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District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 275253

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address		2. OGRID Number
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701		229137
		3. API Number 30-015-46501
4. Property Code 308744	5. Property Name MYOX 31 STATE COM	6. Well No. 504H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
N	31	25S	28E		270	S	1390	W	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	30	25S	28E	1	50	N	660	W	Eddy

9. Pool Information

DELAWARE RIVER;BONE SPRING	16800

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3071
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	18298	2nd Bone Spring Sand		1/1/2020
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	500	400	0
Int1	12.25	9.625	40	2350	800	0
Prod	8.75	5.5	17	18298	3200	2150

Casing/Cement Program: Additional Comments

Drill 17-1/2" hole to 500' into the Rustler. Run 13-3/8" 54.5# J55 STC casing to TD and cement to surface in one stage. Will set in Rustler and cover water depth. Drill 12-1/4" hole to ~2,350' with Brine. Run 9-5/8" 40# J-55 casing to TD and cement to surface in one stage. Drill 8-3/4" vertical hole, curve & lateral to 18,298' with Cut Brine. Run 5-1/2" 17# P110 BTC casing to TD and cement to 2,150' in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

Printed Name:	Electronically filed by Diane Kuykendall	Approved By:	Raymond Podany
Title:	Production Accounting Director	Title:	Geologist
Email Address:	dkuykendall@concho.com	Approved Date:	12/19/2019 — Expiration Date: 12/19/2021
Date:	12/11/2019 — Phone: 432-685-4372	Conditions of Approval Attached	

OIL CONSERVATION DIVISION

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-	16800	Delaware River; Bone Spring

4 Property Code	5 Property Name	6 Well Number
308744	MYOX 31 STATE COM	504H

7 OGRID NO.	8 Operator Name	9 Elevation
229137	COG OPERATING, LLC	3071'

10 Surface Location

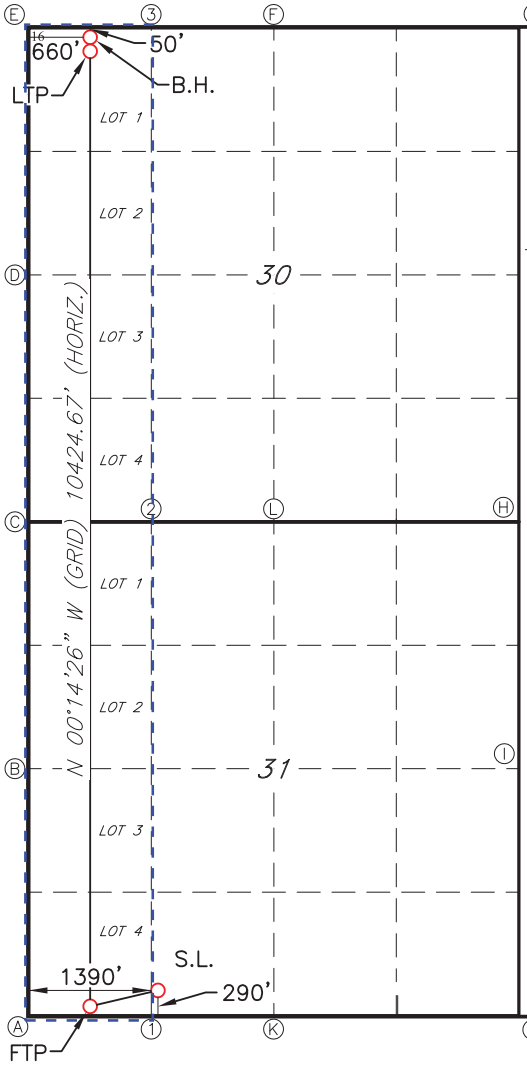
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
N	31	25S	28E		270	SOUTH	1390	WEST	EDDY

11 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
1	30	25S	28E		50	NORTH	660	WEST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
322.08			

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 392781.2 – E: 604079.3
LAT: 32.0796734° N
LONG: 104.1307575° W

