

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

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.***SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NNMM7752
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		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432-685-4384		8. Well Name and No. SAM ADAMS 12 FEDERAL COM LBB 3H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 12 T17S R29E SWNW 1650FNL 0230FWL 32.851660 N Lat, 104.035590 W Lon		9. API Well No. 30-015-41617-00-X1
		10. Field and Pool, or Exploratory EMPIRE
		11. County or Parish, and State EDDY 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 A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

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 recomple 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 to change the TVD and name of this well:

FROM: Sam Adams 12 Federal Com LBB #3H

TO: Sam Adams 12 Federal Com PDK #3H 313345

FROM: 5427' TVD; 9988' MD

TO: 4277' TVD; 8838' MD

Attached is the revised C-102 and directional plan.

Accepted for record
NMOCD 6-6-14
NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 06 2014
RECEIVED

Original COAs still apply

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #246998 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by CATHY QUEEN on 05/28/2014 (14CQ0041SE)	
Name (Printed/Typed) KELLY J HOLLY	Title PERMITTING TECH
Signature (Electronic Submission)	Date 05/27/2014
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
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 ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
911 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Briscoe Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 30-015-41617	2 Pool Code 96610	3 Pool Name Empire; Glorieta yeso East
4 Property Code 40088	5 Property Name SAM ADAMS 12 FED. COM. PDK	6 Well Number 3H
7 OGRID No. 229137	8 Operator Name COG OPERATING, LLC	9 Elevation 3652'

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
E	12	17-S	29-E		1650	NORTH	230	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
H	12	17-S	29-E		1650	NORTH	330	EAST	EDDY

12 Dedicated Acres 160	13 Joint or Infill	14 Consolidation Code	15 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.

10 Estimated Completed Interval: 1052 FNL 330 FWL SEE DETAIL "A" 3649.4 600' 3650.9 3649.2 600' S. L. 3649.9 N 89°58'44" E (GRID) 4712.12' (HORIZ.) Producing Area Project Area CORNER DATA A: END USGLO BC 1914 N 670041.9 - E 591216.3 B: END 1" STL PIPE N 672682.3 - E 591209.8 C: BRASS CAP "1914" N 675322.5 - E 591200.4 D: BRASS CAP "1914" N 675326.5 - E 593844.9 E: BRASS CAP "1914" N 675324.2 - E 598474.6 F: BRASS CAP "1914" N 672688.0 - E 598478.6 G: BRASS CAP "1914" N 670054.8 - E 598494.2 H: BRASS CAP "1914" N 670048.4 - E 593857.0	DETAIL "A" 3649.4 600' 3650.9 3649.2 600' S. L. 3649.9	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 undivided mineral interest in this 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 as approved by the division. Signature: <i>[Signature]</i> Date: 5-27-14 Printed Name: Kelly J. Holly Email Address: kholly@concho.com
	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. 1/29/13 Date of Survey Signature and Seal of Professional Surveyor: 19680 Certificate Number Revised: 5/5/14 NAME	
	19 GEODETTIC DATA NAD 27 GRID - NM EAST SURFACE LOCATION N 673673.2 - E 591436.3 BOTTOM LOCATION N 673674.9 - E 596147.2	
	20 CALC 16TH COR N 672685.2 - E 593851.0	

COG OPERATING, LLC

Field: Eddy County, NM
 Site: Sam Adams 12 Federal Com PDK #3H
 Well: 3H
 Wellbore: Lateral
 Plan: Plan #2

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Sam Adams 3H PP	0.00	-2.62	99.96	673670.58	591536.28	32° 51' 5.94 N	104° 2' 6.95 W
Sam Adams 3H Surface	0.00	0.00	0.00	673673.20	591436.30	32° 51' 5.97 N	104° 2' 8.12 W
Sam Adams 3H PBHL	4277.02	1.70	4710.90	673674.90	596147.20	32° 51' 5.85 N	104° 1' 12.89 W



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3829.00	0.00	0.00	3829.00	0.00	0.00	0.00	0.00	0.00	
3	4656.27	91.00	91.50	4349.79	-13.87	529.78	11.00	91.50	529.77	
4	4742.83	91.00	89.77	4348.28	-14.83	616.31	2.00	-90.08	616.31	
5	8838.07	91.00	89.77	4277.02	1.70	4710.90	0.00	0.00	4710.90	Sam Adams 3H PBHL

