

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" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-44006
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>1679</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 36H
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 & 1679' FWL Section 21, T25S, R28E UL N
To: 220' FSL & 1679' 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. Pridemore TITLE: Geology DATE: 2-7-19
Conditions of Approval (if any):

2-8-19
MR

FEB 07 2019

DISTRICT I
1608 N. FERNER DR., ROSA, NM 88240
Phone: (505) 693-6181 Fax: (505) 693-6782

DISTRICT II
611 S. FIRST ST., ARTESIA, NM 88210
Phone: (505) 746-1853 Fax: (505) 746-9782

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3450 Fax: (505) 476-5452

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 30-015-44006	Pool Code 98220	Pool Name Purple Sage; Wolfcamp
Property Code 38521	Property Name MYOX 21 STATE COM	Well Number 36H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 2976.9'

Surface Location

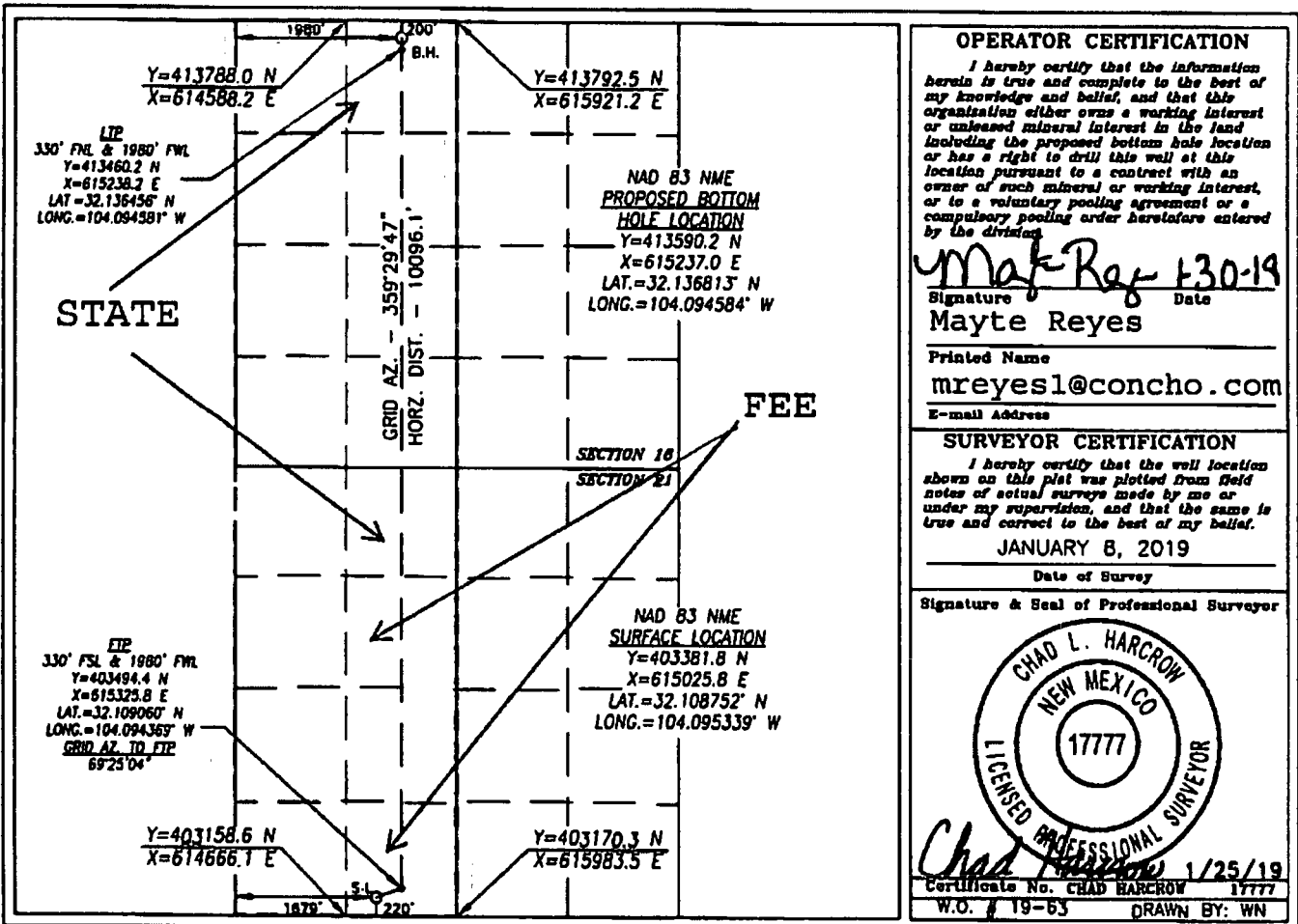
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	21	25-S	28-E		220	SOUTH	1679	WEST	EDDY

