

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

JUN 16 2014

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM114987
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 575-748-6958		8. Well Name and No. DOMINATOR 25 FEDERAL 1H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 25 T25S R33E NENE 330FNL 380FEL		9. API Well No. 30-025-40211-00-X1
		10. Field and Pool, or Exploratory RED HILLS
		11. County or Parish, and State LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA.

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing ☐ Fracture Treat ☐ Reclamation ☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair ☐ New Construction ☐ Recomplete ☒ Other
	☐ Change Plans ☐ Plug and Abandon ☐ Temporarily Abandon ☐ Change to Original APD
	☐ Convert to Injection ☐ Plug Back ☐ Water Disposal

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG OPERATING LLC RESPECTFULLY REQUESTS THE FOLLOWING CHANGES TO THE ORIGINAL APD:

PILOT HOLE WILL NOT BE DRILLED ON THIS WELL. WE WILL KICK-OFF AND DRILL 7-7/8" CURVE AND LATERAL TO 13,951' MD/9600' TVD (SEE ATTACHED DIRECTIONAL PLAN).

CMT IN 1 STG WITH:
LEAD: 950 SX 36:65:6 H + SALT + GILSONITE + CF + CFR-3 @ 10.4 PPG/2.89 YIELD
TAIL: 950 SX 50:50:2 H + SALT + GASSTOP + CFR-3 @ 14.4 PPG/1.25 YIELD
35% EXCESS ON OH
DESIGNED TO CIRC CMT TO SFC.

Extension COAs still apply

14. I hereby certify that the foregoing is true and correct. Electronic Submission #241314 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Hobbs Committed to AFMSS for processing by JENNIFER MASON on 05/07/2014 (14JAM0045SE)	
Name (Printed/Typed) DEBORA WILBOURN	Title DRLG ENGINEERING TECH
Signature (Electronic Submission)	Date 04/07/2014
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
APPROVED JUN 3 2014 BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE	
Approved By	Title
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	
Office	

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

JUN 17 2014



COG Operating LLC

Lea County, NM (NAD27 NME)

Dominator "25"

#1H

OH

Plan: Design #1

Standard Planning Report

25 March, 2014

HOBBS OCD

JUN 16 2014

RECEIVED



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #1H
Company:	COG Operating LLC	TVD Reference:	WELL @ 3342.0usft (Original Well Elev)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	WELL @ 3342.0usft (Original Well Elev)
Site:	Dominator "25"	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Project:	Lea 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:	Dominator "25"		
Site Position:	From: Map	Northing:	403,865.63 usft
		Easting:	793,580.12 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 6' 24.457 N
		Longitude:	103° 23' 6.730 W
		Grid Convergence:	0.50 °

Well:	#1H		
Well Position	+N-S	0.0 usft	Northing:
	+E-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			3,324.0 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	3/25/2014	7.15
			Dip Angle
			60.04
			Field Strength
			48,289

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			178.96

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,062.5	0.00	0.00	9,062.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,805.7	89.17	178.96	9,540.0	-470.6	8.5	12.00	12.00	0.00	178.96	
13,951.2	89.17	178.96	9,600.0	-4,614.9	83.8	0.00	0.00	0.00	0.00	PBHL(D25#1H)



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Wellbore:	OH		
Design:	Design #1		

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
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
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



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Wellbore:	OH		
Design:	Design #1		

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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,062.5	0.00	0.00	9,062.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP - 9062.5 'MD, 0.00° INC, 0.00° AZI'									
9,075.0	1.50	178.96	9,075.0	-0.2	0.0	0.2	12.00	12.00	0.00
9,100.0	4.50	178.96	9,100.0	-1.5	0.0	1.5	12.00	12.00	0.00
9,125.0	7.50	178.96	9,124.8	-4.1	0.1	4.1	12.00	12.00	0.00
9,150.0	10.50	178.96	9,149.5	-8.0	0.1	8.0	12.00	12.00	0.00
9,175.0	13.50	178.96	9,174.0	-13.2	0.2	13.2	12.00	12.00	0.00
9,200.0	16.50	178.96	9,198.1	-19.7	0.4	19.7	12.00	12.00	0.00
9,225.0	19.50	178.96	9,221.9	-27.4	0.5	27.4	12.00	12.00	0.00
9,250.0	22.50	178.96	9,245.2	-36.3	0.7	36.3	12.00	12.00	0.00
9,275.0	25.50	178.96	9,268.1	-46.5	0.8	46.5	12.00	12.00	0.00
9,300.0	28.49	178.96	9,290.3	-57.8	1.1	57.9	12.00	12.00	0.00
9,325.0	31.49	178.96	9,312.0	-70.3	1.3	70.3	12.00	12.00	0.00
9,350.0	34.49	178.96	9,332.9	-83.9	1.5	84.0	12.00	12.00	0.00
9,375.0	37.49	178.96	9,353.2	-98.6	1.8	98.7	12.00	12.00	0.00
9,400.0	40.49	178.96	9,372.6	-114.4	2.1	114.4	12.00	12.00	0.00



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Wellbore:	OH		
Design:	Design #1		

