



30.015.43706

COG Operating LLC

Eddy County, NM (NAD-27 2015)

Myox 5 State Com #22H

Myox 5 State Com #22H

Lateral #1

Plan: Design #2

Standard Planning Report

18 July, 2016





TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Myox 5 State Com #22H
Company:	COG Operating LLC	TVD Reference:	KB @ 3079.50usft (Latshaw 44)
Project:	Eddy County, NM (NAD-27 2015)	MD Reference:	KB @ 3079.50usft (Latshaw 44)
Site:	Myox 5 State Com #22H	North Reference:	Grid
Well:	Myox 5 State Com #22H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #2		

Project	Eddy County, NM (NAD-27 2015)		
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	Myox 5 State Com #22H			
Site Position:		Northing:	387,405.30 usft	Latitude: 32° 3' 53.611 N
From:	Map	Easting:	569,864.30 usft	Longitude: 104° 6' 28.087 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: 0.12 °

Well	Myox 5 State Com #22H			
Well Position	+N/-S	0.00 usft	Northing:	387,405.30 usft
	+E/-W	0.00 usft	Easting:	569,864.30 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level: 3,054.50 usft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2015	6/29/2016	7.29	59.84	47,887

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	0.19

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)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,004.54	0.00	0.00	9,004.54	0.00	0.00	0.00	0.00	0.00	0.00	
9,754.59	90.01	0.19	9,482.01	477.51	1.55	12.00	12.00	0.02	0.19	
19,503.43	90.01	0.19	9,481.00	10,226.30	33.20	0.00	0.00	0.00	0.00	PBHL (M5SC #22H/L)



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Wellbore:	Lateral #1		
Design:	Design #2		

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	



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5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9,004.54	0.00	0.00	9,004.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start DLS 12.00 TFO 0.19										
9,025.00	2.46	0.19	9,024.99	0.44	0.00	0.44	12.00	12.00	0.00	0.00
9,050.00	5.46	0.19	9,049.93	2.16	0.01	2.16	12.00	12.00	0.00	0.00
9,075.00	8.46	0.19	9,074.74	5.19	0.02	5.19	12.00	12.00	0.00	0.00
9,100.00	11.46	0.19	9,099.37	9.51	0.03	9.51	12.00	12.00	0.00	0.00
9,125.00	14.46	0.19	9,123.73	15.11	0.05	15.12	12.00	12.00	0.00	0.00
9,150.00	17.46	0.19	9,147.76	21.99	0.07	21.99	12.00	12.00	0.00	0.00
9,175.00	20.46	0.19	9,171.40	30.11	0.10	30.11	12.00	12.00	0.00	0.00
9,200.00	23.46	0.19	9,194.59	39.45	0.13	39.45	12.00	12.00	0.00	0.00
9,225.00	26.46	0.19	9,217.25	50.00	0.16	50.00	12.00	12.00	0.00	0.00
9,250.00	29.46	0.19	9,239.33	61.72	0.20	61.72	12.00	12.00	0.00	0.00
9,275.00	32.46	0.19	9,260.77	74.57	0.24	74.57	12.00	12.00	0.00	0.00
9,300.00	35.46	0.19	9,281.50	88.54	0.29	88.54	12.00	12.00	0.00	0.00
9,325.00	38.46	0.19	9,301.48	103.56	0.34	103.56	12.00	12.00	0.00	0.00
9,350.00	41.46	0.19	9,320.64	119.62	0.39	119.62	12.00	12.00	0.00	0.00
9,375.00	44.46	0.19	9,338.93	136.65	0.44	136.65	12.00	12.00	0.00	0.00



