District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

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

Form C-144 CLEZ
July 21, 2008

For closed-loop systems *that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure*, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: COG OPERATING LLC OGRID #: 229137
Address: 550 WEST TEXAS, SUITE 100 MIDLAND, TX 79701
Facility or well name: SHERMAN "4" FEE #3H
API Number: 30-015- 39712 OCD Permit Number: 212209
U/L or Qtr/Qtr UL O Section 4 Township 19S Range 26E County: Eddy
Center of Proposed Design: Latitude N/A Longitude N/A NAD: ☐1927 ☐ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3.
Signs: Subsection C of 19.15.17.11 NMAC
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☒ Signed in compliance with 19.15.3.103 NMAC

RECEIVED
NOV 29 2011
NMOCD ARTESIA

4.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.
Disposal Facility Name: CRI Disposal Facility Permit Number: R1966
Disposal Facility Name: GM INC Disposal Facility Permit Number: 711-019-001
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): KELLY J. HOLLY Title: PERMITTING TECH
Signature: Date: 07/29/2011
e-mail address: kholly@concho.com Telephone: 432-685-4384

7.
OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: RDade **Approval Date:** 12/1/2011

Title: Dist II Supervisor **OCD Permit Number:** 212209

8.
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ **Closure Completion Date:** _____

9.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

10.
Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Closed Loop Operation & Maintenance Procedure

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

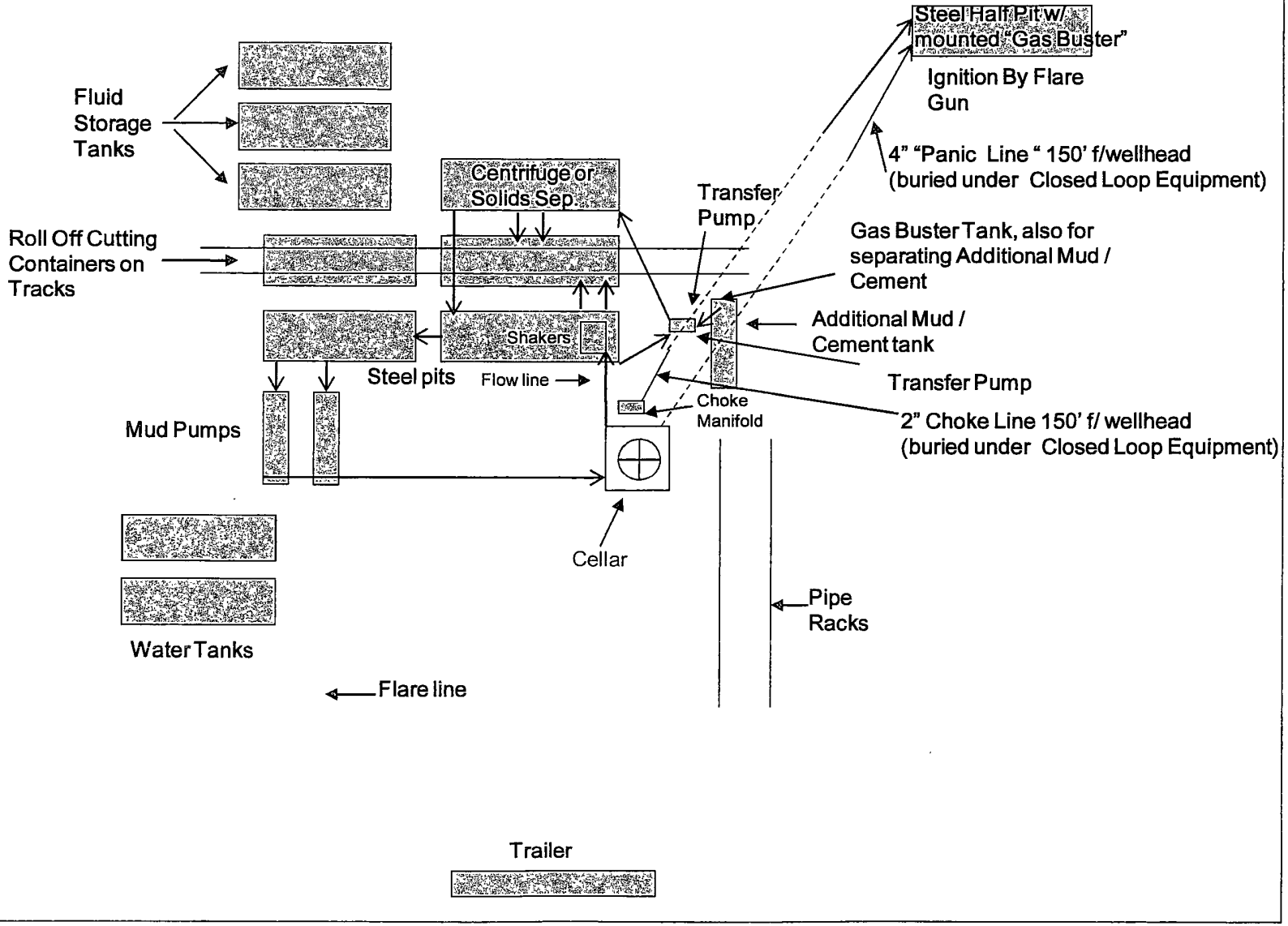
Cuttings will be hauled to either:

