0	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	
900.0	0.00	0.00	900.0	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	
1,100.0	0.00	0.00	1,100.0	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	
1,300.0	0.00	0.00	1,300.0	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	
1,500.0	0.00	0.00	1,500.0	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	
1,700.0	0.00	0.00	1,700.0	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	
1,900.0	0.00	0.00	1,900.0	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	
2,100.0	0.00	0.00	2,100.0	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	
2,300.0	0.00	0.00	2,300.0	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	
2,500.0	0.00	0.00	2,500.0	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	
2,700.0	0.00	0.00	2,700.0	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	
2,900.0	0.00	0.00	2,900.0	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	
3,100.0	0.00	0.00	3,100.0	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	
3,300.0	0.00	0.00	3,300.0	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	
3,500.0	0.00	0.00	3,500.0	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	
3,700.0	0.00	0.00	3,700.0	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	
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00	



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Wellbore:	OH		
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Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,707.5	0.00	0.00	8,707.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 8707.5 MD, 0.00° INC, 0.00° AZI									
8,725.0	2.10	357.06	8,725.0	0.3	0.0	0.3	12.00	12.00	0.00
8,750.0	5.10	357.06	8,749.9	1.9	-0.1	1.9	12.00	12.00	0.00
8,775.0	8.10	357.06	8,774.8	4.8	-0.2	4.8	12.00	12.00	0.00
8,800.0	11.10	357.06	8,799.4	8.9	-0.5	8.9	12.00	12.00	0.00
8,825.0	14.10	357.06	8,823.8	14.4	-0.7	14.4	12.00	12.00	0.00
8,850.0	17.10	357.06	8,847.9	21.1	-1.1	21.1	12.00	12.00	0.00
8,875.0	20.10	357.06	8,871.6	29.0	-1.5	29.1	12.00	12.00	0.00
8,900.0	23.10	357.06	8,894.8	38.2	-2.0	38.3	12.00	12.00	0.00
8,925.0	26.10	357.06	8,917.6	48.6	-2.5	48.7	12.00	12.00	0.00
8,950.0	29.10	357.06	8,939.7	60.2	-3.1	60.3	12.00	12.00	0.00
8,975.0	32.10	357.06	8,961.2	72.9	-3.7	73.0	12.00	12.00	0.00
9,000.0	35.10	357.06	8,982.0	86.7	-4.5	86.8	12.00	12.00	0.00
9,025.0	38.10	357.06	9,002.1	101.6	-5.2	101.7	12.00	12.00	0.00
9,050.0	41.10	357.06	9,021.4	117.5	-6.0	117.7	12.00	12.00	0.00
9,075.0	44.10	357.06	9,039.8	134.4	-6.9	134.6	12.00	12.00	0.00
9,100.0	47.10	357.06	9,057.3	152.2	-7.8	152.4	12.00	12.00	0.00
9,125.0	50.10	357.06	9,073.8	171.0	-8.8	171.2	12.00	12.00	0.00
9,150.0	53.10	357.06	9,089.3	190.5	-9.8	190.8	12.00	12.00	0.00