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Planned Survey										
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9,400.00	47.46	0.19	9,356.31	154.62	0.50	154.62	12.00	12.00	0.00	
9,425.00	50.46	0.19	9,372.73	173.47	0.56	173.47	12.00	12.00	0.00	
9,450.00	53.46	0.19	9,388.13	193.16	0.63	193.16	12.00	12.00	0.00	
9,475.00	56.46	0.19	9,402.49	213.62	0.69	213.62	12.00	12.00	0.00	
9,500.00	59.46	0.19	9,415.75	234.81	0.76	234.81	12.00	12.00	0.00	
9,525.00	62.46	0.19	9,427.88	256.66	0.83	256.67	12.00	12.00	0.00	
9,550.00	65.46	0.19	9,438.86	279.12	0.91	279.12	12.00	12.00	0.00	
9,575.00	68.46	0.19	9,448.64	302.12	0.98	302.13	12.00	12.00	0.00	
9,600.00	71.46	0.19	9,457.21	325.61	1.06	325.61	12.00	12.00	0.00	
9,625.00	74.46	0.19	9,464.54	349.51	1.13	349.51	12.00	12.00	0.00	
9,650.00	77.46	0.19	9,470.61	373.76	1.21	373.76	12.00	12.00	0.00	
9,675.00	80.46	0.19	9,475.40	398.29	1.29	398.29	12.00	12.00	0.00	
9,700.00	83.46	0.19	9,478.89	423.04	1.37	423.04	12.00	12.00	0.00	
9,725.00	86.46	0.19	9,481.09	447.94	1.45	447.94	12.00	12.00	0.00	
9,750.00	89.46	0.19	9,481.98	472.92	1.54	472.92	12.00	12.00	0.00	
9,754.59	90.01	0.19	9,482.01	477.51	1.55	477.51	12.00	12.00	0.00	
Start 9748.84 hold at 9754.59 MD										
9,800.00	90.01	0.19	9,482.00	522.92	1.70	522.92	0.00	0.00	0.00	
9,900.00	90.01	0.19	9,481.99	622.92	2.02	622.92	0.00	0.00	0.00	
10,000.00	90.01	0.19	9,481.98	722.92	2.35	722.92	0.00	0.00	0.00	
10,100.00	90.01	0.19	9,481.97	822.92	2.67	822.92	0.00	0.00	0.00	
10,200.00	90.01	0.19	9,481.96	922.92	3.00	922.92	0.00	0.00	0.00	
10,300.00	90.01	0.19	9,481.95	1,022.92	3.32	1,022.92	0.00	0.00	0.00	
10,400.00	90.01	0.19	9,481.94	1,122.92	3.65	1,122.92	0.00	0.00	0.00	
10,500.00	90.01	0.19	9,481.93	1,222.92	3.97	1,222.92	0.00	0.00	0.00	
10,600.00	90.01	0.19	9,481.92	1,322.92	4.29	1,322.92	0.00	0.00	0.00	
10,700.00	90.01	0.19	9,481.91	1,422.92	4.62	1,422.92	0.00	0.00	0.00	
10,800.00	90.01	0.19	9,481.90	1,522.92	4.94	1,522.92	0.00	0.00	0.00	
10,900.00	90.01	0.19	9,481.89	1,622.92	5.27	1,622.92	0.00	0.00	0.00	
11,000.00	90.01	0.19	9,481.88	1,722.92	5.59	1,722.92	0.00	0.00	0.00	
11,100.00	90.01	0.19	9,481.87	1,822.92	5.92	1,822.92	0.00	0.00	0.00	
11,200.00	90.01	0.19	9,481.86	1,922.91	6.24	1,922.92	0.00	0.00	0.00	
11,300.00	90.01	0.19	9,481.85	2,022.91	6.57	2,022.92	0.00	0.00	0.00	
11,400.00	90.01	0.19	9,481.84	2,122.91	6.89	2,122.92	0.00	0.00	0.00	
11,500.00	90.01	0.19	9,481.83	2,222.91	7.22	2,222.92	0.00	0.00	0.00	
11,600.00	90.01	0.19	9,481.81	2,322.91	7.54	2,322.92	0.00	0.00	0.00	
11,700.00	90.01	0.19	9,481.80	2,422.91	7.87	2,422.92	0.00	0.00	0.00	
11,800.00	90.01	0.19	9,481.79	2,522.91	8.19	2,522.92	0.00	0.00	0.00	
11,900.00	90.01	0.19	9,481.78	2,622.91	8.52	2,622.92	0.00	0.00	0.00	
12,000.00	90.01	0.19	9,481.77	2,722.91	8.84	2,722.92	0.00	0.00	0.00	
12,100.00	90.01	0.19	9,481.76	2,822.91	9.16	2,822.92	0.00	0.00	0.00	
12,200.00	90.01	0.19	9,481.75	2,922.91	9.49	2,922.92	0.00	0.00	0.00	
12,300.00	90.01	0.19	9,481.74	3,022.91	9.81	3,022.92	0.00	0.00	0.00	
12,400.00	90.01	0.19	9,481.73	3,122.91	10.14	3,122.92	0.00	0.00	0.00	
12,500.00	90.01	0.19	9,481.72	3,222.91	10.46	3,222.92	0.00	0.00	0.00	
12,600.00	90.01	0.19	9,481.71	3,322.91	10.79	3,322.92	0.00	0.00	0.00	
12,700.00	90.01	0.19	9,481.70	3,422.91	11.11	3,422.92	0.00	0.00	0.00	
12,800.00	90.01	0.19	9,481.69	3,522.91	11.44	3,522.92	0.00	0.00	0.00	
12,900.00	90.01	0.19	9,481.68	3,622.91	11.76	3,622.92	0.00	0.00	0.00	
13,000.00	90.01	0.19	9,481.67	3,722.91	12.09	3,722.92	0.00	0.00	0.00	
13,100.00	90.01	0.19	9,481.66	3,822.90	12.41	3,822.92	0.00	0.00	0.00	
13,200.00	90.01	0.19	9,481.65	3,922.90	12.74	3,922.92	0.00	0.00	0.00	
13,300.00	90.01	0.19	9,481.64	4,022.90	13.06	4,022.92	0.00	0.00	0.00	
13,400.00	90.01	0.19	9,481.63	4,122.90	13.39	4,122.92	0.00	0.00	0.00	



TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Myox 5 State Com #22H
Company:	COG Operating LLC	TVD Reference:	KB @ 3079.50usft (Latshaw 44)
Project:	Eddy County, NM (NAD-27 2015)	MD Reference:	KB @ 3079.50usft (Latshaw 44)
Site:	Myox 5 State Com #22H	North Reference:	Grid
Well:	Myox 5 State Com #22H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #2		

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)
13,500.00	90.01	0.19	9,481.62	4,222.90	13.71	4,222.92	0.00	0.00	0.00
13,600.00	90.01	0.19	9,481.61	4,322.90	14.03	4,322.92	0.00	0.00	0.00
13,700.00	90.01	0.19	9,481.60	4,422.90	14.36	4,422.92	0.00	0.00	0.00
13,800.00	90.01	0.19	9,481.59	4,522.90	14.68	4,522.92	0.00	0.00	0.00
13,900.00	90.01	0.19	9,481.58	4,622.90	15.01	4,622.92	0.00	0.00	0.00
14,000.00	90.01	0.19	9,481.57	4,722.90	15.33	4,722.92	0.00	0.00	0.00
14,100.00	90.01	0.19	9,481.56	4,822.90	15.66	4,822.92	0.00	0.00	0.00
14,200.00	90.01	0.19	9,481.55	4,922.90	15.98	4,922.92	0.00	0.00	0.00
14,300.00	90.01	0.19	9,481.54	5,022.90	16.31	5,022.92	0.00	0.00	0.00
14,400.00	90.01	0.19	9,481.53	5,122.90	16.63	5,122.92	0.00	0.00	0.00
14,500.00	90.01	0.19	9,481.52	5,222.90	16.96	5,222.92	0.00	0.00	0.00
14,600.00	90.01	0.19	9,481.51	5,322.90	17.28	5,322.92	0.00	0.00	0.00
14,700.00	90.01	0.19	9,481.50	5,422.90	17.61	5,422.92	0.00	0.00	0.00
14,800.00	90.01	0.19	9,481.49	5,522.90	17.93	5,522.92	0.00	0.00	0.00
14,900.00	90.01	0.19	9,481.47	5,622.90	18.25	5,622.92	0.00	0.00	0.00
15,000.00	90.01	0.19	9,481.46	5,722.89	18.58	5,722.92	0.00	0.00	0.00
15,100.00	90.01	0.19	9,481.45	5,822.89	18.90	5,822.92	0.00	0.00	0.00
15,200.00	90.01	0.19	9,481.44	5,922.89	19.23	5,922.92	0.00	0.00	0.00
15,300.00	90.01	0.19	9,481.43	6,022.89	19.55	6,022.92	0.00	0.00	0.00
15,400.00	90.01	0.19	9,481.42	6,122.89	19.88	6,122.92	0.00	0.00	0.00
15,500.00	90.01	0.19	9,481.41	6,222.89	20.20	6,222.92	0.00	0.00	0.00
15,600.00	90.01	0.19	9,481.40	6,322.89	20.53	6,322.92	0.00	0.00	0.00
15,700.00	90.01	0.19	9,481.39	6,422.89	20.85	6,422.92	0.00	0.00	0.00
15,800.00	90.01	0.19	9,481.38	6,522.89	21.18	6,522.92	0.00	0.00	0.00
15,900.00	90.01	0.19	9,481.37	6,622.89	21.50	6,622.92	0.00	0.00	0.00
16,000.00	90.01	0.19	9,481.36	6,722.89	21.83	6,722.92	0.00	0.00	0.00
16,100.00	90.01	0.19	9,481.35	6,822.89	22.15	6,822.92	0.00	0.00	0.00
