

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address COG Operating 600 West Illinois Ave. Midland, TX 79701		² OGRID Number 229137
		³ Reason for Filing Code/ Effective Date NW/1/31/21
⁴ API Number 30-015-46814	⁵ Pool Name Dogie Draw; Purple Sage; Wolfcamp	
⁶ Pool Code 98220		
⁷ Property Code 323072	⁸ Property Name Hambone Federal Com	⁹ Well Number 703H

II. ¹⁰ Surface Location

UI or lot no. P	Section 8	Township 26-S	Range 29-E	Lot Idn	Feet from the 222	North/South Line South	Feet from the 1228	East/West line East	County Eddy
--------------------	--------------	------------------	---------------	---------	----------------------	---------------------------	-----------------------	------------------------	----------------

¹¹ Bottom Hole Location

UL or lot no. 2	Section 5	Township 26-S	Range 29-E	Lot Idn	Feet from the 202	North/South line North	Feet from the 2182	East/West line East	County Eddy
¹² Lse Code F	¹³ Producing Method Code P		¹⁴ Gas Connection Date 1/31/21		¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
371058	ETC Field Services 8111 Westchester Drive Suite 600 Dallas, Tx 75225	G
214984	Plains Marketing L.P. P.O. Box 4648 Houston, Tx 77002	O

IV. Well Completion Data

²¹ Spud Date 3/17/20	²² Ready Date 4/13/20	²³ TD 20272'	²⁴ PBTD 20231'	²⁵ Perforations 10,270'-19,930'	²⁶ DHC, MC
²⁷ Hole Size		²⁸ Casing & Tubing Size	²⁹ Depth Set		³⁰ Sacks Cement
17.5"		13.375"	356'		425
12.25"		10.75"	2886'		800
9.875"		7.625"	8868'		1200
6.75"		5.5"	20257'		1475
Tubing		2.875"	9407.4'		

V. Well Test Data

³¹ Date New Oil 1/31/21	³² Gas Delivery Date 1/31/21	³³ Test Date 1/31/21	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure 1700#	³⁶ Csg. Pressure 1800#
³⁷ Choke Size 8/64"	³⁸ Oil 562	³⁹ Water 4537	⁴⁰ Gas 1679		⁴¹ Test Method
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Kayla Estrada</i>			OIL CONSERVATION DIVISION		
Printed name: Kayla Estrada			Approved by:		
Title: Regulatory Coordinator			Title:		
E-mail Address: kayla.l.estrada@conocophillips.com			Approval Date:		
Date: 2/14/23		Phone: 432-688-6837			

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
511 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 746-1283 Fax: (575) 746-9720

DISTRICT III
1000 RIO BRAZOS RD., 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, New Mexico 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-46814		Pool Code 98220	Pool Name Purple Sage; Wolfcamp
Property Code 323072	Property Name HAMBONE FEDERAL COM		Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING, LLC		Elevation 2913.8'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	26-S	29-E		222	SOUTH	1228	EAST	EDDY

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
2	5	26-S	29-E		202	NORTH	2182	EAST	EDDY
Dedicated Acres 640	Joint or Infill	Consolidation Code	Order No.						

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

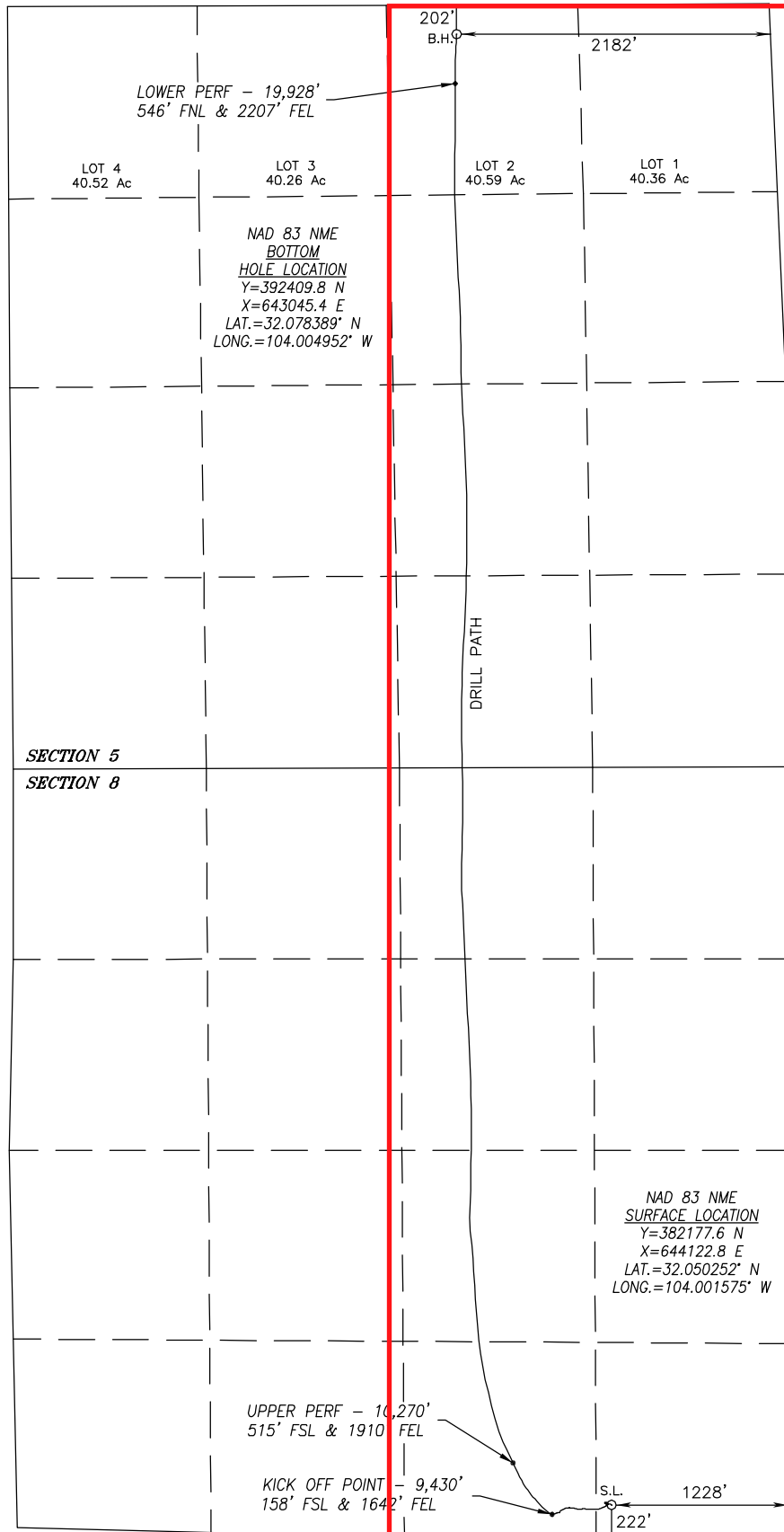
SEE PAGE 2

PAGE 1 OF 2

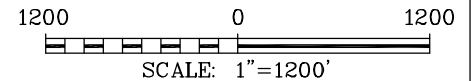
W.O. #20-1643

DRAWN BY: WN

Property Code 323072	Property Name HAMBONE FEDERAL COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 2913.8'



SURFACE INFO AND BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING, LLC FOR THE HAMBONE FEDERAL COM #703H SUPPLIED TO HARCROW SURVEYING, LLC ON DECEMBER 4, 2020



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Kayla Estrada 2/14/23

Signature

Date

Kayla Estrada

Printed Name

Kayla.l.estrada@conocophillips.com

E-mail Address

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.

JULY 3, 2019/APRIL 16, 2020

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



12/8/20

Certificate No. CHAD HARCROW 17777

PAGE 2 OF 2

W.O. #20-1643

DRAWN BY: WN

Intent ☐ As Drilled ☐

API # 30-015-46814		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit?

☐ No

Is this well an infill well?