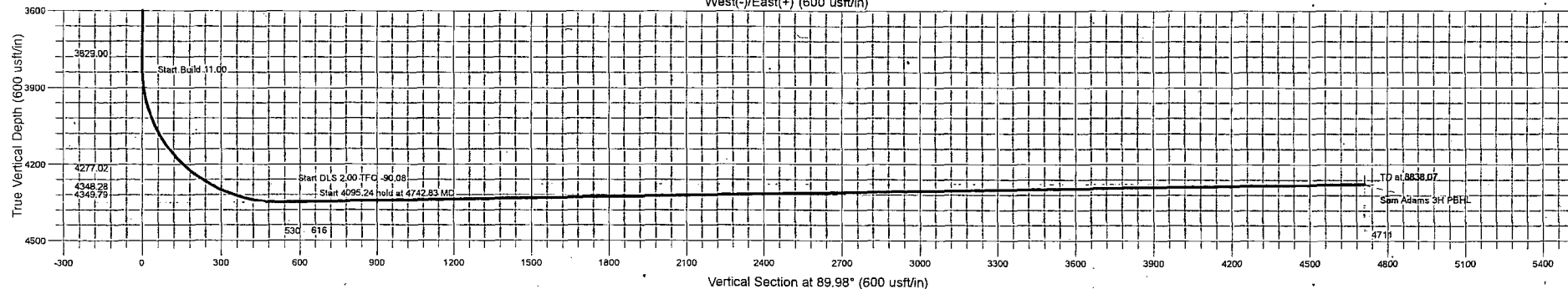
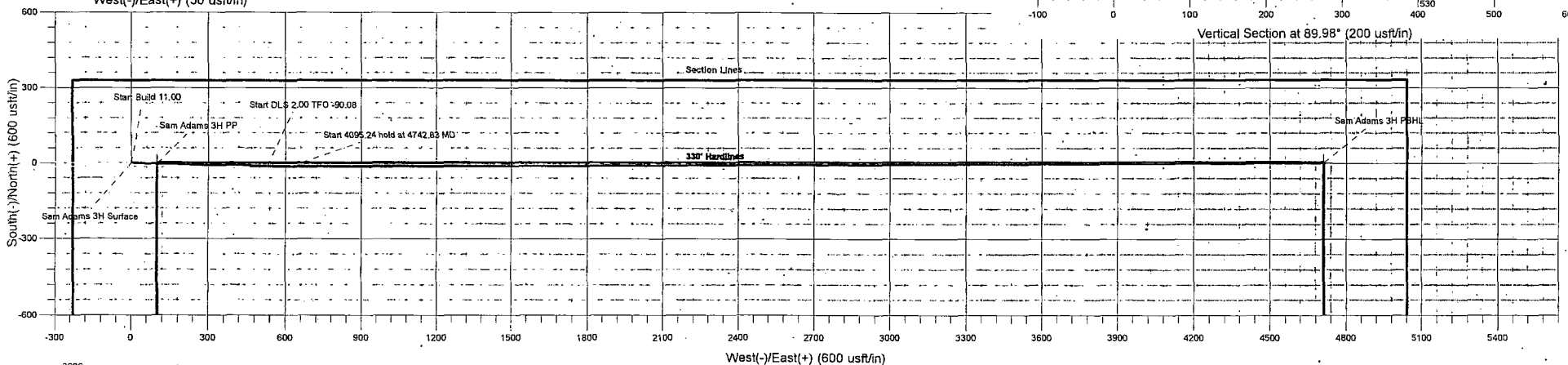
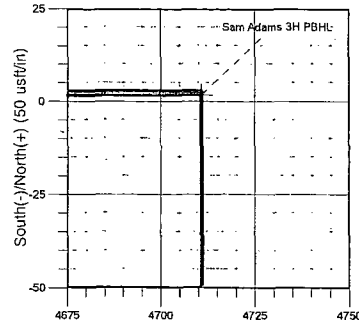
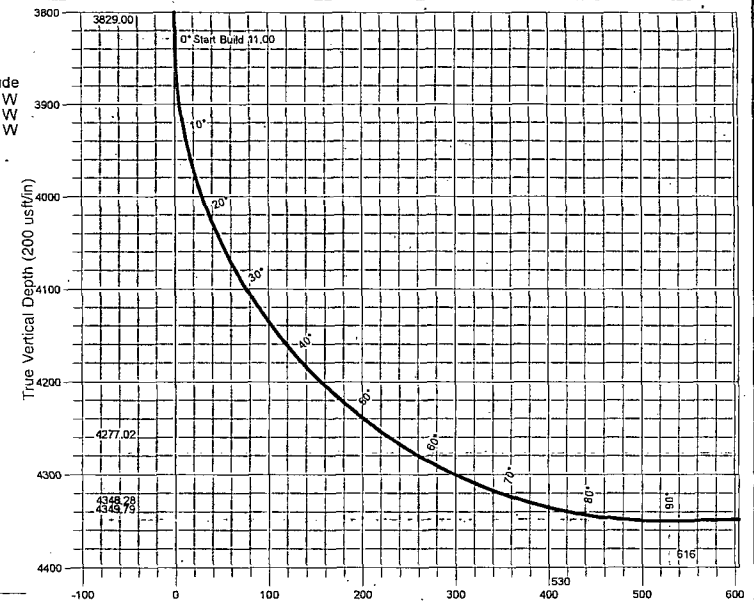
Section Distances

