



COG Operating LLC

Lea County, NM

Airbonita 12 Federal Com

#9H

OH

Plan: Plan #1

Standard Planning Report

08 March, 2015



JAN 12 2016



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #9H
Company:	COG Operating LLC	TVD Reference:	KB @ 3654.9usft
Project:	Lea County, NM	MD Reference:	KB @ 3654.9usft
Site:	Airbonita 12 Federal Com	North Reference:	Grid
Well:	#9H	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 Com			
Site Position:		Northing:	509,773.30 usft	Latitude: 32° 23' 58.202 N
From:	Map	Easting:	718,065.70 usft	Longitude: 103° 37' 36.519 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.38 °

Well:	#9H			
Well Position	+N-S	18.4 usft	Northing:	509,791.70 usft
	+E-W	1,919.6 usft	Easting:	719,985.30 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 3,623.8 usft

Wellbore:	OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)
	IGRF2010	3/8/2015	7.16	60.25
				48,342

Design:	Plan #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	359.71

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	
9,426.5	0.00	0.00	9,426.5	0.0	0.0	0.00	0.00	0.00	0.00	
10,178.6	90.25	359.71	9,904.0	479.6	-2.4	12.00	12.00	-0.04	359.71	
14,458.3	90.25	359.71	9,885.0	4,759.2	-23.7	0.00	0.00	0.00	0.00	PBHL (#9H/OH)



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Site:	Airbonita 12 Federal Com	North Reference:	Grid
Well:	#9H	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)
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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Well:	#9H	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)
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
9,426.5	0.00	0.00	9,426.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start DLS 12.00 TFO 359.71									
9,450.0	2.82	359.71	9,450.0	0.6	0.0	0.6	12.00	12.00	0.00
9,475.0	5.82	359.71	9,474.9	2.5	0.0	2.5	12.00	12.00	0.00
9,500.0	8.82	359.71	9,499.7	5.6	0.0	5.6	12.00	12.00	0.00
9,525.0	11.82	359.71	9,524.3	10.1	-0.1	10.1	12.00	12.00	0.00
9,550.0	14.82	359.71	9,548.6	15.9	-0.1	15.9	12.00	12.00	0.00
9,575.0	17.82	359.71	9,572.6	22.9	-0.1	22.9	12.00	12.00	0.00
9,600.0	20.82	359.71	9,596.2	31.2	-0.2	31.2	12.00	12.00	0.00
9,625.0	23.82	359.71	9,619.3	40.7	-0.2	40.7	12.00	12.00	0.00
9,650.0	26.82	359.71	9,641.9	51.4	-0.3	51.4	12.00	12.00	0.00
9,675.0	29.82	359.71	9,663.9	63.2	-0.3	63.2	12.00	12.00	0.00