LAST TAKE POINT (LTP)
100' FNL & 660' FWL SEC 30
N: 403030.6 – E: 603306.2
LAT: 32.1078523° N
LONG: 104.1331920° W

FIRST TAKE POINT (FTP)
100' FSL & 660' FWL SEC 31
N: 392608.4 – E: 603350.0
LAT: 32.0792019° N
LONG: 104.1331132° W

BOTTOM HOLE (BH)
N: 403080.6 – E: 603305.9
LAT: 32.1079898° N
LONG: 104.1331928° W

CORNER DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1940"
N 392505.8 – E 602690.5

B: FOUND BRASS CAP "1940"
N 395164.6 – E 602682.1

C: FOUND BRASS CAP "1940"
N 397822.7 – E 602672.6

D: FOUND BRASS CAP "1940"
N 400468.2 – E 602664.3

E: CALCULATED CORNER
N 403132.3 – E 602645.7

F: FOUND BRASS CAP "1940"
N 403125.4 – E 605277.9

G: FOUND BRASS CAP "1940"
N 403046.2 – E 608036.0

H: FOUND BRASS CAP "1940"
N 397715.1 – E 608074.9

I: FOUND BRASS CAP "1940"
N 395116.5 – E 608050.9

J: FOUND BRASS CAP "1940"
N 392514.2 – E 608024.8

K: FOUND BRASS CAP "1940"
N 392516.4 – E 605361.5

L: FOUND BRASS CAP "1940"
N 397768.3 – E 605379.3

CALCULATED POINTS

1: N 392511.1 – E 604026.3
2: N 397795.4 – E 604031.2
3: N 403128.9 – E 603968.4

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 12/11/19 Date

Robyn M. Russell
Printed Name

Rrussell@concho.com
E-mail Address

18 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.

11-13-19
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

Job No.: LS19111071

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Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 12/19/2019

☒ Original

☐ Amended - Reason for Amendment:

Operator & OGRID No.: [229137] COG OPERATING LLC

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
MYOX 31 STATE COM #504H	30-015-46501	N-31-25S-28E	0270S 1390W	2526	None	Length of additional line is not known at this time. Processing Plant Location: Sec 35, Blk 57, T2S, Culberson County, TX

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ETC Texas Pipeline, Ltd. and will be connected to ETC Texas Pipeline, Ltd. Low Pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. COG OPERATING LLC provides (periodically) to ETC Texas Pipeline, Ltd. a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG OPERATING LLC and ETC Texas Pipeline, Ltd. have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ETC Texas Pipeline, Ltd. Processing Plant located in Sec. 31, Twn. 25S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on ETC Texas Pipeline, Ltd. system at that time. Based on current information, it is COG OPERATING LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 275253

PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-015-46501
	Well: MYOX 31 STATE COM #504H

Created By	Comment	Comment Date
rodom	H2S concentrations of wells in this area from surface to TD are low enough that a contingency plan is not required.	12/11/2019

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Santa Fe, NM 87505

Form APD Conditions

Permit 275253

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-015-46501
	Well: MYOX 31 STATE COM #504H

OCD Reviewer	Condition
rpodany	Will require a directional survey with the C-104
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM
MYOX 31 ST COM
MYOX 31 ST COM #504H

OWB

Plan: PWP0

Standard Survey Report

10 December, 2019

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**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 MYOX 31 ST COM

Site Position:		**Northing:**	392,720.68 usft	**Latitude:**	32° 4' 46.351 N
From:	Map	**Easting:**	562,896.44 usft	**Longitude:**	104° 7' 48.946 W
Position Uncertainty:	3.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.11 °

Well MYOX 31 ST COM #504H

Well Position	**+N/-S**	0.0 usft	**Northing:**	392,723.80 usft	**Latitude:**	32° 4' 46.382 N
	+E/-W	0.0 usft	**Easting:**	562,895.10 usft	**Longitude:**	104° 7' 48.962 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,071.0 usft

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/2/2019	6.94	59.81	47,543.59466019

Design PWP0

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	355.71

Survey Tool Program **Date** 12/10/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	18,298.8	PWP0 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	EDM_Users

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)
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,600.0	2.00	230.00	2,600.0	-1.1	-1.3	-1.0	2.00	2.00	0.00
2,700.0	4.00	230.00	2,699.8	-4.5	-5.3	-4.1	2.00	2.00	0.00
2,750.0	5.00	230.00	2,749.7	-7.0	-8.4	-6.4	2.00	2.00	0.00
Start 4568.9 hold at 2750.0 MD									
2,800.0	5.00	230.00	2,799.5	-9.8	-11.7	-8.9	0.00	0.00	0.00
2,900.0	5.00	230.00	2,899.1	-15.4	-18.4	-14.0	0.00	0.00	0.00
3,000.0	5.00	230.00	2,998.7	-21.0	-25.0	-19.1	0.00	0.00	0.00
3,100.0	5.00	230.00	3,098.4	-26.6	-31.7	-24.2	0.00	0.00	0.00
3,200.0	5.00	230.00	3,198.0	-32.2	-38.4	-29.3	0.00	0.00	0.00
3,300.0	5.00	230.00	3,297.6	-37.8	-45.1	-34.3	0.00	0.00	0.00
3,400.0	5.00	230.00	3,397.2	-43.4	-51.7	-39.4	0.00	0.00	0.00
3,500.0	5.00	230.00	3,496.8	-49.0	-58.4	-44.5	0.00	0.00	0.00
3,600.0	5.00	230.00	3,596.4	-54.6	-65.1	-49.6	0.00	0.00	0.00
3,700.0	5.00	230.00	3,696.1	-60.2	-71.8	-54.7	0.00	0.00	0.00
3,800.0	5.00	230.00	3,795.7	-65.8	-78.5	-59.8	0.00	0.00	0.00
3,900.0	5.00	230.00	3,895.3	-71.4	-85.1	-64.9	0.00	0.00	0.00
4,000.0	5.00	230.00	3,994.9	-77.0	-91.8	-69.9	0.00	0.00	0.00
4,100.0	5.00	230.00	4,094.5	-82.6	-98.5	-75.0	0.00	0.00	0.00
4,200.0	5.00	230.00	4,194.2	-88.2	-105.2	-80.1	0.00	0.00	0.00
4,300.0	5.00	230.00	4,293.8	-93.8	-111.8	-85.2	0.00	0.00	0.00
4,400.0	5.00	230.00	4,393.4	-99.4	-118.5	-90.3	0.00	0.00	0.00
4,500.0	5.00	230.00	4,493.0	-105.0	-125.2	-95.4	0.00	0.00	0.00
4,600.0	5.00	230.00	4,592.6	-110.6	-131.9	-100.5	0.00	0.00	0.00
4,700.0	5.00	230.00	4,692.3	-116.3	-138.5	-105.6	0.00	0.00	0.00
4,800.0	5.00	230.00	4,791.9	-121.9	-145.2	-110.6	0.00	0.00	0.00
4,900.0	5.00	230.00	4,891.5	-127.5	-151.9	-115.7	0.00	0.00	0.00
5,000.0	5.00	230.00	4,991.1	-133.1	-158.6	-120.8	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	EDM_Users

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)
5,100.0	5.00	230.00	5,090.7	-138.7	-165.2	-125.9	0.00	0.00	0.00
5,200.0	5.00	230.00	5,190.4	-144.3	-171.9	-131.0	0.00	0.00	0.00
5,300.0	5.00	230.00	5,290.0	-149.9	-178.6	-136.1	0.00	0.00	0.00
5,400.0	5.00	230.00	5,389.6	-155.5	-185.3	-141.2	0.00	0.00	0.00
5,500.0	5.00	230.00	5,489.2	-161.1	-192.0	-146.2	0.00	0.00	0.00
5,600.0	5.00	230.00	5,588.8	-166.7	-198.6	-151.3	0.00	0.00	0.00
5,700.0	5.00	230.00	5,688.5	-172.3	-205.3	-156.4	0.00	0.00	0.00
5,800.0	5.00	230.00	5,788.1	-177.9	-212.0	-161.5	0.00	0.00	0.00
5,900.0	5.00	230.00	5,887.7	-183.5	-218.7	-166.6	0.00	0.00	0.00
6,000.0	5.00	230.00	5,987.3	-189.1	-225.3	-171.7	0.00	0.00	0.00
6,100.0	5.00	230.00	6,086.9	-194.7	-232.0	-176.8	0.00	0.00	0.00
6,200.0	5.00	230.00	6,186.6	-200.3	-238.7	-181.9	0.00	0.00	0.00
6,300.0	5.00	230.00	6,286.2	-205.9	-245.4	-186.9	0.00	0.00	0.00
6,400.0	5.00	230.00	6,385.8	-211.5	-252.0	-192.0	0.00	0.00	0.00
6,500.0	5.00	230.00	6,485.4	-217.1	-258.7	-197.1	0.00	0.00	0.00
6,600.0	5.00	230.00	6,585.0	-222.7	-265.4	-202.2	0.00	0.00	0.00
6,700.0	5.00	230.00	6,684.7	-228.3	-272.1	-207.3	0.00	0.00	0.00
6,800.0	5.00	230.00	6,784.3	-233.9	-278.7	-212.4	0.00	0.00	0.00
6,900.0	5.00	230.00	6,883.9	-239.5	-285.4	-217.5	0.00	0.00	0.00
7,000.0	5.00	230.00	6,983.5	-245.1	-292.1	-222.6	0.00	0.00	0.00
7,100.0	5.00	230.00	7,083.1	-250.7	-298.8	-227.6	0.00	0.00	0.00
7,200.0	5.00	230.00	7,182.7	-256.3	-305.5	-232.7	0.00	0.00	0.00
7,300.0	5.00	230.00	7,282.4	-261.9	-312.1	-237.8	0.00	0.00	0.00
7,318.9	5.00	230.00	7,301.2	-263.0	-313.4	-238.8	0.00	0.00	0.00
Start DLS 10.00 TFO 109.62									
7,400.0	7.96	303.61	7,381.9	-262.1	-320.8	-237.4	10.00	3.65	90.76
7,500.0	17.07	324.13	7,479.4	-246.4	-335.2	-220.6	10.00	9.11	20.52
7,600.0	26.81	330.31	7,572.1	-214.8	-355.0	-187.6	10.00	9.74	6.18
7,700.0	36.69	333.34	7,657.0	-168.4	-379.7	-139.5	10.00	9.87	3.03
7,800.0	46.61	335.22	7,731.7	-108.5	-408.4	-77.7	10.00	9.92	1.88
7,900.0	56.56	336.57	7,793.7	-37.1	-440.3	-4.0	10.00	9.94	1.35
8,000.0	66.51	337.64	7,841.3	43.8	-474.4	79.2	10.00	9.96	1.07
8,100.0	76.47	338.55	7,873.0	131.7	-509.7	169.5	10.00	9.96	0.92
8,200.0	86.44	339.40	7,887.9	223.9	-545.1	264.0	10.00	9.97	0.84
8,235.7	90.00	339.69	7,889.0	257.3	-557.6	298.3	10.00	9.97	0.82
Start DLS 2.00 TFO 90.00									
8,300.0	90.00	340.98	7,889.0	317.8	-579.2	360.3	2.00	0.00	2.00
8,400.0	90.00	342.98	7,889.0	412.9	-610.2	457.4	2.00	0.00	2.00
8,500.0	90.00	344.98	7,889.0	509.0	-637.8	555.4	2.00	0.00	2.00
8,600.0	90.00	346.98	7,889.0	606.1	-662.0	653.9	2.00	0.00	2.00
8,700.0	90.00	348.98	7,889.0	703.9	-682.8	753.0	2.00	0.00	2.00
8,800.0	90.00	350.98	7,889.0	802.3	-700.2	852.5	2.00	0.00	2.00
8,900.0	90.00	352.98	7,889.0	901.3	-714.2	952.3	2.00	0.00	2.00
9,000.0	90.00	354.98	7,889.0	1,000.8	-724.7	1,052.2	2.00	0.00	2.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	EDM_Users