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	1980	WEST	EDDY

Dedicated Acres 640	Joint or Infill	Consolidation Code	Order No.
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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



Rev 2-7-19
2-8-19



NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 07 2019

RECEIVED

COG Operating LLC

Eddy County, NM (NAD27 NME)

Myox 21 State Com

36H

30-015 44006

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 Com
Well: 36H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 36H
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 Com			
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	36H			
Well Position	+N/-S	-11.40 usft	Northing:	403,324.00 usft
	+E/-W	-3,189.80 usft	Easting:	573,841.60 usft
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	47,877.91702059

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	1.19

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	
2,900.06	8.00	106.96	2,898.76	-8.13	26.68	2.00	2.00	0.00	106.96	
4,765.70	8.00	106.96	4,746.24	-83.87	275.07	0.00	0.00	0.00	0.00	
5,165.76	0.00	0.00	5,145.00	-92.00	301.75	2.00	-2.00	0.00	180.00	
8,894.30	0.00	0.00	8,873.54	-92.00	301.75	0.00	0.00	0.00	0.00	
9,842.36	89.77	359.50	9,351.00	383.50	297.58	12.00	12.00	-0.07	359.50	
19,467.51	89.77	359.50	9,391.00	10,208.20	211.50	0.00	0.00	0.00	0.00	BHL - Myox 21 State



Planning Report



Database: USA Compass
 Company: COG Operating LLC
 Project: Eddy County, NM (NAD27 NME)
 Site: Myox 21 State Com
 Well: 36H
 Wellbore: OH
 Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 36H
 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	106.96	2,599.98	-0.51	1.67	-0.47	2.00	2.00	0.00
2,700.00	4.00	106.96	2,699.84	-2.04	6.68	-1.90	2.00	2.00	0.00
2,800.00	6.00	106.96	2,799.45	-4.58	15.01	-4.26	2.00	2.00	0.00
2,900.00	8.00	106.96	2,898.70	-8.13	26.67	-7.58	2.00	2.00	0.00
2,900.06	8.00	106.96	2,898.76	-8.13	26.68	-7.58	2.00	2.00	0.00
Hold 8.00° Inc at 106.96° Azm									
3,000.00	8.00	106.96	2,997.73	-12.19	39.98	-11.36	0.00	0.00	0.00
3,100.00	8.00	106.96	3,096.75	-16.25	53.30	-15.14	0.00	0.00	0.00
3,200.00	8.00	106.96	3,195.78	-20.31	66.61	-18.92	0.00	0.00	0.00
3,300.00	8.00	106.96	3,294.81	-24.37	79.93	-22.71	0.00	0.00	0.00
3,400.00	8.00	106.96	3,393.83	-28.43	93.24	-26.49	0.00	0.00	0.00
3,500.00	8.00	106.96	3,492.86	-32.49	106.55	-30.27	0.00	0.00	0.00
3,600.00	8.00	106.96	3,591.89	-36.55	119.87	-34.06	0.00	0.00	0.00
3,700.00	8.00	106.96	3,690.91	-40.61	133.18	-37.84	0.00	0.00	0.00
3,800.00	8.00	106.96	3,789.94	-44.67	146.50	-41.62	0.00	0.00	0.00
3,900.00	8.00	106.96	3,888.97	-48.72	159.81	-45.40	0.00	0.00	0.00
4,000.00	8.00	106.96	3,987.99	-52.78	173.13	-49.19	0.00	0.00	0.00
4,100.00	8.00	106.96	4,087.02	-56.84	186.44	-52.97	0.00	0.00	0.00
4,200.00	8.00	106.96	4,186.05	-60.90	199.75	-56.75	0.00	0.00	0.00
4,300.00	8.00	106.96	4,285.07	-64.96	213.07	-60.53	0.00	0.00	0.00
4,400.00	8.00	106.96	4,384.10	-69.02	226.38	-64.32	0.00	0.00	0.00
4,500.00	8.00	106.96	4,483.13	-73.08	239.70	-68.10	0.00	0.00	0.00
4,600.00	8.00	106.96	4,582.15	-77.14	253.01	-71.88	0.00	0.00	0.00
4,700.00	8.00	106.96	4,681.18	-81.20	266.33	-75.67	0.00	0.00	0.00
4,765.70	8.00	106.96	4,746.24	-83.87	275.07	-78.15	0.00	0.00	0.00
Begin 2.00°/100' Drop									
4,800.00	7.32	106.96	4,780.23	-85.20	279.45	-79.39	2.00	-2.00	0.00
4,900.00	5.32	106.96	4,879.62	-88.41	289.97	-82.38	2.00	-2.00	0.00
5,000.00	3.32	106.96	4,979.33	-90.60	297.16	-84.43	2.00	-2.00	0.00
5,100.00	1.32	106.96	5,079.25	-91.78	301.03	-85.52	2.00	-2.00	0.00
5,165.76	0.00	0.00	5,145.00	-92.00	301.75	-85.73	2.00	-2.00	-162.65
Begin Vertical Hold									
8,894.30	0.00	0.00	8,873.54	-92.00	301.75	-85.73	0.00	0.00	0.00
KOP2, Begin 12.00°/100' Build									
8,900.00	0.68	359.50	8,879.24	-91.97	301.75	-85.70	12.00	12.00	0.00
9,000.00	12.68	359.50	8,978.38	-80.35	301.65	-74.08	12.00	12.00	0.00
9,100.00	24.68	359.50	9,072.94	-48.37	301.37	-42.12	12.00	12.00	0.00
9,200.00	36.68	359.50	9,158.78	2.56	300.92	8.79	12.00	12.00	0.00
9,300.00	48.68	359.50	9,232.15	70.23	300.33	76.44	12.00	12.00	0.00
9,400.00	60.68	359.50	9,289.86	151.68	299.61	157.85	12.00	12.00	0.00
9,500.00	72.68	359.50	9,329.37	243.34	298.81	249.48	12.00	12.00	0.00
9,600.00	84.68	359.50	9,348.95	341.21	297.95	347.31	12.00	12.00	0.00
9,642.36	89.77	359.50	9,351.00	383.51	297.58	389.59	12.00	12.00	0.00
LP, Hold 89.77° Inc at 359.50° Azm									
9,700.00	89.77	359.50	9,351.24	441.14	297.08	447.20	0.00	0.00	0.00
9,800.00	89.77	359.50	9,351.64	541.14	296.20	547.16	0.00	0.00	0.00
9,900.00	89.77	359.50	9,352.05	641.13	295.33	647.11	0.00	0.00	0.00
10,000.00	89.77	359.50	9,352.46	741.13	294.45	747.07	0.00	0.00	0.00
10,100.00	89.77	359.50	9,352.86	841.13	293.57	847.03	0.00	0.00	0.00
10,200.00	89.77	359.50	9,353.27	941.12	292.70	946.98	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: 36H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 36H
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)
10,300.00	89.77	359.50	9,353.68	1,041.12	291.82	1,046.94	0.00	0.00	0.00
10,400.00	89.77	359.50	9,354.09	1,141.11	290.95	1,146.89	0.00	0.00	0.00
10,500.00	89.77	359.50	9,354.49	1,241.11	290.07	1,246.85	0.00	0.00	0.00
10,600.00	89.77	359.50	9,354.90	1,341.10	289.19	1,346.80	0.00	0.00	0.00
10,700.00	89.77	359.50	9,355.31	1,441.10	288.32	1,446.76	0.00	0.00	0.00
10,800.00	89.77	359.50	9,355.71	1,541.09	287.44	1,546.72	0.00	0.00	0.00
10,900.00	89.77	359.50	9,356.12	1,641.09	286.56	1,646.67	0.00	0.00	0.00
11,000.00	89.77	359.50	9,356.53	1,741.08	285.69	1,746.63	0.00	0.00	0.00
11,100.00	89.77	359.50	9,356.94	1,841.08	284.81	1,846.58	0.00	0.00	0.00
11,200.00	89.77	359.50	9,357.34	1,941.07	283.94	1,946.54	0.00	0.00	0.00
11,300.00	89.77	359.50	9,357.75	2,041.07	283.06	2,046.49	0.00	0.00	0.00
11,400.00	89.77	359.50	9,358.16	2,141.06	282.18	2,146.45	0.00	0.00	0.00
11,500.00	89.77	359.50	9,358.56	2,241.06	281.31	2,246.41	0.00	0.00	0.00
11,600.00	89.77	359.50	9,358.97	2,341.06	280.43	2,346.36	0.00	0.00	0.00
11,700.00	89.77	359.50	9,359.38	2,441.05	279.56	2,446.32	0.00	0.00	0.00
11,800.00	89.77	359.50	9,359.79	2,541.05	278.68	2,546.27	0.00	0.00	0.00
11,900.00	89.77	359.50	9,360.19	2,641.04	277.80	2,646.23	0.00	0.00	0.00
12,000.00	89.77	359.50	9,360.60	2,741.04	276.93	2,746.18	0.00	0.00	0.00
12,100.00	89.77	359.50	9,361.01	2,841.03	276.05	2,846.14	0.00	0.00	0.00
12,200.00	89.77	359.50	9,361.41	2,941.03	275.17	2,946.10	0.00	0.00	0.00
12,300.00	89.77	359.50	9,361.82	3,041.02	274.30	3,046.05	0.00	0.00	0.00
12,400.00	89.77	359.50	9,362.23	3,141.02	273.42	3,146.01	0.00	0.00	0.00
12,500.00	89.77	359.50	9,362.63	3,241.01	272.55	3,245.96	0.00	0.00	0.00
12,600.00	89.77	359.50	9,363.04	3,341.01	271.67	3,345.92	0.00	0.00	0.00
12,700.00	89.77	359.50	9,363.45	3,441.00	270.79	3,445.87	0.00	0.00	0.00
12,800.00	89.77	359.50	9,363.86	3,541.00	269.92	3,545.83	0.00	0.00	0.00
12,900.00	89.77	359.50	9,364.26	3,640.99	269.04	3,645.79	0.00	0.00	0.00
13,000.00	89.77	359.50	9,364.67	3,740.99	268.17	3,745.74	0.00	0.00	0.00
13,100.00	89.77	359.50	9,365.08	3,840.99	267.29	3,845.70	0.00	0.00	0.00
13,200.00	89.77	359.50	9,365.48	3,940.98	266.41	3,945.65	0.00	0.00	0.00
13,300.00	89.77	359.50	9,365.89	4,040.98	265.54	4,045.61	0.00	0.00	0.00
13,400.00	89.77	359.50	9,366.30	4,140.97	264.66	4,145.57	0.00	0.00	0.00
13,500.00	89.77	359.50	9,366.71	4,240.97	263.78	4,245.52	0.00	0.00	0.00
13,600.00	89.77	359.50	9,367.11	4,340.96	262.91	4,345.48	0.00	0.00	0.00
13,700.00	89.77	359.50	9,367.52	4,440.96	262.03	4,445.43	0.00	0.00	0.00
13,800.00	89.77	359.50	9,367.93	4,540.95	261.16	4,545.39	0.00	0.00	0.00
13,900.00	89.77	359.50	9,368.33	4,640.95	260.28	4,645.34	0.00	0.00	0.00
14,000.00	89.77	359.50	9,368.74	4,740.94	259.40	4,745.30	0.00	0.00	0.00
14,100.00	89.77	359.50	9,369.15	4,840.94	258.53	4,845.26	0.00	0.00	0.00
14,200.00	89.77	359.50	9,369.56	4,940.93	257.65	4,945.21	0.00	0.00	0.00
14,300.00	89.77	359.50	9,369.96	5,040.93	256.78	5,045.17	0.00	0.00	0.00
14,400.00	89.77	359.50	9,370.37	5,140.92	255.90	5,145.12	0.00	0.00	0.00
14,500.00	89.77	359.50	9,370.78	5,240.92	255.02	5,245.08	0.00	0.00	0.00
14,600.00	89.77	359.50	9,371.18	5,340.92	254.15	5,345.03	0.00	0.00	0.00
14,700.00	89.77	359.50	9,371.59	5,440.91	253.27	5,444.99	0.00	0.00	0.00
14,800.00	89.77	359.50	9,372.00	5,540.91	252.39	5,544.95	0.00	0.00	0.00
14,900.00	89.77	359.50	9,372.41	5,640.90	251.52	5,644.90	0.00	0.00	0.00