CRI (permit number R9166)
or
GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

COG Operating LLC

Closed Loop Equipment Diagram



CONCHO

COG Operating LLC

Eddy County, NM (NAN27 NME)
Sherman 4 Fee #3H
Sherman 4 Fee #3H

OH

Plan: Plan #1 8-3/4" Hole
SHL = 150' FSL & 2260' FEL
PP = 330' FSL & 2260' FEL
BHL = 330' FNL & 2260' FEL

Standard Planning Report

18 November, 2011

Scientific Drilling
Directional Drilling Operations

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Sherman 4 Fee #3H
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3347 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3347 00usft
Site:	Sherman 4 Fee #3H	**North Reference:**	Grid
Well:	Sherman 4 Fee #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 8-3/4" Hole		

Project	Eddy County, NM (NAN27 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 #3H				
Site Position:		**Northing:**	612,143 90 usft	**Latitude:**	32° 40' 58 340 N
From:	Map	**Easting:**	483,992 80 usft	**Longitude:**	104° 23' 7 295 W
Position Uncertainty:	0 00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0 03 °

Well	Sherman 4 Fee #3H					
Well Position	**+N/-S**	0 00 usft	**Northing:**	612,143 90 usft	**Latitude:**	32° 40' 58.340 N
	+E/-W	0 00 usft	**Easting:**	483,992 80 usft	**Longitude:**	104° 23' 7 295 W
Position Uncertainty		0 00 usft	**Wellhead Elevation:**		**Ground Level:**	3,347 00 usft

Wellbore	OH					
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**	
	IGRF2010	2011/11/18	7 94	60 46	48,759	

Design	Plan #1 8-3/4" Hole				
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	359 99	

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	
2,272 54	0 00	0 00	2,272 54	0.00	0 00	0 00	0 00	0 00	0.00	
3,022 54	90 00	359 99	2,750 00	477 46	-0 12	12 00	12 00	0 00	359 99	
7,322 97	90 00	359 99	2,750 00	4,777 90	-1 20	0 00	0 00	0 00	0 00	PBHL-Sherman 4 #3H

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Sherman 4 Fee #3H
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3347 00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3347 00usft
Site:	Sherman 4 Fee #3H	**North Reference:**	Grid
Well:	Sherman 4 Fee #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 8-3/4" Hole		