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Wellbore:	OH		
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Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,175.0	56.10	357.06	9,103.8	210.9	-10.8	211.1	12.00	12.00	0.00	
9,200.0	59.10	357.06	9,117.2	231.9	-11.9	232.3	12.00	12.00	0.00	
9,225.0	62.10	357.06	9,129.5	253.7	-13.0	254.0	12.00	12.00	0.00	
9,250.0	65.10	357.06	9,140.6	276.1	-14.2	276.4	12.00	12.00	0.00	
9,275.0	68.09	357.06	9,150.5	299.0	-15.4	299.4	12.00	12.00	0.00	
9,300.0	71.09	357.06	9,159.2	322.4	-16.6	322.8	12.00	12.00	0.00	
9,325.0	74.09	357.06	9,166.7	346.2	-17.8	346.6	12.00	12.00	0.00	
9,350.0	77.09	357.06	9,172.9	370.4	-19.0	370.9	12.00	12.00	0.00	
9,375.0	80.09	357.06	9,177.9	394.8	-20.3	395.4	12.00	12.00	0.00	
9,400.0	83.09	357.06	9,181.5	419.5	-21.5	420.1	12.00	12.00	0.00	
9,425.0	86.09	357.06	9,183.9	444.4	-22.8	445.0	12.00	12.00	0.00	
9,450.0	89.09	357.06	9,184.9	469.3	-24.1	469.9	12.00	12.00	0.00	
9,457.6	90.00	357.06	9,185.0	476.9	-24.5	477.5	12.00	12.00	0.00	
EOC- 9457.6 MD, 90.00° INC, 357.06° AZI										
9,500.0	90.00	357.06	9,185.0	519.3	-26.7	519.9	0.00	0.00	0.00	
9,600.0	90.00	357.06	9,185.0	619.1	-31.8	619.9	0.00	0.00	0.00	
9,700.0	90.00	357.06	9,185.0	719.0	-36.9	719.9	0.00	0.00	0.00	
9,800.0	90.00	357.06	9,185.0	818.9	-42.1	819.9	0.00	0.00	0.00	
9,900.0	90.00	357.06	9,185.0	918.7	-47.2	919.9	0.00	0.00	0.00	
10,000.0	90.00	357.06	9,185.0	1,018.6	-52.3	1,019.9	0.00	0.00	0.00	
10,100.0	90.00	357.06	9,185.0	1,118.5	-57.4	1,119.9	0.00	0.00	0.00	
10,200.0	90.00	357.06	9,185.0	1,218.3	-62.6	1,219.9	0.00	0.00	0.00	
10,300.0	90.00	357.06	9,185.0	1,318.2	-67.7	1,319.9	0.00	0.00	0.00	
10,400.0	90.00	357.06	9,185.0	1,418.1	-72.8	1,419.9	0.00	0.00	0.00	
10,500.0	90.00	357.06	9,185.0	1,517.9	-78.0	1,519.9	0.00	0.00	0.00	
10,600.0	90.00	357.06	9,185.0	1,617.8	-83.1	1,619.9	0.00	0.00	0.00	
10,700.0	90.00	357.06	9,185.0	1,717.7	-88.2	1,719.9	0.00	0.00	0.00	
10,800.0	90.00	357.06	9,185.0	1,817.5	-93.3	1,819.9	0.00	0.00	0.00	
10,900.0	90.00	357.06	9,185.0	1,917.4	-98.5	1,919.9	0.00	0.00	0.00	
11,000.0	90.00	357.06	9,185.0	2,017.3	-103.6	2,019.9	0.00	0.00	0.00	
11,100.0	90.00	357.06	9,185.0	2,117.2	-108.7	2,119.9	0.00	0.00	0.00	
11,200.0	90.00	357.06	9,185.0	2,217.0	-113.9	2,219.9	0.00	0.00	0.00	
11,300.0	90.00	357.06	9,185.0	2,316.9	-119.0	2,319.9	0.00	0.00	0.00	
11,400.0	90.00	357.06	9,185.0	2,416.8	-124.1	2,419.9	0.00	0.00	0.00	
11,500.0	90.00	357.06	9,185.0	2,516.6	-129.2	2,519.9	0.00	0.00	0.00	
11,600.0	90.00	357.06	9,185.0	2,616.5	-134.4	2,619.9	0.00	0.00	0.00	
11,700.0	90.00	357.06	9,185.0	2,716.4	-139.5	2,719.9	0.00	0.00	0.00	
11,800.0	90.00	357.06	9,185.0	2,816.2	-144.6	2,819.9	0.00	0.00	0.00	
11,900.0	90.00	357.06	9,185.0	2,916.1	-149.8	2,919.9	0.00	0.00	0.00	
12,000.0	90.00	357.06	9,185.0	3,016.0	-154.9	3,019.9	0.00	0.00	0.00	
12,100.0	90.00	357.06	9,185.0	3,115.8	-160.0	3,119.9	0.00	0.00	0.00	
12,200.0	90.00	357.06	9,185.0	3,215.7	-165.2	3,219.9	0.00	0.00	0.00	
12,300.0	90.00	357.06	9,185.0	3,315.6	-170.3	3,319.9	0.00	0.00	0.00	
12,400.0	90.00	357.06	9,185.0	3,415.4	-175.4	3,419.9	0.00	0.00	0.00	
12,500.0	90.00	357.06	9,185.0	3,515.3	-180.5	3,519.9	0.00	0.00	0.00	
12,600.0	90.00	357.06	9,185.0	3,615.2	-185.7	3,619.9	0.00	0.00	0.00	
12,700.0	90.00	357.06	9,185.0	3,715.0	-190.8	3,719.9	0.00	0.00	0.00	
12,800.0	90.00	357.06	9,185.0	3,814.9	-195.9	3,819.9	0.00	0.00	0.00	
12,900.0	90.00	357.06	9,185.0	3,914.8	-201.1	3,919.9	0.00	0.00	0.00	
13,000.0	90.00	357.06	9,185.0	4,014.7	-206.2	4,019.9	0.00	0.00	0.00	
13,100.0	90.00	357.06	9,185.0	4,114.5	-211.3	4,119.9	0.00	0.00	0.00	
13,200.0	90.00	357.06	9,185.0	4,214.4	-216.4	4,219.9	0.00	0.00	0.00	
13,300.0	90.00	357.06	9,185.0	4,314.3	-221.6	4,319.9	0.00	0.00	0.00	
13,400.0	90.00	357.06	9,185.0	4,414.1	-226.7	4,419.9	0.00	0.00	0.00	