16,200.00	90.01	0.19	9,481.34	6,922.89	22.48	6,922.92	0.00	0.00	0.00
16,300.00	90.01	0.19	9,481.33	7,022.89	22.80	7,022.92	0.00	0.00	0.00
16,400.00	90.01	0.19	9,481.32	7,122.89	23.12	7,122.92	0.00	0.00	0.00
16,500.00	90.01	0.19	9,481.31	7,222.89	23.45	7,222.92	0.00	0.00	0.00
16,600.00	90.01	0.19	9,481.30	7,322.89	23.77	7,322.92	0.00	0.00	0.00
16,700.00	90.01	0.19	9,481.29	7,422.89	24.10	7,422.92	0.00	0.00	0.00
16,800.00	90.01	0.19	9,481.28	7,522.89	24.42	7,522.92	0.00	0.00	0.00
16,900.00	90.01	0.19	9,481.27	7,622.88	24.75	7,622.92	0.00	0.00	0.00
17,000.00	90.01	0.19	9,481.26	7,722.88	25.07	7,722.92	0.00	0.00	0.00
17,100.00	90.01	0.19	9,481.25	7,822.88	25.40	7,822.92	0.00	0.00	0.00
17,200.00	90.01	0.19	9,481.24	7,922.88	25.72	7,922.92	0.00	0.00	0.00
17,300.00	90.01	0.19	9,481.23	8,022.88	26.05	8,022.92	0.00	0.00	0.00
17,400.00	90.01	0.19	9,481.22	8,122.88	26.37	8,122.92	0.00	0.00	0.00
17,500.00	90.01	0.19	9,481.21	8,222.88	26.70	8,222.92	0.00	0.00	0.00
17,600.00	90.01	0.19	9,481.20	8,322.88	27.02	8,322.92	0.00	0.00	0.00
17,700.00	90.01	0.19	9,481.19	8,422.88	27.35	8,422.92	0.00	0.00	0.00
17,800.00	90.01	0.19	9,481.18	8,522.88	27.67	8,522.92	0.00	0.00	0.00
17,900.00	90.01	0.19	9,481.17	8,622.88	27.99	8,622.92	0.00	0.00	0.00
18,000.00	90.01	0.19	9,481.16	8,722.88	28.32	8,722.92	0.00	0.00	0.00
18,100.00	90.01	0.19	9,481.14	8,822.88	28.64	8,822.92	0.00	0.00	0.00
18,200.00	90.01	0.19	9,481.13	8,922.88	28.97	8,922.92	0.00	0.00	0.00
18,300.00	90.01	0.19	9,481.12	9,022.88	29.29	9,022.92	0.00	0.00	0.00
18,400.00	90.01	0.19	9,481.11	9,122.88	29.62	9,122.92	0.00	0.00	0.00
18,500.00	90.01	0.19	9,481.10	9,222.88	29.94	9,222.92	0.00	0.00	0.00
18,600.00	90.01	0.19	9,481.09	9,322.88	30.27	9,322.92	0.00	0.00	0.00
18,700.00	90.01	0.19	9,481.08	9,422.88	30.59	9,422.92	0.00	0.00	0.00
18,800.00	90.01	0.19	9,481.07	9,522.87	30.92	9,522.92	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Myox 5 State Com #22H
Company:	COG Operating LLC	TVD Reference:	KB @ 3079.50usft (Latshaw 44)
Project:	Eddy County, NM (NAD-27 2015)	MD Reference:	KB @ 3079.50usft (Latshaw 44)
Site:	Myox 5 State Com #22H	North Reference:	Grid
Well:	Myox 5 State Com #22H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral #1		
Design:	Design #2		