15,000.00	89.77	359.50	9,372.81	5,740.90	250.64	5,744.86	0.00	0.00	0.00
15,100.00	89.77	359.50	9,373.22	5,840.89	249.77	5,844.81	0.00	0.00	0.00
15,200.00	89.77	359.50	9,373.63	5,940.89	248.89	5,944.77	0.00	0.00	0.00
15,300.00	89.77	359.50	9,374.03	6,040.88	248.01	6,044.72	0.00	0.00	0.00
15,400.00	89.77	359.50	9,374.44	6,140.88	247.14	6,144.68	0.00	0.00	0.00
15,500.00	89.77	359.50	9,374.85	6,240.87	246.26	6,244.64	0.00	0.00	0.00
15,600.00	89.77	359.50	9,375.26	6,340.87	245.39	6,344.59	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: 36H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 36H
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)
15,700.00	89.77	359.50	9,375.66	6,440.86	244.51	6,444.55	0.00	0.00	0.00
15,800.00	89.77	359.50	9,376.07	6,540.86	243.63	6,544.50	0.00	0.00	0.00
15,900.00	89.77	359.50	9,376.48	6,640.85	242.76	6,644.46	0.00	0.00	0.00
16,000.00	89.77	359.50	9,376.88	6,740.85	241.88	6,744.41	0.00	0.00	0.00
16,100.00	89.77	359.50	9,377.29	6,840.85	241.00	6,844.37	0.00	0.00	0.00
16,200.00	89.77	359.50	9,377.70	6,940.84	240.13	6,944.33	0.00	0.00	0.00
16,300.00	89.77	359.50	9,378.10	7,040.84	239.25	7,044.28	0.00	0.00	0.00
16,400.00	89.77	359.50	9,378.51	7,140.83	238.38	7,144.24	0.00	0.00	0.00
16,500.00	89.77	359.50	9,378.92	7,240.83	237.50	7,244.19	0.00	0.00	0.00
16,600.00	89.77	359.50	9,379.33	7,340.82	236.62	7,344.15	0.00	0.00	0.00
16,700.00	89.77	359.50	9,379.73	7,440.82	235.75	7,444.10	0.00	0.00	0.00
16,800.00	89.77	359.50	9,380.14	7,540.81	234.87	7,544.06	0.00	0.00	0.00
16,900.00	89.77	359.50	9,380.55	7,640.81	234.00	7,644.02	0.00	0.00	0.00
17,000.00	89.77	359.50	9,380.95	7,740.80	233.12	7,743.97	0.00	0.00	0.00
17,100.00	89.77	359.50	9,381.36	7,840.80	232.24	7,843.93	0.00	0.00	0.00
17,200.00	89.77	359.50	9,381.77	7,940.79	231.37	7,943.88	0.00	0.00	0.00
17,300.00	89.77	359.50	9,382.18	8,040.79	230.49	8,043.84	0.00	0.00	0.00
17,400.00	89.77	359.50	9,382.58	8,140.78	229.61	8,143.79	0.00	0.00	0.00
17,500.00	89.77	359.50	9,382.99	8,240.78	228.74	8,243.75	0.00	0.00	0.00
17,600.00	89.77	359.50	9,383.40	8,340.78	227.86	8,343.71	0.00	0.00	0.00
17,700.00	89.77	359.50	9,383.80	8,440.77	226.99	8,443.66	0.00	0.00	0.00
17,800.00	89.77	359.50	9,384.21	8,540.77	226.11	8,543.62	0.00	0.00	0.00
17,900.00	89.77	359.50	9,384.62	8,640.76	225.23	8,643.57	0.00	0.00	0.00
18,000.00	89.77	359.50	9,385.03	8,740.76	224.36	8,743.53	0.00	0.00	0.00
18,100.00	89.77	359.50	9,385.43	8,840.75	223.48	8,843.48	0.00	0.00	0.00
18,200.00	89.77	359.50	9,385.84	8,940.75	222.61	8,943.44	0.00	0.00	0.00
18,300.00	89.77	359.50	9,386.25	9,040.74	221.73	9,043.40	0.00	0.00	0.00
18,400.00	89.77	359.50	9,386.65	9,140.74	220.85	9,143.35	0.00	0.00	0.00
18,500.00	89.77	359.50	9,387.06	9,240.73	219.98	9,243.31	0.00	0.00	0.00
18,600.00	89.77	359.50	9,387.47	9,340.73	219.10	9,343.26	0.00	0.00	0.00
18,700.00	89.77	359.50	9,387.88	9,440.72	218.22	9,443.22	0.00	0.00	0.00
18,800.00	89.77	359.50	9,388.28	9,540.72	217.35	9,543.17	0.00	0.00	0.00
18,900.00	89.77	359.50	9,388.69	9,640.71	216.47	9,643.13	0.00	0.00	0.00
19,000.00	89.77	359.50	9,389.10	9,740.71	215.60	9,743.09	0.00	0.00	0.00
19,100.00	89.77	359.50	9,389.50	9,840.71	214.72	9,843.04	0.00	0.00	0.00
19,200.00	89.77	359.50	9,389.91	9,940.70	213.84	9,943.00	0.00	0.00	0.00
19,300.00	89.77	359.50	9,390.32	10,040.70	212.97	10,042.95	0.00	0.00	0.00
19,400.00	89.77	359.50	9,390.73	10,140.69	212.09	10,142.91	0.00	0.00	0.00
19,467.51	89.77	359.50	9,391.00	10,208.20	211.50	10,210.39	0.00	0.00	0.00