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate/Reference:	Well #7H
Company:	COG Production LLC	TVD/Reference:	WELL @ 3509.3usft (Original Well Elev)
Project:	Lea County, NM	MD Reference:	WELL @ 3509.3usft (Original Well Elev)
Site:	Azores Federal	North/Reference:	Grid
Well:	#7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	90.00	357.06	9,185.0	4,514.0	-231.8	4,519.9	0.00	0.00	0.00
13,600.0	90.00	357.06	9,185.0	4,613.9	-237.0	4,619.9	0.00	0.00	0.00
13,700.0	90.00	357.06	9,185.0	4,713.7	-242.1	4,719.9	0.00	0.00	0.00
13,800.0	90.00	357.06	9,185.0	4,813.6	-247.2	4,819.9	0.00	0.00	0.00
13,900.0	90.00	357.06	9,185.0	4,913.5	-252.3	4,919.9	0.00	0.00	0.00
14,000.0	90.00	357.06	9,185.0	5,013.3	-257.5	5,019.9	0.00	0.00	0.00
14,100.0	90.00	357.06	9,185.0	5,113.2	-262.6	5,119.9	0.00	0.00	0.00
14,145.7	90.00	357.06	9,185.0	5,158.8	-264.9	5,165.6	0.00	0.00	0.00
TD at 14145.7 - PBHL (AF#7H)									

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 (AF#7H)	0.00	0.00	9,185.0	5,158.8	-265.4	435,119.00	696,944.80	32° 11' 40.763 N	103° 41' 48.025 W
- plan misses target center by 0.5usft at 14145.7usft MD (9185.0 TVD, 5158.8 N, -264.9 E)									
- Rectangle (sides W50.0 H5,165.6 D0.0)									

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
8,707.5	8,707.5	0.0	0.0	KOP - 8707.5 'MD, 0.00° INC, 0.00° AZI	
9,457.6	9,185.0	476.9	-24.5	EOC - 9457.6 'MD, 90.00° INC, 357.06° AZI	
14,145.7	9,185.0	5,158.8	-264.9	TD at 14145.7	



COG Production LLC
Project: Lea County, NM
Site: Azores Federal
Well: #11H
Plan: Design #1 (#11H/OH)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
2	8712.5	0.00	0.00	8712.5	0.0	0.0	0.00	0.00	0.0
3	9462.6	90.00	1.35	9190.0	477.4	11.2	12.00	1.35	477.5
4	14149.9	90.00	1.35	9190.0	5163.4	121.7	0.00	0.00	5164.8

PBHL(AF#11H)

WELL DETAILS: #11H

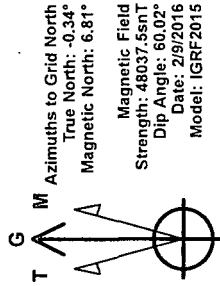
Ground Elevation:: 3491.7
RKB Elevation: WELL @ 3509.7usft (Original Well Elev)
Rig Name: Original Well Elev