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
2,272 54	0 00	0 00	2,272 54	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 12.00°/100'									
2,300 00	3 30	359 99	2,299 98	0 79	0 00	0 79	12 00	12 00	0 00
2,400 00	15.30	359 99	2,398 49	16 91	0 00	16 91	12 00	12 00	0 00
2,500 00	27 30	359 99	2,491 49	53 17	-0 01	53 17	12 00	12 00	0 00
2,600 00	39 30	359 99	2,574 93	107 96	-0 03	107 96	12 00	12 00	0 00
2,700 00	51 30	359 99	2,645 14	178 91	-0 04	178 91	12 00	12 00	0 00
2,701 41	51 46	359 99	2,646 02	180 00	-0.05	180 00	12 00	12 00	0 00
PP=330' FSL Sherman 4 #3H									
2,800 00	63 30	359 99	2,699 07	262 90	-0 07	262.90	12 00	12.00	0 00
2,900 00	75 30	359 99	2,734 36	356 27	-0 09	356.27	12 00	12 00	0 00
3,000 00	87 30	359 99	2,749 47	454 94	-0 11	454 94	12 00	12 00	0 00
3,022 54	90 00	359 99	2,750 00	477 47	-0 12	477 47	12 00	12 00	0 00
EOC hold 90.00°									
3,100 00	90 00	359 99	2,750 00	554 93	-0 14	554.93	0 00	0 00	0 00
3,200 00	90.00	359 99	2,750 00	654 93	-0 16	654 93	0 00	0 00	0 00
3,300 00	90 00	359 99	2,750 00	754 93	-0 19	754 93	0 00	0 00	0 00
3,400 00	90 00	359 99	2,750 00	854 93	-0 21	854 93	0 00	0 00	0 00
3,500 00	90 00	359 99	2,750 00	954 93	-0 24	954 93	0 00	0 00	0 00
3,600 00	90 00	359 99	2,750 00	1,054 93	-0 26	1,054.93	0 00	0 00	0 00
3,700 00	90 00	359.99	2,750 00	1,154 93	-0 29	1,154 93	0 00	0 00	0 00
3,800 00	90 00	359.99	2,750 00	1,254 93	-0 32	1,254 93	0 00	0 00	0 00
3,900 00	90 00	359 99	2,750 00	1,354 93	-0 34	1,354 93	0 00	0 00	0 00
4,000 00	90 00	359 99	2,750 00	1,454 93	-0 37	1,454 93	0 00	0 00	0 00
4,100 00	90 00	359 99	2,750 00	1,554 93	-0 39	1,554 93	0 00	0 00	0 00
4,200 00	90 00	359.99	2,750 00	1,654 93	-0 42	1,654 93	0 00	0 00	0 00
4,300 00	90 00	359 99	2,750 00	1,754 93	-0 44	1,754 93	0 00	0 00	0 00
4,400 00	90 00	359 99	2,750 00	1,854 93	-0 47	1,854 93	0 00	0 00	0 00
4,500 00	90 00	359 99	2,750.00	1,954 93	-0.49	1,954.93	0 00	0 00	0 00
4,600 00	90 00	359 99	2,750 00	2,054 93	-0 52	2,054 93	0 00	0 00	0 00
4,700 00	90 00	359 99	2,750.00	2,154 93	-0 54	2,154.93	0 00	0 00	0 00
4,800 00	90 00	359 99	2,750 00	2,254 93	-0 57	2,254 93	0 00	0 00	0 00
4,900 00	90 00	359.99	2,750 00	2,354 93	-0 59	2,354 93	0 00	0 00	0 00
5,000 00	90 00	359 99	2,750 00	2,454 93	-0 62	2,454 93	0 00	0 00	0 00
5,100 00	90 00	359 99	2,750 00	2,554 93	-0.64	2,554.93	0 00	0 00	0 00
5,200 00	90 00	359 99	2,750 00	2,654 93	-0 67	2,654 93	0 00	0 00	0 00
5,300 00	90 00	359 99	2,750 00	2,754 93	-0 69	2,754.93	0 00	0 00	0 00
5,400 00	90 00	359 99	2,750 00	2,854 93	-0 72	2,854 93	0 00	0 00	0 00
5,500 00	90 00	359 99	2,750 00	2,954 93	-0.74	2,954 93	0 00	0 00	0 00
5,600 00	90 00	359 99	2,750 00	3,054 93	-0 77	3,054.93	0 00	0 00	0 00
5,700 00	90 00	359 99	2,750 00	3,154 93	-0 79	3,154 93	0 00	0 00	0 00
5,800 00	90 00	359.99	2,750 00	3,254 93	-0 82	3,254 93	0 00	0 00	0 00
5,900 00	90 00	359 99	2,750 00	3,354 93	-0 84	3,354 93	0 00	0 00	0 00
6,000 00	90 00	359 99	2,750 00	3,454 93	-0 87	3,454 93	0 00	0 00	0 00
6,100 00	90 00	359 99	2,750 00	3,554 93	-0.89	3,554 93	0 00	0 00	0 00
6,200 00	90 00	359 99	2,750 00	3,654 93	-0 92	3,654 93	0 00	0 00	0 00
6,300 00	90 00	359 99	2,750 00	3,754 93	-0 94	3,754 93	0 00	0.00	0 00
6,400 00	90 00	359.99	2,750 00	3,854 93	-0 97	3,854 93	0 00	0 00	0 00
6,500 00	90 00	359 99	2,750 00	3,954 93	-0 99	3,954 93	0 00	0 00	0 00
6,600 00	90 00	359 99	2,750.00	4,054 93	-1 02	4,054 93	0 00	0 00	0 00
6,700 00	90.00	359 99	2,750 00	4,154 93	-1.04	4,154 93	0 00	0 00	0 00
6,800 00	90 00	359 99	2,750 00	4,254 93	-1 07	4,254 93	0 00	0 00	0 00