☐ Yes

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-015-46813		
Operator Name: COG Operating LLC	Property Name: Hambone Federal Com	Well Number 702H

KZ 06/29/2018



COG Operating LLC

**Eddy County, NM (NAD27 NME)
Hambone Federal Com
703H**

OH / 66457

Design: Surveys (Pioneer 84)

Standard Survey Report

16 April, 2020





Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

Project	Eddy 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	Hambone Federal Com		
Site Position:		Northing:	382,232.28 usft
From:	Map	Easting:	601,211.49 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 1.622153 N
		Longitude:	104° 0' 23.979022 W
		Grid Convergence:	0.17 °

Well	703H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	1.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 3' 0.457866 N
		Longitude:	104° 0' 3.929216 W
		Ground Level:	2,913.80 usft

Wellbore	OH / 66457		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	4/19/2020	6.72
			Dip Angle (°)
			59.64
			Field Strength (nT)
			47,710.46971170

Design	Surveys (Pioneer 84)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			354.02

Survey Program	Date	4/16/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	6,254.00	SDI Gyro Surveys (OH / 66457)	Scientific Keeper	Scientific Drilling Intl. Standard Wireline Keeper
6,263.00	20,272.00	Phoenix MWD Surveys - SQC FDIR (OH /	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

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	1.11	319.72	99.99	0.74	-0.63	0.80	1.11	1.11	0.00
125.00	0.96	316.98	124.99	1.08	-0.93	1.17	0.63	-0.60	-10.96
150.00	1.31	321.87	149.98	1.45	-1.25	1.58	1.45	1.40	19.56
175.00	0.89	316.84	174.98	1.82	-1.55	1.97	1.72	-1.68	-20.12
200.00	0.82	314.58	199.98	2.09	-1.81	2.27	0.31	-0.28	-9.04
225.00	0.76	308.85	224.97	2.32	-2.07	2.52	0.40	-0.24	-22.92
250.00	0.74	308.33	249.97	2.52	-2.33	2.75	0.08	-0.08	-2.08
275.00	0.70	308.74	274.97	2.72	-2.57	2.97	0.16	-0.16	1.64
300.00	0.72	298.93	299.97	2.89	-2.83	3.17	0.49	0.08	-39.24



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
325.00	0.64	300.53	324.97	3.04	-3.09	3.34	0.33	-0.32	6.40
350.00	0.63	300.22	349.97	3.18	-3.33	3.51	0.04	-0.04	-1.24
375.00	0.69	299.66	374.96	3.32	-3.58	3.67	0.24	0.24	-2.24
400.00	0.66	295.88	399.96	3.46	-3.84	3.84	0.21	-0.12	-15.12
425.00	0.67	299.03	424.96	3.59	-4.09	4.00	0.15	0.04	12.60
450.00	0.69	298.41	449.96	3.73	-4.35	4.17	0.09	0.08	-2.48
475.00	0.73	297.29	474.96	3.88	-4.63	4.34	0.17	0.16	-4.48
500.00	0.82	298.53	499.95	4.04	-4.93	4.53	0.37	0.36	4.96
525.00	0.86	297.74	524.95	4.21	-5.25	4.73	0.17	0.16	-3.16
550.00	1.07	294.33	549.95	4.39	-5.63	4.96	0.87	0.84	-13.64
575.00	1.02	299.38	574.94	4.60	-6.03	5.20	0.42	-0.20	20.20
600.00	1.19	292.17	599.94	4.81	-6.47	5.45	0.88	0.68	-28.84
625.00	1.31	287.30	624.93	4.99	-6.98	5.69	0.64	0.48	-19.48
650.00	1.44	286.39	649.93	5.16	-7.56	5.92	0.53	0.52	-3.64
675.00	1.57	284.08	674.92	5.33	-8.19	6.16	0.57	0.52	-9.24
700.00	1.76	279.68	699.91	5.48	-8.90	6.38	0.92	0.76	-17.60
725.00	1.81	278.78	724.90	5.61	-9.67	6.58	0.23	0.20	-3.60
750.00	1.89	279.34	749.88	5.73	-10.47	6.79	0.33	0.32	2.24
775.00	1.93	278.36	774.87	5.86	-11.29	7.01	0.21	0.16	-3.92
800.00	1.98	279.11	799.85	5.99	-12.13	7.22	0.22	0.20	3.00
825.00	2.00	277.53	824.84	6.12	-12.99	7.44	0.23	0.08	-6.32
850.00	2.11	279.21	849.82	6.25	-13.88	7.66	0.50	0.44	6.72
875.00	2.18	278.07	874.80	6.39	-14.80	7.90	0.33	0.28	-4.56
900.00	2.25	280.98	899.79	6.55	-15.76	8.15	0.53	0.28	11.64
925.00	2.27	278.81	924.77	6.72	-16.73	8.42	0.35	0.08	-8.68
950.00	2.36	279.91	949.75	6.88	-17.72	8.69	0.40	0.36	4.40
975.00	2.45	282.04	974.72	7.08	-18.75	9.00	0.51	0.36	8.52
1,000.00	2.50	281.76	999.70	7.30	-19.81	9.33	0.21	0.20	-1.12
1,025.00	2.60	280.70	1,024.68	7.52	-20.90	9.66	0.44	0.40	-4.24
1,050.00	2.78	276.74	1,049.65	7.70	-22.06	9.95	1.03	0.72	-15.84
1,075.00	3.08	271.49	1,074.62	7.79	-23.33	10.17	1.61	1.20	-21.00
1,100.00	3.11	269.24	1,099.58	7.79	-24.68	10.32	0.50	0.12	-9.00
1,125.00	2.83	251.48	1,124.55	7.59	-25.95	10.25	3.83	-1.12	-71.04
1,150.00	2.80	229.32	1,149.52	7.00	-26.99	9.77	4.33	-0.12	-88.64
1,175.00	3.01	214.60	1,174.49	6.06	-27.83	8.92	3.09	0.84	-58.88
1,200.00	3.00	214.69	1,199.45	4.98	-28.57	7.93	0.04	-0.04	0.36
1,225.00	3.08	216.68	1,224.42	3.90	-29.35	6.94	0.53	0.32	7.96
1,250.00	3.07	219.22	1,249.38	2.85	-30.17	5.97	0.55	-0.04	10.16
1,275.00	3.10	224.70	1,274.34	1.85	-31.07	5.07	1.19	0.12	21.92
1,300.00	2.93	231.55	1,299.31	0.97	-32.05	4.30	1.59	-0.68	27.40
1,325.00	2.27	245.55	1,324.28	0.37	-33.00	3.80	3.65	-2.64	56.00
1,350.00	1.47	275.67	1,349.27	0.19	-33.77	3.71	4.97	-3.20	120.48
1,375.00	1.11	306.94	1,374.26	0.37	-34.28	3.94	3.11	-1.44	125.08



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
1,400.00	0.94	332.11	1,399.26	0.70	-34.57	4.29	1.91	-0.68	100.68
1,425.00	0.99	335.00	1,424.26	1.07	-34.76	4.69	0.28	0.20	11.56
1,450.00	1.04	331.92	1,449.25	1.47	-34.96	5.10	0.30	0.20	-12.32
1,475.00	1.16	332.88	1,474.25	1.90	-35.18	5.55	0.49	0.48	3.84
1,500.00	1.08	329.52	1,499.24	2.32	-35.41	6.00	0.41	-0.32	-13.44
1,525.00	1.20	324.89	1,524.24	2.74	-35.68	6.44	0.60	0.48	-18.52
1,550.00	1.18	324.97	1,549.23	3.17	-35.98	6.90	0.08	-0.08	0.32
1,575.00	1.08	323.12	1,574.23	3.56	-36.27	7.32	0.43	-0.40	-7.40
1,600.00	1.16	322.20	1,599.22	3.95	-36.57	7.74	0.33	0.32	-3.68
1,625.00	1.19	320.36	1,624.22	4.35	-36.89	8.17	0.19	0.12	-7.36
1,650.00	1.18	323.22	1,649.21	4.76	-37.21	8.61	0.24	-0.04	11.44
1,675.00	1.23	322.56	1,674.21	5.18	-37.52	9.06	0.21	0.20	-2.64
1,700.00	1.18	321.78	1,699.20	5.59	-37.85	9.51	0.21	-0.20	-3.12
1,725.00	1.22	322.84	1,724.20	6.01	-38.17	9.95	0.18	0.16	4.24
1,750.00	1.21	320.98	1,749.19	6.43	-38.49	10.40	0.16	-0.04	-7.44
1,775.00	1.24	320.12	1,774.19	6.84	-38.83	10.85	0.14	0.12	-3.44
1,800.00	1.26	315.20	1,799.18	7.24	-39.20	11.29	0.44	0.08	-19.68
1,825.00	1.21	313.84	1,824.17	7.62	-39.58	11.70	0.23	-0.20	-5.44
1,850.00	1.28	311.34	1,849.17	7.99	-39.98	12.11	0.35	0.28	-10.00
1,875.00	1.33	312.58	1,874.16	8.37	-40.41	12.53	0.23	0.20	4.96
1,900.00	1.34	310.80	1,899.15	8.75	-40.84	12.96	0.17	0.04	-7.12
1,925.00	1.29	309.44	1,924.15	9.12	-41.28	13.37	0.24	-0.20	-5.44
1,950.00	1.40	308.96	1,949.14	9.49	-41.74	13.79	0.44	0.44	-1.92
1,975.00	1.33	306.12	1,974.13	9.86	-42.21	14.20	0.39	-0.28	-11.36
2,000.00	1.33	305.31	1,999.13	10.20	-42.68	14.59	0.08	0.00	-3.24
2,025.00	1.43	304.80	2,024.12	10.54	-43.17	14.98	0.40	0.40	-2.04
2,050.00	1.56	305.28	2,049.11	10.92	-43.71	15.41	0.52	0.52	1.92
2,075.00	1.56	302.56	2,074.10	11.30	-44.27	15.85	0.30	0.00	-10.88
2,100.00	1.52	302.01	2,099.09	11.66	-44.84	16.26	0.17	-0.16	-2.20
2,125.00	1.61	302.43	2,124.08	12.02	-45.42	16.69	0.36	0.36	1.68
2,150.00	1.51	299.19	2,149.07	12.37	-46.00	17.09	0.53	-0.40	-12.96
2,175.00	1.39	305.46	2,174.07	12.70	-46.53	17.48	0.80	-0.48	25.08
2,200.00	1.31	313.69	2,199.06	13.08	-46.99	17.90	0.84	-0.32	32.92
2,225.00	0.92	329.44	2,224.05	13.45	-47.30	18.30	1.97	-1.56	63.00
2,250.00	0.80	346.44	2,249.05	13.79	-47.44	18.66	1.12	-0.48	68.00
2,275.00	0.88	358.75	2,274.05	14.15	-47.49	19.02	0.79	0.32	49.24
2,300.00	0.95	359.67	2,299.05	14.55	-47.49	19.42	0.29	0.28	3.68
2,325.00	0.96	7.74	2,324.04	14.97	-47.46	19.83	0.54	0.04	32.28
2,350.00	1.00	4.93	2,349.04	15.39	-47.42	20.25	0.25	0.16	-11.24
2,375.00	1.06	4.99	2,374.03	15.84	-47.38	20.69	0.24	0.24	0.24
2,400.00	1.01	15.30	2,399.03	16.28	-47.30	21.12	0.77	-0.20	41.24
2,425.00	1.04	30.15	2,424.03	16.69	-47.13	21.51	1.07	0.12	59.40
2,450.00	1.21	43.92	2,449.02	17.08	-46.83	21.86	1.27	0.68	55.08



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
2,475.00	1.47	56.87	2,474.02	17.44	-46.38	22.18	1.59	1.04	51.80
2,500.00	1.80	73.15	2,499.01	17.73	-45.73	22.40	2.27	1.32	65.12
2,525.00	2.22	77.20	2,523.99	17.95	-44.89	22.53	1.77	1.68	16.20
2,550.00	2.58	85.60	2,548.97	18.10	-43.85	22.57	2.01	1.44	33.60
2,575.00	3.00	89.28	2,573.94	18.15	-42.64	22.50	1.83	1.68	14.72
2,600.00	3.25	88.85	2,598.90	18.18	-41.28	22.38	1.00	1.00	-1.72
2,625.00	3.42	90.10	2,623.86	18.19	-39.82	22.24	0.74	0.68	5.00
2,650.00	3.50	92.09	2,648.81	18.16	-38.31	22.05	0.58	0.32	7.96
2,675.00	3.45	90.33	2,673.77	18.13	-36.80	21.86	0.47	-0.20	-7.04
2,700.00	3.24	93.14	2,698.72	18.09	-35.34	21.67	1.07	-0.84	11.24
2,725.00	2.69	111.03	2,723.69	17.84	-34.09	21.29	4.28	-2.20	71.56
2,750.00	2.39	117.51	2,748.67	17.38	-33.08	20.74	1.66	-1.20	25.92
2,775.00	2.31	120.59	2,773.65	16.89	-32.18	20.15	0.60	-0.32	12.32
2,800.00	2.24	123.08	2,798.63	16.36	-31.34	19.54	0.48	-0.28	9.96
2,825.00	2.34	123.53	2,823.61	15.82	-30.50	18.91	0.41	0.40	1.80
2,850.00	2.30	123.13	2,848.59	15.26	-29.66	18.27	0.17	-0.16	-1.60
2,875.00	2.37	125.76	2,873.57	14.68	-28.82	17.61	0.51	0.28	10.52
2,900.00	2.36	124.61	2,898.54	14.09	-27.98	16.93	0.19	-0.04	-4.60
2,925.00	2.31	123.83	2,923.52	13.52	-27.13	16.27	0.24	-0.20	-3.12
2,950.00	2.27	122.40	2,948.50	12.97	-26.30	15.64	0.28	-0.16	-5.72
2,975.00	2.29	132.36	2,973.48	12.37	-25.51	14.96	1.58	0.08	39.84
3,000.00	1.92	143.19	2,998.47	11.70	-24.89	14.23	2.17	-1.48	43.32
3,025.00	2.09	153.12	3,023.45	10.95	-24.43	13.44	1.54	0.68	39.72
3,050.00	2.23	156.37	3,048.43	10.10	-24.03	12.55	0.74	0.56	13.00
3,075.00	1.93	165.83	3,073.42	9.25	-23.73	11.67	1.82	-1.20	37.84
3,100.00	2.41	172.95	3,098.40	8.32	-23.57	10.73	2.20	1.92	28.48
3,125.00	2.53	177.39	3,123.38	7.25	-23.48	9.65	0.90	0.48	17.76
3,150.00	2.61	183.12	3,148.35	6.13	-23.48	8.54	1.08	0.32	22.92
3,175.00	2.65	188.99	3,173.32	4.99	-23.60	7.42	1.09	0.16	23.48
3,200.00	3.06	205.35	3,198.29	3.81	-23.98	6.29	3.63	1.64	65.44
3,225.00	3.28	211.90	3,223.26	2.60	-24.64	5.16	1.69	0.88	26.20
3,250.00	3.92	222.47	3,248.21	1.37	-25.60	4.03	3.68	2.56	42.28
3,275.00	4.78	232.81	3,273.13	0.11	-27.00	2.92	4.64	3.44	41.36
3,300.00	5.08	237.75	3,298.04	-1.11	-28.77	1.89	2.08	1.20	19.76
3,325.00	5.15	236.45	3,322.94	-2.33	-30.64	0.88	0.54	0.28	-5.20
3,350.00	5.13	237.65	3,347.84	-3.54	-32.52	-0.14	0.44	-0.08	4.80
3,375.00	5.11	238.82	3,372.74	-4.72	-34.42	-1.11	0.43	-0.08	4.68
3,400.00	5.15	236.48	3,397.64	-5.91	-36.31	-2.10	0.85	0.16	-9.36
3,425.00	5.02	236.65	3,422.54	-7.13	-38.16	-3.12	0.52	-0.52	0.68
3,450.00	5.05	236.99	3,447.45	-8.34	-39.99	-4.12	0.17	0.12	1.36
3,475.00	5.03	236.41	3,472.35	-9.54	-41.83	-5.13	0.22	-0.08	-2.32
3,500.00	5.05	235.98	3,497.25	-10.76	-43.65	-6.16	0.17	0.08	-1.72
3,525.00	5.05	236.71	3,522.16	-11.98	-45.48	-7.18	0.26	0.00	2.92
3,550.00	5.13	237.86	3,547.06	-13.18	-47.35	-8.18	0.52	0.32	4.60



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
3,575.00	5.17	246.71	3,571.96	-14.22	-49.33	-9.00	3.18	0.16	35.40
3,600.00	5.21	249.56	3,596.86	-15.06	-51.43	-9.62	1.04	0.16	11.40
3,625.00	5.27	250.98	3,621.75	-15.83	-53.58	-10.17	0.57	0.24	5.68
3,650.00	5.22	250.35	3,646.65	-16.59	-55.73	-10.69	0.31	-0.20	-2.52
3,675.00	5.19	249.21	3,671.54	-17.37	-57.86	-11.25	0.43	-0.12	-4.56
3,700.00	5.15	250.46	3,696.44	-18.15	-59.98	-11.80	0.48	-0.16	5.00
3,725.00	5.08	247.94	3,721.34	-18.94	-62.06	-12.37	0.94	-0.28	-10.08
3,750.00	5.12	246.36	3,746.24	-19.80	-64.11	-13.02	0.58	0.16	-6.32
3,775.00	5.07	247.14	3,771.14	-20.68	-66.15	-13.68	0.34	-0.20	3.12
3,800.00	5.10	246.72	3,796.05	-21.55	-68.19	-14.33	0.19	0.12	-1.68
3,825.00	5.17	246.34	3,820.95	-22.44	-70.24	-15.00	0.31	0.28	-1.52
3,850.00	5.19	246.89	3,845.84	-23.34	-72.31	-15.68	0.21	0.08	2.20
3,875.00	5.29	246.63	3,870.74	-24.24	-74.41	-16.35	0.41	0.40	-1.04
3,900.00	5.69	250.19	3,895.62	-25.11	-76.63	-16.99	2.10	1.60	14.24
3,925.00	6.60	255.26	3,920.48	-25.90	-79.19	-17.51	4.23	3.64	20.28
3,950.00	6.91	256.94	3,945.31	-26.61	-82.04	-17.91	1.47	1.24	6.72
3,975.00	6.96	257.00	3,970.12	-27.29	-84.98	-18.28	0.20	0.20	0.24
4,000.00	7.01	255.75	3,994.94	-28.00	-87.94	-18.69	0.64	0.20	-5.00
4,025.00	7.04	256.70	4,019.75	-28.73	-90.91	-19.10	0.48	0.12	3.80
4,050.00	7.09	257.17	4,044.56	-29.43	-93.90	-19.48	0.31	0.20	1.88
4,075.00	7.11	259.74	4,069.37	-30.04	-96.93	-19.78	1.27	0.08	10.28
4,100.00	7.13	266.00	4,094.18	-30.43	-100.00	-19.84	3.10	0.08	25.04
4,125.00	7.27	271.78	4,118.98	-30.49	-103.13	-19.58	2.95	0.56	23.12
4,150.00	7.37	273.48	4,143.78	-30.34	-106.31	-19.10	0.95	0.40	6.80
4,175.00	7.41	273.62	4,168.57	-30.14	-109.52	-18.57	0.18	0.16	0.56
4,200.00	7.36	272.60	4,193.36	-29.97	-112.73	-18.06	0.56	-0.20	-4.08
4,225.00	7.42	273.85	4,218.15	-29.79	-115.94	-17.54	0.69	0.24	5.00
4,250.00	7.26	272.67	4,242.95	-29.60	-119.13	-17.03	0.88	-0.64	-4.72
4,275.00	7.16	271.02	4,267.75	-29.50	-122.26	-16.60	0.92	-0.40	-6.60
4,300.00	7.18	271.22	4,292.56	-29.44	-125.38	-16.22	0.13	0.08	0.80
4,325.00	7.12	270.17	4,317.36	-29.40	-128.49	-15.86	0.58	-0.24	-4.20
4,350.00	7.07	271.10	4,342.17	-29.37	-131.58	-15.50	0.50	-0.20	3.72
4,375.00	6.72	272.56	4,366.99	-29.27	-134.58	-15.09	1.57	-1.40	5.84
4,400.00	6.23	274.34	4,391.83	-29.11	-137.39	-14.63	2.12	-1.96	7.12
4,425.00	6.02	274.29	4,416.69	-28.91	-140.05	-14.16	0.84	-0.84	-0.20
4,450.00	5.91	273.45	4,441.55	-28.73	-142.65	-13.71	0.56	-0.44	-3.36
4,475.00	5.88	273.25	4,466.42	-28.58	-145.21	-13.30	0.15	-0.12	-0.80
4,500.00	5.89	273.55	4,491.29	-28.43	-147.77	-12.88	0.13	0.04	1.20
4,525.00	5.77	272.06	4,516.16	-28.30	-150.30	-12.49	0.77	-0.48	-5.96
4,550.00	5.66	270.35	4,541.03	-28.25	-152.79	-12.18	0.81	-0.44	-6.84
4,575.00	5.74	271.96	4,565.91	-28.20	-155.28	-11.87	0.72	0.32	6.44
4,600.00	5.51	267.98	4,590.79	-28.20	-157.72	-11.61	1.81	-0.92	-15.92
4,625.00	5.47	267.49	4,615.68	-28.29	-160.11	-11.46	0.25	-0.16	-1.96



