

COG Operating LLC

Lea County, NM

Airbonita 12 Federal

#3H

OH

Plan: Plan #1

Standard Planning Report

08 March, 2015



FEB 11 2016



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	KB @ 3689.8usft
Project:	Lea County, NM	MD Reference:	KB @ 3689.8usft
Site:	Airbonita 12 Federal	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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	Airbonita 12 Federal		
Site Position:		Northing:	509,618.50 usft
From:	Map	Easting:	715,682.90 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 23' 56.826 N
		Longitude:	103° 38' 4.321 W
		Grid Convergence:	0.37 °

Well	#3H		
Well Position	+N/-S	145.2 usft	Northing:
	+E/-W	1,448.8 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 23' 58.168 N
		Longitude:	103° 37' 47.413 W
		Ground Level:	3,658.7 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	3/5/2015	7.17
			Dip Angle
			60.25
			Field Strength
			48,341

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			358.86

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
11,369.6	0.00	0.00	11,369.6	0.0	0.0	0.00	0.00	0.00	0.00	
12,126.3	90.80	358.86	11,847.0	484.1	-9.6	12.00	12.00	-0.15	358.86	
16,398.3	90.80	358.86	11,787.0	4,754.8	-94.6	0.00	0.00	0.00	0.00	PBHL (A12F #3H/OH)



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Site:	Airbonita 12 Federal	North Reference:	Grid
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Wellbore:	OH		
Design:	Plan #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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Planned Survey									
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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
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	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
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	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
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,600.0	0.0	0.0	0.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,700.0	0.0	0.0	0.0	0.00	0.00	0.00



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Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)
10,800.0	0.00	0.00	10,800.0	0.0	0.0	0.0	0.00	0.00	0.00
10,900.0	0.00	0.00	10,900.0	0.0	0.0	0.0	0.00	0.00	0.00
11,000.0	0.00	0.00	11,000.0	0.0	0.0	0.0	0.00	0.00	0.00
11,100.0	0.00	0.00	11,100.0	0.0	0.0	0.0	0.00	0.00	0.00
11,200.0	0.00	0.00	11,200.0	0.0	0.0	0.0	0.00	0.00	0.00
11,300.0	0.00	0.00	11,300.0	0.0	0.0	0.0	0.00	0.00	0.00
11,369.6	0.00	0.00	11,369.6	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start DLS 12.00 TFO 358.86									
11,375.0	0.65	358.86	11,375.0	0.0	0.0	0.0	12.00	12.00	0.00
11,400.0	3.65	358.86	11,400.0	1.0	0.0	1.0	12.00	12.00	0.00
11,425.0	6.65	358.86	11,424.9	3.2	-0.1	3.2	12.00	12.00	0.00
11,450.0	9.65	358.86	11,449.6	6.8	-0.1	6.8	12.00	12.00	0.00
11,475.0	12.65	358.86	11,474.1	11.6	-0.2	11.6	12.00	12.00	0.00
11,500.0	15.65	358.86	11,498.4	17.7	-0.4	17.7	12.00	12.00	0.00
11,525.0	18.65	358.86	11,522.3	25.1	-0.5	25.1	12.00	12.00	0.00
11,550.0	21.65	358.86	11,545.7	33.7	-0.7	33.7	12.00	12.00	0.00
11,575.0	24.65	358.86	11,568.7	43.5	-0.9	43.5	12.00	12.00	0.00
11,600.0	27.65	358.86	11,591.2	54.5	-1.1	54.5	12.00	12.00	0.00
11,625.0	30.65	358.86	11,613.0	66.7	-1.3	66.7	12.00	12.00	0.00
11,650.0	33.65	358.86	11,634.2	80.0	-1.6	80.0	12.00	12.00	0.00
11,675.0	36.65	358.86	11,654.6	94.4	-1.9	94.4	12.00	12.00	0.00
11,700.0	39.65	358.86	11,674.3	109.8	-2.2	109.8	12.00	12.00	0.00
11,725.0	42.65	358.86	11,693.1	126.3	-2.5	126.3	12.00	12.00	0.00
11,750.0	45.65	358.86	11,711.0	143.7	-2.9	143.7	12.00	12.00	0.00
11,775.0	48.65	358.86	11,728.0	162.0	-3.2	162.0	12.00	12.00	0.00
11,800.0	51.65	358.86	11,744.0	181.2	-3.6	181.2	12.00	12.00	0.00
11,825.0	54.65	358.86	11,759.0	201.2	-4.0	201.2	12.00	12.00	0.00
11,850.0	57.65	358.86	11,773.0	221.9	-4.4	222.0	12.00	12.00	0.00
11,875.0	60.65	358.86	11,785.8	243.4	-4.8	243.4	12.00	12.00	0.00
11,900.0	63.65	358.86	11,797.4	265.5	-5.3	265.5	12.00	12.00	0.00
11,925.0	66.65	358.86	11,808.0	288.2	-5.7	288.2	12.00	12.00	0.00
11,950.0	69.65	358.86	11,817.3	311.3	-6.2	311.4	12.00	12.00	0.00
11,975.0	72.65	358.86	11,825.3	335.0	-6.7	335.1	12.00	12.00	0.00
12,000.0	75.65	358.86	11,832.2	359.0	-7.1	359.1	12.00	12.00	0.00
12,025.0	78.65	358.86	11,837.7	383.4	-7.6	383.5	12.00	12.00	0.00
12,050.0	81.65	358.86	11,842.0	408.0	-8.1	408.1	12.00	12.00	0.00
12,075.0	84.65	358.86	11,845.0	432.8	-8.6	432.9	12.00	12.00	0.00
12,100.0	87.65	358.86	11,846.7	457.8	-9.1	457.9	12.00	12.00	0.00
12,126.3	90.80	358.86	11,847.0	484.1	-9.6	484.2	12.00	12.00	0.00
EOC - Start 4272.0 hold at 12126.3 MD									
12,200.0	90.80	358.86	11,846.0	557.7	-11.1	557.9	0.00	0.00	0.00
12,300.0	90.80	358.86	11,844.6	657.7	-13.1	657.8	0.00	0.00	0.00
12,400.0	90.80	358.86	11,843.2	757.7	-15.1	757.8	0.00	0.00	0.00
12,500.0	90.80	358.86	11,841.8	857.7	-17.1	857.8	0.00	0.00	0.00
12,600.0	90.80	358.86	11,840.4	957.6	-19.1	957.8	0.00	0.00	0.00
12,700.0	90.80	358.86	11,839.0	1,057.6	-21.0	1,057.8	0.00	0.00	0.00
12,800.0	90.80	358.86	11,837.6	1,157.6	-23.0	1,157.8	0.00	0.00	0.00
12,900.0	90.80	358.86	11,836.1	1,257.5	-25.0	1,257.8	0.00	0.00	0.00
13,000.0	90.80	358.86	11,834.7	1,357.5	-27.0	1,357.8	0.00	0.00	0.00
13,100.0	90.80	358.86	11,833.3	1,457.5	-29.0	1,457.8	0.00	0.00	0.00
13,200.0	90.80	358.86	11,831.9	1,557.5	-31.0	1,557.8	0.00	0.00	0.00
13,300.0	90.80	358.86	11,830.5	1,657.4	-33.0	1,657.7	0.00	0.00	0.00
13,400.0	90.80	358.86	11,829.1	1,757.4	-35.0	1,757.7	0.00	0.00	0.00
13,500.0	90.80	358.86	11,827.7	1,857.4	-37.0	1,857.7	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	KB @ 3689.8usft
Project:	Lea County, NM	MD Reference:	KB @ 3689.8usft
Site:	Airbonita 12 Federal	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #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)
13,600.0	90.80	358.86	11,826.3	1,957.3	-38.9	1,957.7	0.00	0.00	0.00
13,700.0	90.80	358.86	11,824.9	2,057.3	-40.9	2,057.7	0.00	0.00	0.00
13,800.0	90.80	358.86	11,823.5	2,157.3	-42.9	2,157.7	0.00	0.00	0.00
13,900.0	90.80	358.86	11,822.1	2,257.2	-44.9	2,257.7	0.00	0.00	0.00
14,000.0	90.80	358.86	11,820.7	2,357.2	-46.9	2,357.7	0.00	0.00	0.00
14,100.0	90.80	358.86	11,819.3	2,457.2	-48.9	2,457.7	0.00	0.00	0.00
14,200.0	90.80	358.86	11,817.9	2,557.2	-50.9	2,557.7	0.00	0.00	0.00
14,300.0	90.80	358.86	11,816.5	2,657.1	-52.9	2,657.7	0.00	0.00	0.00
14,400.0	90.80	358.86	11,815.1	2,757.1	-54.9	2,757.6	0.00	0.00	0.00
14,500.0	90.80	358.86	11,813.7	2,857.1	-56.8	2,857.6	0.00	0.00	0.00
14,600.0	90.80	358.86	11,812.3	2,957.0	-58.8	2,957.6	0.00	0.00	0.00
14,700.0	90.80	358.86	11,810.9	3,057.0	-60.8	3,057.6	0.00	0.00	0.00
14,800.0	90.80	358.86	11,809.5	3,157.0	-62.8	3,157.6	0.00	0.00	0.00
14,900.0	90.80	358.86	11,808.0	3,256.9	-64.8	3,257.6	0.00	0.00	0.00
15,000.0	90.80	358.86	11,806.6	3,356.9	-66.8	3,357.6	0.00	0.00	0.00
15,100.0	90.80	358.86	11,805.2	3,456.9	-68.8	3,457.6	0.00	0.00	0.00
15,200.0	90.80	358.86	11,803.8	3,556.9	-70.8	3,557.6	0.00	0.00	0.00
15,300.0	90.80	358.86	11,802.4	3,656.8	-72.8	3,657.6	0.00	0.00	0.00
15,400.0	90.80	358.86	11,801.0	3,756.8	-74.7	3,757.5	0.00	0.00	0.00
15,500.0	90.80	358.86	11,799.6	3,856.8	-76.7	3,857.5	0.00	0.00	0.00
15,600.0	90.80	358.86	11,798.2	3,956.7	-78.7	3,957.5	0.00	0.00	0.00
15,700.0	90.80	358.86	11,796.8	4,056.7	-80.7	4,057.5	0.00	0.00	0.00
15,800.0	90.80	358.86	11,795.4	4,156.7	-82.7	4,157.5	0.00	0.00	0.00
15,900.0	90.80	358.86	11,794.0	4,256.6	-84.7	4,257.5	0.00	0.00	0.00
16,000.0	90.80	358.86	11,792.6	4,356.6	-86.7	4,357.5	0.00	0.00	0.00
16,100.0	90.80	358.86	11,791.2	4,456.6	-88.7	4,457.5	0.00	0.00	0.00
16,200.0	90.80	358.86	11,789.8	4,556.6	-90.7	4,557.5	0.00	0.00	0.00
16,300.0	90.80	358.86	11,788.4	4,656.5	-92.6	4,657.5	0.00	0.00	0.00
16,398.3	90.80	358.86	11,787.0	4,754.8	-94.6	4,755.7	0.00	0.00	0.00
TD at 16398.3									

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 (A12F #3H/OH)	0.00	0.00	11,787.0	4,754.8	-94.6	514,518.50	717,037.10	32° 24' 45.225 N	103° 37' 48.151 W
- plan hits target center									
- Point									
EOC (A12F #3H/OH Pla	0.00	0.00	11,847.0	484.1	-9.6	510,247.77	717,122.07	32° 24' 2.959 N	103° 37' 47.488 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,369.6	11,369.6	0.0	0.0	KOP - Start DLS 12.00 TFO 358.86
12,126.3	11,847.0	484.1	-9.6	EOC - Start 4272.0 hold at 12126.3 MD
16,398.3	11,787.0	4,754.8	-94.6	TD at 16398.3



COG Operating LLC
Project: Lea County, NM
Site: Airbonita 12 Federal
Well: #3H
Wellbore: OH
Plan: Plan #1 (#3H/OH)

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	11369.6	0.00	0.00	11369.6	0.0	0.0	0.00	0.00	0.0	
3	12126.3	90.80	358.86	11847.0	484.1	-9.6	12.00	358.86	484.2	PBHL (A12F #3H/OH)
4	16398.3	90.80	358.86	11787.0	4754.8	-94.6	0.00	0.00	4755.7	PBHL (A12F #3H/OH)

WELL DETAILS: #3H

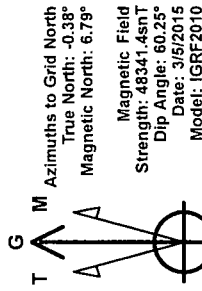
Ground Elevation: 3658.7
RKB Elevation: KB @ 3689.8usft
Rig Name:

Northings
509763.70

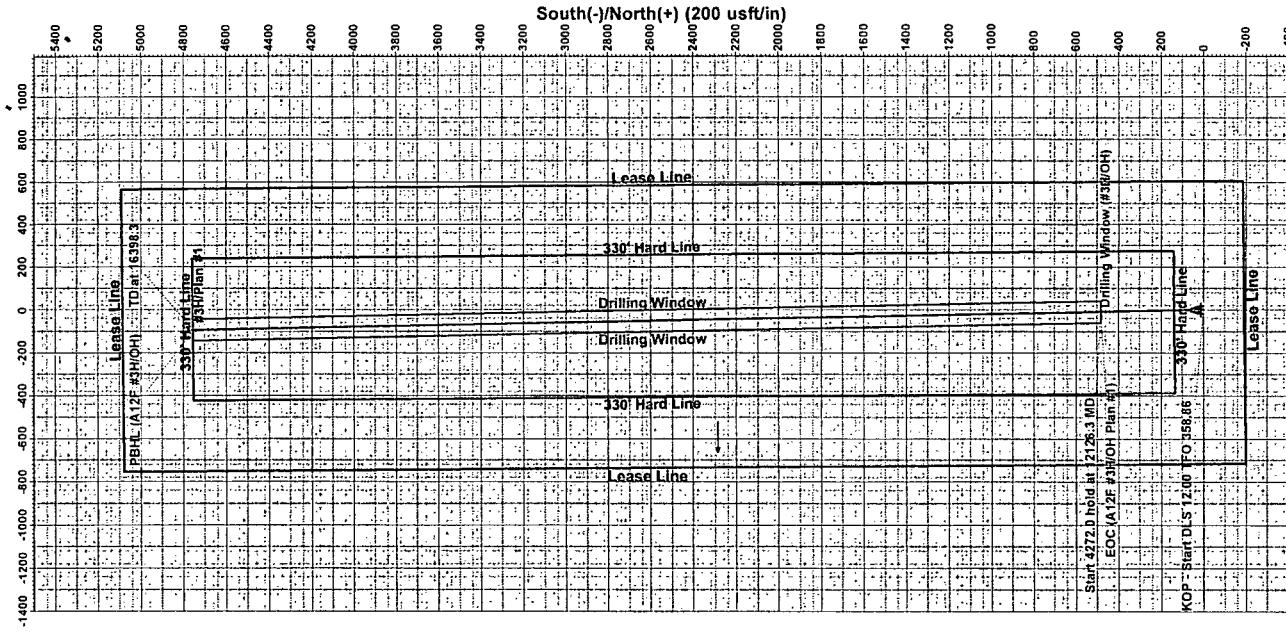
Easting
717131.70

Latitude
32° 23' 58.168 N

Longitude
103° 37' 47.413 W

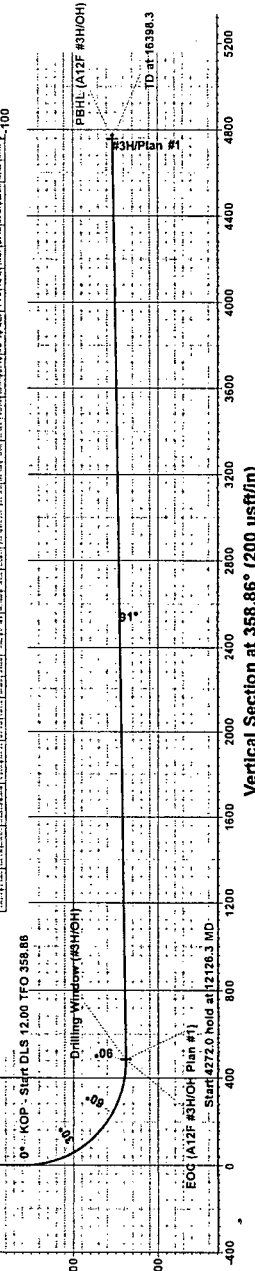
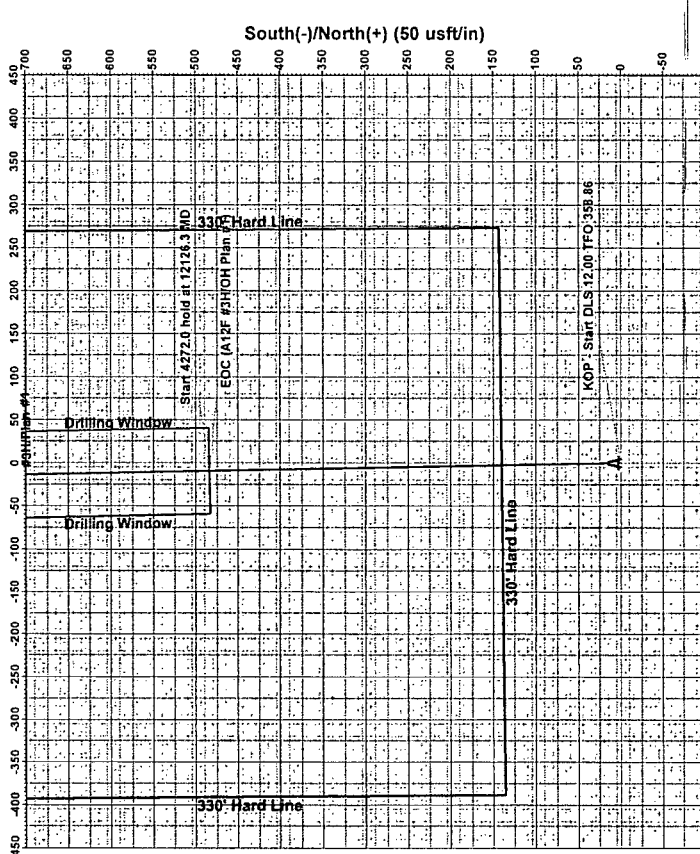


West(-)/East(+) (200 usft/in)



South(-)/North(+) (50 usft/in)

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



Vertical Section at 358.86° (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



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