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NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 11 2017

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30-015-44005

COG OPERATING LLC

EDDY COUNTY, NM

ATLAS

MYOX 21 ST COM #35H

OWB

Plan: PWP1

Survey Report - Geographic

08 August, 2017



COG Operating LLC

Survey Report - Geographic

Company: COG OPERATING LLC
Project: EDDY COUNTY, NM
Site: ATLAS
Well: MYOX 21 ST COM #35H
Wellbore: OWB
Design: PWP1

Local Co-ordinate Reference: Well MYOX 21 ST COM #35H
TVD Reference: RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
MD Reference: RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Project EDDY 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 ATLAS
Site Position: Northing: 371,480.80 usft Latitude: 32° 1' 15.933 N
From: Map Easting: 573,599.60 usft Longitude: 104° 5' 45.086 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.13 °

Well MYOX 21 ST COM #35H
Well Position +N/-S 0.0 usft Northing: 403,303.95 usf Latitude: 32° 6' 30.867 N
+E/-W 0.0 usft Easting: 573,841.43 usf Longitude: 104° 5' 41.460 W
Position Uncertainty 3.0 usft Wellhead Elevation: usf Ground Level: 2,977.6 usf

Wellbore OWB
Magnetics Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)
WMM2015 12/19/2016 7.26 59.86 47,856.69854174

Design PWP1
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.0
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(usft) (usft) (usft) (°)
0.0 0.0 0.0 359.33

Survey Tool Program Date 8/8/2017
From (usft) **To** (usft) **Survey (Wellbore)** **Tool Name** **Description**
0.0 19,680.4 PWP1 (OWB) MWD OWSG MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
100.0	0.00	0.00	100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
200.0	0.00	0.00	200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
300.0	0.00	0.00	300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
400.0	0.00	0.00	400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
500.0	0.00	0.00	500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
600.0	0.00	0.00	600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
700.0	0.00	0.00	700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
800.0	0.00	0.00	800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
900.0	0.00	0.00	900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W



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Database: EDM Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,200.0	0.00	0.00	1,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,600.0	0.00	0.00	1,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,700.0	0.00	0.00	1,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,800.0	0.00	0.00	1,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
1,900.0	0.00	0.00	1,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,000.0	0.00	0.00	2,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,100.0	0.00	0.00	2,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,200.0	0.00	0.00	2,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,300.0	0.00	0.00	2,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,400.0	0.00	0.00	2,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,500.0	0.00	0.00	2,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,600.0	0.00	0.00	2,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,700.0	0.00	0.00	2,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,800.0	0.00	0.00	2,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
2,900.0	0.00	0.00	2,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,000.0	0.00	0.00	3,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,100.0	0.00	0.00	3,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,200.0	0.00	0.00	3,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,300.0	0.00	0.00	3,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,400.0	0.00	0.00	3,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,500.0	0.00	0.00	3,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,600.0	0.00	0.00	3,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,700.0	0.00	0.00	3,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,800.0	0.00	0.00	3,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
3,900.0	0.00	0.00	3,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,000.0	0.00	0.00	4,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,100.0	0.00	0.00	4,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,200.0	0.00	0.00	4,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,300.0	0.00	0.00	4,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,400.0	0.00	0.00	4,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,500.0	0.00	0.00	4,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,600.0	0.00	0.00	4,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,700.0	0.00	0.00	4,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,800.0	0.00	0.00	4,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
4,900.0	0.00	0.00	4,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,000.0	0.00	0.00	5,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,100.0	0.00	0.00	5,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,200.0	0.00	0.00	5,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,300.0	0.00	0.00	5,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,400.0	0.00	0.00	5,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,500.0	0.00	0.00	5,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,600.0	0.00	0.00	5,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,700.0	0.00	0.00	5,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,800.0	0.00	0.00	5,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
5,900.0	0.00	0.00	5,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,000.0	0.00	0.00	6,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,100.0	0.00	0.00	6,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,200.0	0.00	0.00	6,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,300.0	0.00	0.00	6,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,400.0	0.00	0.00	6,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,500.0	0.00	0.00	6,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,600.0	0.00	0.00	6,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W



