

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

WELL API NO. 30-015-44005
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Myox 21 State Com
8. Well Number 35H
9. OGRID Number 229137
10. Pool name or Wildcat Purple Sage; Wolfcamp

**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.)

1. Type of Well: Oil Well  Gas Well  Other  **NM OIL CONSERVATION ARTESIA DISTRICT**

2. Name of Operator  
COG Operating LLC

3. Address of Operator  
2208 W. Main Street, Artesia, NM 88210

4. Well Location  
 Unit Letter N : 220 feet from the South line and 1649 feet from the West line  
 Section 21 Township 25S Range 28E NMPM Eddy County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
2977.1'

FEB 07 2019  
 RECEIVED

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

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>		OTHER: <input type="checkbox"/>	
OTHER: <input checked="" type="checkbox"/> SHL Change			

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 & 1649' FWL Section 21. T25S, R28E UL N  
 To: 220' FSL & 1649' 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 J. Redding TITLE Geologist DATE 2-7-19  
 Conditions of Approval (if any):

RWP 2-8

*Handwritten initials and date: MR 2-8-19*

FEB 07 2019

DISTRICT I  
1650 N. FRANCIS DR., ROSA, NM 88240  
Phone: (505) 838-0181 Fax: (505) 838-0780

DISTRICT II  
511 S. FIRST ST., ARTESIA, NM 88210  
Phone: (505) 748-1883 Fax: (505) 748-9780

DISTRICT III  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3468

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 <b>30-015-44005</b>	Pool Code <b>98220</b>	Pool Name <b>Purple Sage; Wolfcamp</b>
Property Code <b>38521</b>	Property Name <b>MYOX 21 STATE COM</b>	Well Number <b>35H</b>
OGRID No. <b>229137</b>	Operator Name <b>COG OPERATING, LLC</b>	Elevation <b>2977.1'</b>

Surface Location

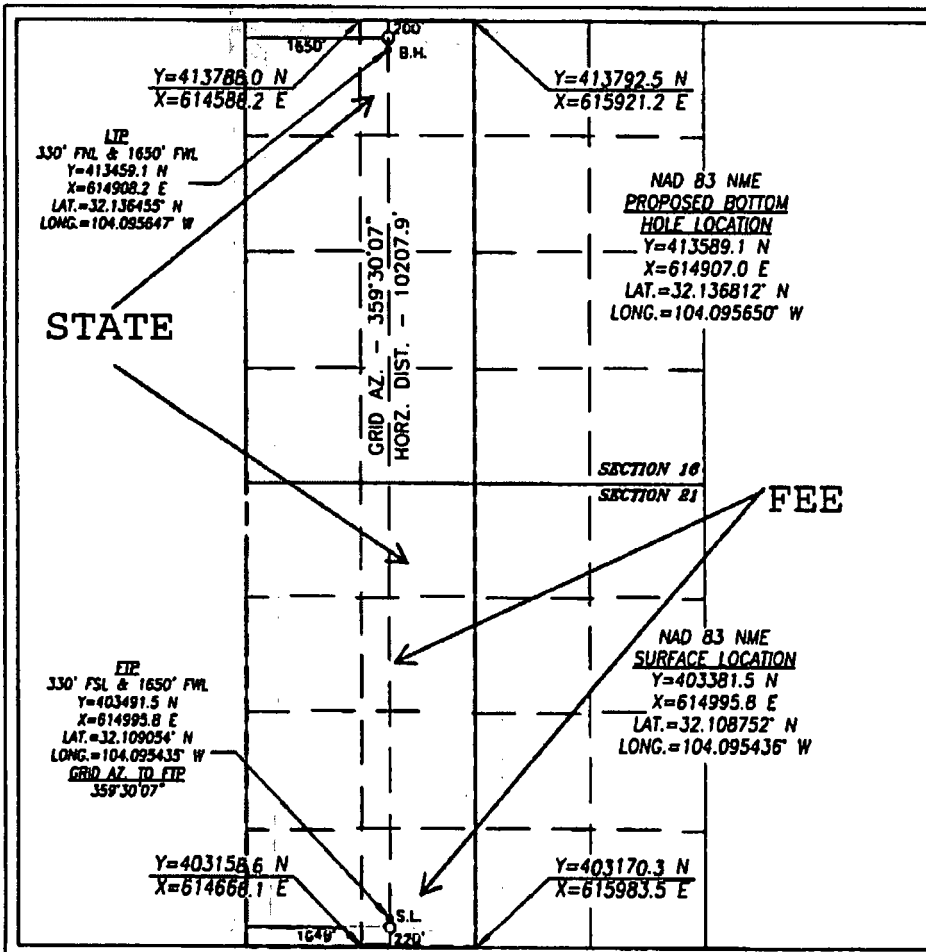
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	21	25-S	28-E		220	SOUTH	1649	WEST	EDDY