Northing
429961.10

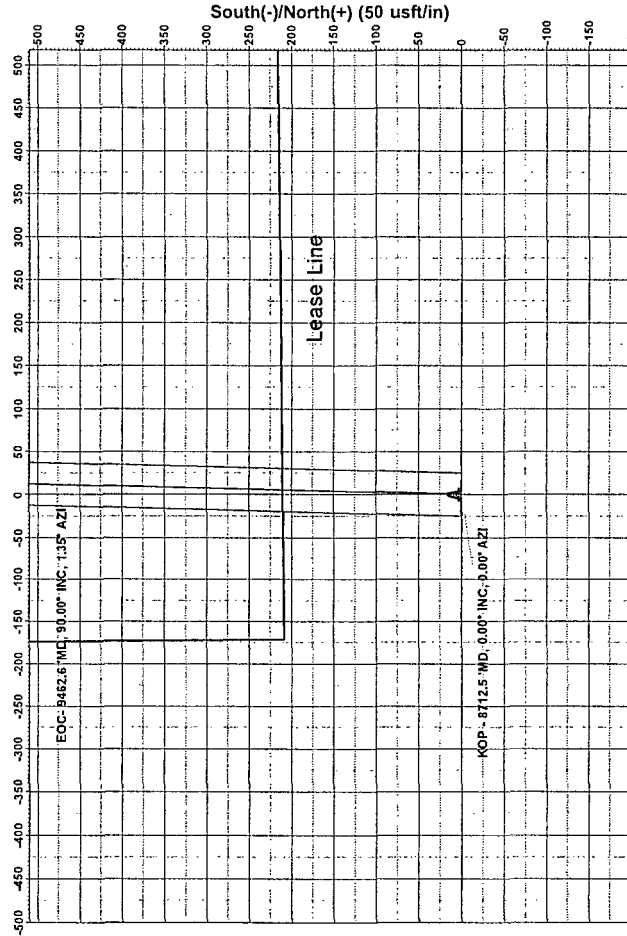
Easting
697290.20

Latitude
32° 10' 49.702 N

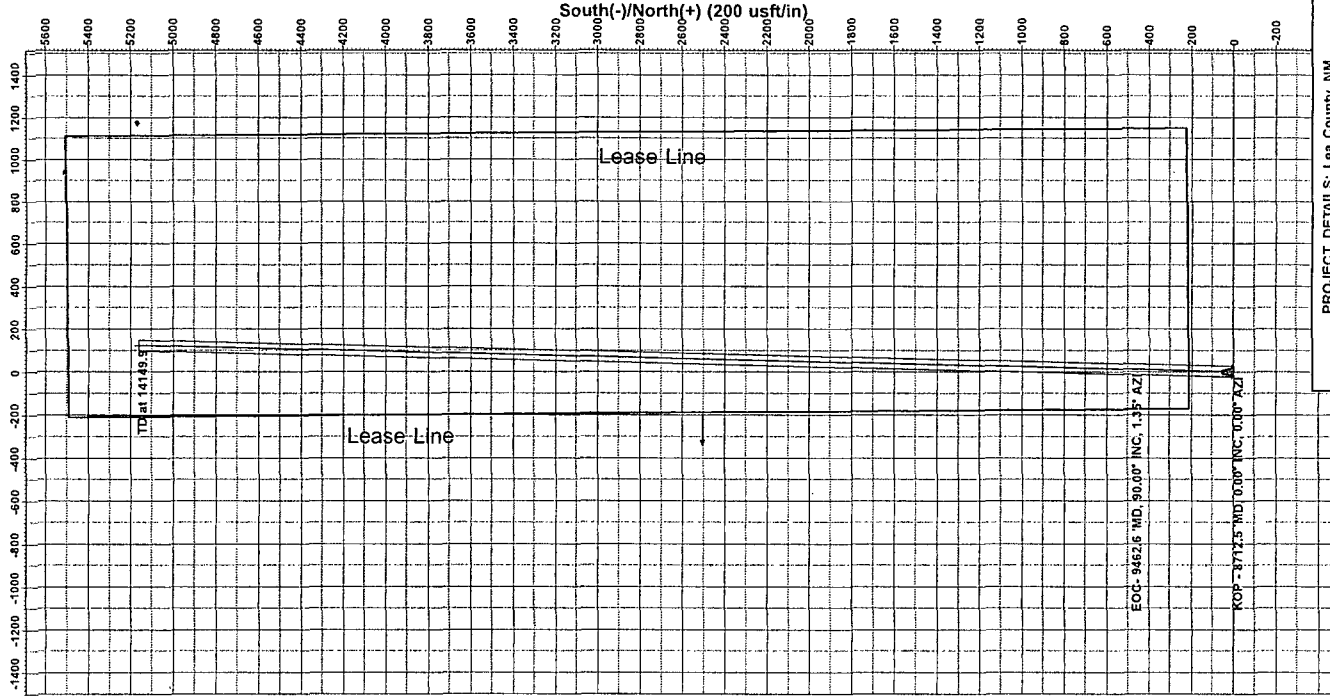
Longitude
103° 41' 44.362 W



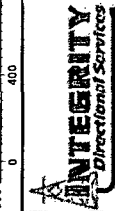
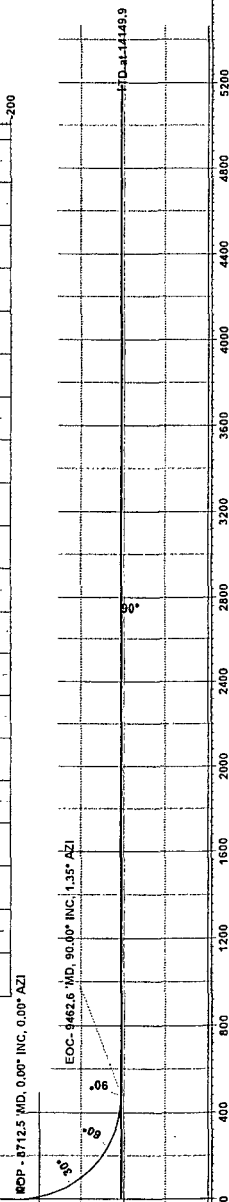
West(-)/East(+) (50 usft/in)



West(-)/East(+) (200 usft/in)



True Vertical Depth (200 usft/in)



Integrity Directional Services

Vertical Section at 1.35° (200 usft/in)

PROJECT DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid