

HOBBS OCD

APR 21 2016

RECEIVED

COG Operating LLC

Lea County, NM

Spruce Goose Federal Com

#3H

OH

Plan: Plan #1

Standard Planning Report

09 July, 2015

APR 25 2016

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	WELL @ 3641.7usft (Patriot #6 - 18' KB)
Project:	Lea County, NM	MD Reference:	WELL @ 3641.7usft (Patriot #6 - 18' KB)
Site:	Spruce Goose Federal Com	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	Spruce Goose Federal Com		
Site Position:		Northing:	611,778.90 usft
From:	Map	Easting:	660,061.60 usft
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 50.884 N
		Longitude:	103° 48' 47.230 W
		Grid Convergence:	0.28 °

Well	#3H		
Well Position	+N-S	-1,479.6 usft	Northing:
	+E-W	10.6 usft	Easting:
Position Uncertainty	2.0 usft	Wellhead Elevation:	
		Latitude:	32° 40' 36.243 N
		Longitude:	103° 48' 47.191 W
		Ground Level:	3,623.7 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	7/9/2015	7.23
			Dip Angle
			60.46
			Field Strength
			48,454

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
			(°)
			89.86

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	
8,638.0	0.00	0.00	8,638.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,367.5	87.55	89.86	9,115.0	1.1	457.0	12.00	12.00	0.00	89.86	
9,367.8	87.55	89.86	9,115.0	1.1	457.3	2.00	-1.16	1.63	125.38	
13,689.2	87.55	89.86	9,300.0	11.3	4,774.7	0.00	0.00	0.00	0.00	PBHL (SG#3H)