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	1650	WEST	EDDY

Dedicated Acres <b>640</b>	Joint or Infill <input checked="" type="checkbox"/>	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



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Mayte Reyes* 1-30-19  
Signature Date

Mayte Reyes  
Printed Name

mreyes1@concho.com  
E-mail Address

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JANUARY 8, 2019  
Date of Survey

Signature & Seal of Professional Surveyor

*Chad Harcrow* 1/24/19  
Certificate No. CHAD HARCROW 17777  
W.O. # 19-52 DRAWN BY: WN

RIP 2-7-19  
2-8



NM OIL CONSERVATION  
ARTESIA DISTRICT

FEB 07 2019

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## COG Operating LLC

Eddy County, NM (NAD27 NME)

Myox 21 State Com

35H

30.013-44005

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:** 35H  
**Wellbore:** OH  
**Design:** Plan 2 02-05-19

**Local Co-ordinate Reference:** Well 35H  
**TVD Reference:** KB @ 3001.10usft (Ensign 155)  
**MD Reference:** KB @ 3001.10usft (Ensign 155)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	Eddy County, NM (NAD27 NME)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	Myox 21 State Com				
<b>Site Position:</b>		<b>Northing:</b>	403,335.40 usft	<b>Latitude:</b>	32° 6' 31.10711 N
<b>From:</b>	Map	<b>Easting:</b>	577,031.40 usft	<b>Longitude:</b>	104° 5' 4.37007 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.13 °

<b>Well</b>	35H					
<b>Well Position</b>	<b>+N/-S</b>	-11.60 usft	<b>Northing:</b>	403,323.80 usft	<b>Latitude:</b>	32° 6' 31.06432 N
	<b>+E/-W</b>	-3,219.80 usft	<b>Easting:</b>	573,811.60 usft	<b>Longitude:</b>	104° 5' 41.80611 W
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	2,977.10 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	MVHD	3/18/2019	7.02	59.80	47,877.91711812

<b>Design</b>	Plan 2 02-05-19				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	359.50	

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	
2,749.84	5.00	178.74	2,749.53	-10.89	0.24	2.00	2.00	0.00	178.74	
3,648.20	5.00	178.74	3,644.47	-89.11	1.96	0.00	0.00	0.00	0.00	
3,898.05	0.00	0.01	3,894.00	-100.00	2.20	2.00	-2.00	0.00	180.00	
9,053.59	0.00	0.01	9,049.54	-100.00	2.20	0.00	0.00	0.00	0.01	
9,802.13	89.83	359.50	9,527.00	375.99	-1.99	12.00	12.00	-0.07	359.50	
19,633.87	89.83	359.50	9,557.00	10,207.30	-88.50	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: 35H  
 Wellbore: OH  
 Design: Plan 2 02-05-19