TD at 19467.51



Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 36H
Wellbore: OH
Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 36H
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 - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP - Myox 21 State Co - plan misses target center by 72.51usft at 9400.00usft MD (9289.86 TVD, 151.68 N, 299.61 E) - Point	0.00	0.00	9,351.00	112.70	300.00	403,436.70	574,141.60	32° 6' 32.17439 N	104° 5' 37.96637 W
BHL - Myox 21 State Co - plan hits target center - Point	0.00	0.00	9,391.00	10,208.20	211.50	413,532.20	574,053.10	32° 8' 12.08602 N	104° 5' 38.73473 W
LTP - Myox 21 State Cor - plan misses target center by 0.53usft at 19337.51usft MD (9390.47 TVD, 10078.20 N, 212.64 E) - Point	0.00	0.01	9,391.00	10,078.20	212.60	413,402.20	574,054.20	32° 8' 10.79946 N	104° 5' 38.72529 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	KOP, Begin 2.00°/100' Build
2,900.06	2,898.76	-8.13	26.68	Hold 8.00° Inc at 106.96° Azm
4,765.70	4,746.24	-83.87	275.07	Begin 2.00°/100' Drop
5,165.76	5,145.00	-92.00	301.75	Begin Vertical Hold
8,894.30	8,873.54	-92.00	301.75	KOP2, Begin 12.00°/100' Build
9,642.36	9,351.00	383.51	297.58	LP, Hold 89.77° Inc at 359.50° Azm
19,467.51	9,391.00	10,208.20	211.50	TD at 19467.51



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



Aligns to Grid North
Magnetic North: 8.3P
Magnetic Decl: 8.3P
Strength: 47877.20
Declination: 8.3P
Date: 01/02/2019
Model: BMD

15 @ 300' Shot (Range 150)
Chart Level 2876.40

WELL DETAILS				
	North	East	Longitude	Latitude
Wellbore	412.5	5797.0	106° 5' 41.0252" W	37° 6' 31.0254" N
Ensign 155	412.5	5797.0	106° 5' 41.0252" W	37° 6' 31.0254" N

DESIGN TARGET DETAILS				
Name	North	East	Longitude	Latitude
FTP - Myox 21 State Com 36H	412.5	5797.0	106° 5' 41.0252" W	37° 6' 31.0254" N
LTP - Myox 21 State Com 36H	412.5	5797.0	106° 5' 41.0252" W	37° 6' 31.0254" N
BK - Myox 21 State Com 36H	412.5	5797.0	106° 5' 41.0252" W	37° 6' 31.0254" N