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
4,650.00	5.54	268.21	4,640.56	-28.38	-162.51	-11.30	0.39	0.28	2.88
4,675.00	5.48	267.14	4,665.44	-28.48	-164.91	-11.15	0.48	-0.24	-4.28
4,700.00	5.63	269.77	4,690.33	-28.55	-167.33	-10.96	1.18	0.60	10.52
4,725.00	5.54	272.24	4,715.21	-28.50	-169.76	-10.66	1.03	-0.36	9.88
4,750.00	5.75	273.36	4,740.09	-28.38	-172.22	-10.29	0.95	0.84	4.48
4,775.00	5.87	273.98	4,764.96	-28.22	-174.74	-9.86	0.54	0.48	2.48
4,800.00	5.74	271.65	4,789.83	-28.10	-177.27	-9.48	1.08	-0.52	-9.32
4,825.00	5.82	273.75	4,814.70	-27.98	-179.78	-9.10	0.90	0.32	8.40
4,850.00	5.79	272.82	4,839.58	-27.83	-182.31	-8.69	0.39	-0.12	-3.72
4,875.00	5.80	272.45	4,864.45	-27.72	-184.83	-8.31	0.15	0.04	-1.48
4,900.00	5.89	272.93	4,889.32	-27.60	-187.37	-7.93	0.41	0.36	1.92
4,925.00	5.82	272.04	4,914.19	-27.49	-189.92	-7.55	0.46	-0.28	-3.56
4,950.00	5.78	270.23	4,939.06	-27.44	-192.44	-7.24	0.75	-0.16	-7.24
4,975.00	5.83	270.42	4,963.93	-27.42	-194.97	-6.96	0.21	0.20	0.76
5,000.00	5.66	268.48	4,988.81	-27.45	-197.47	-6.72	1.03	-0.68	-7.76
5,025.00	5.58	266.71	5,013.69	-27.55	-199.92	-6.57	0.76	-0.32	-7.08
5,050.00	5.49	263.46	5,038.57	-27.75	-202.32	-6.52	1.30	-0.36	-13.00
5,075.00	5.42	262.32	5,063.46	-28.05	-204.68	-6.57	0.52	-0.28	-4.56
5,100.00	5.52	266.52	5,088.34	-28.28	-207.05	-6.55	1.65	0.40	16.80
5,125.00	5.42	269.15	5,113.23	-28.37	-209.43	-6.40	1.08	-0.40	10.52
5,150.00	5.41	271.19	5,138.12	-28.36	-211.79	-6.14	0.77	-0.04	8.16
5,175.00	5.55	272.35	5,163.00	-28.29	-214.18	-5.82	0.71	0.56	4.64
5,200.00	5.59	272.05	5,187.88	-28.19	-216.60	-5.48	0.20	0.16	-1.20
5,225.00	5.46	270.43	5,212.77	-28.14	-219.01	-5.17	0.81	-0.52	-6.48
5,250.00	5.61	271.17	5,237.65	-28.11	-221.42	-4.89	0.66	0.60	2.96
5,275.00	5.56	269.09	5,262.53	-28.10	-223.85	-4.63	0.83	-0.20	-8.32
5,300.00	5.68	269.64	5,287.41	-28.13	-226.30	-4.40	0.53	0.48	2.20
5,325.00	5.68	268.92	5,312.29	-28.16	-228.77	-4.17	0.29	0.00	-2.88
5,350.00	5.53	266.11	5,337.17	-28.27	-231.21	-4.02	1.25	-0.60	-11.24
5,375.00	5.56	267.53	5,362.05	-28.40	-233.62	-3.91	0.56	0.12	5.68
5,400.00	5.25	265.86	5,386.94	-28.53	-235.97	-3.80	1.39	-1.24	-6.68
5,425.00	5.02	272.35	5,411.84	-28.57	-238.21	-3.60	2.50	-0.92	25.96
5,450.00	4.92	282.59	5,436.75	-28.29	-240.35	-3.10	3.57	-0.40	40.96
5,475.00	4.87	284.56	5,461.66	-27.79	-242.42	-2.39	0.70	-0.20	7.88
5,500.00	4.83	284.39	5,486.57	-27.26	-244.47	-1.65	0.17	-0.16	-0.68
5,525.00	4.93	285.69	5,511.48	-26.71	-246.52	-0.88	0.60	0.40	5.20
5,550.00	4.95	285.38	5,536.38	-26.14	-248.59	-0.10	0.13	0.08	-1.24
5,575.00	4.87	285.34	5,561.29	-25.57	-250.66	0.68	0.32	-0.32	-0.16
5,600.00	4.78	283.24	5,586.20	-25.05	-252.70	1.41	0.79	-0.36	-8.40
5,625.00	4.86	282.69	5,611.12	-24.58	-254.74	2.09	0.37	0.32	-2.20
5,650.00	4.75	283.33	5,636.03	-24.11	-256.78	2.78	0.49	-0.44	2.56
5,675.00	4.60	281.36	5,660.95	-23.67	-258.77	3.42	0.88	-0.60	-7.88
5,700.00	4.63	281.27	5,685.86	-23.28	-260.75	4.01	0.12	0.12	-0.36



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
5,725.00	4.72	281.39	5,710.78	-22.88	-262.74	4.62	0.36	0.36	0.48
5,750.00	4.58	278.21	5,735.70	-22.53	-264.74	5.17	1.17	-0.56	-12.72
5,775.00	4.57	278.18	5,760.62	-22.25	-266.71	5.66	0.04	-0.04	-0.12
5,800.00	4.66	279.26	5,785.54	-21.94	-268.70	6.17	0.50	0.36	4.32
5,825.00	4.67	278.39	5,810.46	-21.63	-270.71	6.69	0.29	0.04	-3.48
5,850.00	4.69	277.88	5,835.37	-21.34	-272.73	7.19	0.18	0.08	-2.04
5,875.00	4.59	276.44	5,860.29	-21.09	-274.74	7.65	0.61	-0.40	-5.76
5,900.00	4.52	276.55	5,885.21	-20.86	-276.71	8.08	0.28	-0.28	0.44
5,925.00	4.43	275.55	5,910.13	-20.66	-278.65	8.48	0.48	-0.36	-4.00
5,950.00	4.40	274.93	5,935.06	-20.48	-280.56	8.86	0.23	-0.12	-2.48
5,975.00	4.44	274.98	5,959.99	-20.32	-282.48	9.22	0.16	0.16	0.20
6,000.00	4.34	273.96	5,984.91	-20.17	-284.39	9.57	0.51	-0.40	-4.08
6,025.00	4.24	273.94	6,009.84	-20.04	-286.26	9.89	0.40	-0.40	-0.08
6,050.00	4.12	272.66	6,034.78	-19.93	-288.08	10.19	0.61	-0.48	-5.12
6,075.00	4.04	271.03	6,059.71	-19.88	-289.85	10.43	0.56	-0.32	-6.52
6,100.00	3.99	271.90	6,084.65	-19.83	-291.60	10.66	0.32	-0.20	3.48
6,125.00	3.92	272.08	6,109.59	-19.77	-293.33	10.90	0.28	-0.28	0.72
6,150.00	3.65	270.28	6,134.54	-19.74	-294.98	11.10	1.18	-1.08	-7.20
6,175.00	3.48	266.08	6,159.49	-19.78	-296.53	11.22	1.25	-0.68	-16.80
6,200.00	3.46	267.21	6,184.44	-19.87	-298.04	11.29	0.29	-0.08	4.52
6,225.00	3.38	264.00	6,209.40	-19.99	-299.53	11.33	0.83	-0.32	-12.84
6,250.00	3.41	263.39	6,234.36	-20.15	-301.00	11.32	0.19	0.12	-2.44
6,254.00	3.48	266.63	6,238.35	-20.17	-301.24	11.32	5.17	1.75	81.00
Tie In									
6,263.00	3.40	265.83	6,247.33	-20.21	-301.78	11.34	1.04	-0.89	-8.89
First Phoenix MWD Survey									
6,358.00	3.33	261.06	6,342.17	-20.84	-307.31	11.29	0.30	-0.07	-5.02
6,452.00	3.10	258.55	6,436.02	-21.77	-312.50	10.91	0.29	-0.24	-2.67
6,546.00	2.96	252.82	6,529.89	-22.99	-317.31	10.19	0.35	-0.15	-6.10
6,642.00	3.28	243.93	6,625.75	-24.93	-322.14	8.77	0.60	0.33	-9.26
6,736.00	3.33	238.49	6,719.59	-27.54	-326.89	6.67	0.34	0.05	-5.79
6,831.00	2.65	243.40	6,814.46	-29.96	-331.20	4.71	0.76	-0.72	5.17
6,925.00	2.11	248.26	6,908.38	-31.58	-334.75	3.47	0.61	-0.57	5.17
7,020.00	1.83	256.53	7,003.32	-32.58	-337.85	2.80	0.42	-0.29	8.71
7,115.00	1.88	243.44	7,098.27	-33.63	-340.72	2.05	0.45	0.05	-13.78
7,209.00	2.18	239.66	7,192.22	-35.22	-343.65	0.77	0.35	0.32	-4.02
7,304.00	2.43	240.10	7,287.14	-37.14	-346.95	-0.79	0.26	0.26	0.46
7,399.00	2.36	243.91	7,382.06	-39.00	-350.45	-2.28	0.18	-0.07	4.01
7,494.00	2.27	230.34	7,476.98	-41.06	-353.66	-3.99	0.58	-0.09	-14.28
7,589.00	2.21	213.68	7,571.91	-43.79	-356.12	-6.45	0.69	-0.06	-17.54
7,683.00	2.59	182.73	7,665.83	-47.42	-357.23	-9.94	1.42	0.40	-32.93
7,778.00	2.09	199.17	7,760.75	-51.20	-357.90	-13.63	0.88	-0.53	17.31
7,873.00	1.84	248.35	7,855.70	-53.40	-359.89	-15.61	1.74	-0.26	51.77
7,968.00	2.30	262.56	7,950.64	-54.21	-363.19	-16.07	0.72	0.48	14.96



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
8,063.00	4.89	264.93	8,045.44	-54.81	-369.12	-16.06	2.73	2.73	2.49
8,158.00	2.84	271.23	8,140.22	-55.12	-375.51	-15.70	2.20	-2.16	6.63
8,252.00	0.89	252.89	8,234.17	-55.28	-378.53	-15.55	2.14	-2.07	-19.51
8,347.00	0.63	248.09	8,329.16	-55.69	-379.72	-15.83	0.28	-0.27	-5.05
8,442.00	0.38	133.31	8,424.16	-56.11	-379.98	-16.21	0.91	-0.26	-120.82
8,536.00	0.45	103.40	8,518.16	-56.40	-379.39	-16.57	0.24	0.07	-31.82
8,631.00	0.38	222.15	8,613.16	-56.72	-379.24	-16.91	0.75	-0.07	125.00
8,727.00	1.32	247.66	8,709.14	-57.38	-380.48	-17.43	1.03	0.98	26.57
8,900.00	2.86	253.28	8,882.02	-59.38	-386.45	-18.80	0.90	0.89	3.25
8,995.00	2.90	252.17	8,976.90	-60.80	-391.01	-19.73	0.07	0.04	-1.17
9,089.00	2.84	255.63	9,070.79	-62.10	-395.53	-20.56	0.20	-0.06	3.68
9,185.00	2.73	255.75	9,166.67	-63.26	-400.05	-21.24	0.11	-0.11	0.13
9,279.00	2.56	253.79	9,260.57	-64.39	-404.23	-21.93	0.20	-0.18	-2.09
9,374.00	3.09	266.73	9,355.46	-65.13	-408.83	-22.19	0.87	0.56	13.62
9,421.00	4.87	269.83	9,402.34	-65.21	-412.09	-21.92	3.81	3.79	6.60
9,469.00	6.41	275.46	9,450.11	-64.96	-416.79	-21.19	3.41	3.21	11.73
9,516.00	10.57	304.90	9,496.60	-62.24	-422.95	-17.84	12.53	8.85	62.64
9,564.00	11.47	299.40	9,543.72	-57.38	-430.72	-12.20	2.88	1.88	-11.46
9,658.00	20.53	308.77	9,634.00	-42.44	-451.76	4.86	9.99	9.64	9.97
9,753.00	32.47	319.30	9,718.91	-12.55	-481.50	37.68	13.46	12.57	11.08
9,848.00	37.84	315.86	9,796.56	27.73	-518.45	81.59	6.02	5.65	-3.62
9,880.00	37.21	315.20	9,821.94	41.64	-532.10	96.85	2.34	-1.97	-2.06
9,911.00	37.23	317.04	9,846.63	55.15	-545.10	111.64	3.59	0.06	5.94
9,943.00	39.03	322.29	9,871.80	70.21	-557.86	127.95	11.58	5.63	16.41
9,993.00	39.92	324.20	9,910.40	95.68	-576.88	155.26	3.01	1.78	3.82
10,014.21	41.80	324.52	9,926.44	106.96	-584.96	167.32	8.90	8.84	1.53
FTP @ 10014.2' MD									
10,025.00	42.75	324.68	9,934.42	112.87	-589.17	173.64	8.90	8.85	1.44
10,056.00	45.64	327.60	9,956.65	130.82	-601.19	192.74	11.40	9.32	9.42
10,088.00	48.65	330.16	9,978.41	150.90	-613.30	213.98	11.08	9.41	8.00
10,119.00	53.40	331.91	9,997.91	171.99	-624.96	236.16	15.94	15.32	5.65
10,151.00	58.04	333.00	10,015.93	195.43	-637.17	260.75	14.77	14.50	3.41
10,183.00	62.22	334.29	10,031.86	220.29	-649.48	286.76	13.52	13.06	4.03
10,214.00	66.29	333.74	10,045.32	245.38	-661.72	312.99	13.23	13.13	-1.77
10,246.00	69.16	334.07	10,057.45	271.98	-674.74	340.79	9.02	8.97	1.03
10,277.00	71.81	333.94	10,067.81	298.24	-687.55	368.24	8.56	8.55	-0.42
10,373.00	82.40	333.86	10,089.20	382.15	-728.66	455.99	11.03	11.03	-0.08
10,436.00	91.15	337.21	10,092.74	439.34	-754.67	515.58	14.87	13.89	5.32
10,513.00	98.15	339.97	10,086.50	510.74	-782.67	589.50	9.77	9.09	3.58
10,608.00	98.07	345.94	10,073.09	600.62	-810.23	681.76	6.22	-0.08	6.28
10,703.00	99.05	345.69	10,058.95	691.69	-833.25	774.74	1.06	1.03	-0.26
10,798.00	100.39	345.15	10,042.91	782.31	-856.82	867.32	1.52	1.41	-0.57
10,892.00	101.36	347.42	10,025.17	871.98	-878.71	958.78	2.59	1.03	2.41



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
10,986.00	100.42	350.04	10,007.41	962.50	-896.74	1,050.69	2.91	-1.00	2.79
11,081.00	99.42	352.14	9,991.04	1,054.95	-911.23	1,144.14	2.42	-1.05	2.21
11,176.00	96.02	353.58	9,978.28	1,148.34	-922.93	1,238.24	3.88	-3.58	1.52
11,271.00	89.80	355.77	9,973.46	1,242.76	-931.72	1,333.06	6.94	-6.55	2.31
11,365.00	88.21	355.39	9,975.09	1,336.46	-938.96	1,427.01	1.74	-1.69	-0.40
11,460.00	89.67	356.33	9,976.85	1,431.19	-945.82	1,521.94	1.83	1.54	0.99
11,554.00	89.98	356.20	9,977.14	1,524.99	-951.94	1,615.87	0.36	0.33	-0.14
11,650.00	90.77	356.06	9,976.51	1,620.77	-958.42	1,711.80	0.84	0.82	-0.15
11,744.00	90.69	356.30	9,975.31	1,714.55	-964.69	1,805.72	0.27	-0.09	0.26
11,839.00	86.94	354.23	9,977.28	1,809.19	-972.52	1,900.66	4.51	-3.95	-2.18
11,933.00	90.87	355.29	9,979.07	1,902.76	-981.10	1,994.62	4.33	4.18	1.13
12,029.00	93.04	359.40	9,975.80	1,998.57	-985.55	2,090.37	4.84	2.26	4.28
12,123.00	89.38	1.50	9,973.81	2,092.53	-984.81	2,183.74	4.49	-3.89	2.23
12,218.00	91.09	3.25	9,973.42	2,187.44	-980.87	2,277.72	2.58	1.80	1.84
12,313.00	88.33	0.40	9,973.90	2,282.37	-977.85	2,371.82	4.18	-2.91	-3.00
12,407.00	89.94	0.44	9,975.32	2,376.35	-977.16	2,465.22	1.71	1.71	0.04
12,501.00	88.55	0.00	9,976.56	2,470.34	-976.80	2,558.66	1.55	-1.48	-0.47
12,597.00	89.78	0.68	9,977.96	2,566.33	-976.23	2,654.07	1.46	1.28	0.71
12,692.00	91.23	0.62	9,977.12	2,661.31	-975.15	2,748.42	1.53	1.53	-0.06
12,787.00	89.60	359.09	9,976.43	2,756.31	-975.39	2,842.92	2.35	-1.72	-1.61
12,881.00	88.15	358.85	9,978.28	2,850.27	-977.08	2,936.55	1.56	-1.54	-0.26
12,976.00	89.34	359.06	9,980.36	2,945.23	-978.81	3,031.18	1.27	1.25	0.22
13,071.00	86.00	357.86	9,984.22	3,040.10	-981.36	3,125.80	3.74	-3.52	-1.26
13,166.00	89.32	357.21	9,988.10	3,134.92	-985.44	3,220.53	3.56	3.49	-0.68
13,261.00	90.25	356.52	9,988.46	3,229.78	-990.64	3,315.41	1.22	0.98	-0.73
13,356.00	89.46	356.67	9,988.70	3,324.61	-996.28	3,410.31	0.85	-0.83	0.16
13,452.00	93.21	357.29	9,986.46	3,420.43	-1,001.34	3,506.14	3.96	3.91	0.65
13,547.00	91.38	357.13	9,982.66	3,515.24	-1,005.96	3,600.91	1.93	-1.93	-0.17
13,642.00	90.64	358.13	9,980.98	3,610.14	-1,009.89	3,695.71	1.31	-0.78	1.05
13,737.00	89.55	357.94	9,980.83	3,705.08	-1,013.14	3,790.47	1.16	-1.15	-0.20
13,832.00	88.61	357.32	9,982.35	3,799.99	-1,017.07	3,885.27	1.19	-0.99	-0.65
13,926.00	89.28	357.18	9,984.08	3,893.86	-1,021.58	3,979.10	0.73	0.71	-0.15
14,021.00	88.89	357.10	9,985.60	3,988.73	-1,026.32	4,073.95	0.42	-0.41	-0.08
14,116.00	90.52	357.19	9,986.09	4,083.61	-1,031.05	4,168.80	1.72	1.72	0.09
14,211.00	91.05	357.03	9,984.79	4,178.48	-1,035.84	4,263.66	0.58	0.56	-0.17
14,306.00	91.23	356.77	9,982.90	4,273.32	-1,040.98	4,358.52	0.33	0.19	-0.27
14,401.00	93.58	359.96	9,978.91	4,368.18	-1,043.69	4,453.14	4.17	2.47	3.36
14,496.00	92.99	1.41	9,973.47	4,463.01	-1,042.55	4,547.34	1.65	-0.62	1.53
14,591.00	92.72	1.20	9,968.73	4,557.87	-1,040.39	4,641.46	0.36	-0.28	-0.22
14,686.00	92.89	1.80	9,964.08	4,652.72	-1,037.91	4,735.54	0.66	0.18	0.63
14,781.00	89.41	0.86	9,962.18	4,747.66	-1,035.70	4,829.73	3.79	-3.66	-0.99
14,876.00	88.79	0.28	9,963.67	4,842.65	-1,034.76	4,924.10	0.89	-0.65	-0.61
14,972.00	86.49	359.35	9,967.62	4,938.56	-1,035.07	5,019.52	2.58	-2.40	-0.97
15,067.00	85.42	359.29	9,974.32	5,033.31	-1,036.19	5,113.87	1.13	-1.13	-0.06



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
15,162.00	85.70	359.09	9,981.68	5,128.02	-1,037.53	5,208.20	0.36	0.29	-0.21
15,257.00	88.25	357.71	9,986.69	5,222.84	-1,040.18	5,302.78	3.05	2.68	-1.45
15,352.00	90.50	359.27	9,987.73	5,317.79	-1,042.69	5,397.48	2.88	2.37	1.64
15,447.00	92.67	0.20	9,985.10	5,412.75	-1,043.12	5,491.97	2.48	2.28	0.98
15,542.00	93.48	0.36	9,980.00	5,507.61	-1,042.66	5,586.26	0.87	0.85	0.17
15,637.00	91.65	0.56	9,975.75	5,602.51	-1,041.90	5,680.56	1.94	-1.93	0.21
15,732.00	89.49	1.54	9,974.81	5,697.48	-1,040.16	5,774.84	2.50	-2.27	1.03
15,827.00	88.77	1.86	9,976.25	5,792.42	-1,037.34	5,868.98	0.83	-0.76	0.34
15,922.00	92.08	2.13	9,975.55	5,887.35	-1,034.03	5,963.04	3.50	3.48	0.28
16,017.00	92.61	3.13	9,971.66	5,982.17	-1,029.68	6,056.89	1.19	0.56	1.05
16,112.00	91.29	2.85	9,968.43	6,076.98	-1,024.73	6,150.67	1.42	-1.39	-0.29
16,206.00	90.82	2.92	9,966.70	6,170.85	-1,020.00	6,243.53	0.51	-0.50	0.07
16,302.00	91.08	3.11	9,965.10	6,266.70	-1,014.95	6,338.34	0.34	0.27	0.20
16,398.00	89.88	1.74	9,964.30	6,362.61	-1,010.89	6,433.30	1.90	-1.25	-1.43
16,493.00	89.24	0.30	9,965.03	6,457.59	-1,009.19	6,527.59	1.66	-0.67	-1.52
16,588.00	88.72	0.49	9,966.72	6,552.57	-1,008.54	6,621.98	0.58	-0.55	0.20
16,684.00	88.52	0.70	9,969.03	6,648.54	-1,007.54	6,717.33	0.30	-0.21	0.22
16,779.00	88.74	0.40	9,971.30	6,743.51	-1,006.63	6,811.68	0.39	0.23	-0.32
16,874.00	88.77	0.14	9,973.37	6,838.48	-1,006.18	6,906.09	0.28	0.03	-0.27
16,969.00	87.99	0.37	9,976.05	6,933.44	-1,005.76	7,000.49	0.86	-0.82	0.24
17,063.00	88.42	358.75	9,979.00	7,027.39	-1,006.48	7,094.01	1.78	0.46	-1.72
17,158.00	90.01	357.23	9,980.30	7,122.32	-1,009.81	7,188.76	2.32	1.67	-1.60
17,252.00	89.73	357.40	9,980.51	7,216.21	-1,014.22	7,282.61	0.35	-0.30	0.18
17,347.00	92.92	357.79	9,978.32	7,311.09	-1,018.20	7,377.38	3.38	3.36	0.41
17,442.00	93.51	357.54	9,972.99	7,405.86	-1,022.07	7,472.04	0.67	0.62	-0.26
17,537.00	92.71	356.83	9,967.83	7,500.61	-1,026.73	7,566.76	1.13	-0.84	-0.75
17,632.00	90.94	355.63	9,964.81	7,595.35	-1,032.97	7,661.63	2.25	-1.86	-1.26
17,727.00	92.07	355.82	9,962.31	7,690.05	-1,040.05	7,756.56	1.21	1.19	0.20
17,822.00	93.15	358.74	9,957.99	7,784.83	-1,044.55	7,851.29	3.27	1.14	3.07
17,916.00	93.99	359.10	9,952.13	7,878.63	-1,046.32	7,944.77	0.97	0.89	0.38
18,012.00	94.36	359.56	9,945.14	7,974.37	-1,047.44	8,040.10	0.61	0.39	0.48
18,107.00	91.60	359.97	9,940.21	8,069.23	-1,047.83	8,134.49	2.94	-2.91	0.43
18,202.00	89.35	358.15	9,939.42	8,164.21	-1,049.39	8,229.11	3.05	-2.37	-1.92
18,296.00	89.54	357.92	9,940.33	8,258.15	-1,052.61	8,322.87	0.32	0.20	-0.24
18,391.00	89.08	357.63	9,941.47	8,353.07	-1,056.30	8,417.66	0.57	-0.48	-0.31
18,485.00	88.98	357.34	9,943.06	8,446.96	-1,060.42	8,511.47	0.33	-0.11	-0.31
18,580.00	88.83	357.17	9,944.88	8,541.84	-1,064.97	8,606.30	0.24	-0.16	-0.18
18,673.00	88.74	357.13	9,946.85	8,634.70	-1,069.60	8,699.15	0.11	-0.10	-0.04
18,767.00	88.01	356.53	9,949.52	8,728.52	-1,074.79	8,792.99	1.01	-0.78	-0.64
18,862.00	90.15	357.80	9,951.04	8,823.38	-1,079.49	8,887.83	2.62	2.25	1.34
18,957.00	88.61	356.94	9,952.07	8,918.27	-1,083.85	8,982.66	1.86	-1.62	-0.91
19,052.00	91.10	358.57	9,952.31	9,013.19	-1,087.57	9,077.45	3.13	2.62	1.72
19,146.00	92.10	358.35	9,949.69	9,107.12	-1,090.09	9,171.13	1.09	1.06	-0.23



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 703H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 2938.80usft (Pioneer 84)
Site:	Hambone Federal Com	MD Reference:	RKB @ 2938.80usft (Pioneer 84)
Well:	703H	North Reference:	Grid
Wellbore:	OH / 66457	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Pioneer 84)	Database:	USA Compass

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)
19,241.00	93.08	359.85	9,945.39	9,202.00	-1,091.58	9,265.65	1.88	1.03	1.58
19,336.00	94.19	0.35	9,939.37	9,296.81	-1,091.42	9,359.93	1.28	1.17	0.53
19,431.00	94.02	0.73	9,932.57	9,391.56	-1,090.53	9,454.07	0.44	-0.18	0.40
19,526.00	91.29	1.42	9,928.17	9,486.43	-1,088.75	9,548.24	2.96	-2.87	0.73
19,621.00	90.59	0.99	9,926.61	9,581.40	-1,086.75	9,642.48	0.86	-0.74	-0.45
19,716.00	88.52	359.38	9,927.35	9,676.39	-1,086.44	9,736.92	2.76	-2.18	-1.69
19,811.00	88.67	0.16	9,929.68	9,771.36	-1,086.82	9,831.41	0.84	0.16	0.82
19,905.00	88.31	359.98	9,932.16	9,865.33	-1,086.71	9,924.86	0.43	-0.38	-0.19
20,000.00	88.59	0.66	9,934.73	9,960.29	-1,086.18	10,019.25	0.77	0.29	0.72
20,094.00	88.85	0.79	9,936.83	10,054.26	-1,084.99	10,112.58	0.31	0.28	0.14
20,144.13	89.79	2.07	9,937.42	10,104.37	-1,083.74	10,162.29	3.16	1.87	2.55
LTP @ 20144.1' MD									
20,189.00	90.63	3.21	9,937.26	10,149.19	-1,081.67	10,206.65	3.16	1.87	2.55
20,214.00	90.76	3.12	9,936.95	10,174.15	-1,080.29	10,231.33	0.63	0.52	-0.36
Final Phoenix MWD Survey									
20,272.00	90.76	3.12	9,936.18	10,232.06	-1,077.14	10,288.59	0.00	0.00	0.00
Projection @ TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,254.00	6,238.35	-20.17	-301.24	Tie In
6,263.00	6,247.33	-20.21	-301.78	First Phoenix MWD Survey
10,014.21	9,926.44	106.96	-584.96	FTP @ 10014.2' MD
20,144.13	9,937.42	10,104.37	-1,083.74	LTP @ 20144.1' MD
20,214.00	9,936.95	10,174.15	-1,080.29	Final Phoenix MWD Survey
20,272.00	9,936.18	10,232.06	-1,077.14	Projection @ TD



U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Completion Print

03/16/2023

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Section 1 - General

Well Completion Report Id: 33552**Submission Date:** 02-15-2021**BLM Office:** Carlsbad Field Office**User:** KAYLA ESTRADA**Title:** Regulatory Coordinator**Federal/Indian:** FEDERAL**Lease Number:** NMNM057261**Lease Acres:** 439.75**Agreement in place?:** NO**Federal or Indian Agreement:****Agreement Number:****Agreement Name:****Keep this Well Completion Report confidential?:****APD Operator:** COG OPERATING LLC

Section 2 - Well

Field/Pool or Exploratory:**Pool Name:** WOLFCAMP gas**Field Name:** Purple Sage**Well Type:** OIL WELL**Spud Date:** 03-17-2020**Date Total Measured Depth Reached:** 04-12-2020**Drill & Abandon or Ready To Produce:** READY TO**Well Class:** HORIZONTAL

Section 3 - Geologic

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral
QUATERNARY	ALLUVIUM		2914	0	0	NONE	
TOP SALT	SALT		2499	414	414	NONE	

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Section 3 - Geologic

Formation Name	Lithology	Describe Lithology	Elevation	TVD	MD	Mineral Resources	Describe Mineral
BASE OF SALT	SALT		318	2595	2596	NONE	
LAMAR	LIMESTONE		100	2813	2814	NONE	
BELL CANYON	SANDSTONE		63	2850	2852	NONE	
BONE SPRING LIME	LIMESTONE		-3653	6566	6582	NATURAL GAS, OIL	
BONE SPRING 1ST	SANDSTONE		-4554	7467	7484	NATURAL GAS, OIL	
BONE SPRING 2ND	SANDSTONE		-5283	8196	8214	NATURAL GAS, OIL	
BONE SPRING 3RD	SANDSTONE		-6445	9358	9376	NATURAL GAS, OIL	
WOLFCAMP	SHALE		-6799	9712	9745	NATURAL GAS, OIL	

Completion and Completed

Completion Data

Wellbore Code	Completion Code	Interval Number	Case Number	Lease Number	Well Completion Type	Describe Well Completion Type	Completion Status	Date Completed	Date First Produced	Formation	Interval Top (MD)	Interval Bottom (MD)	Interval Perforated?	Perforation Size	Number of Holes	Status of Interval
00	S1	1	NMNM57261	NMNM57261	NEW		DRG	01-31-2021	01-31-2021	WOLFCAMP	10270	19930	Y	.4	864	OPEN

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Treatment Data

Wellbore Code	Completion Code	Interval Number	Interval Treated?	Treatment Type	Tottle Fluid (bbls)	Total Proppant (lbs)	Treatment Remarks
00	S1	1	Y	FRAC	585182	24497047	

Production Data

Wellbore Code	Completion Code	Interval Number	API Oil Gravity	Gas Gravity	Production Method	Describe Production	Disposition of Gas	Describe Disposition
00	S1	1	44.2		GAS LIFT		SOLD	

Test Data

Wellbore Code	Completion Code	Interval Number	Test Date	Hours Tested	24-Hour Rate Oil (bbls)	24-Hour Rate Gas (MCF)	24-Hour Rate Water(BWPD)	Gas-Oil Ratio (SCF/Bbl)	Choke Size	Tubing Pressure	Tubing Pressure Shut-In (psi)	Casing Pressure (psi)
00	S1	1	01/31/2021	24	562	1679	4375	2987	8/64	1700		1800

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Well Location

Survey Type: RECTANGULAR

Survey Number:

Datum: NAD83

Vertical Datum: NAVD88

Reference Datum: GL

	State	Meridian	County	Latitude	Longitude	Elevation (MSL)	Lease Type	Lease Number	Plug TVD (ft)	Plug MD (ft)	Plug Type	NS-Foot	NS-Indicator	EW-Foot	EW-Indicator	Township	Range	Section	Aliquot/Lot/Tract
SHL	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.050252	-104.001575	2914	FEDERAL	NMNM 57261				222	FSL	1228	FEL	26S	29E	8	Lot P
KOP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.050076	-104.002908	-6488	FEDERAL	NMNM 57261				158	FSL	1642	FEL	26S	29E	8	Lot O
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.064362	-104.004789	-7039	FEDERAL	NMNM 124655				1	FSL	2178	FEL	26S	29E	5	SWSE
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.057038	-104.004712	-7037	STATE	STATE				1321	FSL	2178	FEL	26S	29E	8	SWNE
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.05106	-104.003781	-7154	FEDERAL	NMNM 57261				515	FSL	1910	FEL	26S	29E	8	Lot O
PPP Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.060703	-104.00475	-7036	FEDERAL	NMNM 123925				659	FNL	2178	FEL	26S	29E	8	NWNE
EXIT Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.077444	-104.004986	-7018	FEDERAL	NMNM 115417				546	FNL	2207	FEL	26S	29E	5	Lot 2
BHL Well bore 00	NEW MEXICO	NEW MEXICO PRINCIPAL	EDDY	32.078389	-104.004952	-7022	FEDERAL	NMNM 115417		20185		202	FNL	2182	FEL	26S	29E	5	Lot 2