Local Co-ordinate Reference: Well 35H  
 TVD Reference: KB @ 3001.10usft (Ensign 155)  
 MD Reference: KB @ 3001.10usft (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
<b>KOP, Begin 2.00°/100' Build</b>									
2,600.00	2.00	178.74	2,599.98	-1.74	0.04	-1.74	2.00	2.00	0.00
2,700.00	4.00	178.74	2,699.84	-6.98	0.15	-6.98	2.00	2.00	0.00
2,749.84	5.00	178.74	2,749.53	-10.89	0.24	-10.89	2.00	2.00	0.00
<b>Hold 5.00° Inc at 178.74° Azm</b>									
2,800.00	5.00	178.74	2,799.49	-15.25	0.34	-15.26	0.00	0.00	0.00
2,900.00	5.00	178.74	2,899.11	-23.96	0.53	-23.96	0.00	0.00	0.00
3,000.00	5.00	178.74	2,998.73	-32.67	0.72	-32.67	0.00	0.00	0.00
3,100.00	5.00	178.74	3,098.35	-41.38	0.91	-41.38	0.00	0.00	0.00
3,200.00	5.00	178.74	3,197.97	-50.09	1.10	-50.09	0.00	0.00	0.00
3,300.00	5.00	178.74	3,297.59	-58.79	1.29	-58.80	0.00	0.00	0.00
3,400.00	5.00	178.74	3,397.21	-67.50	1.49	-67.51	0.00	0.00	0.00
3,500.00	5.00	178.74	3,496.83	-76.21	1.68	-76.22	0.00	0.00	0.00
3,600.00	5.00	178.74	3,596.45	-84.92	1.87	-84.93	0.00	0.00	0.00
3,648.20	5.00	178.74	3,644.47	-89.11	1.96	-89.13	0.00	0.00	0.00
<b>Begin 2.00°/100' Drop</b>									
3,700.00	3.96	178.74	3,696.11	-93.16	2.05	-93.17	2.00	-2.00	0.00
3,800.00	1.96	178.74	3,795.97	-98.32	2.16	-98.34	2.00	-2.00	0.00
3,898.05	0.00	0.01	3,894.00	-100.00	2.20	-100.02	2.00	-2.00	0.00
<b>Begin Vertical Hold</b>									
9,053.59	0.00	0.00	9,049.54	-100.00	2.20	-100.02	0.00	0.00	0.00
<b>KOP2, Begin 12.00°/100' Build</b>									
9,100.00	5.57	359.50	9,095.88	-97.75	2.18	-97.76	12.00	12.00	0.00
9,200.00	17.57	359.50	9,193.67	-77.73	2.00	-77.74	12.00	12.00	0.00
9,300.00	29.57	359.50	9,285.16	-37.82	1.85	-37.83	12.00	12.00	0.00
9,400.00	41.57	359.50	9,366.35	20.24	1.14	20.23	12.00	12.00	0.00
9,500.00	53.57	359.50	9,433.70	93.92	0.49	93.91	12.00	12.00	0.00
9,600.00	65.57	359.50	9,484.25	179.98	-0.26	179.98	12.00	12.00	0.00
9,700.00	77.57	359.50	9,515.81	274.67	-1.10	274.67	12.00	12.00	0.00
9,800.00	89.57	359.50	9,526.99	373.86	-1.97	373.86	12.00	12.00	0.00
9,802.13	89.83	359.50	9,527.00	375.99	-1.99	375.99	12.00	12.00	0.00
<b>LP, Hold 89.83° Inc at 359.50° Azm</b>									
9,900.00	89.83	359.50	9,527.30	473.85	-2.85	473.86	0.00	0.00	0.00
10,000.00	89.83	359.50	9,527.61	573.85	-3.73	573.86	0.00	0.00	0.00
10,100.00	89.83	359.50	9,527.91	673.85	-4.61	673.86	0.00	0.00	0.00
10,200.00	89.83	359.50	9,528.22	773.84	-5.49	773.86	0.00	0.00	0.00
10,300.00	89.83	359.50	9,528.52	873.84	-6.37	873.86	0.00	0.00	0.00
10,400.00	89.83	359.50	9,528.83	973.83	-7.25	973.86	0.00	0.00	0.00
10,500.00	89.83	359.50	9,529.13	1,073.83	-8.13	1,073.86	0.00	0.00	0.00
10,600.00	89.83	359.50	9,529.44	1,173.82	-9.01	1,173.86	0.00	0.00	0.00
10,700.00	89.83	359.50	9,529.74	1,273.82	-9.89	1,273.86	0.00	0.00	0.00
10,800.00	89.83	359.50	9,530.05	1,373.82	-10.77	1,373.86	0.00	0.00	0.00
10,900.00	89.83	359.50	9,530.35	1,473.81	-11.65	1,473.86	0.00	0.00	0.00
11,000.00	89.83	359.50	9,530.66	1,573.81	-12.53	1,573.86	0.00	0.00	0.00
11,100.00	89.83	359.50	9,530.96	1,673.80	-13.41	1,673.86	0.00	0.00	0.00
11,200.00	89.83	359.50	9,531.27	1,773.80	-14.29	1,773.86	0.00	0.00	0.00
11,300.00	89.83	359.50	9,531.57	1,873.79	-15.17	1,873.86	0.00	0.00	0.00
11,400.00	89.83	359.50	9,531.88	1,973.79	-16.05	1,973.85	0.00	0.00	0.00
11,500.00	89.83	359.50	9,532.18	2,073.79	-16.93	2,073.85	0.00	0.00	0.00
11,600.00	89.83	359.50	9,532.49	2,173.78	-17.81	2,173.85	0.00	0.00	0.00
11,700.00	89.83	359.50	9,532.79	2,273.78	-18.69	2,273.85	0.00	0.00	0.00