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6,700.0	0.00	0.00	6,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,800.0	0.00	0.00	6,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
6,900.0	0.00	0.00	6,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,000.0	0.00	0.00	7,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,100.0	0.00	0.00	7,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,200.0	0.00	0.00	7,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,300.0	0.00	0.00	7,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,400.0	0.00	0.00	7,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,500.0	0.00	0.00	7,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,600.0	0.00	0.00	7,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,700.0	0.00	0.00	7,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,800.0	0.00	0.00	7,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
7,900.0	0.00	0.00	7,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,000.0	0.00	0.00	8,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,100.0	0.00	0.00	8,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,200.0	0.00	0.00	8,200.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,300.0	0.00	0.00	8,300.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,400.0	0.00	0.00	8,400.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,500.0	0.00	0.00	8,500.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,600.0	0.00	0.00	8,600.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,700.0	0.00	0.00	8,700.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,800.0	0.00	0.00	8,800.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
8,900.0	0.00	0.00	8,900.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
9,000.0	0.00	0.00	9,000.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
9,100.0	0.00	0.00	9,100.0	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
9,153.5	0.00	0.00	9,153.5	0.0	0.0	403,303.95	573,841.43	32° 6' 30.867 N	104° 5' 41.460 W
9,200.0	5.58	343.10	9,199.9	2.2	-0.7	403,306.11	573,840.78	32° 6' 30.889 N	104° 5' 41.467 W
9,300.0	17.58	343.10	9,297.7	21.3	-6.5	403,325.28	573,834.95	32° 6' 31.079 N	104° 5' 41.535 W
9,400.0	29.58	343.10	9,389.2	59.5	-18.1	403,363.49	573,823.34	32° 6' 31.457 N	104° 5' 41.669 W
9,500.0	41.58	343.10	9,470.4	115.1	-35.0	403,419.05	573,806.46	32° 6' 32.007 N	104° 5' 41.863 W