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Site:	Airbonita 12 Federal Corn	North Reference:	Grid
Well:	#9H	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)
9,700.0	32.82	359.71	9,685.3	76.2	-0.4	76.2	12.00	12.00	0.00
9,725.0	35.82	359.71	9,705.9	90.3	-0.4	90.3	12.00	12.00	0.00
9,750.0	38.82	359.71	9,725.8	105.5	-0.5	105.5	12.00	12.00	0.00
9,775.0	41.82	359.71	9,744.9	121.6	-0.6	121.6	12.00	12.00	0.00
9,800.0	44.82	359.71	9,763.1	138.8	-0.7	138.8	12.00	12.00	0.00
9,825.0	47.82	359.71	9,780.3	156.9	-0.8	156.9	12.00	12.00	0.00
9,850.0	50.82	359.71	9,796.6	175.8	-0.9	175.8	12.00	12.00	0.00
9,875.0	53.82	359.71	9,811.9	195.6	-1.0	195.6	12.00	12.00	0.00
9,900.0	56.82	359.71	9,826.1	216.2	-1.1	216.2	12.00	12.00	0.00
9,925.0	59.82	359.71	9,839.2	237.4	-1.2	237.4	12.00	12.00	0.00
9,950.0	62.82	359.71	9,851.2	259.4	-1.3	259.4	12.00	12.00	0.00
9,975.0	65.82	359.71	9,862.1	281.9	-1.4	281.9	12.00	12.00	0.00
10,000.0	68.82	359.71	9,871.7	305.0	-1.5	305.0	12.00	12.00	0.00
10,025.0	71.82	359.71	9,880.1	328.5	-1.6	328.5	12.00	12.00	0.00
10,050.0	74.82	359.71	9,887.3	352.4	-1.8	352.4	12.00	12.00	0.00
10,075.0	77.82	359.71	9,893.2	376.7	-1.9	376.7	12.00	12.00	0.00
10,100.0	80.82	359.71	9,897.8	401.3	-2.0	401.3	12.00	12.00	0.00
10,125.0	83.82	359.71	9,901.2	426.1	-2.1	426.1	12.00	12.00	0.00
10,150.0	86.82	359.71	9,903.2	451.0	-2.2	451.0	12.00	12.00	0.00
10,175.0	89.82	359.71	9,904.0	476.0	-2.4	476.0	12.00	12.00	0.00
10,178.6	90.25	359.71	9,904.0	479.6	-2.4	479.6	12.00	12.00	0.00
EOC - Start 4279.7 hold at 10178.6 MD									
10,200.0	90.25	359.71	9,903.9	501.0	-2.5	501.0	0.00	0.00	0.00
10,300.0	90.25	359.71	9,903.4	601.0	-3.0	601.0	0.00	0.00	0.00
10,400.0	90.25	359.71	9,903.0	701.0	-3.5	701.0	0.00	0.00	0.00
10,500.0	90.25	359.71	9,902.5	801.0	-4.0	801.0	0.00	0.00	0.00
10,600.0	90.25	359.71	9,902.1	900.9	-4.5	901.0	0.00	0.00	0.00
10,700.0	90.25	359.71	9,901.7	1,000.9	-5.0	1,001.0	0.00	0.00	0.00
10,800.0	90.25	359.71	9,901.2	1,100.9	-5.5	1,101.0	0.00	0.00	0.00
10,900.0	90.25	359.71	9,900.8	1,200.9	-6.0	1,201.0	0.00	0.00	0.00
11,000.0	90.25	359.71	9,900.3	1,300.9	-6.5	1,301.0	0.00	0.00	0.00
11,100.0	90.25	359.71	9,899.9	1,400.9	-7.0	1,401.0	0.00	0.00	0.00
11,200.0	90.25	359.71	9,899.4	1,500.9	-7.5	1,501.0	0.00	0.00	0.00
11,300.0	90.25	359.71	9,899.0	1,600.9	-8.0	1,601.0	0.00	0.00	0.00
11,400.0	90.25	359.71	9,898.5	1,700.9	-8.5	1,701.0	0.00	0.00	0.00
11,500.0	90.25	359.71	9,898.1	1,800.9	-9.0	1,801.0	0.00	0.00	0.00
11,600.0	90.25	359.71	9,897.7	1,900.9	-9.5	1,901.0	0.00	0.00	0.00
11,700.0	90.25	359.71	9,897.2	2,000.9	-10.0	2,000.9	0.00	0.00	0.00
11,800.0	90.25	359.71	9,896.8	2,100.9	-10.5	2,100.9	0.00	0.00	0.00
11,900.0	90.25	359.71	9,896.3	2,200.9	-11.0	2,200.9	0.00	0.00	0.00
12,000.0	90.25	359.71	9,895.9	2,300.9	-11.5	2,300.9	0.00	0.00	0.00
12,100.0	90.25	359.71	9,895.4	2,400.9	-12.0	2,400.9	0.00	0.00	0.00
12,200.0	90.25	359.71	9,895.0	2,500.9	-12.5	2,500.9	0.00	0.00	0.00
12,300.0	90.25	359.71	9,894.6	2,600.9	-13.0	2,600.9	0.00	0.00	0.00
12,400.0	90.25	359.71	9,894.1	2,700.9	-13.5	2,700.9	0.00	0.00	0.00
12,500.0	90.25	359.71	9,893.7	2,800.9	-13.9	2,800.9	0.00	0.00	0.00
12,600.0	90.25	359.71	9,893.2	2,900.9	-14.4	2,900.9	0.00	0.00	0.00
12,700.0	90.25	359.71	9,892.8	3,000.9	-14.9	3,000.9	0.00	0.00	0.00
12,800.0	90.25	359.71	9,892.3	3,100.9	-15.4	3,100.9	0.00	0.00	0.00
12,900.0	90.25	359.71	9,891.9	3,200.9	-15.9	3,200.9	0.00	0.00	0.00
13,000.0	90.25	359.71	9,891.5	3,300.9	-16.4	3,300.9	0.00	0.00	0.00
13,100.0	90.25	359.71	9,891.0	3,400.9	-16.9	3,400.9	0.00	0.00	0.00
13,200.0	90.25	359.71	9,890.6	3,500.9	-17.4	3,500.9	0.00	0.00	0.00
13,300.0	90.25	359.71	9,890.1	3,600.9	-17.9	3,600.9	0.00	0.00	0.00