Planning Report



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 Site: Myox 21 State Corn  
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 Wellbore: OH  
 Design: Plan 2 02-05-19

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 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)
11,800.00	89.83	359.50	9,533.10	2,373.77	-19.57	2,373.85	0.00	0.00	0.00
11,900.00	89.83	359.50	9,533.40	2,473.77	-20.45	2,473.85	0.00	0.00	0.00
12,000.00	89.83	359.50	9,533.71	2,573.76	-21.33	2,573.85	0.00	0.00	0.00
12,100.00	89.83	359.50	9,534.01	2,673.76	-22.21	2,673.85	0.00	0.00	0.00
12,200.00	89.83	359.50	9,534.32	2,773.75	-23.09	2,773.85	0.00	0.00	0.00
12,300.00	89.83	359.50	9,534.62	2,873.75	-23.97	2,873.85	0.00	0.00	0.00
12,400.00	89.83	359.50	9,534.93	2,973.75	-24.85	2,973.85	0.00	0.00	0.00
12,500.00	89.83	359.50	9,535.23	3,073.74	-25.73	3,073.85	0.00	0.00	0.00
12,600.00	89.83	359.50	9,535.54	3,173.74	-26.61	3,173.85	0.00	0.00	0.00
12,700.00	89.83	359.50	9,535.84	3,273.73	-27.49	3,273.85	0.00	0.00	0.00
12,800.00	89.83	359.50	9,536.15	3,373.73	-28.37	3,373.85	0.00	0.00	0.00
12,900.00	89.83	359.50	9,536.45	3,473.72	-29.25	3,473.85	0.00	0.00	0.00
13,000.00	89.83	359.50	9,536.76	3,573.72	-30.13	3,573.85	0.00	0.00	0.00
13,100.00	89.83	359.50	9,537.06	3,673.72	-31.01	3,673.85	0.00	0.00	0.00
13,200.00	89.83	359.50	9,537.37	3,773.71	-31.89	3,773.85	0.00	0.00	0.00
13,300.00	89.83	359.50	9,537.68	3,873.71	-32.77	3,873.85	0.00	0.00	0.00
13,400.00	89.83	359.50	9,537.98	3,973.70	-33.65	3,973.85	0.00	0.00	0.00
13,500.00	89.83	359.50	9,538.29	4,073.70	-34.53	4,073.84	0.00	0.00	0.00
13,600.00	89.83	359.50	9,538.59	4,173.69	-35.41	4,173.84	0.00	0.00	0.00
13,700.00	89.83	359.50	9,538.90	4,273.69	-36.29	4,273.84	0.00	0.00	0.00
13,800.00	89.83	359.50	9,539.20	4,373.69	-37.17	4,373.84	0.00	0.00	0.00
13,900.00	89.83	359.50	9,539.51	4,473.68	-38.05	4,473.84	0.00	0.00	0.00
14,000.00	89.83	359.50	9,539.81	4,573.68	-38.93	4,573.84	0.00	0.00	0.00
14,100.00	89.83	359.50	9,540.12	4,673.67	-39.81	4,673.84	0.00	0.00	0.00
14,200.00	89.83	359.50	9,540.42	4,773.67	-40.69	4,773.84	0.00	0.00	0.00
14,300.00	89.83	359.50	9,540.73	4,873.66	-41.57	4,873.84	0.00	0.00	0.00
14,400.00	89.83	359.50	9,541.03	4,973.66	-42.45	4,973.84	0.00	0.00	0.00
14,500.00	89.83	359.50	9,541.34	5,073.66	-43.33	5,073.84	0.00	0.00	0.00
14,600.00	89.83	359.50	9,541.64	5,173.65	-44.21	5,173.84	0.00	0.00	0.00
14,700.00	89.83	359.50	9,541.95	5,273.65	-45.09	5,273.84	0.00	0.00	0.00
14,800.00	89.83	359.50	9,542.25	5,373.64	-45.97	5,373.84	0.00	0.00	0.00
14,900.00	89.83	359.50	9,542.56	5,473.64	-46.85	5,473.84	0.00	0.00	0.00
15,000.00	89.83	359.50	9,542.86	5,573.63	-47.73	5,573.84	0.00	0.00	0.00
15,100.00	89.83	359.50	9,543.17	5,673.63	-48.61	5,673.84	0.00	0.00	0.00
15,200.00	89.83	359.50	9,543.47	5,773.62	-49.49	5,773.84	0.00	0.00	0.00
15,300.00	89.83	359.50	9,543.78	5,873.62	-50.37	5,873.84	0.00	0.00	0.00
15,400.00	89.83	359.50	9,544.08	5,973.62	-51.25	5,973.84	0.00	0.00	0.00
15,500.00	89.83	359.50	9,544.39	6,073.61	-52.13	6,073.84	0.00	0.00	0.00
15,600.00	89.83	359.50	9,544.69	6,173.61	-53.01	6,173.84	0.00	0.00	0.00
15,700.00	89.83	359.50	9,545.00	6,273.60	-53.89	6,273.83	0.00	0.00	0.00
15,800.00	89.83	359.50	9,545.30	6,373.60	-54.77	6,373.83	0.00	0.00	0.00
15,900.00	89.83	359.50	9,545.61	6,473.59	-55.64	6,473.83	0.00	0.00	0.00
16,000.00	89.83	359.50	9,545.91	6,573.59	-56.52	6,573.83	0.00	0.00	0.00
16,100.00	89.83	359.50	9,546.22	6,673.59	-57.40	6,673.83	0.00	0.00	0.00
16,200.00	89.83	359.50	9,546.52	6,773.58	-58.28	6,773.83	0.00	0.00	0.00
16,300.00	89.83	359.50	9,546.83	6,873.58	-59.16	6,873.83	0.00	0.00	0.00
16,400.00	89.83	359.50	9,547.13	6,973.57	-60.04	6,973.83	0.00	0.00	0.00
16,500.00	89.83	359.50	9,547.44	7,073.57	-60.92	7,073.83	0.00	0.00	0.00
16,600.00	89.83	359.50	9,547.74	7,173.56	-61.80	7,173.83	0.00	0.00	0.00
16,700.00	89.83	359.50	9,548.05	7,273.56	-62.68	7,273.83	0.00	0.00	0.00
16,800.00	89.83	359.50	9,548.35	7,373.55	-63.56	7,373.83	0.00	0.00	0.00
16,900.00	89.83	359.50	9,548.66	7,473.55	-64.44	7,473.83	0.00	0.00	0.00
17,000.00	89.83	359.50	9,548.96	7,573.55	-65.32	7,573.83	0.00	0.00	0.00
17,100.00	89.83	359.50	9,549.27	7,673.54	-66.20	7,673.83	0.00	0.00	0.00

**Database:** USA Compass  
**Company:** COG Operating LLC  
**Project:** Eddy County, NM (NAD27 NME)  
**Site:** Myox 21 State Com  
**Well:** 35H  
**Wellbore:** OH  
**Design:** Plan 2 02-05-19