Sec12.T17S.R29E
 SHL - Lot H
 1650'FNL, 230'FWL
 PP
 1652'FNL, 330'FWL
 PBHL - Unit E
 1650'FNL, 330'FEL



Azimuths to Grid North
 True North: -0.16°
 Magnetic North: 7.33°

Magnetic Field
 Strength: 48651.4snT
 Dip Angle: 60.61°
 Date: 5/7/2014
 Model: IGRF2010



Archer

ARCHER DIRECTIONAL DRILLING SERVICES
 12101 Cutten Rd. Houston, Texas 77066
 Phone: 281-301-2600 Fax: 281-301-2795

Design: Plan #2 (3H/Lateral)
 Created By: Ivonne Gonzalez
 Date: 12:27, May 07 2014

COG OPERATING, LLC

Eddy County, NM

Sam Adams 12 Federal Com PDK #3H

3H

Lateral

Plan: Plan #2

Standard Planning Report

07 May, 2014

Section Distances
Sec12,T17S,R29E
SHL - Lot H
1650'FNL, 230'FWL
PP
1652'FNL, 330'FWL
PBHL - Unit E
1650'FNL, 330'FEL

Archer

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 3H
Company:	COG OPERATING, LLC	TVD Reference:	3652'GL+17'KB @ 3669'00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3652'GL+17'KB @ 3669'00usft (Planning)
Site:	Sam Adams 12 Federal Com PDK #3H	North Reference:	Grid
Well:	3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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:	Sam Adams 12 Federal Com PDK #3H		
Site Position:		Northing:	673,673.20 usft
From:	Map	Easting:	591,436.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in
		Latitude:	32° 51' 5.97 N
		Longitude:	104° 2' 8.12 W
		Grid Convergence:	0.16 °

Well:	3H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,652.00 usft

Wellbore:	Lateral		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	5/7/2014	7.49
			Dip Angle
			60.61
			Field Strength
			48,651

Design:	Plan #2		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			89.98

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	
3,829.00	0.00	0.00	3,829.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,656.27	91.00	91.50	4,349.79	-13.87	529.78	11.00	11.00	0.00	91.50	
4,742.83	91.00	89.77	4,348.28	-14.83	616.31	2.00	0.00	-2.00	-90.08	
8,838.07	91.00	89.77	4,277.02	1.70	4,710.90	0.00	0.00	0.00	0.00	Sam Adams 3H PBHL