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)
9,100.0	90.00	356.98	7,889.0	1,100.5	-731.7	1,152.2	2.00	0.00	2.00
9,200.0	90.00	358.98	7,889.0	1,200.5	-735.2	1,252.1	2.00	0.00	2.00
9,239.4	90.00	359.76	7,889.0	1,239.9	-735.7	1,291.5	2.00	0.00	2.00
Start 9059.4 hold at 9239.4 MD									
9,300.0	90.00	359.76	7,889.0	1,300.5	-735.9	1,351.9	0.00	0.00	0.00
9,400.0	90.00	359.76	7,889.0	1,400.5	-736.3	1,451.7	0.00	0.00	0.00
9,500.0	90.00	359.76	7,889.0	1,500.5	-736.8	1,551.4	0.00	0.00	0.00
9,600.0	90.00	359.76	7,889.0	1,600.5	-737.2	1,651.2	0.00	0.00	0.00
9,700.0	90.00	359.76	7,889.0	1,700.5	-737.6	1,750.9	0.00	0.00	0.00
9,800.0	90.00	359.76	7,889.0	1,800.5	-738.0	1,850.6	0.00	0.00	0.00
9,900.0	90.00	359.76	7,889.0	1,900.5	-738.4	1,950.4	0.00	0.00	0.00
10,000.0	90.00	359.76	7,889.0	2,000.5	-738.8	2,050.1	0.00	0.00	0.00
10,100.0	90.00	359.76	7,889.0	2,100.5	-739.2	2,149.9	0.00	0.00	0.00
10,200.0	90.00	359.76	7,889.0	2,200.5	-739.6	2,249.6	0.00	0.00	0.00
10,300.0	90.00	359.76	7,889.0	2,300.5	-740.1	2,349.4	0.00	0.00	0.00
10,400.0	90.00	359.76	7,889.0	2,400.5	-740.5	2,449.1	0.00	0.00	0.00
10,500.0	90.00	359.76	7,889.0	2,500.5	-740.9	2,548.9	0.00	0.00	0.00
10,600.0	90.00	359.76	7,889.0	2,600.5	-741.3	2,648.6	0.00	0.00	0.00
10,700.0	90.00	359.76	7,889.0	2,700.5	-741.7	2,748.4	0.00	0.00	0.00
10,800.0	90.00	359.76	7,889.0	2,800.5	-742.1	2,848.1	0.00	0.00	0.00
10,900.0	90.00	359.76	7,889.0	2,900.5	-742.5	2,947.9	0.00	0.00	0.00
11,000.0	90.00	359.76	7,889.0	3,000.4	-742.9	3,047.6	0.00	0.00	0.00
11,100.0	90.00	359.76	7,889.0	3,100.4	-743.4	3,147.4	0.00	0.00	0.00
11,200.0	90.00	359.76	7,889.0	3,200.4	-743.8	3,247.1	0.00	0.00	0.00
11,300.0	90.00	359.76	7,889.0	3,300.4	-744.2	3,346.9	0.00	0.00	0.00
11,400.0	90.00	359.76	7,889.0	3,400.4	-744.6	3,446.6	0.00	0.00	0.00
11,500.0	90.00	359.76	7,889.0	3,500.4	-745.0	3,546.4	0.00	0.00	0.00
11,600.0	90.00	359.76	7,889.0	3,600.4	-745.4	3,646.1	0.00	0.00	0.00
11,700.0	90.00	359.76	7,889.0	3,700.4	-745.8	3,745.9	0.00	0.00	0.00
11,800.0	90.00	359.76	7,889.0	3,800.4	-746.3	3,845.6	0.00	0.00	0.00
11,900.0	90.00	359.76	7,889.0	3,900.4	-746.7	3,945.4	0.00	0.00	0.00
12,000.0	90.00	359.76	7,889.0	4,000.4	-747.1	4,045.1	0.00	0.00	0.00
12,100.0	90.00	359.76	7,889.0	4,100.4	-747.5	4,144.9	0.00	0.00	0.00
12,200.0	90.00	359.76	7,889.0	4,200.4	-747.9	4,244.6	0.00	0.00	0.00
12,300.0	90.00	359.76	7,889.0	4,300.4	-748.3	4,344.4	0.00	0.00	0.00
12,400.0	90.00	359.76	7,889.0	4,400.4	-748.7	4,444.1	0.00	0.00	0.00
12,500.0	90.00	359.76	7,889.0	4,500.4	-749.1	4,543.9	0.00	0.00	0.00
12,600.0	90.00	359.76	7,889.0	4,600.4	-749.6	4,643.6	0.00	0.00	0.00
12,700.0	90.00	359.76	7,889.0	4,700.4	-750.0	4,743.4	0.00	0.00	0.00
12,800.0	90.00	359.76	7,889.0	4,800.4	-750.4	4,843.1	0.00	0.00	0.00
12,900.0	90.00	359.76	7,889.0	4,900.4	-750.8	4,942.9	0.00	0.00	0.00
13,000.0	90.00	359.76	7,889.0	5,000.4	-751.2	5,042.6	0.00	0.00	0.00
13,100.0	90.00	359.76	7,889.0	5,100.4	-751.6	5,142.4	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	EDM_Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,200.0	90.00	359.76	7,889.0	5,200.4	-752.0	5,242.1	0.00	0.00	0.00
13,300.0	90.00	359.76	7,889.0	5,300.4	-752.4	5,341.9	0.00	0.00	0.00
13,400.0	90.00	359.76	7,889.0	5,400.4	-752.9	5,441.6	0.00	0.00	0.00
13,500.0	90.00	359.76	7,889.0	5,500.4	-753.3	5,541.4	0.00	0.00	0.00
13,600.0	90.00	359.76	7,889.0	5,600.4	-753.7	5,641.1	0.00	0.00	0.00
13,700.0	90.00	359.76	7,889.0	5,700.4	-754.1	5,740.9	0.00	0.00	0.00
13,800.0	90.00	359.76	7,889.0	5,800.4	-754.5	5,840.6	0.00	0.00	0.00
13,900.0	90.00	359.76	7,889.0	5,900.4	-754.9	5,940.4	0.00	0.00	0.00
14,000.0	90.00	359.76	7,889.0	6,000.4	-755.3	6,040.1	0.00	0.00	0.00
14,100.0	90.00	359.76	7,889.0	6,100.4	-755.8	6,139.9	0.00	0.00	0.00
14,200.0	90.00	359.76	7,889.0	6,200.4	-756.2	6,239.6	0.00	0.00	0.00
14,300.0	90.00	359.76	7,889.0	6,300.4	-756.6	6,339.4	0.00	0.00	0.00
14,400.0	90.00	359.76	7,889.0	6,400.4	-757.0	6,439.1	0.00	0.00	0.00
14,500.0	90.00	359.76	7,889.0	6,500.4	-757.4	6,538.9	0.00	0.00	0.00
14,600.0	90.00	359.76	7,889.0	6,600.4	-757.8	6,638.6	0.00	0.00	0.00
14,700.0	90.00	359.76	7,889.0	6,700.4	-758.2	6,738.4	0.00	0.00	0.00
14,800.0	90.00	359.76	7,889.0	6,800.4	-758.6	6,838.1	0.00	0.00	0.00
14,900.0	90.00	359.76	7,889.0	6,900.4	-759.1	6,937.9	0.00	0.00	0.00
15,000.0	90.00	359.76	7,889.0	7,000.4	-759.5	7,037.6	0.00	0.00	0.00
15,100.0	90.00	359.76	7,889.0	7,100.4	-759.9	7,137.4	0.00	0.00	0.00
15,200.0	90.00	359.76	7,889.0	7,200.4	-760.3	7,237.1	0.00	0.00	0.00
15,300.0	90.00	359.76	7,889.0	7,300.4	-760.7	7,336.9	0.00	0.00	0.00
15,400.0	90.00	359.76	7,889.0	7,400.4	-761.1	7,436.6	0.00	0.00	0.00
15,500.0	90.00	359.76	7,889.0	7,500.4	-761.5	7,536.4	0.00	0.00	0.00
15,600.0	90.00	359.76	7,889.0	7,600.4	-762.0	7,636.1	0.00	0.00	0.00
15,700.0	90.00	359.76	7,889.0	7,700.4	-762.4	7,735.9	0.00	0.00	0.00
15,800.0	90.00	359.76	7,889.0	7,800.4	-762.8	7,835.6	0.00	0.00	0.00
15,900.0	90.00	359.76	7,889.0	7,900.4	-763.2	7,935.4	0.00	0.00	0.00
16,000.0	90.00	359.76	7,889.0	8,000.4	-763.6	8,035.1	0.00	0.00	0.00
16,100.0	90.00	359.76	7,889.0	8,100.4	-764.0	8,134.9	0.00	0.00	0.00
16,200.0	90.00	359.76	7,889.0	8,200.4	-764.4	8,234.6	0.00	0.00	0.00
16,300.0	90.00	359.76	7,889.0	8,300.4	-764.8	8,334.4	0.00	0.00	0.00
16,400.0	90.00	359.76	7,889.0	8,400.4	-765.3	8,434.1	0.00	0.00	0.00
16,500.0	90.00	359.76	7,889.0	8,500.4	-765.7	8,533.9	0.00	0.00	0.00
16,600.0	90.00	359.76	7,889.0	8,600.4	-766.1	8,633.6	0.00	0.00	0.00
16,700.0	90.00	359.76	7,889.0	8,700.4	-766.5	8,733.4	0.00	0.00	0.00
16,800.0	90.00	359.76	7,889.0	8,800.4	-766.9	8,833.1	0.00	0.00	0.00
16,900.0	90.00	359.76	7,889.0	8,900.4	-767.3	8,932.9	0.00	0.00	0.00
17,000.0	90.00	359.76	7,889.0	9,000.4	-767.7	9,032.6	0.00	0.00	0.00
17,100.0	90.00	359.76	7,889.0	9,100.4	-768.1	9,132.4	0.00	0.00	0.00
17,200.0	90.00	359.76	7,889.0	9,200.4	-768.6	9,232.1	0.00	0.00	0.00
17,300.0	90.00	359.76	7,889.0	9,300.4	-769.0	9,331.9	0.00	0.00	0.00
17,400.0	90.00	359.76	7,889.0	9,400.4	-769.4	9,431.6	0.00	0.00	0.00
17,500.0	90.00	359.76	7,889.0	9,500.4	-769.8	9,531.4	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MYOX 31 ST COM #504H
Project:	EDDY COUNTY, NM	**TVD Reference:**	X @ 3104.0usft (X)
Site:	MYOX 31 ST COM	**MD Reference:**	X @ 3104.0usft (X)
Well:	MYOX 31 ST COM #504H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP0	**Database:**	EDM_Users

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)
17,600.0	90.00	359.76	7,889.0	9,600.4	-770.2	9,631.1	0.00	0.00	0.00
17,700.0	90.00	359.76	7,889.0	9,700.4	-770.6	9,730.9	0.00	0.00	0.00
17,800.0	90.00	359.76	7,889.0	9,800.4	-771.0	9,830.6	0.00	0.00	0.00
17,900.0	90.00	359.76	7,889.0	9,900.4	-771.5	9,930.4	0.00	0.00	0.00
18,000.0	90.00	359.76	7,889.0	10,000.4	-771.9	10,030.1	0.00	0.00	0.00
18,100.0	90.00	359.76	7,889.0	10,100.4	-772.3	10,129.9	0.00	0.00	0.00
18,200.0	90.00	359.76	7,889.0	10,200.4	-772.7	10,229.6	0.00	0.00	0.00
18,298.8	90.00	359.76	7,889.0	10,299.2	-773.1	10,328.2	0.00	0.00	0.00
TD at 18298.8									

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 31 ST C(	0.00	0.00	7,889.0	-172.8	-729.2	392,551.00	562,165.90	32° 4' 44.686 N	104° 7' 57.441 W
- plan misses target center by 330.7usft at 7934.3usft MD (7811.8 TVD, -10.3 N, -451.7 E)									
- Circle (radius 50.0)									
PBHL (MYOX 31 ST (	0.00	179.76	7,889.0	10,299.2	-773.1	403,023.00	562,122.00	32° 6' 28.323 N	104° 7' 57.725 W
- plan hits target center									
- Rectangle (sides W100.0 H10,563.7 D20.0)									
LTP (MYOX 31 ST C(	0.00	0.00	7,889.0	10,249.2	-772.8	402,973.00	562,122.30	32° 6' 27.828 N	104° 7' 57.722 W
- plan misses target center by 48.8usft at 18200.0usft MD (7889.0 TVD, 10200.4 N, -772.7 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2500	2500	0	0	Start Build 2.00
2750	2750	-7	-8	Start 4568.9 hold at 2750.0 MD
7319	7301	-263	-313	Start DLS 10.00 TFO 109.62
8236	7889	257	-558	Start DLS 2.00 TFO 90.00
9239	7889	1240	-736	Start 9059.4 hold at 9239.4 MD
18,299	7889	10,299	-773	TD at 18298.8

Checked By: _____ Approved By: _____ Date: _____

CONCHO

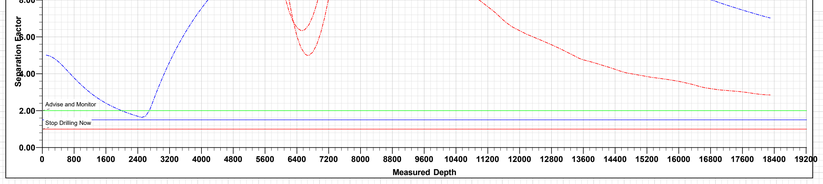
Project:	EDDY COUNTY, NM
Site:	MYOX 31 ST COM
Well:	MYOX 31 ST COM #504H
Wellbore:	OWB
Design:	PWP0
GL:	3071.0
X @ 3104.0usft (X)	

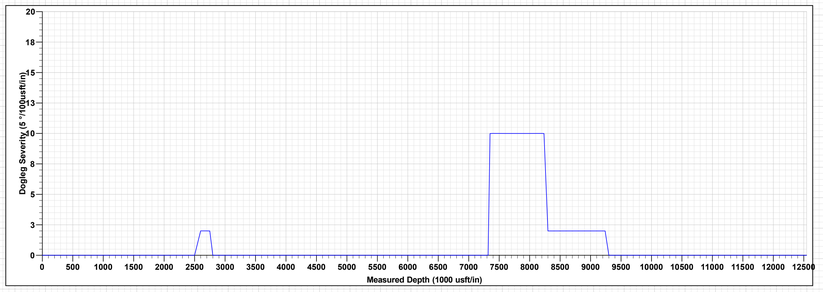
WELL DETAILS: MYOX 31 ST COM #504H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	392723.80	562895.10	32° 4' 46.382 N	104° 7' 48.962 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (MYOX 31 ST COM #504H)	7889.0	-172.8	-729.2	392551.00	562165.90	32° 4' 44.686 N	104° 7' 57.441 W
LTP (MYOX 31 ST COM #504H)	7889.0	10249.2	-772.8	402973.00	562122.30	32° 6' 27.828 N	104° 7' 57.722 W
PBHL (MYOX 31 ST COM #504H)	7889.0	10299.2	-773.1	403023.00	562122.00	32° 6' 28.323 N	104° 7' 57.725 W





MYOX 31 ST COM #504H

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2750.0	5.00	230.00	2749.7	-7.0	-8.4	2.00	230.00	-6.4	Start 4568.9 hold at 2750.0 MD
7318.9	5.00	230.00	7301.2	-263.0	-313.4	0.00	0.00	-238.8	Start DLS 10.00 TFO 109.62
8235.7	90.00	339.69	7889.0	257.3	-557.6	10.00	109.62	298.3	Start DLS 2.00 TFO 90.00
9239.4	90.00	359.76	7889.0	1239.9	-735.7	2.00	90.00	1291.5	Start 9059.4 hold at 9239.4 MD
18298.8	90.00	359.76	7889.0	10299.2	-773.1	0.00	0.00	10328.2	TD at 18298.8