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Site:	Spruce Goose Federal Com	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)
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										
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	
8,638.0	0.00	0.00	8,638.0	0.0	0.0	0.0	0.00	0.00	0.00	
KOP @ 8638 MD										
8,650.0	1.44	89.86	8,650.0	0.0	0.2	0.2	12.00	12.00	0.00	
8,675.0	4.44	89.86	8,675.0	0.0	1.4	1.4	12.00	12.00	0.00	
8,700.0	7.44	89.86	8,699.8	0.0	4.0	4.0	12.00	12.00	0.00	
8,725.0	10.44	89.86	8,724.5	0.0	7.9	7.9	12.00	12.00	0.00	
8,750.0	13.44	89.86	8,749.0	0.0	13.1	13.1	12.00	12.00	0.00	
8,775.0	16.44	89.86	8,773.1	0.0	19.5	19.5	12.00	12.00	0.00	
8,800.0	19.44	89.86	8,796.9	0.1	27.2	27.2	12.00	12.00	0.00	
8,825.0	22.44	89.86	8,820.3	0.1	36.2	36.2	12.00	12.00	0.00	
8,850.0	25.44	89.86	8,843.1	0.1	46.3	46.3	12.00	12.00	0.00	
8,875.0	28.44	89.86	8,865.4	0.1	57.6	57.6	12.00	12.00	0.00	
8,900.0	31.44	89.86	8,887.0	0.2	70.1	70.1	12.00	12.00	0.00	
8,925.0	34.44	89.86	8,908.0	0.2	83.7	83.7	12.00	12.00	0.00	
8,950.0	37.44	89.86	8,928.3	0.2	98.4	98.4	12.00	12.00	0.00	
8,975.0	40.44	89.86	8,947.7	0.3	114.1	114.1	12.00	12.00	0.00	
9,000.0	43.44	89.86	8,966.3	0.3	130.8	130.8	12.00	12.00	0.00	
9,025.0	46.44	89.86	8,984.0	0.4	148.4	148.4	12.00	12.00	0.00	
9,050.0	49.44	89.86	9,000.7	0.4	167.0	167.0	12.00	12.00	0.00	
9,075.0	52.44	89.86	9,016.5	0.5	186.4	186.4	12.00	12.00	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)	
9,100.0	55.44	89.86	9,031.2	0.5	206.6	206.6	12.00	12.00	0.00	
9,125.0	58.44	89.86	9,044.8	0.6	227.6	227.6	12.00	12.00	0.00	
9,150.0	61.44	89.86	9,057.4	0.6	249.2	249.2	12.00	12.00	0.00	
9,175.0	64.44	89.86	9,068.7	0.7	271.5	271.5	12.00	12.00	0.00	
9,200.0	67.44	89.86	9,078.9	0.7	294.3	294.3	12.00	12.00	0.00	
9,225.0	70.44	89.86	9,087.9	0.8	317.6	317.6	12.00	12.00	0.00	
9,250.0	73.44	89.86	9,095.6	0.8	341.4	341.4	12.00	12.00	0.00	
9,275.0	76.44	89.86	9,102.1	0.9	365.5	365.5	12.00	12.00	0.00	
9,300.0	79.44	89.86	9,107.4	1.0	390.0	390.0	12.00	12.00	0.00	
9,325.0	82.44	89.86	9,111.3	1.0	414.7	414.7	12.00	12.00	0.00	
9,350.0	85.45	89.86	9,113.9	1.1	439.5	439.5	12.00	12.00	0.00	
9,367.5	87.55	89.86	9,115.0	1.1	457.0	457.0	12.00	12.00	0.00	
9,367.8	87.55	89.86	9,115.0	1.1	457.3	457.3	2.00	-1.16	1.63	
9,400.0	87.55	89.86	9,116.4	1.2	489.5	489.5	0.00	0.00	0.00	
9,500.0	87.55	89.86	9,120.7	1.4	589.4	589.4	0.00	0.00	0.00	
9,600.0	87.55	89.86	9,125.0	1.7	689.3	689.3	0.00	0.00	0.00	
9,637.5	87.55	89.86	9,126.6	1.8	726.7	726.7	0.00	0.00	0.00	
EOC @ 9367.5 MD, 9115 TVD, 87.55 Inc										
9,700.0	87.55	89.86	9,129.2	1.9	789.2	789.2	0.00	0.00	0.00	
9,800.0	87.55	89.86	9,133.5	2.1	889.1	889.1	0.00	0.00	0.00	
9,900.0	87.55	89.86	9,137.8	2.4	989.0	989.0	0.00	0.00	0.00	
10,000.0	87.55	89.86	9,142.1	2.6	1,088.9	1,088.9	0.00	0.00	0.00	
10,100.0	87.55	89.86	9,146.4	2.8	1,188.8	1,188.8	0.00	0.00	0.00	
10,200.0	87.55	89.86	9,150.6	3.1	1,288.7	1,288.7	0.00	0.00	0.00	
10,300.0	87.55	89.86	9,154.9	3.3	1,388.6	1,388.6	0.00	0.00	0.00	
10,400.0	87.55	89.86	9,159.2	3.5	1,488.5	1,488.5	0.00	0.00	0.00	
10,500.0	87.55	89.86	9,163.5	3.8	1,588.4	1,588.4	0.00	0.00	0.00	
10,600.0	87.55	89.86	9,167.8	4.0	1,688.4	1,688.4	0.00	0.00	0.00	
10,700.0	87.55	89.86	9,172.0	4.3	1,788.3	1,788.3	0.00	0.00	0.00	
10,800.0	87.55	89.86	9,176.3	4.5	1,888.2	1,888.2	0.00	0.00	0.00	
10,900.0	87.55	89.86	9,180.6	4.7	1,988.1	1,988.1	0.00	0.00	0.00	
11,000.0	87.55	89.86	9,184.9	5.0	2,088.0	2,088.0	0.00	0.00	0.00	
11,100.0	87.55	89.86	9,189.2	5.2	2,187.9	2,187.9	0.00	0.00	0.00	
11,200.0	87.55	89.86	9,193.4	5.4	2,287.8	2,287.8	0.00	0.00	0.00	
11,300.0	87.55	89.86	9,197.7	5.7	2,387.7	2,387.7	0.00	0.00	0.00	
11,400.0	87.55	89.86	9,202.0	5.9	2,487.6	2,487.6	0.00	0.00	0.00	
11,500.0	87.55	89.86	9,206.3	6.1	2,587.5	2,587.5	0.00	0.00	0.00	
11,600.0	87.55	89.86	9,210.6	6.4	2,687.4	2,687.4	0.00	0.00	0.00	
11,700.0	87.55	89.86	9,214.8	6.6	2,787.3	2,787.3	0.00	0.00	0.00	
11,800.0	87.55	89.86	9,219.1	6.8	2,887.2	2,887.3	0.00	0.00	0.00	
11,900.0	87.55	89.86	9,223.4	7.1	2,987.2	2,987.2	0.00	0.00	0.00	
12,000.0	87.55	89.86	9,227.7	7.3	3,087.1	3,087.1	0.00	0.00	0.00	
12,100.0	87.55	89.86	9,232.0	7.6	3,187.0	3,187.0	0.00	0.00	0.00	
12,200.0	87.55	89.86	9,236.3	7.8	3,286.9	3,286.9	0.00	0.00	0.00	
12,300.0	87.55	89.86	9,240.5	8.0	3,386.8	3,386.8	0.00	0.00	0.00	
12,400.0	87.55	89.86	9,244.8	8.3	3,486.7	3,486.7	0.00	0.00	0.00	
12,500.0	87.55	89.86	9,249.1	8.5	3,586.6	3,586.6	0.00	0.00	0.00	
12,600.0	87.55	89.86	9,253.4	8.7	3,686.5	3,686.5	0.00	0.00	0.00	
12,700.0	87.55	89.86	9,257.7	9.0	3,786.4	3,786.4	0.00	0.00	0.00	
12,800.0	87.55	89.86	9,261.9	9.2	3,886.3	3,886.3	0.00	0.00	0.00	
12,900.0	87.55	89.86	9,266.2	9.4	3,986.2	3,986.2	0.00	0.00	0.00	
13,000.0	87.55	89.86	9,270.5	9.7	4,086.1	4,086.2	0.00	0.00	0.00	
13,100.0	87.55	89.86	9,274.8	9.9	4,186.1	4,186.1	0.00	0.00	0.00	
13,200.0	87.55	89.86	9,279.1	10.1	4,286.0	4,286.0	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	WELL @ 3641.7usft (Patriot #6 - 18' KB)
Project:	Lea County, NM	MD Reference:	WELL @ 3641.7usft (Patriot #6 - 18' KB)
Site:	Spruce Goose Federal Com	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)	
13,300.0	87.55	89.86	9,283.3	10.4	4,385.9	4,385.9	0.00	0.00	0.00	
13,400.0	87.55	89.86	9,287.6	10.6	4,485.8	4,485.8	0.00	0.00	0.00	
13,500.0	87.55	89.86	9,291.9	10.9	4,585.7	4,585.7	0.00	0.00	0.00	
13,600.0	87.55	89.86	9,296.2	11.1	4,685.6	4,685.6	0.00	0.00	0.00	
13,689.2	87.55	89.86	9,300.0	11.3	4,774.7	4,774.7	0.00	0.00	0.00	
TD @ 13689.2 MD, 9300 TVD										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Shape										
PBHL (SG#3H)		0.00	0.00	9,300.0	11.3	4,774.7	610,310.60	664,846.90	32° 40' 36.119 N	103° 47' 51.329 W
- plan hits target center - Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,638.0	8,638.0	0.0	0.0	KOP @ 8638 MD	
9,637.5	9,126.6	1.8	726.7	EOC @ 9367.5 MD, 9115 TVD, 87.55 Inc	
13,689.2	9,300.0	11.3	4,774.7	TD @ 13689.2 MD, 9300 TVD	