Archer

Planning Report

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Company:	COG OPERATING, LLC	TVD Reference:	3652'GL+17'KB @ 3669.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3652'GL+17'KB @ 3669.00usft (Planning)
Site:	Sam Adams 12 Federal Com PDK #3H	North Reference:	Grid
Well:	3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,829.00	0.00	0.00	3,829.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 11.00									
3,850.00	2.31	91.50	3,849.99	-0.01	0.42	0.42	11.00	11.00	0.00
3,900.00	7.81	91.50	3,899.78	-0.13	4.83	4.83	11.00	11.00	0.00
3,950.00	13.31	91.50	3,948.91	-0.37	13.99	13.99	11.00	11.00	0.00
4,000.00	18.81	91.50	3,996.94	-0.73	27.81	27.81	11.00	11.00	0.00
4,050.00	24.31	91.50	4,043.43	-1.21	46.17	46.17	11.00	11.00	0.00
4,100.00	29.81	91.50	4,087.94	-1.80	68.90	68.90	11.00	11.00	0.00
4,150.00	35.31	91.50	4,130.06	-2.51	95.79	95.79	11.00	11.00	0.00
4,200.00	40.81	91.50	4,169.42	-3.31	126.59	126.59	11.00	11.00	0.00
4,250.00	46.31	91.50	4,205.64	-4.22	161.02	161.02	11.00	11.00	0.00
4,300.00	51.81	91.50	4,238.39	-5.20	198.76	198.76	11.00	11.00	0.00
4,350.00	57.31	91.50	4,267.37	-6.27	239.47	239.47	11.00	11.00	0.00
4,400.00	62.81	91.50	4,292.31	-7.40	282.77	282.76	11.00	11.00	0.00
4,450.00	68.31	91.50	4,312.99	-8.60	328.25	328.25	11.00	11.00	0.00

Archer Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well: 3H
Company:	COG OPERATING, LLC	TVD Reference:	3652 GL-17 KB @ 3669.00usft (Planning)
Project:	Eddy County, NM	MD Reference:	3652 GL-17 KB @ 3669.00usft (Planning)
Site:	Sam Adams #2 Federal Com PDK #3H	North Reference:	Grid
Well:	3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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)
4,500.00	73.81	91.50	4,329.21	-9.83	375.51	375.51	11.00	11.00	0.00
4,550.00	79.31	91.50	4,340.83	-11.11	424.11	424.10	11.00	11.00	0.00
4,600.00	84.81	91.50	4,347.74	-12.40	473.59	473.59	11.00	11.00	0.00
4,650.00	90.31	91.50	4,349.86	-13.71	523.51	523.50	11.00	11.00	0.00
4,656.27	91.00	91.50	4,349.79	-13.87	529.78	529.77	11.00	11.00	0.00
Start DLS 2.00 TFO: 90.08									
4,700.00	91.00	90.63	4,349.03	-14.68	573.49	573.49	2.00	0.00	-2.00
4,742.83	91.00	89.77	4,348.28	-14.83	616.31	616.31	2.00	0.00	-2.00
Start 4095.24 hold at 4742.83 MD									
4,800.00	91.00	89.77	4,347.29	-14.60	673.48	673.47	0.00	0.00	0.00
4,900.00	91.00	89.77	4,345.55	-14.20	773.46	773.46	0.00	0.00	0.00
5,000.00	91.00	89.77	4,343.81	-13.79	873.44	873.44	0.00	0.00	0.00
5,100.00	91.00	89.77	4,342.07	-13.39	973.43	973.42	0.00	0.00	0.00
5,200.00	91.00	89.77	4,340.33	-12.99	1,073.41	1,073.41	0.00	0.00	0.00
5,300.00	91.00	89.77	4,338.59	-12.58	1,173.40	1,173.39	0.00	0.00	0.00
5,400.00	91.00	89.77	4,336.85	-12.18	1,273.38	1,273.38	0.00	0.00	0.00
5,500.00	91.00	89.77	4,335.11	-11.77	1,373.36	1,373.36	0.00	0.00	0.00
5,600.00	91.00	89.77	4,333.37	-11.37	1,473.35	1,473.34	0.00	0.00	0.00
5,700.00	91.00	89.77	4,331.63	-10.97	1,573.33	1,573.33	0.00	0.00	0.00
5,800.00	91.00	89.77	4,329.89	-10.56	1,673.32	1,673.31	0.00	0.00	0.00
5,900.00	91.00	89.77	4,328.15	-10.16	1,773.30	1,773.30	0.00	0.00	0.00
6,000.00	91.00	89.77	4,326.41	-9.76	1,873.28	1,873.28	0.00	0.00	0.00
6,100.00	91.00	89.77	4,324.67	-9.35	1,973.27	1,973.27	0.00	0.00	0.00
6,200.00	91.00	89.77	4,322.93	-8.95	2,073.25	2,073.25	0.00	0.00	0.00
6,300.00	91.00	89.77	4,321.19	-8.55	2,173.24	2,173.23	0.00	0.00	0.00
6,400.00	91.00	89.77	4,319.45	-8.14	2,273.22	2,273.22	0.00	0.00	0.00
6,500.00	91.00	89.77	4,317.71	-7.74	2,373.20	2,373.20	0.00	0.00	0.00
6,600.00	91.00	89.77	4,315.97	-7.33	2,473.19	2,473.19	0.00	0.00	0.00
6,700.00	91.00	89.77	4,314.23	-6.93	2,573.17	2,573.17	0.00	0.00	0.00
6,800.00	91.00	89.77	4,312.49	-6.53	2,673.16	2,673.15	0.00	0.00	0.00
6,900.00	91.00	89.77	4,310.75	-6.12	2,773.14	2,773.14	0.00	0.00	0.00
7,000.00	91.00	89.77	4,309.01	-5.72	2,873.12	2,873.12	0.00	0.00	0.00
7,100.00	91.00	89.77	4,307.26	-5.32	2,973.11	2,973.11	0.00	0.00	0.00
7,200.00	91.00	89.77	4,305.52	-4.91	3,073.09	3,073.09	0.00	0.00	0.00
7,300.00	91.00	89.77	4,303.78	-4.51	3,173.08	3,173.08	0.00	0.00	0.00
7,400.00	91.00	89.77	4,302.04	-4.10	3,273.06	3,273.06	0.00	0.00	0.00
7,500.00	91.00	89.77	4,300.30	-3.70	3,373.05	3,373.04	0.00	0.00	0.00
7,600.00	91.00	89.77	4,298.56	-3.30	3,473.03	3,473.03	0.00	0.00	0.00
7,700.00	91.00	89.77	4,296.82	-2.89	3,573.01	3,573.01	0.00	0.00	0.00
7,800.00	91.00	89.77	4,295.08	-2.49	3,673.00	3,673.00	0.00	0.00	0.00
7,900.00	91.00	89.77	4,293.34	-2.09	3,772.98	3,772.98	0.00	0.00	0.00
8,000.00	91.00	89.77	4,291.60	-1.68	3,872.97	3,872.96	0.00	0.00	0.00
8,100.00	91.00	89.77	4,289.86	-1.28	3,972.95	3,972.95	0.00	0.00	0.00
8,200.00	91.00	89.77	4,288.12	-0.88	4,072.93	4,072.93	0.00	0.00	0.00
8,300.00	91.00	89.77	4,286.38	-0.47	4,172.92	4,172.92	0.00	0.00	0.00
8,400.00	91.00	89.77	4,284.64	-0.07	4,272.90	4,272.90	0.00	0.00	0.00
8,500.00	91.00	89.77	4,282.90	0.34	4,372.89	4,372.89	0.00	0.00	0.00
8,600.00	91.00	89.77	4,281.16	0.74	4,472.87	4,472.87	0.00	0.00	0.00
8,700.00	91.00	89.77	4,279.42	1.14	4,572.85	4,572.85	0.00	0.00	0.00
8,800.00	91.00	89.77	4,277.68	1.55	4,672.84	4,672.84	0.00	0.00	0.00
8,838.07	91.00	89.77	4,277.02	1.70	4,710.90	4,710.90	0.00	0.00	0.00
TD at 8838.07									

Archer Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 3H
Company:	COG OPERATING LLC	TVD Reference:	3652'GL+17'KB @ 3669.00usft (Planning)
Project:	Eddy County NM	MD Reference:	3652'GL+17'KB @ 3669.00usft (Planning)
Site:	Sam Adams 12 Federal Com PDK #3H	North Reference:	Grid
Well:	3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #2		

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									
Sam Adams 3H Surface	0.00	0.00	0.00	0.00	0.00	673,673.20	591,436.30	32° 51' 5.97 N	104° 2' 8.12 W
- plan hits target center									
- Point									
Sam Adams 3H PP	0.00	0.00	0.00	-2.62	99.98	673,670.58	591,536.28	32° 51' 5.94 N	104° 2' 6.95 W
- plan misses target center by 100.01usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
Sam Adams 3H PBHL	0.00	0.00	4,277.02	1.70	4,710.90	673,674.90	596,147.20	32° 51' 5.85 N	104° 1' 12.89 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
3,829.00	3,829.00	0.00	0.00	Start Build 11.00
4,656.27	4,349.79	-13.87	529.78	Start DLS 2.00 TFO -90.08
4,742.83	4,348.28	-14.83	616.31	Start 4095.24 hold at 4742.83 MD
8,838.07	4,277.02	1.70	4,710.90	TD at 8838.07