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)
18,900.00	90.01	0.19	9,481.06	9,622.87	31.24	9,622.92	0.00	0.00	0.00
19,000.00	90.01	0.19	9,481.05	9,722.87	31.57	9,722.92	0.00	0.00	0.00
19,100.00	90.01	0.19	9,481.04	9,822.87	31.89	9,822.92	0.00	0.00	0.00
19,200.00	90.01	0.19	9,481.03	9,922.87	32.21	9,922.93	0.00	0.00	0.00
19,300.00	90.01	0.19	9,481.02	10,022.87	32.54	10,022.93	0.00	0.00	0.00
19,400.00	90.01	0.19	9,481.01	10,122.87	32.86	10,122.93	0.00	0.00	0.00
19,503.43	90.01	0.19	9,481.00	10,226.30	33.20	10,226.35	0.00	0.00	0.00
TD at 19503.43									

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									
KOP (M5SC #22H/L1 Dc - plan hits target center - Point	0.00	0.00	9,004.54	0.00	0.00	387,405.30	569,864.30	32° 3' 53.611 N	104° 6' 28.087 W
PBHL (M5SC #22H/L1) - plan hits target center - Rectangle (sides W100.00 H9,841.53 D0.00)	-0.01	0.19	9,481.00	10,226.30	33.20	397,631.60	569,897.50	32° 5' 34.815 N	104° 6' 27.453 W
EOC (M5SC #22H/L1 Dc - plan hits target center - Point	0.00	0.00	9,482.01	477.51	1.55	387,882.81	569,865.85	32° 3' 58.336 N	104° 6' 28.058 W

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,004.54	9,004.54	0.00	0.00	Start DLS 12.00 TFO 0.19
9,754.59	9,482.01	477.51	1.55	Start 9748.84 hold at 9754.59 MD
19,503.43	9,481.00	10,226.30	33.20	TD at 19503.43



COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #22H
Well: Myox 5 State Com #22H
Wellbore: Lateral #1
Plan: Design #2 (Myox 5 State Com #22H/Lateral #1)