9,600.0	53.58	343.10	9,537.7	185.6	-56.4	403,489.55	573,785.04	32° 6' 32.705 N	104° 5' 42.111 W
9,700.0	65.57	343.10	9,588.3	268.0	-81.4	403,571.91	573,760.02	32° 6' 33.521 N	104° 5' 42.399 W
9,800.0	77.57	343.10	9,619.8	358.6	-108.9	403,662.52	573,732.49	32° 6' 34.418 N	104° 5' 42.717 W
9,900.0	89.57	343.10	9,631.0	453.5	-137.8	403,757.42	573,703.66	32° 6' 35.358 N	104° 5' 43.050 W
9,902.1	89.83	343.10	9,631.0	455.5	-138.4	403,759.47	573,703.03	32° 6' 35.378 N	104° 5' 43.057 W
10,000.0	89.83	347.01	9,631.3	550.1	-163.6	403,854.00	573,677.81	32° 6' 36.314 N	104° 5' 43.348 W
10,100.0	89.83	351.01	9,631.6	648.2	-182.7	403,952.15	573,658.75	32° 6' 37.286 N	104° 5' 43.567 W
10,200.0	89.83	355.01	9,631.9	747.4	-194.8	404,051.39	573,646.59	32° 6' 38.268 N	104° 5' 43.706 W
10,300.0	89.83	359.01	9,632.2	847.3	-200.0	404,151.23	573,641.39	32° 6' 39.257 N	104° 5' 43.764 W
10,337.1	89.83	0.50	9,632.3	884.4	-200.2	404,188.34	573,641.23	32° 6' 39.624 N	104° 5' 43.765 W
10,400.0	89.83	0.50	9,632.5	947.3	-199.7	404,251.23	573,641.78	32° 6' 40.246 N	104° 5' 43.757 W
10,500.0	89.83	0.50	9,632.8	1,047.3	-198.8	404,351.22	573,642.65	32° 6' 41.236 N	104° 5' 43.744 W
10,600.0	89.83	0.50	9,633.1	1,147.3	-197.9	404,451.22	573,643.52	32° 6' 42.225 N	104° 5' 43.731 W
10,700.0	89.83	0.50	9,633.4	1,247.3	-197.0	404,551.22	573,644.39	32° 6' 43.215 N	104° 5' 43.719 W
10,800.0	89.83	0.50	9,633.7	1,347.3	-196.2	404,651.21	573,645.26	32° 6' 44.205 N	104° 5' 43.706 W
10,900.0	89.83	0.50	9,634.0	1,447.3	-195.3	404,751.21	573,646.13	32° 6' 45.194 N	104° 5' 43.693 W
11,000.0	89.83	0.50	9,634.3	1,547.3	-194.4	404,851.20	573,647.00	32° 6' 46.184 N	104° 5' 43.681 W
11,100.0	89.83	0.50	9,634.6	1,647.2	-193.6	404,951.20	573,647.87	32° 6' 47.173 N	104° 5' 43.668 W
11,200.0	89.83	0.50	9,634.9	1,747.2	-192.7	405,051.19	573,648.74	32° 6' 48.163 N	104° 5' 43.655 W
11,300.0	89.83	0.50	9,635.2	1,847.2	-191.8	405,151.19	573,649.61	32° 6' 49.153 N	104° 5' 43.643 W
11,400.0	89.83	0.50	9,635.5	1,947.2	-191.0	405,251.19	573,650.48	32° 6' 50.142 N	104° 5' 43.630 W
11,500.0	89.83	0.50	9,635.7	2,047.2	-190.1	405,351.18	573,651.35	32° 6' 51.132 N	104° 5' 43.617 W
11,600.0	89.83	0.50	9,636.0	2,147.2	-189.2	405,451.18	573,652.22	32° 6' 52.121 N	104° 5' 43.605 W
11,700.0	89.83	0.50	9,636.3	2,247.2	-188.3	405,551.17	573,653.09	32° 6' 53.111 N	104° 5' 43.592 W
11,800.0	89.83	0.50	9,636.6	2,347.2	-187.5	405,651.17	573,653.96	32° 6' 54.101 N	104° 5' 43.579 W



COG Operating LLC

Survey Report - Geographic

Company: COG OPERATING LLC
Project: EDDY COUNTY, NM
Site: ATLAS
Well: MYOX 21 ST COM #35H
Wellbore: OWB
Design: PWP1

Local Co-ordinate Reference: Well MYOX 21 ST COM #35H
TVD Reference: RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
MD Reference: RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,900.0	89.83	0.50	9,636.9	2,447.2	-186.6	405,751.16	573,654.83	32° 6' 55.090 N	104° 5' 43.567 W
12,000.0	89.83	0.50	9,637.2	2,547.2	-185.7	405,851.16	573,655.70	32° 6' 56.080 N	104° 5' 43.554 W
12,100.0	89.83	0.50	9,637.5	2,647.2	-184.9	405,951.16	573,656.57	32° 6' 57.069 N	104° 5' 43.541 W
12,200.0	89.83	0.50	9,637.8	2,747.2	-184.0	406,051.15	573,657.45	32° 6' 58.059 N	104° 5' 43.528 W
12,300.0	89.83	0.50	9,638.1	2,847.2	-183.1	406,151.15	573,658.32	32° 6' 59.048 N	104° 5' 43.516 W
12,400.0	89.83	0.50	9,638.4	2,947.2	-182.2	406,251.14	573,659.19	32° 7' 0.038 N	104° 5' 43.503 W
12,500.0	89.83	0.50	9,638.7	3,047.2	-181.4	406,351.14	573,660.06	32° 7' 1.028 N	104° 5' 43.490 W
12,600.0	89.83	0.50	9,639.0	3,147.2	-180.5	406,451.13	573,660.93	32° 7' 2.017 N	104° 5' 43.478 W
12,700.0	89.83	0.50	9,639.3	3,247.2	-179.6	406,551.13	573,661.80	32° 7' 3.007 N	104° 5' 43.465 W
12,800.0	89.83	0.50	9,639.6	3,347.2	-178.8	406,651.13	573,662.67	32° 7' 3.996 N	104° 5' 43.452 W
12,900.0	89.83	0.50	9,639.9	3,447.2	-177.9	406,751.12	573,663.54	32° 7' 4.986 N	104° 5' 43.440 W
13,000.0	89.83	0.50	9,640.2	3,547.2	-177.0	406,851.12	573,664.41	32° 7' 5.976 N	104° 5' 43.427 W
13,100.0	89.83	0.50	9,640.5	3,647.2	-176.2	406,951.11	573,665.28	32° 7' 6.965 N	104° 5' 43.414 W
13,200.0	89.83	0.50	9,640.8	3,747.2	-175.3	407,051.11	573,666.15	32° 7' 7.955 N	104° 5' 43.402 W
13,300.0	89.83	0.50	9,641.1	3,847.2	-174.4	407,151.11	573,667.02	32° 7' 8.944 N	104° 5' 43.389 W
13,400.0	89.83	0.50	9,641.4	3,947.2	-173.5	407,251.10	573,667.89	32° 7' 9.934 N	104° 5' 43.376 W
13,500.0	89.83	0.50	9,641.7	4,047.1	-172.7	407,351.10	573,668.76	32° 7' 10.923 N	104° 5' 43.363 W
13,600.0	89.83	0.50	9,642.0	4,147.1	-171.8	407,451.09	573,669.63	32° 7' 11.913 N	104° 5' 43.351 W
13,700.0	89.83	0.50	9,642.3	4,247.1	-170.9	407,551.09	573,670.50	32° 7' 12.903 N	104° 5' 43.338 W
13,800.0	89.83	0.50	9,642.6	4,347.1	-170.1	407,651.08	573,671.37	32° 7' 13.892 N	104° 5' 43.325 W
13,900.0	89.83	0.50	9,642.9	4,447.1	-169.2	407,751.08	573,672.24	32° 7' 14.882 N	104° 5' 43.313 W
14,000.0	89.83	0.50	9,643.2	4,547.1	-168.3	407,851.08	573,673.11	32° 7' 15.871 N	104° 5' 43.300 W
14,100.0	89.83	0.50	9,643.5	4,647.1	-167.4	407,951.07	573,673.99	32° 7' 16.861 N	104° 5' 43.287 W
14,200.0	89.83	0.50	9,643.8	4,747.1	-166.6	408,051.07	573,674.86	32° 7' 17.851 N	104° 5' 43.275 W
14,300.0	89.83	0.50	9,644.0	4,847.1	-165.7	408,151.06	573,675.73	32° 7' 18.840 N	104° 5' 43.262 W
14,400.0	89.83	0.50	9,644.3	4,947.1	-164.8	408,251.06	573,676.60	32° 7' 19.830 N	104° 5' 43.249 W
14,500.0	89.83	0.50	9,644.6	5,047.1	-164.0	408,351.05	573,677.47	32° 7' 20.819 N	104° 5' 43.237 W
14,600.0	89.83	0.50	9,644.9	5,147.1	-163.1	408,451.05	573,678.34	32° 7' 21.809 N	104° 5' 43.224 W
14,700.0	89.83	0.50	9,645.2	5,247.1	-162.2	408,551.05	573,679.21	32° 7' 22.798 N	104° 5' 43.211 W
14,800.0	89.83	0.50	9,645.5	5,347.1	-161.4	408,651.04	573,680.08	32° 7' 23.788 N	104° 5' 43.199 W
14,900.0	89.83	0.50	9,645.8	5,447.1	-160.5	408,751.04	573,680.95	32° 7' 24.778 N	104° 5' 43.186 W
15,000.0	89.83	0.50	9,646.1	5,547.1	-159.6	408,851.03	573,681.82	32° 7' 25.767 N	104° 5' 43.173 W
15,100.0	89.83	0.50	9,646.4	5,647.1	-158.7	408,951.03	573,682.69	32° 7' 26.757 N	104° 5' 43.160 W
15,200.0	89.83	0.50	9,646.7	5,747.1	-157.9	409,051.02	573,683.56	32° 7' 27.746 N	104° 5' 43.148 W
15,300.0	89.83	0.50	9,647.0	5,847.1	-157.0	409,151.02	573,684.43	32° 7' 28.736 N	104° 5' 43.135 W
15,400.0	89.83	0.50	9,647.3	5,947.1	-156.1	409,251.02	573,685.30	32° 7' 29.726 N	104° 5' 43.122 W
15,500.0	89.83	0.50	9,647.6	6,047.1	-155.3	409,351.01	573,686.17	32° 7' 30.715 N	104° 5' 43.110 W
15,600.0	89.83	0.50	9,647.9	6,147.1	-154.4	409,451.01	573,687.04	32° 7' 31.705 N	104° 5' 43.097 W
15,700.0	89.83	0.50	9,648.2	6,247.1	-153.5	409,551.00	573,687.91	32° 7' 32.694 N	104° 5' 43.084 W
15,800.0	89.83	0.50	9,648.5	6,347.1	-152.6	409,651.00	573,688.78	32° 7' 33.684 N	104° 5' 43.072 W
15,900.0	89.83	0.50	9,648.8	6,447.0	-151.8	409,751.00	573,689.65	32° 7' 34.674 N	104° 5' 43.059 W
16,000.0	89.83	0.50	9,649.1	6,547.0	-150.9	409,850.99	573,690.52	32° 7' 35.663 N	104° 5' 43.046 W
16,100.0	89.83	0.50	9,649.4	6,647.0	-150.0	409,950.99	573,691.40	32° 7' 36.653 N	104° 5' 43.034 W
16,200.0	89.83	0.50	9,649.7	6,747.0	-149.2	410,050.98	573,692.27	32° 7' 37.642 N	104° 5' 43.021 W
16,300.0	89.83	0.50	9,650.0	6,847.0	-148.3	410,150.98	573,693.14	32° 7' 38.632 N	104° 5' 43.008 W
16,400.0	89.83	0.50	9,650.3	6,947.0	-147.4	410,250.97	573,694.01	32° 7' 39.621 N	104° 5' 42.995 W
16,500.0	89.83	0.50	9,650.6	7,047.0	-146.6	410,350.97	573,694.88	32° 7' 40.611 N	104° 5' 42.983 W
16,600.0	89.83	0.50	9,650.9	7,147.0	-145.7	410,450.97	573,695.75	32° 7' 41.601 N	104° 5' 42.970 W
16,700.0	89.83	0.50	9,651.2	7,247.0	-144.8	410,550.96	573,696.62	32° 7' 42.590 N	104° 5' 42.957 W
16,800.0	89.83	0.50	9,651.5	7,347.0	-143.9	410,650.96	573,697.49	32° 7' 43.580 N	104° 5' 42.945 W
16,900.0	89.83	0.50	9,651.8	7,447.0	-143.1	410,750.95	573,698.36	32° 7' 44.569 N	104° 5' 42.932 W
17,000.0	89.83	0.50	9,652.1	7,547.0	-142.2	410,850.95	573,699.23	32° 7' 45.559 N	104° 5' 42.919 W
17,100.0	89.83	0.50	9,652.3	7,647.0	-141.3	410,950.94	573,700.10	32° 7' 46.549 N	104° 5' 42.907 W
17,200.0	89.83	0.50	9,652.6	7,747.0	-140.5	411,050.94	573,700.97	32° 7' 47.538 N	104° 5' 42.894 W
17,300.0	89.83	0.50	9,652.9	7,847.0	-139.6	411,150.94	573,701.84	32° 7' 48.528 N	104° 5' 42.881 W



COG Operating LLC

Survey Report - Geographic

Company:	COG OPERATING LLC	Local Co-ordinate Reference:	Well MYOX 21 ST COM #35H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
Site:	ATLAS	MD Reference:	RKB=2977.6+25 @ 3002.6usft (LATSAHW 44)
Well:	MYOX 21 ST COM #35H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDM_Users

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
17,400.0	89.83	0.50	9,653.2	7,947.0	-138.7	411,250.93	573,702.71	32° 7' 49.517 N	104° 5' 42.869 W
17,500.0	89.83	0.50	9,653.5	8,047.0	-137.9	411,350.93	573,703.58	32° 7' 50.507 N	104° 5' 42.856 W
17,600.0	89.83	0.50	9,653.8	8,147.0	-137.0	411,450.92	573,704.45	32° 7' 51.496 N	104° 5' 42.843 W
17,700.0	89.83	0.50	9,654.1	8,247.0	-136.1	411,550.92	573,705.32	32° 7' 52.486 N	104° 5' 42.830 W
17,800.0	89.83	0.50	9,654.4	8,347.0	-135.2	411,650.91	573,706.19	32° 7' 53.476 N	104° 5' 42.818 W
17,900.0	89.83	0.50	9,654.7	8,447.0	-134.4	411,750.91	573,707.06	32° 7' 54.465 N	104° 5' 42.805 W
18,000.0	89.83	0.50	9,655.0	8,547.0	-133.5	411,850.91	573,707.94	32° 7' 55.455 N	104° 5' 42.792 W
18,100.0	89.83	0.50	9,655.3	8,647.0	-132.6	411,950.90	573,708.81	32° 7' 56.444 N	104° 5' 42.780 W
18,200.0	89.83	0.50	9,655.6	8,746.9	-131.8	412,050.90	573,709.68	32° 7' 57.434 N	104° 5' 42.767 W
18,300.0	89.83	0.50	9,655.9	8,846.9	-130.9	412,150.89	573,710.55	32° 7' 58.424 N	104° 5' 42.754 W
18,400.0	89.83	0.50	9,656.2	8,946.9	-130.0	412,250.89	573,711.42	32° 7' 59.413 N	104° 5' 42.742 W
18,500.0	89.83	0.50	9,656.5	9,046.9	-129.1	412,350.89	573,712.29	32° 8' 0.403 N	104° 5' 42.729 W
18,600.0	89.83	0.50	9,656.8	9,146.9	-128.3	412,450.88	573,713.16	32° 8' 1.392 N	104° 5' 42.716 W
18,700.0	89.83	0.50	9,657.1	9,246.9	-127.4	412,550.88	573,714.03	32° 8' 2.382 N	104° 5' 42.703 W
18,800.0	89.83	0.50	9,657.4	9,346.9	-126.5	412,650.87	573,714.90	32° 8' 3.371 N	104° 5' 42.691 W
18,900.0	89.83	0.50	9,657.7	9,446.9	-125.7	412,750.87	573,715.77	32° 8' 4.361 N	104° 5' 42.678 W
19,000.0	89.83	0.50	9,658.0	9,546.9	-124.8	412,850.86	573,716.64	32° 8' 5.351 N	104° 5' 42.665 W
19,100.0	89.83	0.50	9,658.3	9,646.9	-123.9	412,950.86	573,717.51	32° 8' 6.340 N	104° 5' 42.653 W
19,200.0	89.83	0.50	9,658.6	9,746.9	-123.1	413,050.86	573,718.38	32° 8' 7.330 N	104° 5' 42.640 W
19,300.0	89.83	0.50	9,658.9	9,846.9	-122.2	413,150.85	573,719.25	32° 8' 8.319 N	104° 5' 42.627 W
19,400.0	89.83	0.50	9,659.2	9,946.9	-121.3	413,250.85	573,720.12	32° 8' 9.309 N	104° 5' 42.615 W
19,500.0	89.83	0.50	9,659.5	10,046.9	-120.4	413,350.84	573,720.99	32° 8' 10.299 N	104° 5' 42.602 W
19,600.0	89.83	0.50	9,659.8	10,146.9	-119.6	413,450.84	573,721.86	32° 8' 11.288 N	104° 5' 42.589 W
19,680.4	89.83	0.50	9,660.0	10,227.2	-118.9	413,531.19	573,722.56	32° 8' 12.083 N	104° 5' 42.579 W

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- Myox St Com	0.00	0.00	9,660.0	10,227.2	-118.9	413,531.19	573,722.56	32° 8' 12.083 N	104° 5' 42.579 W
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____



WELL DETAILS: MYOX 21 ST COM #35H
2977.6

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	403303.95	573841.43	32° 6' 30.867 N	104° 5' 41.460 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	9153.5	0.00	0.00	9153.5	0.0	0.0	0.00	0.00	0.0	
3	9902.1	89.83	343.10	9631.0	455.5	-138.4	12.00	343.10	457.1	
4	10337.1	89.83	0.50	9632.3	884.4	-200.2	4.00	90.03	886.7	
5	19680.4	89.83	0.50	9660.0	10227.2	-118.9	0.00	0.00	10227.9	

Project: EDDY COUNTY, NM
Site: ATLAS
Well: MYOX 21 ST COM #35H
Wellbore: DWB
Design: PWP1