TDS
Planning Report

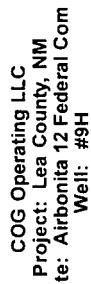


Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #9H
Company:	COG Operating LLC	TVD Reference:	KB @ 3654.9usft
Project:	Lea County, NM	MD Reference:	KB @ 3654.9usft
Site:	Airbonita 12 Federal Com	North Reference:	Grid
Well:	#9H	Survey Calculation Method:	Minimum Curvature
Wellbore:	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)	
13,400.0	90.25	359.71	9,889.7	3,700.9	-18.4	3,700.9	0.00	0.00	0.00	
13,500.0	90.25	359.71	9,889.2	3,800.9	-18.9	3,800.9	0.00	0.00	0.00	
13,600.0	90.25	359.71	9,888.8	3,900.9	-19.4	3,900.9	0.00	0.00	0.00	
13,700.0	90.25	359.71	9,888.4	4,000.9	-19.9	4,000.9	0.00	0.00	0.00	
13,800.0	90.25	359.71	9,887.9	4,100.9	-20.4	4,100.9	0.00	0.00	0.00	
13,900.0	90.25	359.71	9,887.5	4,200.9	-20.9	4,200.9	0.00	0.00	0.00	
14,000.0	90.25	359.71	9,887.0	4,300.9	-21.4	4,300.9	0.00	0.00	0.00	
14,100.0	90.25	359.71	9,886.6	4,400.9	-21.9	4,400.9	0.00	0.00	0.00	
14,200.0	90.25	359.71	9,886.1	4,500.9	-22.4	4,500.9	0.00	0.00	0.00	
14,300.0	90.25	359.71	9,885.7	4,600.9	-22.9	4,600.9	0.00	0.00	0.00	
14,400.0	90.25	359.71	9,885.3	4,700.9	-23.4	4,700.9	0.00	0.00	0.00	
14,458.3	90.25	359.71	9,885.0	4,759.2	-23.7	4,759.3	0.00	0.00	0.00	
TD at 14458.3										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL (#9H/OH)	0.00	0.00	9,885.0	4,759.2	-23.7	514,550.90	719,961.60	32° 24' 45.354 N	103° 37' 14.035 W	
- hit/miss target										
- Shape										
- Point										
EOC (A12FC #9H/OH P	0.00	0.00	9,904.0	479.6	-2.4	510,271.26	719,982.91	32° 24' 3.004 N	103° 37' 14.119 W	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,426.5	9,426.5	0.0	0.0	KOP - Start DLS 12.00 TFO 359.71	
10,178.6	9,904.0	479.6	-2.4	EOC - Start 4279.7 hold at 10178.6 MD	
14,458.3	9,885.0	4,759.2	-23.7	TD at 14458.3	



