



HOBBS OCD

APR 18 2016

RECEIVED

## COG Production LLC

Lea County, NM

Dos XX 27 Federal Com

#2H

OH

Plan: Design #1

## Standard Planning Report

01 June, 2015

APR 22 2016



Wellplanning  
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #2H
Company:	COG Production LLC	TVD Reference:	WELL @ 3607.7usft (Original Well Elev)
Project:	Lea County, NM	MD Reference:	WELL @ 3607.7usft (Original Well Elev)
Site:	Dos XX 27 Federal Com	North Reference:	Grid
Well:	#2H	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	Dos XX 27 Federal Com					
Site Position:	From:	Map	Northing:	435,387.70 usft	Latitude:	32° 11' 42.635 N
			Easting:	709,948.90 usft	Longitude:	103° 39' 16.677 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °	

Well	#2H					
Well Position	+N/-S	-18.2 usft	Northing:	435,369.50 usft	Latitude:	32° 11' 42.574 N
	+E/-W	-1,909.5 usft	Easting:	708,039.40 usft	Longitude:	103° 39' 38.899 W
Position Uncertainty	0.0 usft	Wellhead Elevation:			Ground Level:	3,589.7 usft

Wellbore	OH					
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/28/2015	7.14	60.05	48,193

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	179.69

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	
9,122.5	0.00	0.00	9,122.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,872.6	90.00	179.69	9,600.0	-477.5	2.6	12.00	12.00	0.00	179.69	
14,151.0	90.00	179.69	9,600.0	-4,755.9	25.7	0.00	0.00	0.00	0.00	PBHL(DOSXX#2H)



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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	0.00
100.0	0.00	0.00	100.0	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	0.0	0.00	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	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	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	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	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	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	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	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	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	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	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	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	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	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	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	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	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	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	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	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	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	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	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	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	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	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	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	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	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	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	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	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	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	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	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	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	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	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	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	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	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	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	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	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	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	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	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	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	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	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	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	0.00



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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)	
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	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	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	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	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	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	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	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	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	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	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	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	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	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	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	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	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	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	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	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	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	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	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	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	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	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	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	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	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	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	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	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	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
9,122.5	0.00	0.00	9,122.5	0.0	0.0	0.0	0.00	0.00	0.00	0.00
<b>KOP - 9122.5 'MD, 0.00° INC, 0.00° AZI</b>										
9,125.0	0.30	179.69	9,125.0	0.0	0.0	0.0	12.00	12.00	0.00	0.00
9,150.0	3.30	179.69	9,150.0	-0.8	0.0	0.8	12.00	12.00	0.00	0.00
9,175.0	6.30	179.69	9,174.9	-2.9	0.0	2.9	12.00	12.00	0.00	0.00
9,200.0	9.30	179.69	9,199.7	-6.3	0.0	6.3	12.00	12.00	0.00	0.00
9,225.0	12.30	179.69	9,224.2	-11.0	0.1	11.0	12.00	12.00	0.00	0.00
9,250.0	15.30	179.69	9,248.5	-16.9	0.1	16.9	12.00	12.00	0.00	0.00
9,275.0	18.30	179.69	9,272.4	-24.1	0.1	24.1	12.00	12.00	0.00	0.00
9,300.0	21.30	179.69	9,295.9	-32.6	0.2	32.6	12.00	12.00	0.00	0.00
9,325.0	24.30	179.69	9,319.0	-42.3	0.2	42.3	12.00	12.00	0.00	0.00
9,350.0	27.30	179.69	9,341.5	-53.2	0.3	53.2	12.00	12.00	0.00	0.00
9,375.0	30.30	179.69	9,363.4	-65.2	0.4	65.2	12.00	12.00	0.00	0.00
9,400.0	33.30	179.69	9,384.6	-78.4	0.4	78.4	12.00	12.00	0.00	0.00
9,425.0	36.30	179.69	9,405.2	-92.7	0.5	92.7	12.00	12.00	0.00	0.00



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Wellbore:	OH		
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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)	
9,450.0	39.30	179.69	9,424.9	-108.0	0.6	108.0	12.00	12.00	0.00	
9,475.0	42.30	179.69	9,443.8	-124.3	0.7	124.3	12.00	12.00	0.00	
9,500.0	45.30	179.69	9,461.9	-141.6	0.8	141.6	12.00	12.00	0.00	
9,525.0	48.30	179.69	9,479.0	-159.8	0.9	159.8	12.00	12.00	0.00	
9,550.0	51.30	179.69	9,495.1	-178.9	1.0	178.9	12.00	12.00	0.00	
9,575.0	54.30	179.69	9,510.3	-198.8	1.1	198.8	12.00	12.00	0.00	
9,600.0	57.30	179.69	9,524.3	-219.5	1.2	219.5	12.00	12.00	0.00	
9,625.0	60.30	179.69	9,537.3	-240.9	1.3	240.9	12.00	12.00	0.00	
9,650.0	63.30	179.69	9,549.1	-262.9	1.4	262.9	12.00	12.00	0.00	
9,675.0	66.30	179.69	9,559.7	-285.5	1.5	285.5	12.00	12.00	0.00	
9,700.0	69.29	179.69	9,569.2	-308.7	1.7	308.7	12.00	12.00	0.00	
9,725.0	72.29	179.69	9,577.4	-332.3	1.8	332.3	12.00	12.00	0.00	
9,750.0	75.29	179.69	9,584.4	-356.3	1.9	356.3	12.00	12.00	0.00	
9,775.0	78.29	179.69	9,590.1	-380.6	2.1	380.6	12.00	12.00	0.00	
9,800.0	81.29	179.69	9,594.5	-405.2	2.2	405.2	12.00	12.00	0.00	
9,825.0	84.29	179.69	9,597.6	-430.0	2.3	430.0	12.00	12.00	0.00	
9,850.0	87.29	179.69	9,599.5	-454.9	2.5	455.0	12.00	12.00	0.00	
9,872.6	90.00	179.69	9,600.0	-477.5	2.6	477.5	12.00	12.00	0.00	
EOC- 9872.6 °MD, 90.00° INC, 179.69° AZI										
9,900.0	90.00	179.69	9,600.0	-504.9	2.7	504.9	0.00	0.00	0.00	
10,000.0	90.00	179.69	9,600.0	-604.9	3.3	604.9	0.00	0.00	0.00	
10,100.0	90.00	179.69	9,600.0	-704.9	3.8	704.9	0.00	0.00	0.00	
10,200.0	90.00	179.69	9,600.0	-804.9	4.4	804.9	0.00	0.00	0.00	
10,300.0	90.00	179.69	9,600.0	-904.9	4.9	904.9	0.00	0.00	0.00	
10,400.0	90.00	179.69	9,600.0	-1,004.9	5.4	1,004.9	0.00	0.00	0.00	
10,500.0	90.00	179.69	9,600.0	-1,104.9	6.0	1,104.9	0.00	0.00	0.00	
10,600.0	90.00	179.69	9,600.0	-1,204.9	6.5	1,204.9	0.00	0.00	0.00	
10,700.0	90.00	179.69	9,600.0	-1,304.9	7.1	1,304.9	0.00	0.00	0.00	
10,800.0	90.00	179.69	9,600.0	-1,404.9	7.6	1,404.9	0.00	0.00	0.00	
10,900.0	90.00	179.69	9,600.0	-1,504.9	8.1	1,504.9	0.00	0.00	0.00	
11,000.0	90.00	179.69	9,600.0	-1,604.9	8.7	1,604.9	0.00	0.00	0.00	
11,100.0	90.00	179.69	9,600.0	-1,704.9	9.2	1,704.9	0.00	0.00	0.00	
11,200.0	90.00	179.69	9,600.0	-1,804.9	9.8	1,804.9	0.00	0.00	0.00	
11,300.0	90.00	179.69	9,600.0	-1,904.9	10.3	1,904.9	0.00	0.00	0.00	
11,400.0	90.00	179.69	9,600.0	-2,004.9	10.8	2,004.9	0.00	0.00	0.00	
11,500.0	90.00	179.69	9,600.0	-2,104.9	11.4	2,104.9	0.00	0.00	0.00	
11,600.0	90.00	179.69	9,600.0	-2,204.9	11.9	2,204.9	0.00	0.00	0.00	
11,700.0	90.00	179.69	9,600.0	-2,304.9	12.5	2,304.9	0.00	0.00	0.00	
11,800.0	90.00	179.69	9,600.0	-2,404.9	13.0	2,404.9	0.00	0.00	0.00	
11,900.0	90.00	179.69	9,600.0	-2,504.9	13.6	2,504.9	0.00	0.00	0.00	
12,000.0	90.00	179.69	9,600.0	-2,604.9	14.1	2,604.9	0.00	0.00	0.00	
12,100.0	90.00	179.69	9,600.0	-2,704.9	14.6	2,704.9	0.00	0.00	0.00	
12,200.0	90.00	179.69	9,600.0	-2,804.9	15.2	2,804.9	0.00	0.00	0.00	
12,300.0	90.00	179.69	9,600.0	-2,904.9	15.7	2,904.9	0.00	0.00	0.00	
12,400.0	90.00	179.69	9,600.0	-3,004.9	16.3	3,004.9	0.00	0.00	0.00	
12,500.0	90.00	179.69	9,600.0	-3,104.9	16.8	3,104.9	0.00	0.00	0.00	
12,600.0	90.00	179.69	9,600.0	-3,204.9	17.3	3,204.9	0.00	0.00	0.00	
12,700.0	90.00	179.69	9,600.0	-3,304.9	17.9	3,304.9	0.00	0.00	0.00	
12,800.0	90.00	179.69	9,600.0	-3,404.9	18.4	3,404.9	0.00	0.00	0.00	
12,900.0	90.00	179.69	9,600.0	-3,504.9	19.0	3,504.9	0.00	0.00	0.00	
13,000.0	90.00	179.69	9,600.0	-3,604.9	19.5	3,604.9	0.00	0.00	0.00	
13,100.0	90.00	179.69	9,600.0	-3,704.9	20.0	3,704.9	0.00	0.00	0.00	
13,200.0	90.00	179.69	9,600.0	-3,804.9	20.6	3,804.9	0.00	0.00	0.00	
13,300.0	90.00	179.69	9,600.0	-3,904.9	21.1	3,904.9	0.00	0.00	0.00	



Wellplanning  
Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #2H
Company:	COG Production LLC	TVD Reference:	WELL @ 3607.7usft (Original Well Elev)
Project:	Lea County, NM	MD Reference:	WELL @ 3607.7usft (Original Well Elev)
Site:	Dos XX 27 Federal Com	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

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)
13,400.0	90.00	179.69	9,600.0	-4,004.9	21.7	4,004.9	0.00	0.00	0.00
13,500.0	90.00	179.69	9,600.0	-4,104.9	22.2	4,104.9	0.00	0.00	0.00
13,600.0	90.00	179.69	9,600.0	-4,204.9	22.8	4,204.9	0.00	0.00	0.00
13,700.0	90.00	179.69	9,600.0	-4,304.9	23.3	4,304.9	0.00	0.00	0.00
13,800.0	90.00	179.69	9,600.0	-4,404.9	23.8	4,404.9	0.00	0.00	0.00
13,900.0	90.00	179.69	9,600.0	-4,504.9	24.4	4,504.9	0.00	0.00	0.00
14,000.0	90.00	179.69	9,600.0	-4,604.9	24.9	4,604.9	0.00	0.00	0.00
14,100.0	90.00	179.69	9,600.0	-4,704.9	25.5	4,704.9	0.00	0.00	0.00
14,151.0	90.00	179.69	9,600.0	-4,755.9	25.7	4,756.0	0.00	0.00	0.00

TD at 14151.0 - PBHL(DOSXX#2H)

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(DOSXX#2H)	0.00	0.00	9,600.0	-4,755.9	25.5	430,613.60	708,064.90	32° 10' 55.509 N	103° 39' 38.949 W
- plan misses target center by 0.2usft at 14151.0usft MD (9600.0 TVD, -4755.9 N, 25.7 E)									
- Point									

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,122.5	9,122.5	0.0	0.0	KOP - 9122.5 'MD, 0.00° INC, 0.00° AZI
9,872.6	9,600.0	-477.5	2.6	EOC - 9872.6 'MD, 90.00° INC, 179.69° AZI
14,151.0	9,600.0	-4,755.9	25.7	TD at 14151.0



COG Production LLC  
 Project: Lea County, NM  
 Site: Dos XX 27 Federal Com  
 Well: #2H

Wellbore: OH  
 Plan: Design #1 (#2H/OH)

Ground Elevation: 3589.7  
 RKB Elevation: WELL @ 3607.7usft (Original Well Elev)  
 Rig Name: Original Well Elev

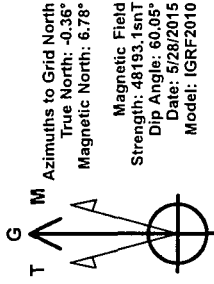
Northing 435369.50  
 Easting 708039.40  
 Longitude 103° 39' 38.899 W

WELL DETAILS: #2H

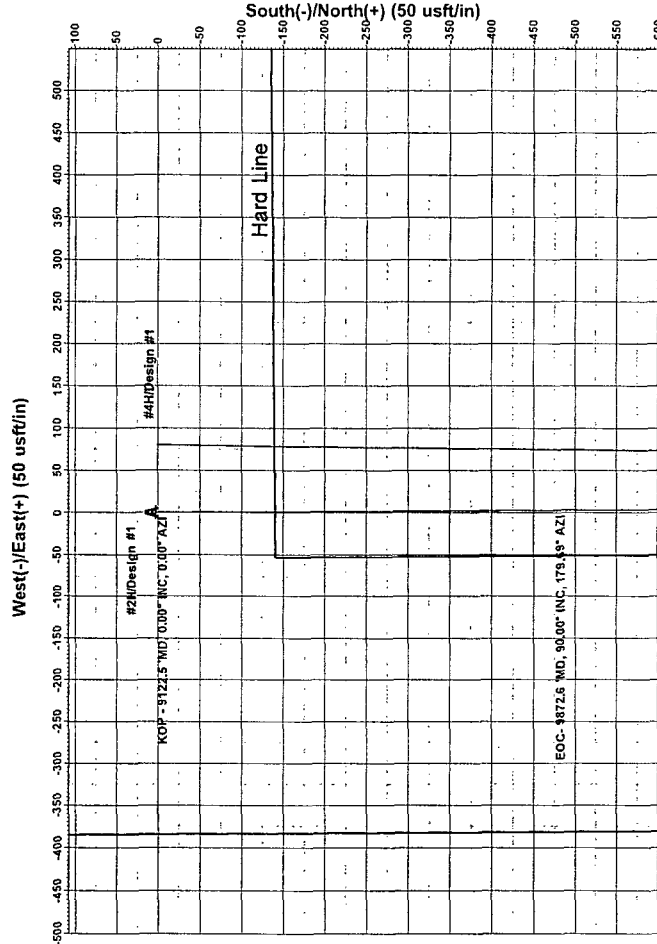
Section Details

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	9122.5	0.00	0.00	9122.5	0.0	0.0	0.00	0.00	0.0
3	9872.6	90.00	179.69	9600.0	-477.5	2.6	12.00	179.69	477.5
4	14151.0	90.00	179.69	9600.0	-4755.9	25.7	0.00	0.00	4756.0

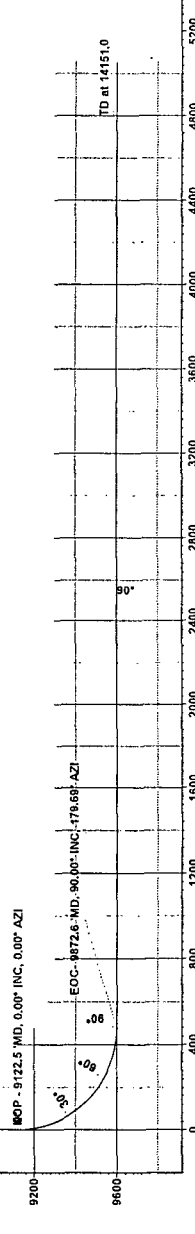
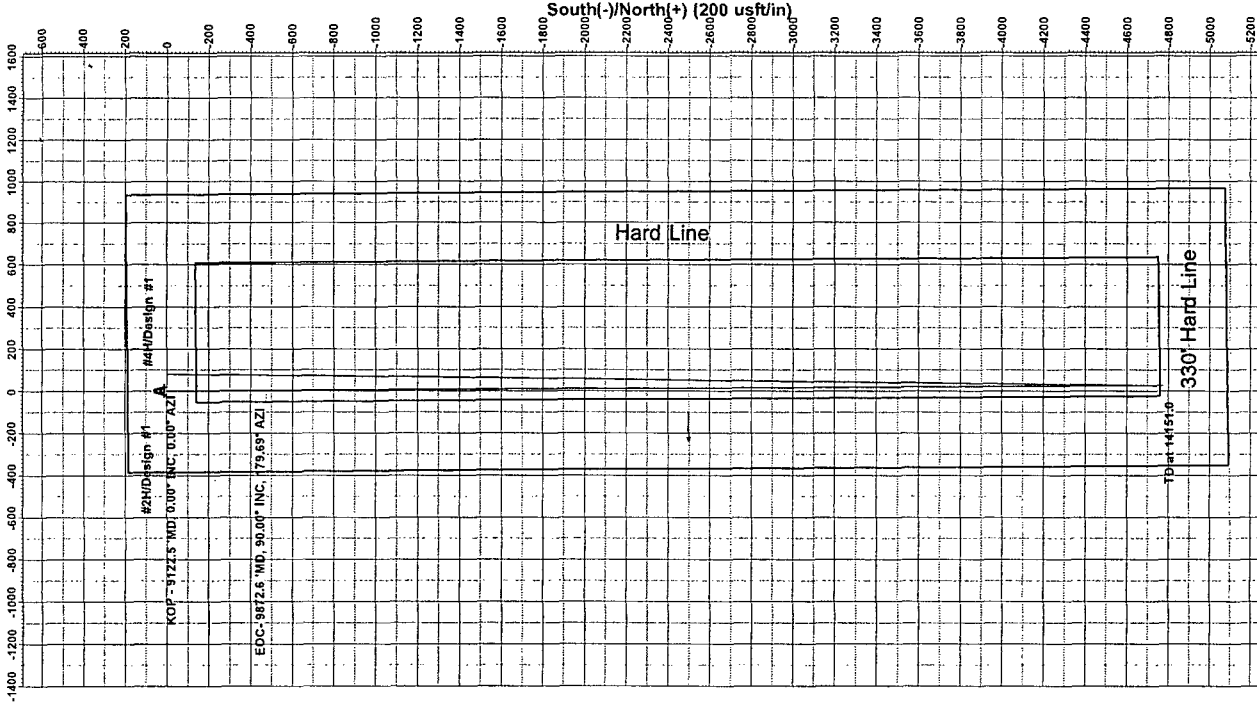
PBHL(DOSXX#2H)



Azimuths to Grid North  
 True North: -0.36°  
 Magnetic North: 6.78°



West(-)/East(+) (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

Nexus Directional Solutions

Vertical Section at 179.69° (200 usft/in)