Database:	EDM-Julio	**Local Co-ordinate Reference:**	Site Sherman 4 Fee #3H
Company:	COG Operating LLC	**TVD Reference:**	GL Elev @ 3347.00usft
Project:	Eddy County, NM (NAN27 NME)	**MD Reference:**	GL Elev @ 3347 00usft
Site:	Sherman 4 Fee #3H	**North Reference:**	Grid
Well:	Sherman 4 Fee #3H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 8-3/4" Hole		

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)
6,900 00	90.00	359 99	2,750 00	4,354 93	-1 09	4,354.93	0 00	0 00	0 00
7,000 00	90.00	359 99	2,750 00	4,454 93	-1 12	4,454.93	0 00	0 00	0 00
7,100 00	90.00	359 99	2,750 00	4,554 93	-1.14	4,554 93	0 00	0 00	0 00
7,200.00	90 00	359 99	2,750 00	4,654.93	-1 17	4,654.93	0 00	0 00	0 00
7,300 00	90 00	359 99	2,750 00	4,754 93	-1 19	4,754 93	0 00	0 00	0 00
7,322 97	90 00	359 99	2,750.00	4,777.90	-1 20	4,777.90	0 00	0 00	0 00
PBHL-Sherman 4 #3H									

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
PP=330' FSL Sherman 4 - plan hits target center - Point	0 00	360.00	2,646.02	180 01	-0 05	612,323 91	483,992 76	32° 41' 0.121 N	104° 23' 7 296 W
PBHL-Sherman 4 #3H - plan hits target center - Point	0 00	0 00	2,750 00	4,777 90	-1 20	616,921 80	483,991 60	32° 41' 45 620 N	104° 23' 7 336 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,272 54	2,272.54	0 00	0 00	KOP Start Build 12 00°/100'
3,022 54	2,750.00	477 47	-0 12	EOC hold 90 00°

CONCHO

Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Sherman 4 Fee #3H
Wellbore: OH
Design: Plan #1 8-3/4" Hole

Scientific Drilling
Directional Drilling Operations

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2272 54	0 00	0.00	2272 54	0.00	0 00	0 00	0.00	0.00	
3	3022 54	90.00	359.99	2750.00	477 46	-0.12	12 00	359.99	477 46	
4	7322.97	90 00	359 99	2750.00	4777 90	-1.20	0 00	0.00	4777 90	PBHL-Sherman 4 #3H

Sherman 4 Fee #3H

Created By: Julio Pina Date: 18-Nov-11
Checked: _____ Date _____
Reviewed: _____ Date: _____

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PP=330' FSL Sherman 4 #3H	2646.02	180 01	-0.05	612323 91	483992.75	32°41' 0.121 N	104°23' 7 296 W	Point
PBHL-Sherman 4 #3H	2750.00	4777 90	-1.20	616921 80	483991.60	32°41' 45.620 N	104°23' 7 336 W	Point

PROJECT DETAILS Eddy County, NM (NAN27 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

WELL DETAILS: Sherman 4 Fee #3H

Ground Level: 3347.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	612143 90	483992.80	32°40' 58 340 N	104°23' 7 295 W	

AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.97°
To convert a True Direction to a Grid Direction, Add 0.03°