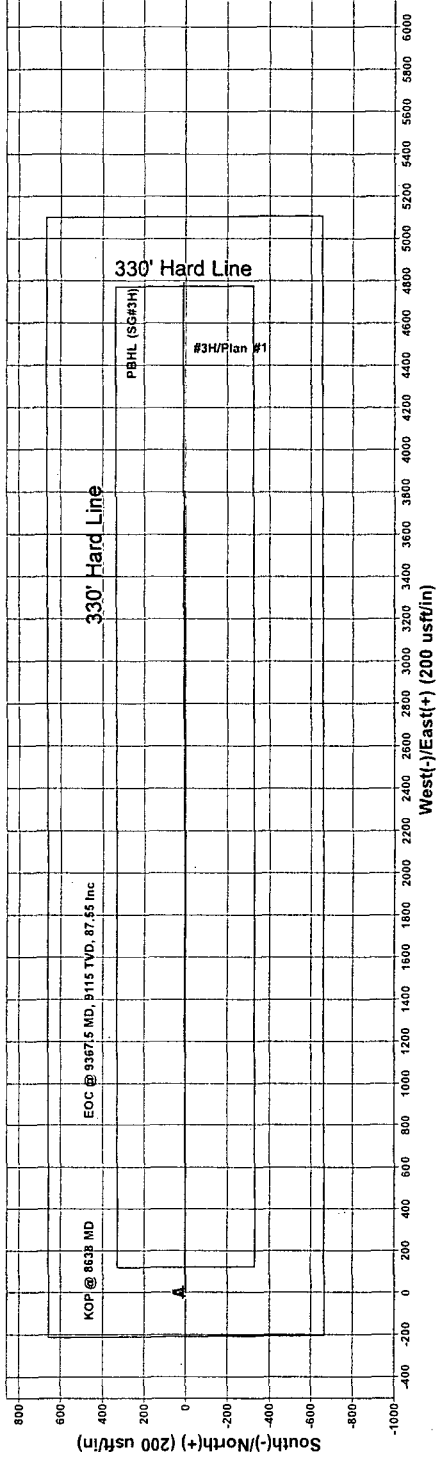
COG Operating LLC
Project: Lea County, NM
Site: Spruce Goose Federal Com