SECTION DETAILS									
Sec	MD	Inc	TD	Depth	Target	FACIES			
1	0.00	0.00	0.00	0.00		19.5	-2.0	0.00	0.00
2	1.00	0.00	0.00	1.00		0.00	0.00	0.00	0.00
3	2.00	0.00	0.00	2.00		0.00	0.00	0.00	0.00
4	3.00	0.00	0.00	3.00		0.00	0.00	0.00	0.00
5	4.00	0.00	0.00	4.00		42.0	27.0	0.00	-7.0
6	5.00	0.00	0.00	5.00		0.00	0.00	0.00	0.00
7	6.00	0.00	0.00	6.00		0.00	0.00	0.00	0.00
8	7.00	0.00	0.00	7.00		0.00	0.00	0.00	0.00
9	8.00	0.00	0.00	8.00		0.00	0.00	0.00	0.00
10	9.00	0.00	0.00	9.00		0.00	0.00	0.00	0.00
11	10.00	0.00	0.00	10.00		0.00	0.00	0.00	0.00
12	11.00	0.00	0.00	11.00		0.00	0.00	0.00	0.00
13	12.00	0.00	0.00	12.00		0.00	0.00	0.00	0.00
14	13.00	0.00	0.00	13.00		0.00	0.00	0.00	0.00
15	14.00	0.00	0.00	14.00		0.00	0.00	0.00	0.00
16	15.00	0.00	0.00	15.00		0.00	0.00	0.00	0.00
17	16.00	0.00	0.00	16.00		0.00	0.00	0.00	0.00
18	17.00	0.00	0.00	17.00		0.00	0.00	0.00	0.00
19	18.00	0.00	0.00	18.00		0.00	0.00	0.00	0.00
20	19.00	0.00	0.00	19.00		0.00	0.00	0.00	0.00
21	20.00	0.00	0.00	20.00		0.00	0.00	0.00	0.00
22	21.00	0.00	0.00	21.00		0.00	0.00	0.00	0.00
23	22.00	0.00	0.00	22.00		0.00	0.00	0.00	0.00
24	23.00	0.00	0.00	23.00		0.00	0.00	0.00	0.00
25	24.00	0.00	0.00	24.00		0.00	0.00	0.00	0.00
26	25.00	0.00	0.00	25.00		0.00	0.00	0.00	0.00
27	26.00	0.00	0.00	26.00		0.00	0.00	0.00	0.00
28	27.00	0.00	0.00	27.00		0.00	0.00	0.00	0.00
29	28.00	0.00	0.00	28.00		0.00	0.00	0.00	0.00
30	29.00	0.00	0.00	29.00		0.00	0.00	0.00	0.00
31	30.00	0.00	0.00	30.00		0.00	0.00	0.00	0.00
32	31.00	0.00	0.00	31.00		0.00	0.00	0.00	0.00
33	32.00	0.00	0.00	32.00		0.00	0.00	0.00	0.00
34	33.00	0.00	0.00	33.00		0.00	0.00	0.00	0.00
35	34.00	0.00	0.00	34.00		0.00	0.00	0.00	0.00
36	35.00	0.00	0.00	35.00		0.00	0.00	0.00	0.00
37	36.00	0.00	0.00	36.00		0.00	0.00	0.00	0.00
38	37.00	0.00	0.00	37.00		0.00	0.00	0.00	0.00
39	38.00	0.00	0.00	38.00		0.00	0.00	0.00	0.00
40	39.00	0.00	0.00	39.00		0.00	0.00	0.00	0.00
41	40.00	0.00	0.00	40.00		0.00	0.00	0.00	0.00
42	41.00	0.00	0.00	41.00		0.00	0.00	0.00	0.00
43	42.00	0.00	0.00	42.00		0.00	0.00	0.00	0.00
44	43.00	0.00	0.00	43.00		0.00	0.00	0.00	0.00
45	44.00	0.00	0.00	44.00		0.00	0.00	0.00	0.00
46	45.00	0.00	0.00	45.00		0.00	0.00	0.00	0.00
47	46.00	0.00	0.00	46.00		0.00	0.00	0.00	0.00
48	47.00	0.00	0.00	47.00		0.00	0.00	0.00	0.00
49	48.00	0.00	0.00	48.00		0.00	0.00	0.00	0.00
50	49.00	0.00	0.00	49.00		0.00	0.00	0.00	0.00
51	50.00	0.00	0.00	50.00		0.00	0.00	0.00	0.00
52	51.00	0.00	0.00	51.00		0.00	0.00	0.00	0.00
53	52.00	0.00	0.00	52.00		0.00	0.00	0.00	0.00
54	53.00	0.00	0.00	53.00		0.00	0.00	0.00	0.00
55	54.00	0.00	0.00	54.00		0.00	0.00	0.00	0.00
56	55.00	0.00	0.00	55.00		0.00	0.00	0.00	0.00
57	56.00	0.00	0.00	56.00		0.00	0.00	0.00	0.00
58	57.00	0.00	0.00	57.00		0.00	0.00	0.00	0.00
59	58.00	0.00	0.00	58.00		0.00	0.00	0.00	0.00
60	59.00	0.00	0.00	59.00		0.00	0.00	0.00	0.00
61	60.00	0.00	0.00	60.00		0.00	0.00	0.00	0.00
62	61.00	0.00	0.00	61.00		0.00	0.00	0.00	0.00
63	62.00	0.00	0.00	62.00		0.00	0.00	0.00	0.00
64	63.00	0.00	0.00	63.00		0.00	0.00	0.00	0.00
65	64.00	0.00	0.00	64.00		0.00	0.00	0.00	0.00
66	65.00	0.00	0.00	65.00		0.00	0.00	0.00	0.00
67	66.00	0.00	0.00	66.00		0.00	0.00	0.00	0.00
68	67.00	0.00	0.00	67.00		0.00	0.00	0.00	0.00
69	68.00	0.00	0.00	68.00		0.00	0.00	0.00	0.00
70	69.00	0.00	0.00	69.00		0.00	0.00	0.00	0.00