**Local Co-ordinate Reference:** Well 35H  
**TVD Reference:** KB @ 3001.10usft (Ensign 155)  
**MD Reference:** KB @ 3001.10usft (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)
17,200.00	89.83	359.50	9,549.57	7,773.54	-67.08	7,773.83	0.00	0.00	0.00
17,300.00	89.83	359.50	9,549.88	7,873.53	-67.96	7,873.83	0.00	0.00	0.00
17,400.00	89.83	359.50	9,550.18	7,973.53	-68.84	7,973.83	0.00	0.00	0.00
17,500.00	89.83	359.50	9,550.49	8,073.53	-69.72	8,073.83	0.00	0.00	0.00
17,600.00	89.83	359.50	9,550.79	8,173.52	-70.60	8,173.83	0.00	0.00	0.00
17,700.00	89.83	359.50	9,551.10	8,273.52	-71.48	8,273.83	0.00	0.00	0.00
17,800.00	89.83	359.50	9,551.40	8,373.51	-72.36	8,373.82	0.00	0.00	0.00
17,900.00	89.83	359.50	9,551.71	8,473.51	-73.24	8,473.82	0.00	0.00	0.00
18,000.00	89.83	359.50	9,552.02	8,573.50	-74.12	8,573.82	0.00	0.00	0.00
18,100.00	89.83	359.50	9,552.32	8,673.50	-75.00	8,673.82	0.00	0.00	0.00
18,200.00	89.83	359.50	9,552.63	8,773.49	-75.88	8,773.82	0.00	0.00	0.00
18,300.00	89.83	359.50	9,552.93	8,873.49	-76.76	8,873.82	0.00	0.00	0.00
18,400.00	89.83	359.50	9,553.24	8,973.49	-77.64	8,973.82	0.00	0.00	0.00
18,500.00	89.83	359.50	9,553.54	9,073.48	-78.52	9,073.82	0.00	0.00	0.00
18,600.00	89.83	359.50	9,553.85	9,173.48	-79.40	9,173.82	0.00	0.00	0.00
18,700.00	89.83	359.50	9,554.15	9,273.47	-80.28	9,273.82	0.00	0.00	0.00
18,800.00	89.83	359.50	9,554.46	9,373.47	-81.16	9,373.82	0.00	0.00	0.00
18,900.00	89.83	359.50	9,554.76	9,473.46	-82.04	9,473.82	0.00	0.00	0.00
19,000.00	89.83	359.50	9,555.07	9,573.46	-82.92	9,573.82	0.00	0.00	0.00
19,100.00	89.83	359.50	9,555.37	9,673.46	-83.80	9,673.82	0.00	0.00	0.00
19,200.00	89.83	359.50	9,555.68	9,773.45	-84.68	9,773.82	0.00	0.00	0.00
19,300.00	89.83	359.50	9,555.98	9,873.45	-85.56	9,873.82	0.00	0.00	0.00
19,400.00	89.83	359.50	9,556.29	9,973.44	-86.44	9,973.82	0.00	0.00	0.00
19,500.00	89.83	359.50	9,556.59	10,073.44	-87.32	10,073.82	0.00	0.00	0.00
19,600.00	89.83	359.50	9,556.90	10,173.43	-88.20	10,173.82	0.00	0.00	0.00
19,633.87	89.83	359.50	9,557.00	10,207.30	-88.50	10,207.68	0.00	0.00	0.00
TD at 19633.87									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP - Myox 21 State Co - hit/miss target - Shape - Point	0.00	0.00	9,527.00	110.00	0.00	403,433.80	573,811.60	32° 6' 32.15293 N	104° 5' 41.80328 W
- plan misses target center by 69.82usft at 9581.24usft MD (9466.81 TVD, 145.38 N, 0.04 E)									
BHL - Myox 21 State Co - plan hits target center - Point	0.00	0.01	9,557.00	10,207.30	-88.50	413,531.10	573,723.10	32° 8' 12.08237 N	104° 5' 42.57275 W
LTP - Myox 21 State Co - plan misses target center by 0.40usft at 19503.86usft MD (9556.60 TVD, 10077.30 N, -87.36 E) - Point	0.00	0.01	9,557.00	10,077.30	-87.40	413,401.10	573,724.20	32° 8' 10.79581 N	104° 5' 42.56330 W



Planning Report



**Database:** USA Compass  
**Company:** COG Operating LLC  
**Project:** Eddy County, NM (NAD27 NME)  
**Site:** Myox 21 State Com  
**Well:** 35H  
**Wellbore:** OH  
**Design:** Plan 2 02-05-19