Well: #3H
Wellbore: OH
Plan: Plan #1 (#3H/OH)

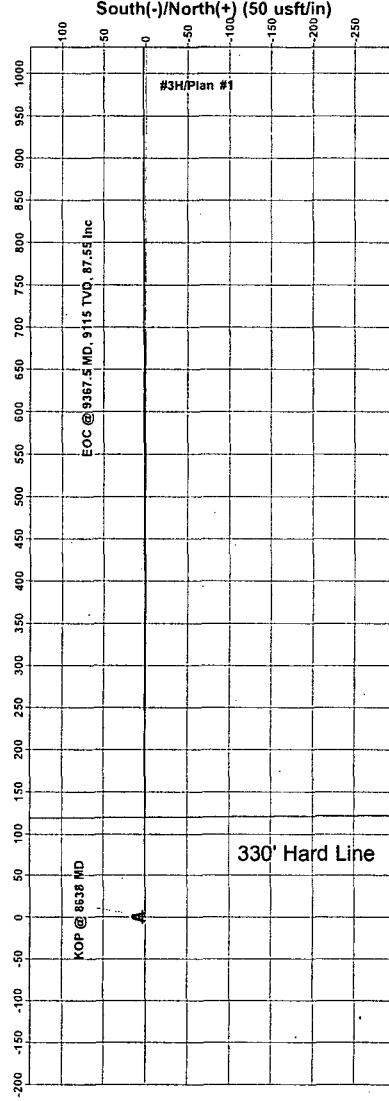
Section Details

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	8638.0	0.00	0.00	8638.0	0.0	0.0	0.00	0.00	0.0
3	9367.5	87.55	89.86	9115.0	1.1	457.3	12.00	89.86	457.0
4	9367.8	87.55	89.86	9115.0	1.1	457.3	2.00	125.38	457.3
5	13689.2	87.55	89.86	9300.0	11.3	4774.7	0.00	0.00	4774.7

PBHL (SC#3H)



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



G M
T
Azimuths to Grid North
True North: -0.28°
Magnetic North: 6.95°
Magnetic Field
Strength: 48453.8nT
Dip Angle: 60.46°
Date: 7/9/2015
Model: IGRF2010

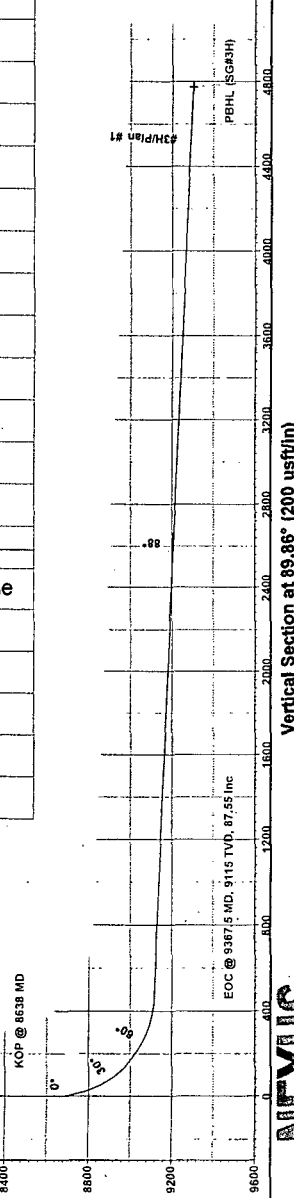
WELL DETAILS: #3H

Ground Elevation: 3623.7
RKB Elevation: WELL @ 3641.7usft (Patriot #6 - 18' KB)
Rig Name: Patriot #6 - 18' KB

Northing 610299.30
Easting 660072.20
Latitude 32° 40' 36.243 N
Longitude 103° 48' 47.191 W

Nexus Directional Solutions

Vertical Section at 89.86° (200 usft/in)



NEXUS
DIRECTIONAL SOLUTIONS, L.P.

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