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)	
9,425.0	43.49	178.96	9,391.2	-131.1	2.4	131.1	12.00	12.00	0.00	
9,450.0	46.49	178.96	9,408.9	-148.8	2.7	148.8	12.00	12.00	0.00	
9,475.0	49.49	178.96	9,425.6	-167.3	3.0	167.4	12.00	12.00	0.00	
9,500.0	52.49	178.96	9,441.3	-186.7	3.4	186.8	12.00	12.00	0.00	
9,525.0	55.49	178.96	9,456.0	-207.0	3.8	207.0	12.00	12.00	0.00	
9,550.0	58.49	178.96	9,469.6	-227.9	4.1	228.0	12.00	12.00	0.00	
9,575.0	61.49	178.96	9,482.1	-249.6	4.5	249.6	12.00	12.00	0.00	
9,600.0	64.49	178.96	9,493.5	-271.8	4.9	271.9	12.00	12.00	0.00	
9,625.0	67.49	178.96	9,503.7	-294.7	5.3	294.7	12.00	12.00	0.00	
9,650.0	70.49	178.96	9,512.6	-318.0	5.8	318.0	12.00	12.00	0.00	
9,675.0	73.49	178.96	9,520.4	-341.8	6.2	341.8	12.00	12.00	0.00	
9,700.0	76.49	178.96	9,526.8	-365.9	6.6	366.0	12.00	12.00	0.00	
9,725.0	79.49	178.96	9,532.0	-390.3	7.1	390.4	12.00	12.00	0.00	
9,750.0	82.49	178.96	9,535.9	-415.0	7.5	415.1	12.00	12.00	0.00	
9,775.0	85.48	178.96	9,538.6	-439.9	8.0	440.0	12.00	12.00	0.00	
9,800.0	88.48	178.96	9,539.9	-464.8	8.4	464.9	12.00	12.00	0.00	
9,805.7	89.17	178.96	9,540.0	-470.6	8.5	470.6	12.00	12.00	0.00	
EOC- 9805.7 'MD, 89.17° INC, 178.96° AZI										
9,900.0	89.17	178.96	9,541.4	-564.8	10.3	564.9	0.00	0.00	0.00	
10,000.0	89.17	178.96	9,542.8	-664.8	12.1	664.9	0.00	0.00	0.00	
10,100.0	89.17	178.96	9,544.3	-764.8	13.9	764.9	0.00	0.00	0.00	
10,200.0	89.17	178.96	9,545.7	-864.7	15.7	864.9	0.00	0.00	0.00	
10,300.0	89.17	178.96	9,547.2	-964.7	17.5	964.9	0.00	0.00	0.00	
10,400.0	89.17	178.96	9,548.6	-1,064.7	19.3	1,064.9	0.00	0.00	0.00	
10,500.0	89.17	178.96	9,550.1	-1,164.7	21.1	1,164.8	0.00	0.00	0.00	
10,600.0	89.17	178.96	9,551.5	-1,264.6	23.0	1,264.8	0.00	0.00	0.00	
10,700.0	89.17	178.96	9,553.0	-1,364.6	24.8	1,364.8	0.00	0.00	0.00	
10,800.0	89.17	178.96	9,554.4	-1,464.6	26.6	1,464.8	0.00	0.00	0.00	
10,900.0	89.17	178.96	9,555.9	-1,564.5	28.4	1,564.8	0.00	0.00	0.00	
11,000.0	89.17	178.96	9,557.3	-1,664.5	30.2	1,664.8	0.00	0.00	0.00	
11,100.0	89.17	178.96	9,558.7	-1,764.5	32.0	1,764.8	0.00	0.00	0.00	
11,200.0	89.17	178.96	9,560.2	-1,864.5	33.8	1,864.8	0.00	0.00	0.00	
11,300.0	89.17	178.96	9,561.6	-1,964.4	35.7	1,964.8	0.00	0.00	0.00	
11,400.0	89.17	178.96	9,563.1	-2,064.4	37.5	2,064.7	0.00	0.00	0.00	
11,500.0	89.17	178.96	9,564.5	-2,164.4	39.3	2,164.7	0.00	0.00	0.00	
11,600.0	89.17	178.96	9,566.0	-2,264.4	41.1	2,264.7	0.00	0.00	0.00	
11,700.0	89.17	178.96	9,567.4	-2,364.3	42.9	2,364.7	0.00	0.00	0.00	
11,800.0	89.17	178.96	9,568.9	-2,464.3	44.7	2,464.7	0.00	0.00	0.00	
11,900.0	89.17	178.96	9,570.3	-2,564.3	46.6	2,564.7	0.00	0.00	0.00	
12,000.0	89.17	178.96	9,571.8	-2,664.2	48.4	2,664.7	0.00	0.00	0.00	
12,100.0	89.17	178.96	9,573.2	-2,764.2	50.2	2,764.7	0.00	0.00	0.00	
12,200.0	89.17	178.96	9,574.7	-2,864.2	52.0	2,864.7	0.00	0.00	0.00	
12,300.0	89.17	178.96	9,576.1	-2,964.2	53.8	2,964.7	0.00	0.00	0.00	
12,400.0	89.17	178.96	9,577.6	-3,064.1	55.6	3,064.6	0.00	0.00	0.00	
12,500.0	89.17	178.96	9,579.0	-3,164.1	57.4	3,164.6	0.00	0.00	0.00	
12,600.0	89.17	178.96	9,580.5	-3,264.1	59.3	3,264.6	0.00	0.00	0.00	
12,700.0	89.17	178.96	9,581.9	-3,364.1	61.1	3,364.6	0.00	0.00	0.00	
12,800.0	89.17	178.96	9,583.4	-3,464.0	62.9	3,464.6	0.00	0.00	0.00	
12,900.0	89.17	178.96	9,584.8	-3,564.0	64.7	3,564.6	0.00	0.00	0.00	
13,000.0	89.17	178.96	9,586.3	-3,664.0	66.5	3,664.6	0.00	0.00	0.00	
13,100.0	89.17	178.96	9,587.7	-3,764.0	68.3	3,764.6	0.00	0.00	0.00	
13,200.0	89.17	178.96	9,589.2	-3,863.9	70.1	3,864.6	0.00	0.00	0.00	
13,300.0	89.17	178.96	9,590.6	-3,963.9	72.0	3,964.5	0.00	0.00	0.00	
13,400.0	89.17	178.96	9,592.1	-4,063.9	73.8	4,064.5	0.00	0.00	0.00	



Wellplanning Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #1H
Company:	COG Operating LLC	TVD Reference:	WELL @ 3342.0usft (Original Well Elev)
Project:	Lea County, NM (NAD27 NME)	MD Reference:	WELL @ 3342.0usft (Original Well Elev)
Site:	Dominator "25"	North Reference:	Grid
Well:	#1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

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)
13,500.0	89.17	178.96	9,593.5	-4,163.8	75.6	4,164.5	0.00	0.00	0.00
13,600.0	89.17	178.96	9,595.0	-4,263.8	77.4	4,264.5	0.00	0.00	0.00
13,700.0	89.17	178.96	9,596.4	-4,363.8	79.2	4,364.5	0.00	0.00	0.00
13,800.0	89.17	178.96	9,597.9	-4,463.8	81.0	4,464.5	0.00	0.00	0.00
13,900.0	89.17	178.96	9,599.3	-4,563.7	82.8	4,564.5	0.00	0.00	0.00
13,951.2	89.17	178.96	9,600.0	-4,614.9	83.8	4,615.6	0.00	0.00	0.00
TD at 13951.2 - PBHL(D25#1H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL(D25#1H)	0.00	0.00	9,600.0	-4,614.9	83.9	399,250.75	793,664.06	32° 5' 38.784 N	103° 23' 6.226 W
- plan misses target center by 0.2usft at 13951.2usft MD (9600.0 TVD, -4614.9 N, 83.8 E)									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,062.5	9,062.5	0.0	0.0	KOP - 9062.5 'MD, 0.00° INC, 0.00° AZI
9,805.7	9,540.0	-470.6	8.5	EOC- 9805.7 'MD, 89.17° INC, 178.96° AZI
13,951.2	9,600.0	-4,614.9	83.8	TD at 13951.2



Dominator "25" #1H
Lea County, NM (NAD27 NME)
Northing: (Y) 403865.63
Easting: (X) 793580.12
Design #1

NEXUS

DIRECTIONAL SOLUTIONS, L.P.



Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.64°

Magnetic Field
Strength: 48288.5nT
Dip Angle: 60.04°

To convert a Magnetic Direction to a Grid Direction, Add 6.64°
To convert a True Direction to a Grid Direction, Subtract 0.50°
Date: 3/25/2014
Model: IGRF2010

WELL DETAILS:						
WELL @ 3342.0usft (Original Well Elev)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	403865.63	793580.12	32° 6' 24.457 N	103° 23' 6.730 W	

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9062.5	0.00	0.00	9062.5	0.0	0.0	0.00	0.00	0.0	
9805.7	89.17	178.96	9540.0	-470.6	83.8	12.00	178.96	470.6	
13951.2	89.17	178.96	9600.0	-4614.9	83.8	0.00	0.00	4615.6	PBHL(D25#1H)

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
PBHL(D25#1H)	9600.0	-4614.9	83.8	399250.75	793664.06

LEGEND

• Design #1

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 #1H, Grid North
Latitude: 32° 6' 24.457 N
Longitude: 103° 23' 6.730 W
Grid East: 793580.12
Grid North: 403865.63
Scale Factor: 1.000

Geomagnetic Model: IGRF2010
Sample Date: 25-Mar-14
Magnetic Declination: 7.15°
Dip Angle from Horizontal: 60.04°
Magnetic Field Strength: 48289
To convert a Magnetic Direction to a Grid Direction, Add 6.64°
To convert a Magnetic Direction to a True Direction, Add 7.15° East
To convert a True Direction to a Grid Direction, Subtract 0.50°

Mark Shipp
15-06, March 25 2014
Nexus Directional Solutions
3925 CR 1285
Odessa TX 79765