**Local Co-ordinate Reference:** Well 35H  
**TVD Reference:** KB @ 3001.10usft (Ensign 155)  
**MD Reference:** KB @ 3001.10usft (Ensign 155)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

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
2,749.84	2,749.53	-10.89	0.24	Hold 5.00° Inc at 178.74° Azm
3,648.20	3,644.47	-89.11	1.96	Begin 2.00°/100' Drop
3,898.05	3,894.00	-100.00	2.20	Begin Vertical Hold
9,053.59	9,049.54	-100.00	2.20	KOP2, Begin 12.00°/100' Build
9,802.13	9,527.00	375.99	-1.99	LP, Hold 89.83° Inc at 359.50° Azm
19,633.87	9,557.00	10,207.30	-88.50	TD at 19633.87





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 Sheet No. 2977.H

Project: Eddy County, NM (HAD27 NME)  
 Site: Myox 21 State Com  
 Well: 35H  
 Wellbore: OH  
 Design: Plan 2 02-05-19  
 Rig: Ensign 155



Alignments to Grid North  
 Magnetic North: 6.8P  
 Magnetic Decl: 1.87777777  
 Dip Angle: 83.29  
 Scale: MVD

WELL DETAILS

UWS	61W	North	6.8P	2977.H
0.0	0.0	42323.00	32811.00	37° E 11 04232N
				04° S 11 0271W

DESIGN TARGET DETAILS

Name	TD	+HS	-61W	North	East	Lon	Lat	Loc
FTP - Myox 21 State Com 35H 857.00	110.00	0.00	42323.00	32811.00	5281.48	37° E 10 232N	04° S 11 027N	Loc 35H
LTP - Myox 21 State Com 35H 857.00	47.50	11301.10	32773.30	37° E 10 250N	04° S 11 023W			
KOP2 - Myox 21 State Com 35H 857.00	1027.30	47.50	11301.10	32773.30	37° E 10 250N	04° S 11 023W		

SECTION DETAILS

Sec	UWS	TD	+HS	-61W	Phi	Phi	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	202.00	0.00	250.00	0.00	0.00	0.00	0.00
3	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
4	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
5	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
6	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
7	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
8	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
9	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
10	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
11	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
12	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
13	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
14	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
15	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
16	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
17	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
18	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
19	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
20	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
21	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
22	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
23	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
24	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
25	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
26	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
27	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
28	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
29	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
30	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
31	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
32	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
33	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
34	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
35	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
36	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
37	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
38	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
39	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
40	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
41	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
42	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
43	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
44	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
45	244.50	5.00	178.74	344.47	-49.11	1.98	0.00
46	244.50	5.00	178.74	344.47	-49.11	1.98	0.00 </tr

