

Submit 1 Copy To: Appropriate District Office.

District I -- (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II -- (575) 748-1283
811 S. First St., Artesia, NM 88210
District III -- (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV -- (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised August 1, 2011

WELL API NO. 30-015-39717
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Sherman 4 Fee
8. Well Number 3H
9. OGRID Number 229137
10. Pool name or Wildcat Atoka; Glorieta-Yeso 3250
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3347'

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 ☐
2. Name of Operator COG Operating LLC
3. Address of Operator One Concho Center - 600 W Illinois Ave Midland, TX 79701
4. Well Location Unit Letter: O 150 feet from the SOUTH line and 2260 feet from the EAST line Section: 4 Township 19S Range 26E NMPM County EDDY

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: **Change TVD & MD** ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

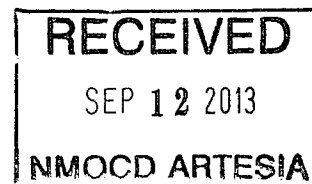
13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.13.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC respectfully requests permission to change TVD:

FROM: 2750'
TO: 3087'

COG Operating LLC respectfully requests permission to change MD:

FROM: 7323'
TO: 7678'



A revised directional plan is attached for your review.

Spud Date:

Rig Release Date:

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

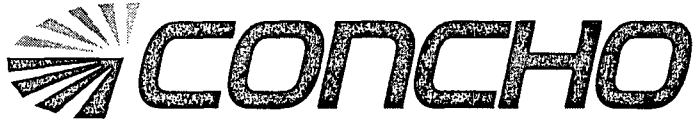
SIGNATURE [Signature] TITLE Permitting Tech DATE 09/12/2013

Type or print name Kelly J. Holly E-mail address: kholly@concho.com PHONE: 432-685-4384

For State Use Only

APPROVED BY: [Signature] TITLE "Geologist" DATE 9/12/2013

Conditions of Approval (if any):



COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Sherman 4 Fee

#3H

OH

Plan: Plan #1 09-09-13

Surface: 150' FSL, 2260' FEL, Sec 4, T19S, R26E, Unit O

PP: 330' FSL, 2260' FEL, Sec 4, T19S, R26E, Unit O

BHL: 330' FNL, 2260' FEL, Sec 4, T19S, R26E, Lot #2

Standard Planning Report

09 September, 2013



PHOENIX
TECHNOLOGY SERVICES



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3347.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3347.00usft
Site:	Sherman 4 Fee	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 09-09-13		

Project:	Eddy County, New Mexico (NAD 27 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:	Sherman 4 Fee		
Site Position:		Northing:	612,151.80 usft
From:	Map	Easting:	485,212.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 58.42381 N
		Longitude:	104° 22' 53.02452 W
		Grid Convergence:	-0.03 °

Well:	#3H		
Well Position	+N/-S	-7.90 usft	Northing:
	+E/-W	-1,219.60 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,347.00 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	09/09/13	7.72
			Dip Angle
			(°)
			Field Strength
			(nT)
			48,579

Design:	Plan #1 09-09-13		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			359.99

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,602.91	0.00	0.00	2,602.91	0.00	0.00	0.00	0.00	0.00	0.00	
3,425.64	90.50	359.99	3,123.76	525.42	-0.13	11.00	11.00	0.00	359.99	
7,678.28	90.50	359.99	3,086.65	4,777.90	-1.20	0.00	0.00	0.00	0.00	PBHL-Sherman 4 Fee



Phoenix Technology Services
Planning Report



Database: GCR DB
Company: COG Operating LLC
Project: Eddy County, New Mexico (NAD 27 NME)
Site: Sherman 4 Fee
Well: #3H
Wellbore: OH
Design: Plan #1 09-09-13

Local Co-ordinate Reference: Well #3H
TVD Reference: GL @ 3347.00usft
MD Reference: GL @ 3347.00usft
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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	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
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,602.91	0.00	0.00	2,602.91	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.00									
2,700.00	10.68	359.99	2,699.44	9.02	0.00	9.02	11.00	11.00	0.00
2,800.00	21.68	359.99	2,795.33	36.85	-0.01	36.85	11.00	11.00	0.00
2,900.00	32.68	359.99	2,884.15	82.45	-0.02	82.45	11.00	11.00	0.00
3,000.00	43.68	359.99	2,962.64	144.17	-0.04	144.17	11.00	11.00	0.00
3,049.49	49.12	359.99	2,996.75	180.00	-0.05	180.00	11.00	11.00	0.00
PP-Sherman 4 Fee #3H									
3,100.00	54.68	359.99	3,027.91	219.73	-0.06	219.73	11.00	11.00	0.00
3,200.00	65.68	359.99	3,077.56	306.36	-0.08	306.36	11.00	11.00	0.00
3,300.00	76.68	359.99	3,109.77	400.87	-0.10	400.87	11.00	11.00	0.00
3,336.65	80.71	359.99	3,116.95	436.80	-0.11	436.80	11.00	11.00	0.00
TL, 3120' TVD @ 0 VZ, 90.4° Inc									
3,400.00	87.68	359.99	3,123.35	499.78	-0.13	499.78	11.00	11.00	0.00
3,425.64	90.50	359.99	3,123.76	525.42	-0.13	525.42	11.00	11.00	0.00
LP Start 4252.65 hold at 3425.64 MD									
3,500.00	90.50	359.99	3,123.11	599.78	-0.15	599.78	0.00	0.00	0.00
3,600.00	90.50	359.99	3,122.24	699.77	-0.18	699.77	0.00	0.00	0.00
3,700.00	90.50	359.99	3,121.37	799.77	-0.20	799.77	0.00	0.00	0.00
3,800.00	90.50	359.99	3,120.49	899.76	-0.23	899.76	0.00	0.00	0.00
3,900.00	90.50	359.99	3,119.62	999.76	-0.25	999.76	0.00	0.00	0.00
4,000.00	90.50	359.99	3,118.75	1,099.76	-0.28	1,099.76	0.00	0.00	0.00
4,100.00	90.50	359.99	3,117.88	1,199.75	-0.30	1,199.75	0.00	0.00	0.00
4,200.00	90.50	359.99	3,117.00	1,299.75	-0.33	1,299.75	0.00	0.00	0.00
4,300.00	90.50	359.99	3,116.13	1,399.75	-0.35	1,399.75	0.00	0.00	0.00
4,400.00	90.50	359.99	3,115.26	1,499.74	-0.38	1,499.74	0.00	0.00	0.00
4,500.00	90.50	359.99	3,114.39	1,599.74	-0.40	1,599.74	0.00	0.00	0.00



Phoenix Technology Services
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3347.00usft
Project:	Eddy County, New Mexico (NAD 27 NME)	MD Reference:	GL @ 3347.00usft
Site:	Sherman 4 Fee	North Reference:	Grid
Well:	#3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 09-09-13		

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)
4,600.00	90.50	359.99	3,113.51	1,699.73	-0.43	1,699.73	0.00	0.00	0.00
4,700.00	90.50	359.99	3,112.64	1,799.73	-0.45	1,799.73	0.00	0.00	0.00
4,800.00	90.50	359.99	3,111.77	1,899.73	-0.48	1,899.73	0.00	0.00	0.00
4,900.00	90.50	359.99	3,110.89	1,999.72	-0.50	1,999.72	0.00	0.00	0.00
5,000.00	90.50	359.99	3,110.02	2,099.72	-0.53	2,099.72	0.00	0.00	0.00
5,100.00	90.50	359.99	3,109.15	2,199.72	-0.55	2,199.72	0.00	0.00	0.00
5,200.00	90.50	359.99	3,108.28	2,299.71	-0.58	2,299.71	0.00	0.00	0.00
5,300.00	90.50	359.99	3,107.40	2,399.71	-0.60	2,399.71	0.00	0.00	0.00
5,400.00	90.50	359.99	3,106.53	2,499.70	-0.63	2,499.70	0.00	0.00	0.00
5,500.00	90.50	359.99	3,105.66	2,599.70	-0.65	2,599.70	0.00	0.00	0.00
5,600.00	90.50	359.99	3,104.79	2,699.70	-0.68	2,699.70	0.00	0.00	0.00
5,700.00	90.50	359.99	3,103.91	2,799.69	-0.70	2,799.69	0.00	0.00	0.00
5,800.00	90.50	359.99	3,103.04	2,899.69	-0.73	2,899.69	0.00	0.00	0.00
5,900.00	90.50	359.99	3,102.17	2,999.68	-0.75	2,999.68	0.00	0.00	0.00
6,000.00	90.50	359.99	3,101.30	3,099.68	-0.78	3,099.68	0.00	0.00	0.00
6,100.00	90.50	359.99	3,100.42	3,199.68	-0.80	3,199.68	0.00	0.00	0.00
6,200.00	90.50	359.99	3,099.55	3,299.67	-0.83	3,299.67	0.00	0.00	0.00
6,300.00	90.50	359.99	3,098.68	3,399.67	-0.85	3,399.67	0.00	0.00	0.00
6,400.00	90.50	359.99	3,097.81	3,499.67	-0.88	3,499.67	0.00	0.00	0.00
6,500.00	90.50	359.99	3,096.93	3,599.66	-0.90	3,599.66	0.00	0.00	0.00
6,600.00	90.50	359.99	3,096.06	3,699.66	-0.93	3,699.66	0.00	0.00	0.00
6,700.00	90.50	359.99	3,095.19	3,799.65	-0.95	3,799.65	0.00	0.00	0.00
6,800.00	90.50	359.99	3,094.31	3,899.65	-0.98	3,899.65	0.00	0.00	0.00
6,900.00	90.50	359.99	3,093.44	3,999.65	-1.00	3,999.65	0.00	0.00	0.00
7,000.00	90.50	359.99	3,092.57	4,099.64	-1.03	4,099.64	0.00	0.00	0.00
7,100.00	90.50	359.99	3,091.70	4,199.64	-1.05	4,199.64	0.00	0.00	0.00
7,200.00	90.50	359.99	3,090.82	4,299.64	-1.08	4,299.64	0.00	0.00	0.00
7,300.00	90.50	359.99	3,089.95	4,399.63	-1.10	4,399.63	0.00	0.00	0.00
7,400.00	90.50	359.99	3,089.08	4,499.63	-1.13	4,499.63	0.00	0.00	0.00
7,500.00	90.50	359.99	3,088.21	4,599.62	-1.16	4,599.62	0.00	0.00	0.00
7,600.00	90.50	359.99	3,087.33	4,699.62	-1.18	4,699.62	0.00	0.00	0.00
7,678.28	90.50	359.99	3,086.65	4,777.90	-1.20	4,777.90	0.00	0.00	0.00
TD at 7678.28 - PBHL-Sherman 4 Fee #3H									

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
PP-Sherman 4 Fee #3H - plan hits target center - Point	0.00	0.00	2,996.75	180.00	-0.05	612,323.90	483,992.76	32° 41' 0.12115 N	104° 23' 7.29615 W
PBHL-Sherman 4 Fee # - plan hits target center - Point	0.00	360.00	3,086.65	4,777.90	-1.20	616,921.80	483,991.60	32° 41' 45.62030 N	104° 23' 7.33605 W



Phoenix Technology Services
Planning Report



Database: GCR DB
Company: COG Operating LLC
Project: Eddy County, New Mexico (NAD 27 NME)
Site: Sherman 4 Fee
Well: #3H
Wellbore: OH
Design: Plan #1 09-09-13

Local Co-ordinate Reference:
TVD Reference: GL @ 3347.00usft
MD Reference: GL @ 3347.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,336.65	3,116.95	TL, 3120' TVD @ 0 VZ, 90.4° Inc		-0.40	359.99

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,602.91	2,602.91	0.00	0.00	KOP Start Build 11.00
3,425.64	3,123.76	525.42	-0.13	LP Start 4252.65 hold at 3425.64 MD
7,678.28	3,086.65	4,777.90	-1.20	TD at 7678.28



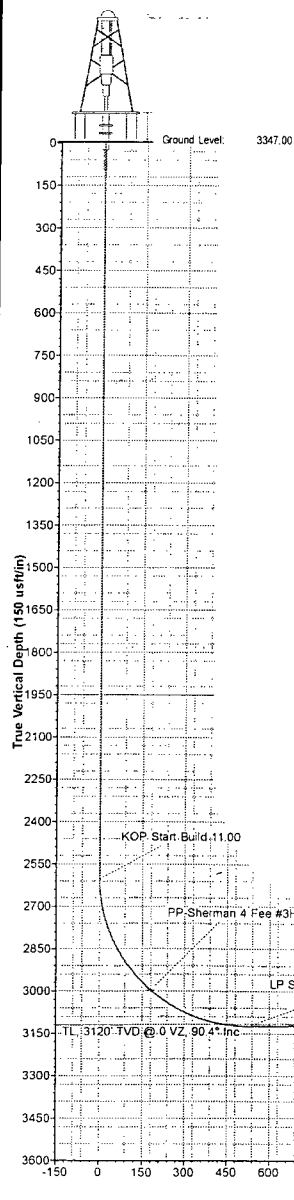
Project: Eddy County, New Mexico (NAD 27 NME)
Site: Sherman 4 Fee
Well: #3H
Wellbore: OH
Design: Plan #1 09-09-13



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.03°
Magnetic North: 7.75°
Magnetic Field
Strength: 48579.231
Dip Angle: 60.42°
Date: 09/09/2013
Model: IGRF2010_14



WELL DETAILS						
+N/-S	+E/-W	Northing	Ground Level	Easting	Latitude	Longitude
0.00	0.00	612143.90	3347.00	483992.80	32° 40' 58.33994 N	104° 23' 7.29459 W

SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSection Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	2602.91	0.00	0.00	2602.91	0.00	0.00	0.00	0.00	0.00
3	3425.64	90.50	359.99	3123.76	525.42	-0.13	11.00	359.99	525.42
4	7678.28	90.50	359.99	3086.65	4777.90	-1.20	0.00	0.00	4777.90

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PP-Sherman 4 Fee #3H	2996.75	180.00	-0.05	612323.90	483992.75	32° 41' 0.12115 N	104° 23' 7.29615 W	Point	
PBHL-Sherman 4 Fee #3H	3086.65	4777.90	-1.20	616921.80	483991.60	32° 41' 45.62030 N	104° 23' 7.33605 W	Point	

PROJECT DETAILS: Eddy County, New Mexico (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

SITE DETAILS: Sherman 4 Fee
Site Centre Northing: 612151.80
Easting: 485212.40
Positional Uncertainty: 0.00
Convergence: -0.03
Local North: Grid

LEGEND
Plan #1 09-09-13

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 #3H, Grid North
Latitude: 32° 40' 58.33994 N
Longitude: 104° 23' 7.29459 W
Grid East: 483992.80
Grid North: 612143.90
Scale Factor: 1.000
Geomagnetic Model: IGRF2010_14
Sample Date: 09-Sep-13
Magnetic Declination: 7.72°
Dip Angle from Horizontal: 60.42°
Magnetic Field Strength: 48579
To convert a Magnetic Direction to a Grid Direction, Add 7.75°
To convert a Magnetic Direction to a True Direction, Add 7.72° East
To convert a True Direction to a Grid Direction, Add 0.03°

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
3116.95	3336.65	TL 3120' TVD @ 0 VZ 90.4° Inc	-0.40	359.99