71	70.00	0.00	0.00	70.00		0.00	0.00	0.00	0.00
72	71.00	0.00	0.00	71.00		0.00	0.00	0.00	0.00
73	72.00	0.00	0.00	72.00		0.00	0.00	0.00	0.00
74	73.00	0.00	0.00	73.00		0.00	0.00	0.00	0.00
75	74.00	0.00	0.00	74.00		0.00	0.00	0.00	0.00
76	75.00	0.00	0.00	75.00		0.00	0.00	0.00	0.00
77	76.00	0.00	0.00	76.00		0.00	0.00	0.00	0.00
78	77.00	0.00	0.00	77.00		0.00	0.00	0.00	0.00
79	78.00	0.00	0.00	78.00		0.00	0.00	0.00	0.00
80	79.00	0.00	0.00	79.00		0.00	0.00	0.00	0.00
81	80.00	0.00	0.00	80.00		0.00	0.00	0.00	0.00
82	81.00	0.00	0.00	81.00		0.00	0.00	0.00	0.00
83	82.00	0.00	0.00	82.00		0.00	0.00	0.00	0.00
84	83.00	0.00	0.00	83.00		0.00	0.00	0.00	0.00
85	84.00	0.00	0.00	84.00		0.00	0.00	0.00	0.00
86	85.00	0.00	0.00	85.00		0.00	0.00	0.00	0.00
87	86.00	0.00	0.00	86.00		0.00	0.00	0.00	0.00
88	87.00	0.00	0.00	87.00		0.00	0.00	0.00	0.00
89	88.00	0.00	0.00	88.00		0.00	0.00	0.00	0.00
90	89.00	0.00	0.00	89.00		0.00	0.00	0.00	0.00
91	90.00	0.00	0.00	90.00		0.00	0.00	0.00	0.00
92	91.00	0.00	0.00	91.00		0.00	0.00	0.00	0.00
93	92.00	0.00	0.00	92.00		0.00	0.00	0.00	0.00
94	93.00	0.00	0.00	93.00		0.00	0.00	0.00	0.00
95	94.00	0.00	0.00	94.00		0.00	0.00	0.00	0.00
96	95.00	0.00	0.00	95.00		0.00	0.00	0.00	0.00
97	96.00	0.00	0.00	96.00		0.00	0.00	0.00	0.00
98	97.00	0.00	0.00	97.00		0.00	0.00	0.00	0.00
99	98.00	0.00	0.00	98.00		0.00	0.00	0.00	0.00
100	99.00	0.00	0.00	99.00		0.00	0.00	0.00	0.00
101	100.00	0.00	0.00	100.00		0.00	0.00	0.00	0.00
102	101.00	0.00	0.00	101.00		0.00	0.00	0.00	0.00
103	102.00	0.00	0.00	102.00		0.00	0.00	0.00	0.00
104	103.00	0.00	0.00	103.00		0.00	0.00	0.00	0.00
105	104.00	0.00	0.00	104.00		0.00	0.00	0.00	0.00
106	105.00	0.00	0.00	105.00		0.00	0.00	0.00	0.00
107	106.00	0.00	0.00	106.00		0.00	0.00	0.00	0.00
108	107.00	0.00	0.00	107.00		0.00	0.00	0.00	0.00
109	108.00	0.00	0.00	108.00		0.00	0.00	0.00	0.00
110	109.00	0.00	0.00	109.00		0.00	0.00	0.00	0.00
111	110.00	0.00	0.00	110.00		0.00	0.00	0.00	0.00
112	111.00	0.00	0.00	111.00		0.00	0.00	0.00	0.00
113	112.00	0.00	0.00	112.00		0.00	0.00	0.00	0.00
114	113.00	0.00	0.00	113.00		0.00	0.00	0.00	0.00
115	114.00	0.00	0.00	114.00		0.00	0.00	0.00	0.00
116	115.00	0.00	0.00	115.00		0.00	0.00	0.00	0.00
117	116.00	0.00	0.00	116.00		0.00	0.00	0.00	0.00
118	117.00	0.00	0.00	117.00		0.00	0.00	0.00	0.00
119	118.00	0.00	0.00	118.00		0.00	0.00	0.00	0.00
120	119.00	0.00	0.00	119.00		0.00	0.00	0.00	0.00
121	120.00	0.00	0.00	120.00		0.00	0.00	0.00	0.00
122	121.00	0.00	0.00	121.00		0.00	0.00	0.00	0.00
123	122.00	0.00	0.00	122.00		0.00	0.00	0.00	0.00
124	123.00	0.00	0.00	123.00		0.00	0.00	0.00	0.00
125	124.00	0.00	0.00	124.00		0.00	0.00	0.00	0.00
126	125.00	0.00	0.00	125.00		0.00	0.00	0.00	0.00
127	126.00	0.00	0.00	126.00		0.00	0.00	0.00	0.00
128	127.00	0.00	0.00	127.00		0.00	0.00	0.00	0.00
129	128.00	0.00	0.00	128.00		0.00	0.00	0.00	0.00
130	129.00	0.00	0.00	129.00		0.00	0.00	0.00	0.00
131	130.00	0.00	0.00	130.00		0.00	0.00	0.00	0.00
132	131.00	0.00	0.00	131.00		0.00	0.00	0.00	0.00
133	132.00	0.00	0.00	132.00		0.00	0.00	0.00	0.00
134	133.00	0.00	0.00	133.00		0.00	0.00	0.00	0.00
135	134.00	0.00	0.00	134.00		0.00	0.00	0.00	0.00
136	135.00	0.00	0.00	135.00		0.00	0.00	0.00	0.00
137	136.00	0.00	0.00	136.00		0.00	0.00	0.00	0.00
138	137.00	0.00	0.00	1					