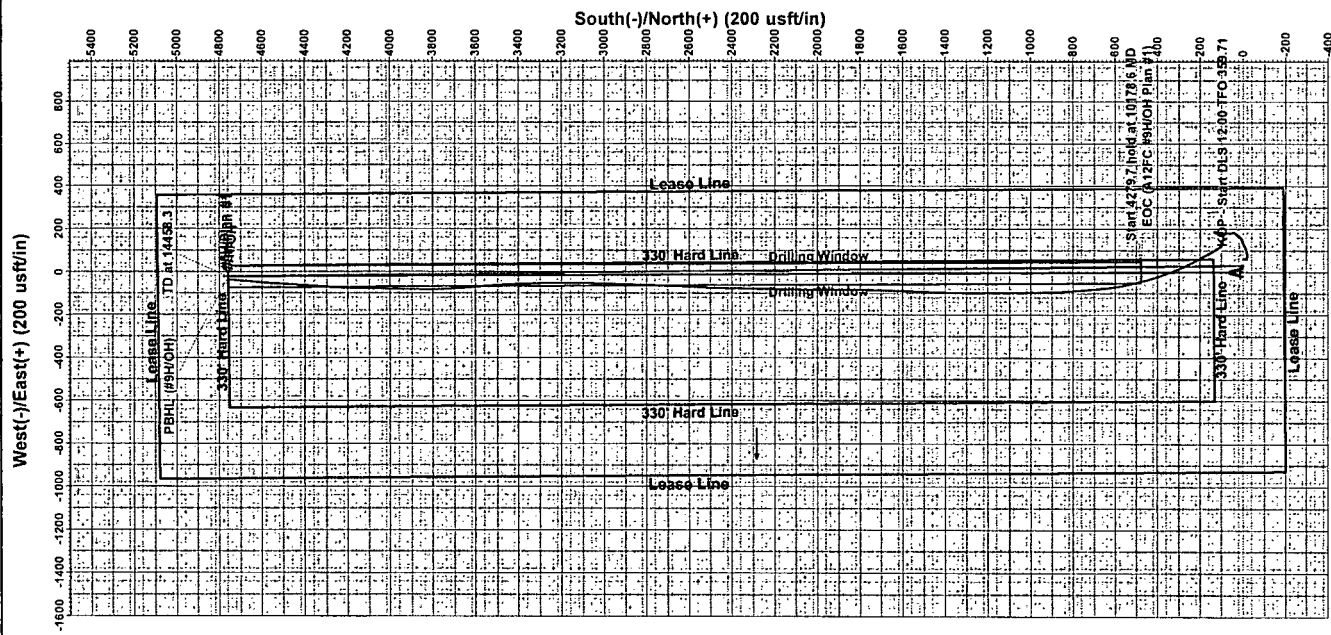
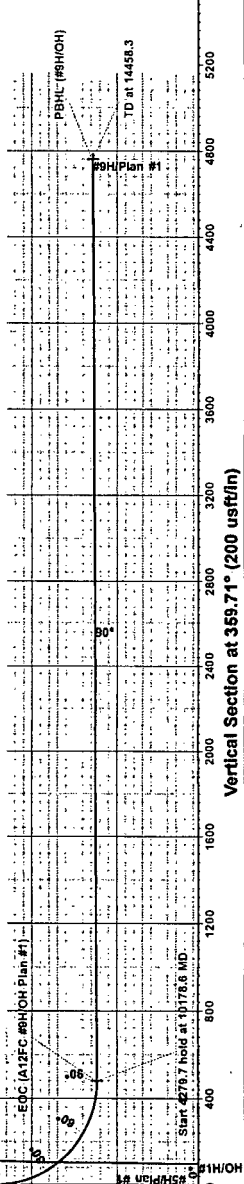
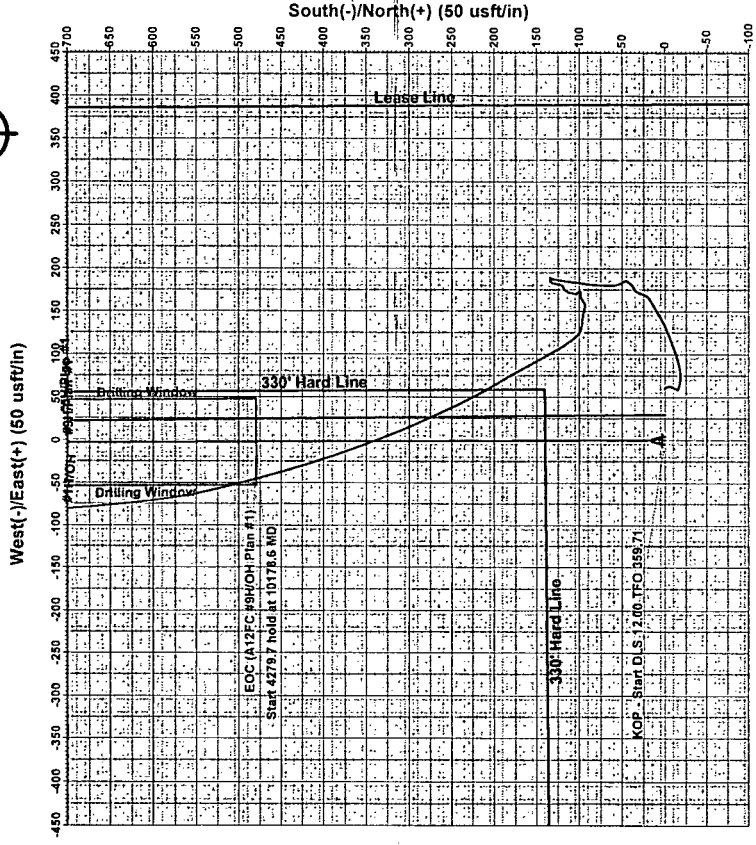
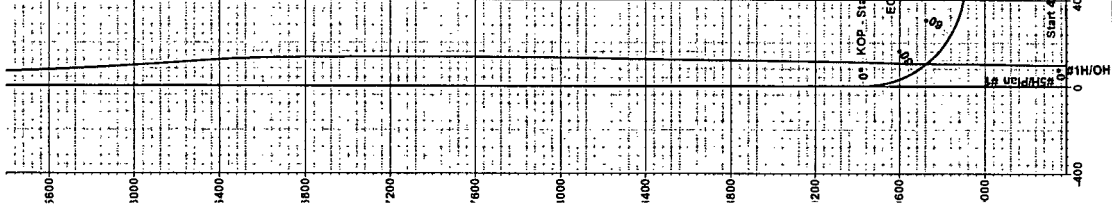
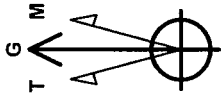
Plan: Plan #1 (#9H/OH)

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	TFace	V_Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	9426.5	0.00	0.00	9426.5	0.0	0.0	0.00	0.00	0.0	
3	10178.6	90.25	359.71	9904.0	479.6	-2.4	12.00	359.71	479.6	
4	14458.3	90.25	359.71	9885.0	4759.2	-23.7	0.00	0.00	4759.3	PBHL #9H1

Ground Elevation:: 3623.8
RKB Elevation: KB @ 3654.9usft
Rig Name:

North	East	Latitude	Longitude
509791.70	719985.30	32° 23' 58.258 N	103° 37' 14.129 W

T M G
 Azimuths to Grid North
 True North: -0.38°
 Magnetic North: 6.78°
 Magnetic Field
 Strength: 48341.85nT
 Dip Angle: 60.25°
 Date: 3/8/2015
 Model: IGRF2010



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

Terra Directional Services LLC
322 Spring Hill Drive, Suite A300, Spring, Tx 77386
Phone: 432-425-7532