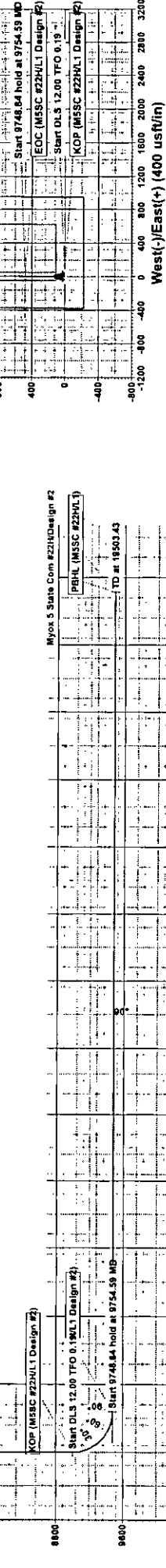
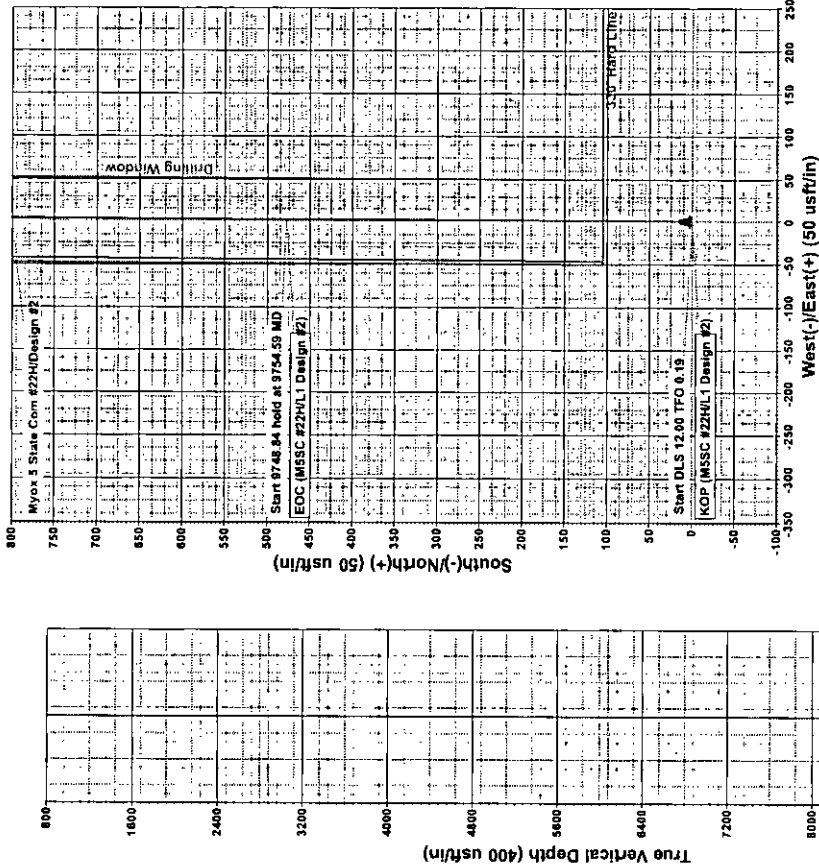
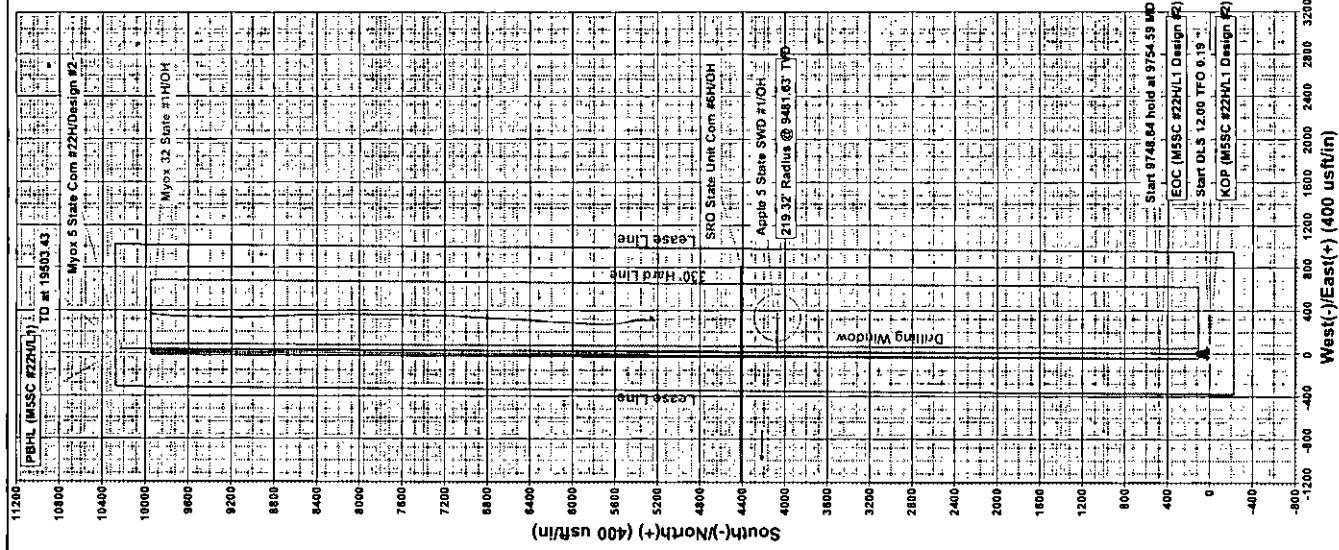
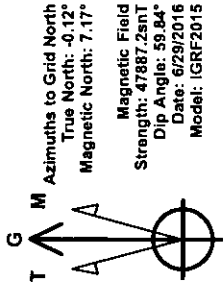
Section Details

Sec	MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	Vsect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	9004.54	0.00	0.00	9004.54	0.00	0.00	0.00	0.00	0.00
3	9754.59	90.01	0.19	9482.00	477.51	1.55	12.00	0.19	477.51
4	19503.43	90.01	0.19	9481.00	10226.30	33.20	0.00	0.0010226.35	PBHL (MSSC #22H/L1)

WELL DETAILS: Myox 5 State Com #22H

Ground Elevation: 3054.50
RKB Elevation: KB @ 3079.50usft (Latshaw 44)
Rig Name: Latshaw 44

Northing 387405.30 Easting 569864.30
Latitude 32° 3' 53.611 N Longitude 104° 6' 28.087 W





Plan: Design #2 (Myox 5 State Com #22H/Lateral #1)
Created By: Debbie Mason Date: 18-16, July 18 2015

Terra Directional Services
3705 South County Road 1210, Midland, TX 79706
432.618.1210

PROJECT DETAILS: Eddy County, NM (NAD-27 2015)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1886
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid