

Submit 1 Copy To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
October 13, 2009

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" FOR OIL CONSERVATION PROPOSALS.) ARTESIA DISTRICT		WELL API NO. 30-015-45376
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator COG Operating LLC		6. State Oil & Gas Lease No.
3. Address of Operator 2208 W. Main Street, Artesia, NM 88210		7. Lease Name or Unit Agreement Name Myox 21 State Com
4. Well Location Unit Letter <u>N</u> : <u>220</u> feet from the <u>South</u> line and <u>1709</u> feet from the <u>West</u> line Section <u>21</u> Township <u>25S</u> Range <u>28E</u> NMPM Eddy County		8. Well Number 37H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 2976.9'		9. OGRID Number 229137
		10. Pool name or Wildcat Purple Sage; Wolfcamp

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐ DOWNHOLE COMMINGLE ☐ OTHER: ☒ SHL Change	SUBSEQUENT REPORT OF: REMEDIAL WORK ☐ ALTERING CASING ☐ COMMENCE DRILLING OPNS. ☐ P AND A ☐ CASING/CEMENT JOB ☐ OTHER: ☐
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC respectfully requests approval for the following changes to the original approved APD.

SHL:
From: 200' FSL & 1709' FWL Section 21, T25S, R28E UL N
To: 220' FSL & 1709' FWL Section 21, T25S, R28E UL N
C102 attached.

Directional Plan Attached.

Spud Date: Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mayte Reyes TITLE: Senior Regulatory Analyst DATE: 2/5/2019
Type or print name: Mayte Reyes E-mail address: mreyes1@conchoresources.com PHONE: (575) 748-6945
For State Use Only

APPROVED BY: Raymond M. Bodany TITLE: Geology 31 DATE: 2-7-19
Conditions of Approval (if any):

FEB 07 2019

DISTRICT I
1000 N. FRENCH DR., HOHEN, NM 88240
Phone: (505) 222-6181 Fax: (505) 222-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (505) 748-1253 Fax: (505) 748-0720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-0178 Fax: (505) 334-0170

DISTRICT IV
1000 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3450 Fax: (505) 476-3450

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

RECEIVED
Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45376	Pool Code 98220	Pool Name Purple Sage; Wolfcamp
Property Code 38521	Property Name MYOX 21 STATE COM	Well Number 37H
OCRD No. 229137	Operator Name COG OPERATING, LLC	Elevation 2976.9'

Surface Location

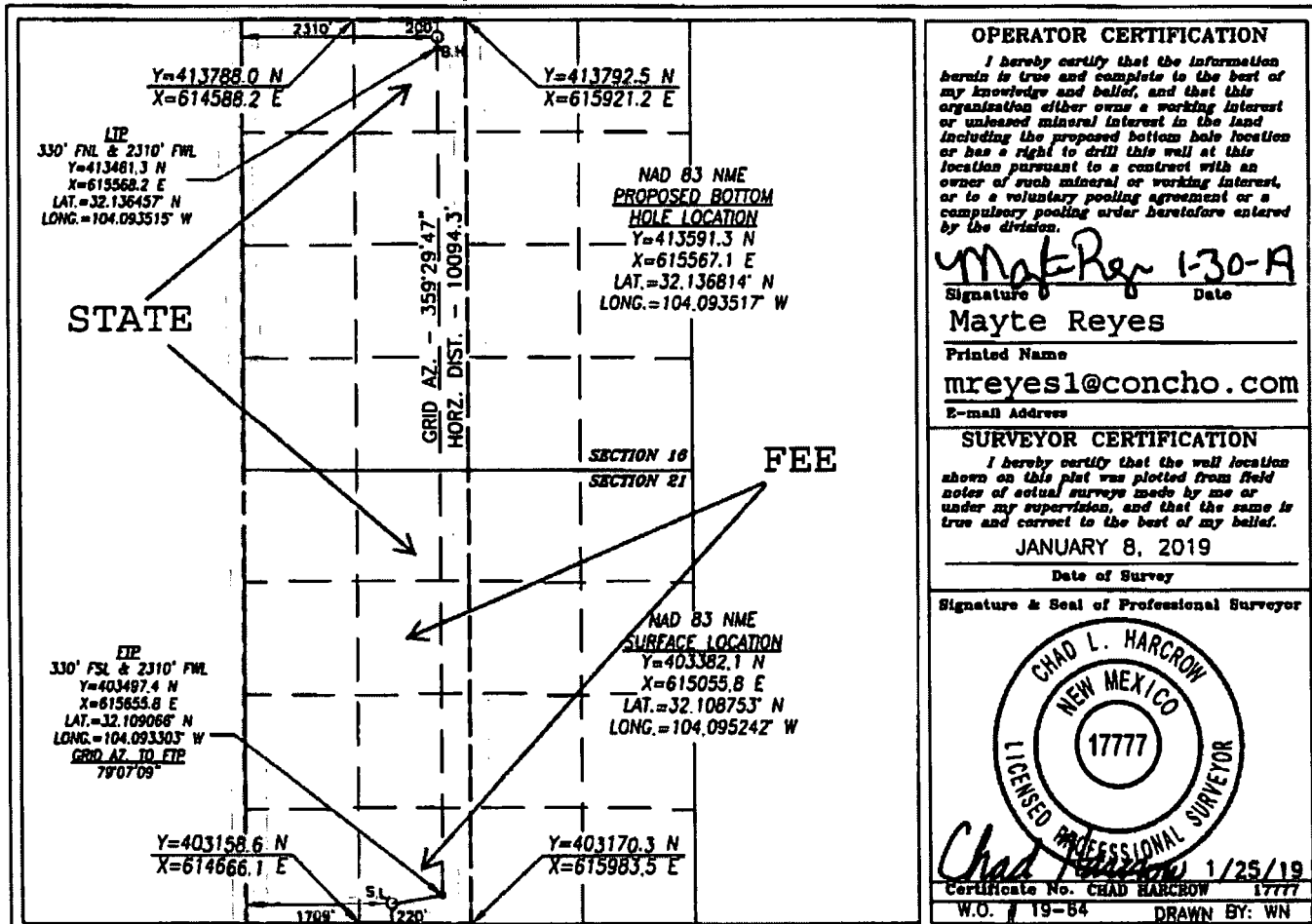
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	21	25-S	28-E		220	SOUTH	1709	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	16	25-S	28-E		200	NORTH	2310	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



RUP 2-7-19



NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 07 2019

RECEIVED

COG Operating LLC

Eddy County, NM (NAD27 NME)

Myox 21 State Com

37H

30-015-45376

OH

Plan: Plan 2 02-05-19

Standard Planning Report

05 February, 2019





Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Cor
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 37H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, NM (NAD27 NME)		
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 21 State Cor				
Site Position:		Northing:	403,335.40 usft	Latitude:	32° 6' 31.10711 N
From:	Map	Easting:	577,031.40 usft	Longitude:	104° 5' 4.37007 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	37H					
Well Position	+N/-S	-11.10 usft	Northing:	403,324.30 usft	Latitude:	32° 6' 31.06800 N
	+E/-W	-3,159.80 usft	Easting:	573,871.60 usft	Longitude:	104° 5' 41.10849 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	Ground Level:		2,976.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	3/18/2019	7.02	59.80	47,877.92527252

Design	Plan 2 02-05-19			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	2.87

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
0.00	0.00	0.00	0.00	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	
2,999.96	10.00	98.22	2,997.42	-6.22	43.07	2.00	2.00	0.00	98.22	
6,000.69	10.00	98.22	5,952.58	-80.75	558.74	0.00	0.00	0.00	0.00	
6,500.65	0.00	0.00	6,450.00	-86.97	601.80	2.00	-2.00	0.00	180.00	
9,124.19	0.00	0.00	9,073.54	-86.97	601.80	0.00	0.00	0.00	0.00	
9,873.22	89.88	359.50	9,551.00	389.50	597.62	12.00	12.00	-0.07	359.50	
19,693.11	89.88	359.50	9,571.00	10,209.00	511.50	0.00	0.00	0.00	0.00	BHL - Myox State Cor



Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 37H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
2,600.00	2.00	98.22	2,599.98	-0.25	1.73	-0.16	2.00	2.00	0.00
2,700.00	4.00	98.22	2,699.84	-1.00	6.91	-0.65	2.00	2.00	0.00
2,800.00	6.00	98.22	2,799.45	-2.24	15.53	-1.46	2.00	2.00	0.00
2,900.00	8.00	98.22	2,898.70	-3.99	27.59	-2.60	2.00	2.00	0.00
2,999.96	10.00	98.22	2,997.42	-6.22	43.07	-4.06	2.00	2.00	0.00
Hold 10.00° Inc at 98.23° Azm									
3,000.00	10.00	98.22	2,997.47	-6.23	43.08	-4.06	0.00	0.00	0.00
3,100.00	10.00	98.22	3,095.95	-8.71	60.26	-5.68	0.00	0.00	0.00
3,200.00	10.00	98.22	3,194.43	-11.19	77.44	-7.30	0.00	0.00	0.00
3,300.00	10.00	98.22	3,292.91	-13.68	94.63	-8.92	0.00	0.00	0.00
3,400.00	10.00	98.22	3,391.39	-16.16	111.81	-10.54	0.00	0.00	0.00
3,500.00	10.00	98.22	3,489.87	-18.64	129.00	-12.16	0.00	0.00	0.00
3,600.00	10.00	98.22	3,588.35	-21.13	146.18	-13.79	0.00	0.00	0.00
3,700.00	10.00	98.22	3,686.83	-23.61	163.37	-15.41	0.00	0.00	0.00
3,800.00	10.00	98.22	3,785.31	-26.09	180.55	-17.03	0.00	0.00	0.00
3,900.00	10.00	98.22	3,883.79	-28.58	197.74	-18.65	0.00	0.00	0.00
4,000.00	10.00	98.22	3,982.28	-31.06	214.92	-20.27	0.00	0.00	0.00
4,100.00	10.00	98.22	4,080.76	-33.54	232.11	-21.89	0.00	0.00	0.00
4,200.00	10.00	98.22	4,179.24	-36.03	249.29	-23.51	0.00	0.00	0.00
4,300.00	10.00	98.22	4,277.72	-38.51	266.48	-25.13	0.00	0.00	0.00
4,400.00	10.00	98.22	4,376.20	-41.00	283.66	-26.75	0.00	0.00	0.00
4,500.00	10.00	98.22	4,474.68	-43.48	300.85	-28.37	0.00	0.00	0.00
4,600.00	10.00	98.22	4,573.16	-45.96	318.03	-29.99	0.00	0.00	0.00
4,700.00	10.00	98.22	4,671.64	-48.45	335.22	-31.61	0.00	0.00	0.00
4,800.00	10.00	98.22	4,770.12	-50.93	352.40	-33.23	0.00	0.00	0.00
4,900.00	10.00	98.22	4,868.61	-53.41	369.59	-34.85	0.00	0.00	0.00
5,000.00	10.00	98.22	4,967.09	-55.90	386.77	-36.47	0.00	0.00	0.00
5,100.00	10.00	98.22	5,065.57	-58.38	403.95	-38.09	0.00	0.00	0.00
5,200.00	10.00	98.22	5,164.05	-60.86	421.14	-39.71	0.00	0.00	0.00
5,300.00	10.00	98.22	5,262.53	-63.35	438.32	-41.33	0.00	0.00	0.00
5,400.00	10.00	98.22	5,361.01	-65.83	455.51	-42.95	0.00	0.00	0.00
5,500.00	10.00	98.22	5,459.49	-68.31	472.69	-44.58	0.00	0.00	0.00
5,600.00	10.00	98.22	5,557.97	-70.80	489.88	-46.20	0.00	0.00	0.00
5,700.00	10.00	98.22	5,656.45	-73.28	507.06	-47.82	0.00	0.00	0.00
5,800.00	10.00	98.22	5,754.93	-75.76	524.25	-49.44	0.00	0.00	0.00
5,900.00	10.00	98.22	5,853.42	-78.25	541.43	-51.06	0.00	0.00	0.00
6,000.00	10.00	98.22	5,951.90	-80.73	558.62	-52.68	0.00	0.00	0.00
6,000.69	10.00	98.22	5,952.58	-80.75	558.74	-52.69	0.00	0.00	0.00
Begin 2.00°/100' Drop									
6,100.00	8.01	98.22	6,050.66	-82.97	574.12	-54.14	2.00	-2.00	0.00
6,200.00	6.01	98.22	6,149.90	-84.72	586.20	-55.28	2.00	-2.00	0.00
6,300.00	4.01	98.22	6,249.52	-85.97	594.85	-56.09	2.00	-2.00	0.00
6,400.00	2.01	98.22	6,349.37	-86.72	600.05	-56.59	2.00	-2.00	0.00
6,500.00	0.01	98.22	6,449.35	-86.97	601.80	-56.75	2.00	-2.00	0.00
6,500.65	0.00	0.00	6,450.00	-86.97	601.80	-56.75	2.00	-2.00	0.00
Begin Vertical Hold									
9,124.19	0.00	0.00	9,073.54	-86.97	601.80	-56.75	0.00	0.00	0.00
KOP2, Begin 12.00°/100' Build									
9,200.00	9.10	359.50	9,149.03	-80.97	601.75	-50.75	12.00	12.00	0.00
9,300.00	21.10	359.50	9,245.41	-54.97	601.52	-24.80	12.00	12.00	0.00
9,400.00	33.10	359.50	9,334.27	-9.50	601.12	20.59	12.00	12.00	0.00



Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-18

Local Co-ordinate Reference: Well 37H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
9,500.00	45.10	359.50	9,411.73	53.44	600.57	83.43	12.00	12.00	0.00
9,600.00	57.10	359.50	9,474.42	131.12	599.89	160.97	12.00	12.00	0.00
9,700.00	69.10	359.50	9,519.58	220.13	599.11	249.83	12.00	12.00	0.00
9,800.00	81.10	359.50	9,545.25	316.59	598.26	346.13	12.00	12.00	0.00
9,873.22	89.88	359.50	9,551.00	389.50	597.62	418.92	12.00	12.00	0.00
LP, Hold 89.88° Inc at 359.50° Azm									
9,900.00	89.88	359.50	9,551.06	416.28	597.39	445.66	0.00	0.00	0.00
10,000.00	89.88	359.50	9,551.26	516.28	596.51	545.48	0.00	0.00	0.00
10,100.00	89.88	359.50	9,551.47	616.28	595.64	645.31	0.00	0.00	0.00
10,200.00	89.88	359.50	9,551.67	716.27	594.76	745.14	0.00	0.00	0.00
10,300.00	89.88	359.50	9,551.87	816.27	593.88	844.96	0.00	0.00	0.00
10,400.00	89.88	359.50	9,552.08	916.26	593.00	944.79	0.00	0.00	0.00
10,500.00	89.88	359.50	9,552.28	1,016.26	592.13	1,044.62	0.00	0.00	0.00
10,600.00	89.88	359.50	9,552.48	1,116.26	591.25	1,144.44	0.00	0.00	0.00
10,700.00	89.88	359.50	9,552.69	1,216.25	590.37	1,244.27	0.00	0.00	0.00
10,800.00	89.88	359.50	9,552.89	1,316.25	589.50	1,344.10	0.00	0.00	0.00
10,900.00	89.88	359.50	9,553.09	1,416.24	588.62	1,443.92	0.00	0.00	0.00
11,000.00	89.88	359.50	9,553.30	1,516.24	587.74	1,543.75	0.00	0.00	0.00
11,100.00	89.88	359.50	9,553.50	1,616.24	586.87	1,643.58	0.00	0.00	0.00
11,200.00	89.88	359.50	9,553.71	1,716.23	585.99	1,743.40	0.00	0.00	0.00
11,300.00	89.88	359.50	9,553.91	1,816.23	585.11	1,843.23	0.00	0.00	0.00
11,400.00	89.88	359.50	9,554.11	1,916.22	584.23	1,943.06	0.00	0.00	0.00
11,500.00	89.88	359.50	9,554.32	2,016.22	583.36	2,042.88	0.00	0.00	0.00
11,600.00	89.88	359.50	9,554.52	2,116.22	582.48	2,142.71	0.00	0.00	0.00
11,700.00	89.88	359.50	9,554.72	2,216.21	581.60	2,242.54	0.00	0.00	0.00
11,800.00	89.88	359.50	9,554.93	2,316.21	580.73	2,342.37	0.00	0.00	0.00
11,900.00	89.88	359.50	9,555.13	2,416.20	579.85	2,442.19	0.00	0.00	0.00
12,000.00	89.88	359.50	9,555.33	2,516.20	578.97	2,542.02	0.00	0.00	0.00
12,100.00	89.88	359.50	9,555.54	2,616.20	578.09	2,641.85	0.00	0.00	0.00
12,200.00	89.88	359.50	9,555.74	2,716.19	577.22	2,741.67	0.00	0.00	0.00
12,300.00	89.88	359.50	9,555.95	2,816.19	576.34	2,841.50	0.00	0.00	0.00
12,400.00	89.88	359.50	9,556.15	2,916.18	575.46	2,941.33	0.00	0.00	0.00
12,500.00	89.88	359.50	9,556.35	3,016.18	574.59	3,041.15	0.00	0.00	0.00
12,600.00	89.88	359.50	9,556.56	3,116.17	573.71	3,140.98	0.00	0.00	0.00
12,700.00	89.88	359.50	9,556.76	3,216.17	572.83	3,240.81	0.00	0.00	0.00
12,800.00	89.88	359.50	9,556.96	3,316.17	571.96	3,340.63	0.00	0.00	0.00
12,900.00	89.88	359.50	9,557.17	3,416.16	571.08	3,440.46	0.00	0.00	0.00
13,000.00	89.88	359.50	9,557.37	3,516.16	570.20	3,540.29	0.00	0.00	0.00
13,100.00	89.88	359.50	9,557.57	3,616.15	569.32	3,640.11	0.00	0.00	0.00
13,200.00	89.88	359.50	9,557.78	3,716.15	568.45	3,739.94	0.00	0.00	0.00
13,300.00	89.88	359.50	9,557.98	3,816.15	567.57	3,839.77	0.00	0.00	0.00
13,400.00	89.88	359.50	9,558.19	3,916.14	566.69	3,939.59	0.00	0.00	0.00
13,500.00	89.88	359.50	9,558.39	4,016.14	565.82	4,039.42	0.00	0.00	0.00
13,600.00	89.88	359.50	9,558.59	4,116.13	564.94	4,139.25	0.00	0.00	0.00
13,700.00	89.88	359.50	9,558.80	4,216.13	564.06	4,239.07	0.00	0.00	0.00
13,800.00	89.88	359.50	9,559.00	4,316.13	563.19	4,338.90	0.00	0.00	0.00
13,900.00	89.88	359.50	9,559.20	4,416.12	562.31	4,438.73	0.00	0.00	0.00
14,000.00	89.88	359.50	9,559.41	4,516.12	561.43	4,538.55	0.00	0.00	0.00
14,100.00	89.88	359.50	9,559.61	4,616.11	560.55	4,638.38	0.00	0.00	0.00
14,200.00	89.88	359.50	9,559.81	4,716.11	559.68	4,738.21	0.00	0.00	0.00
14,300.00	89.88	359.50	9,560.02	4,816.11	558.80	4,838.03	0.00	0.00	0.00
14,400.00	89.88	359.50	9,560.22	4,916.10	557.92	4,937.86	0.00	0.00	0.00
14,500.00	89.88	359.50	9,560.43	5,016.10	557.05	5,037.69	0.00	0.00	0.00



Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Corn
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 37H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,600.00	89.88	359.50	9,560.63	5,116.09	556.17	5,137.52	0.00	0.00	0.00
14,700.00	89.88	359.50	9,560.83	5,216.09	555.29	5,237.34	0.00	0.00	0.00
14,800.00	89.88	359.50	9,561.04	5,316.09	554.41	5,337.17	0.00	0.00	0.00
14,900.00	89.88	359.50	9,561.24	5,416.08	553.54	5,437.00	0.00	0.00	0.00
15,000.00	89.88	359.50	9,561.44	5,516.08	552.66	5,536.82	0.00	0.00	0.00
15,100.00	89.88	359.50	9,561.65	5,616.07	551.78	5,636.65	0.00	0.00	0.00
15,200.00	89.88	359.50	9,561.85	5,716.07	550.91	5,736.48	0.00	0.00	0.00
15,300.00	89.88	359.50	9,562.05	5,816.07	550.03	5,836.30	0.00	0.00	0.00
15,400.00	89.88	359.50	9,562.26	5,916.06	549.15	5,936.13	0.00	0.00	0.00
15,500.00	89.88	359.50	9,562.46	6,016.06	548.28	6,035.96	0.00	0.00	0.00
15,600.00	89.88	359.50	9,562.67	6,116.05	547.40	6,135.78	0.00	0.00	0.00
15,700.00	89.88	359.50	9,562.87	6,216.05	546.52	6,235.61	0.00	0.00	0.00
15,800.00	89.88	359.50	9,563.07	6,316.05	545.64	6,335.44	0.00	0.00	0.00
15,900.00	89.88	359.50	9,563.28	6,416.04	544.77	6,435.26	0.00	0.00	0.00
16,000.00	89.88	359.50	9,563.48	6,516.04	543.89	6,535.09	0.00	0.00	0.00
16,100.00	89.88	359.50	9,563.68	6,616.03	543.01	6,634.92	0.00	0.00	0.00
16,200.00	89.88	359.50	9,563.89	6,716.03	542.14	6,734.74	0.00	0.00	0.00
16,300.00	89.88	359.50	9,564.09	6,816.02	541.26	6,834.57	0.00	0.00	0.00
16,400.00	89.88	359.50	9,564.29	6,916.02	540.38	6,934.40	0.00	0.00	0.00
16,500.00	89.88	359.50	9,564.50	7,016.02	539.50	7,034.22	0.00	0.00	0.00
16,600.00	89.88	359.50	9,564.70	7,116.01	538.63	7,134.05	0.00	0.00	0.00
16,700.00	89.88	359.50	9,564.91	7,216.01	537.75	7,233.88	0.00	0.00	0.00
16,800.00	89.88	359.50	9,565.11	7,316.00	536.87	7,333.70	0.00	0.00	0.00
16,900.00	89.88	359.50	9,565.31	7,416.00	536.00	7,433.53	0.00	0.00	0.00
17,000.00	89.88	359.50	9,565.52	7,516.00	535.12	7,533.36	0.00	0.00	0.00
17,100.00	89.88	359.50	9,565.72	7,615.99	534.24	7,633.18	0.00	0.00	0.00
17,200.00	89.88	359.50	9,565.92	7,715.99	533.37	7,733.01	0.00	0.00	0.00
17,300.00	89.88	359.50	9,566.13	7,815.98	532.49	7,832.84	0.00	0.00	0.00
17,400.00	89.88	359.50	9,566.33	7,915.98	531.61	7,932.67	0.00	0.00	0.00
17,500.00	89.88	359.50	9,566.53	8,015.98	530.73	8,032.49	0.00	0.00	0.00
17,600.00	89.88	359.50	9,566.74	8,115.97	529.86	8,132.32	0.00	0.00	0.00
17,700.00	89.88	359.50	9,566.94	8,215.97	528.98	8,232.15	0.00	0.00	0.00
17,800.00	89.88	359.50	9,567.15	8,315.96	528.10	8,331.97	0.00	0.00	0.00
17,900.00	89.88	359.50	9,567.35	8,415.96	527.23	8,431.80	0.00	0.00	0.00
18,000.00	89.88	359.50	9,567.55	8,515.96	526.35	8,531.63	0.00	0.00	0.00
18,100.00	89.88	359.50	9,567.76	8,615.95	525.47	8,631.45	0.00	0.00	0.00
18,200.00	89.88	359.50	9,567.96	8,715.95	524.60	8,731.28	0.00	0.00	0.00
18,300.00	89.88	359.50	9,568.16	8,815.94	523.72	8,831.11	0.00	0.00	0.00
18,400.00	89.88	359.50	9,568.37	8,915.94	522.84	8,930.93	0.00	0.00	0.00
18,500.00	89.88	359.50	9,568.57	9,015.94	521.96	9,030.76	0.00	0.00	0.00
18,600.00	89.88	359.50	9,568.77	9,115.93	521.09	9,130.59	0.00	0.00	0.00
18,700.00	89.88	359.50	9,568.98	9,215.93	520.21	9,230.41	0.00	0.00	0.00
18,800.00	89.88	359.50	9,569.18	9,315.92	519.33	9,330.24	0.00	0.00	0.00
18,900.00	89.88	359.50	9,569.39	9,415.92	518.46	9,430.07	0.00	0.00	0.00
19,000.00	89.88	359.50	9,569.59	9,515.92	517.58	9,529.89	0.00	0.00	0.00
19,100.00	89.88	359.50	9,569.79	9,615.91	516.70	9,629.72	0.00	0.00	0.00
19,200.00	89.88	359.50	9,570.00	9,715.91	515.82	9,729.55	0.00	0.00	0.00
19,300.00	89.88	359.50	9,570.20	9,815.90	514.95	9,829.37	0.00	0.00	0.00
19,400.00	89.88	359.50	9,570.40	9,915.90	514.07	9,929.20	0.00	0.00	0.00
19,500.00	89.88	359.50	9,570.61	10,015.90	513.19	10,029.03	0.00	0.00	0.00
19,600.00	89.88	359.50	9,570.81	10,115.89	512.32	10,128.85	0.00	0.00	0.00
19,693.11	89.88	359.50	9,571.00	10,209.00	511.50	10,221.80	0.00	0.00	0.00



Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 37H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
FTP - Myox State Com 3	0.00	0.00	9,551.00	115.30	600.00	403,439.60	574,471.60	32° 6' 32.19582 N	104° 5' 34.12946 W
- plan misses target center by 73.75usft at 9620.58usft MD (9485.22 TVD, 148.63 N, 599.74 E)									
- Point									
LTP - Myox State Com 3	0.00	0.00	9,571.00	10,079.00	512.60	413,403.30	574,384.20	32° 8' 10.80308 N	104° 5' 34.88728 W
- plan misses target center by 0.27usft at 19563.10usft MD (9570.74 TVD, 10079.00 N, 512.64 E)									
- Point									
BHL - Myox State Com 3	0.00	0.00	9,571.00	10,209.00	511.50	413,533.30	574,383.10	32° 8' 12.08964 N	104° 5' 34.89670 W
- plan hits target center									
- Point									

Plan Annotations

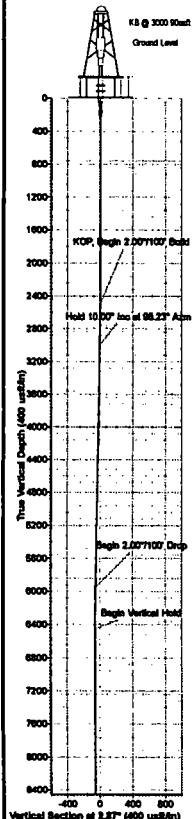
Measured	Vertical	Local Coordinates		
Depth	Depth	+N-S	+E-W	
(usft)	(usft)	(usft)	(usft)	Comment
2,500.00	2,500.00	0.00	0.00	KOP, Begin 2.00°/100' Build
2,999.96	2,997.42	-6.22	43.07	Hold 10.00° Inc at 88.23° Azm
6,000.69	5,952.58	-80.75	558.74	Begin 2.00°/100' Drop
6,500.65	6,450.00	-86.97	601.80	Begin Vertical Hold
9,124.19	9,073.54	-86.97	601.80	KOP2, Begin 12.00°/100' Build
9,873.22	9,551.00	389.50	597.62	LP, Hold 89.88° Inc at 359.50° Azm
19,713.14				TD at 19713.14



Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 37H
Wellbore: OH
Design: Plan 2 02-05-19
Rig: Ensign 155



True North: 4.12°
Magnetic North: 8.89°
Magnetic Field Strength: 47877.825nT
Dip Angle: 69.89°
Date: 5/18/2019
Model: MVD



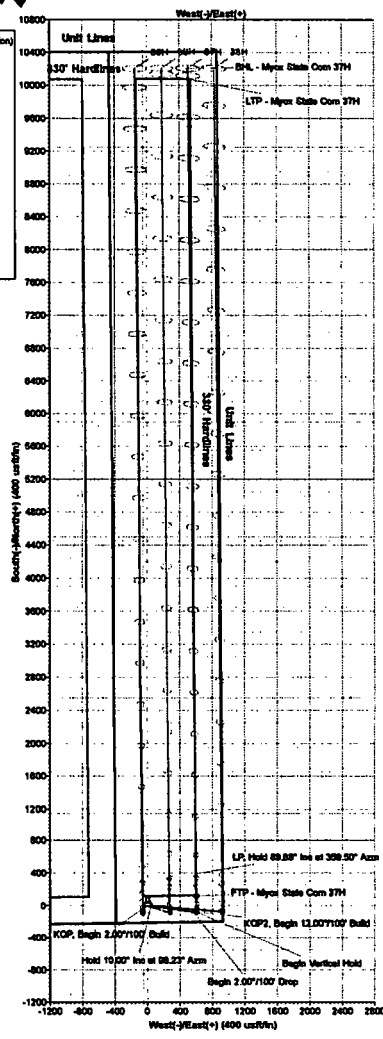
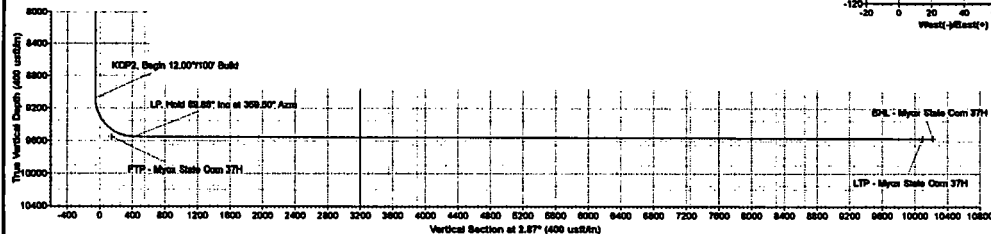
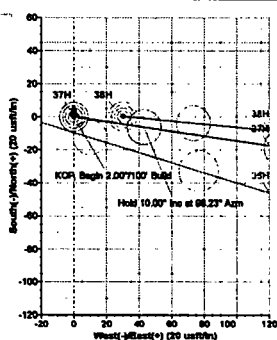
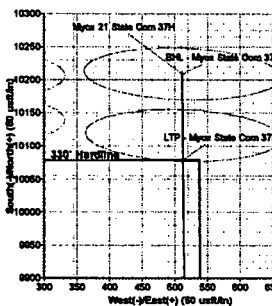
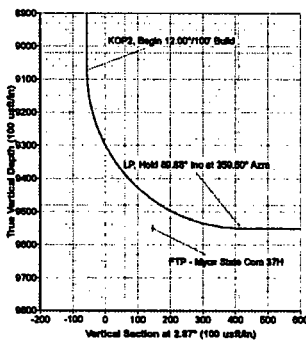
WELL DETAILS											
+N-S		+E-W		North	East	Latitude	Longitude				
0 00		0 00		403234.30	573471.00	32° 0' 31.05822 N	104° 5' 41.10449 W				
DESIGN TARGET DETAILS											
Name		TVD	+N-S	+E-W	North	East	Latitude	Longitude			
FTP - Myox State Com 37H		8551.00	115.30	800.00	403430.00	574471.00	32° 0' 31.05822 N	104° 5' 34.12946 W			
B-H - Myox State Com 37H		9571.00	10208.00	511.50	413633.30	574362.10	32° 0' 12.0804 N	104° 5' 34.86078 W			
LTP - Myox State Com 37H		9571.00	10078.00	512.00	413423.30	574364.20	32° 0' 10.80308 N	104° 5' 34.85728 W			
SECTION DETAILS											
Sec	MD	Inc	As	TVD	+N-S	+E-W	Dog	IFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00		KOP: Begin 2.027100' Bold
3	2500.00	10.00	88.22	2887.42	-8.22	43.07	2.00	88.22	-4.00		88.22 0007' inc at 28.22' Az
4	6000.00	10.00	88.72	3952.58	-80.75	558.74	0.00	0.00	-32.00		Begin 1.027100' Drop
5	8500.00	0.00	0.00	8500.00	-48.97	601.80	2.00	180.00	-38.75		Begin Vertical Drop
6	9124.19	0.00	0.00	9073.54	-48.97	601.80	0.00	0.00	-48.75		LCPT: Begin 1.027100' Bold
7	9873.72	89.88	359.50	9551.00	389.50	597.62	12.00	359.50	418.02		LTP: 60' BIF inc at 359.50' Az
8	10053.11	89.88	359.50	9571.00	10208.00	511.50	0.00	0.00	10221.00		BH - Myox State Com 37H

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well 37H, Grid North
Latitude: 32° 0' 31.05822 N
Longitude: 104° 5' 41.10449 W
Grid East: 573471.00
Grid North: 403324.30
Scale Factor: 1.000
Geographic Model: MVD
Sample Date: 18-Mar-19
Magnetic Declination: 7.02°
Dip Angle from Horizontal: 69.89°
Magnetic Field Strength: 47877.825nT
To convert a Magnetic Direction to a Grid Direction, Add 6.89°
To convert a Magnetic Direction to a True Direction, Add 7.02° East
To convert a True Direction to a Grid Direction, Subtract 0.12°

FORMATION TOP DETAILS
No formation data is available

LEGEND

- 37H, OH, Plan 2 02-05-19 VO
- 37H, OH, Plan 2 02-05-19 VO
- 37H, OH, Plan 2 02-05-19 VO
- Plan 2 02-05-19



Created By: Gustavo Mayo Date: 15.28, February 05.2019