ANNOTATION

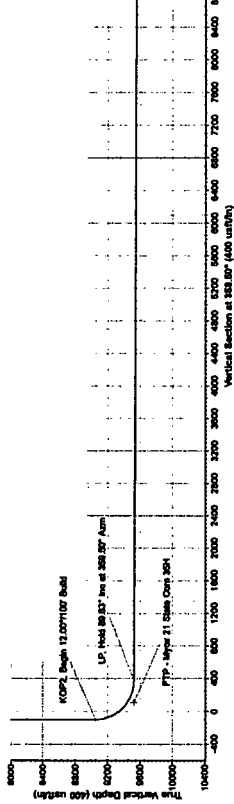
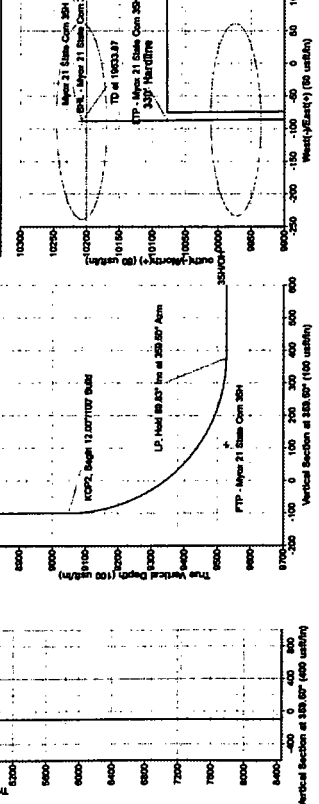
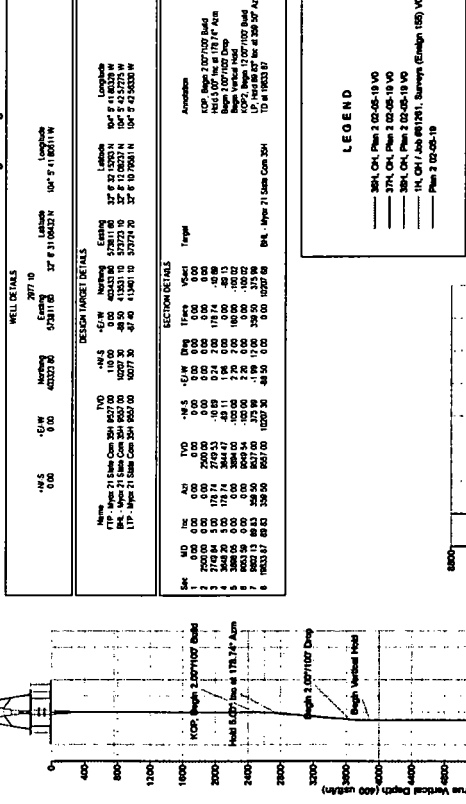
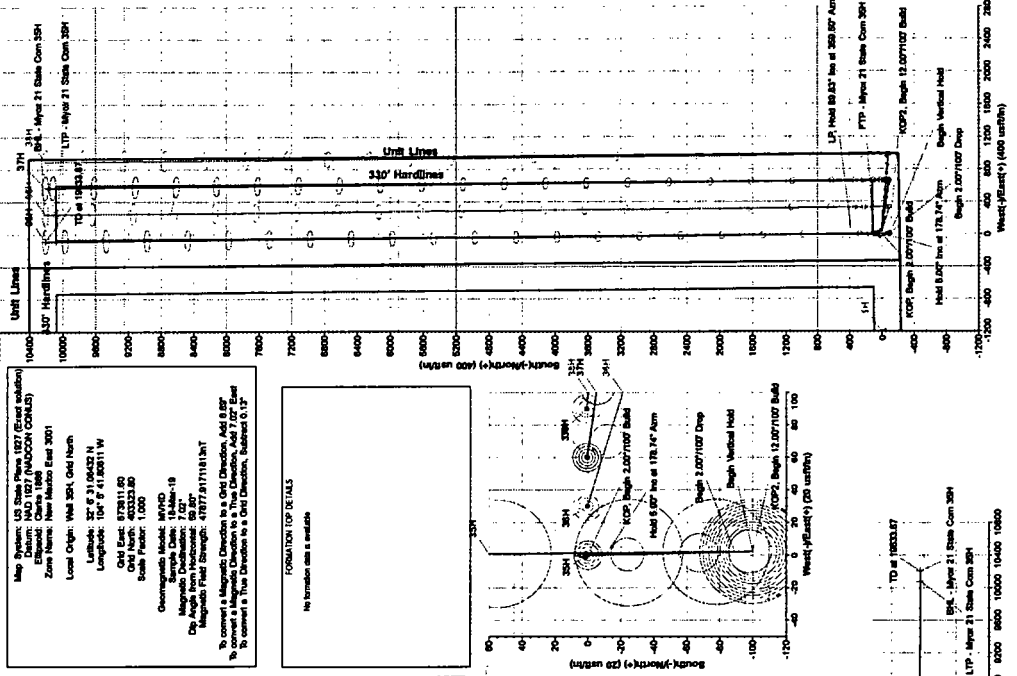
KOP2 - Myox 21 State Com 35H  
 TD at 1027.30  
 LP - Hold 89.87' to 359.87' Ann  
 PTP - Myox 21 State Com 35H  
 TD at 1027.30

FORMATION TOP DETAILS

No formation data is available

LEGEND

- 35H, OH, Plan 2 02-05-19 VO
- 37H, OH, Plan 2 02-05-19 VO
- 38H, OH, Plan 2 02-05-19 VO
- 17A, OH / Job #01261, Surveys (Design 155) VO
- Plan 2 02-05-19



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