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Casing, Liner and Tubing

Casing and Liner

Wellbore Code	Casing String Type	Hole Size	Top Setting Depth (MD)	Bottom Setting Depth (MD)	Casing Size	Wt(lbs/ft)	Casing Grade	Describe Other Casing Grade	Joint	Other Joint	Amount Pulled (ft)
00	SURFACE	17.5	0	356	13.375	54.5	J-55		BUTT		
00	INTERMEDIATE	12.25	0	2886	10.75	45.5	J-55		BUTT		
00	INTERMEDIATE	9.875	0	8868	7.625	29.7	P-110		OTHER	SF	
00	PRODUCTION	6.75	0	20257	5.5	20	P-110		OTHER		

Cementing

Wellbore Code	Casing String Type	Stage Tool Depth	Cement Lead Type	Cement Lead Qty (sks)	Cement Lead Yield (cu.ft/sks)	Cement Lead Top (MD)	Cement Tail Type	Cement Tail Qty (sks)	Cement Tail Yield (cu.ft/sks)	Cement Tail Top (MD)	Total (Lead + Tail) Cement Slurry Volume
00	SURFACE		Class C	425	1.35	0					102.2
00	INTERMEDIATE		Class C	600	2.26	0	Class C	200	1.33	2687	1795.2
00	INTERMEDIATE		Class C	1000	3.39		Class C	200	1.27	7698	1795.2
00	INTERMEDIATE		Class C	775	1.62	245	Class C	700	1.65	6609	429.3

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Tubing

Wellbore Code	Tubing Size	Describe Other	Tubing Setting Depth (MD/ft)	Packer Depth (MD/ft)	Tubing Weight	Tubing Grade	Describe Other	Tubing Coupling	Describe Other
00	2.875		9407	9391	20				

Logs

Wellbore Code	Log Upload	Was Well Cored?	Was DST Run?	Directional Survey?	Geologic Report	Wellbore Diagram
00	YES	NO	NO	YES	NO	YES

Operator Name COG OPERATING LLC	Well Name HAMBONE FEDERAL COM	Well Number 703H	US Well Number 3001546814
SHL Lot P Sec 8 26S 29E	County EDDY	State NM	Lease Number(s) NMNM057261, NMNM57261, NMNM57261
Well Type OIL WELL	Well Status Drilling Well	Agreement Name	Agreement Number(s)
Allottee/Tribe Name	Well Pad Name HAMBONE FEDERAL COM	Well Pad Number 701H/702H/703H	ID 10400047559

Operator

I hereby certify that the foregoing and attached information is complete and correct as determined from all available records. 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 any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Well Completion Reports through this system satisfies regulations requiring a submission of Form 3160-4 or a Well Completion Report.

Name: COG OPERATING LLC

Signed By: KAYLA ESTRADA

Title: Regulatory Coordinator

Signed on: 02/23/2023

Street Address: 600 W ILLINOISE AVE

City: MIDLAND

State: TX

Zip: 79701

Phone: (432)688-6837

Email address: KAYLA.L.ESTRADA@CONOCOPHILLIPS.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Extension:

Email address:

Attachments

Hambone_Federal_Com_703H___Final_Survey_Report_Composite_NAD27_20210215101644.pdf

Hambone_Federal_Com_703H_WCA_WBD_V17_20210215101822.pdf

300154681400_HAMBONE_FEDERAL_COM_0703H_CNL_20230221125732.pdf

C102_HAMBONE_FED_COM_703H_New_20230221125746.pdf

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 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-105 Revised April 3, 2017				
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)						5. Lease Name or Unit Agreement Name Hambone Federal Com				
						6. Well Number: 703H				
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER										
8. Name of Operator COG Operating LLC						9. OGRID 229137				
10. Address of Operator 600 W Illinois Ave Midland, Tx, 79701						11. Pool name or Wildcat Purple Sage; Wolfcamp				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	P	8	26-S	29-E		222	South	1228	East	Eddy
BH:	2	5	26-S	29-E		202	North	2182	East	Eddy
13. Date Spudded 3/17/20	14. Date T.D. Reached 4/12/20		15. Date Rig Released 4/14/20			16. Date Completed (Ready to Produce) 1/31/21		17. Elevations (DF and RKB, RT, GR, etc.) 2913.8'		
18. Total Measured Depth of Well 20272'			19. Plug Back Measured Depth 20231			20. Was Directional Survey Made? Y		21. Type Electric and Other Logs Run CNL		
22. Producing Interval(s), of this completion - Top, Bottom, Name								Wolfcamp		
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13.375"		54.5#		356'		17.5"		425 sx		
10.75"		45.5#		2886'		12.25"		800 sx		
7.625"		29.7#		8868'		9.875"		1200 sx		
5.5"		20#		20257'		6.75"		1475 sx		
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP		BOTTOM		SACKS CEMENT	SCREEN		SIZE	DEPTH SET	PACKER SET
								2.875	9407	9391
26. Perforation record (interval, size, and number) Perf 10,270' – 19,930'(864 Shots)						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. I				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						10,270' – 19,930'		Acidize w/o gal 7 1/2%; Frac 24,497,047# proppant & 585,182 BBL Clean fluid.		
28. PRODUCTION										
Date First Production 1/31/21		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) Gas Lift				Well Status (<i>Prod. or Shut-in</i>) Producing				
Date of Test 1/31/21	Hours Tested 24 hrs	Choke Size 8/64"	Prod'n For Test Period	Oil - Bbl 562	Gas - MCF 1679	Water - Bbl. 4357	Gas - Oil Ratio 2987.5			
Flow Tubing Press. 1700#	Casing Pressure 1800#	Calculated 24- Hour Rate	Oil - Bbl. 562	Gas - MCF 1679	Water - Bbl. 4537	Oil Gravity - API - (<i>Corr.</i>) 44.2				
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) Sold								30. Test Witnessed By		
31. List Attachments Completion Package with C102										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.								33. Rig Release Date:		
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude				Longitude				NAD83		

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature *Kayla Estrada*Printed
Name Kayla Estrada

Title Regulatory Coordinator

Date 2/14/23

E-mail Address kayla.l.estrada@conocophillips.com

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico		Northwestern New Mexico	
T. RSLR		T. Ojo Alamo	T. Penn A"
T. Salt	414'	T. Kirtland	T. Penn. "B"
B. Salt	2596'	T. Fruitland	T. Penn. "C"
T. LMAR	2814'	T. Pictured Cliffs	T. Penn. "D"
T. BLCN	2852'	T. Cliff House	T. Leadville
T. CYCN		T. Menefee	T. Madison
T. BYCN		T. Point Lookout	T. Elbert
T. BSPG	6582'	T. Mancos	T. McCracken
T. BS1S	7484'	T. Gallup	T. Ignacio Otzte
T. BS2S	8214'	Base Greenhorn	T. Granite
T. BS3C	9376'	T. Dakota	
T. WFMP	9745'	T. Morrison	

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....

No. 3, from.....to.....

No. 2, from.....to.....

No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....

No. 2, from.....to.....feet.....

No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology	From	To	Thickness In Feet	Lithology



CURRENT WELL SKETCH

API: 30-015-46814
 SPUD: 3/17/2020
 FRR: 4/14/2020
 RIG: Pioneer 84

Hambone Federal Com 703H
 Purple Sage; Wolfcamp
 Eddy County

Sec 8 T/B 26S R/Svy 29E
 SHL: 222' FSL & 1,228' FEL
 BHL: 202' FNL & 2,182' FEL (est.)
 Sec 5 T/B 26S R/Svy 29E
 GL: 2,914'
 KB: 2,939'
 ZERO: 25'

HOLE SIZE	MW	BHST	Evaluation
17.5"	8.4 (ppg)		No Logs
12.25"	10.2 (ppg)		No Logs
9.875"	9 (ppg)		No Logs
6.75"	11.7 (ppg)	163°F (est.)	Mud and Cased-Hole logs

Surface Casing @ 356'
 13.375" 54.5 ppf J55 BTC
 Circulated 187 sx cement

Intermediate Casing @ 2,886'
 10.75" 45.5 ppf J55 BTC
 Circulated: 387 sx cement

Intermediate Casing @ 8,868'
 7.625" 29.7 ppf L80 EHC BTC Surface - 6,607'
 7.625" 29.7 ppf P110 CY TL-FJ 6,607' - 8,868'
 Circulated: 468 sx cement

KOP @ 9,421'
 EOC @ 10,513'
 EOL @ 20,257'
 TD @ 20,272'

Average TVD in Lateral 9,970'

Notes: Wet Shoe

Production Casing @ 20,257'
 5.5" 20 ppf P110 CY TLW Surface - 9,237'
 5.5" 20 ppf P110 CY TLW 9,237' - 20,257'
 PBTD (LC) 20,211'
 Casing X/O 9,217' (X/O, MJ not installed)
 Floation Collar: 10,515'
 Circulated: 0 sx cement

Updated by A. Wills
 Date: 6/8/2020

Well Name: HAMBONE FEDERAL COM	Well Location: T26S / R29E / SEC 8 / SESE / 32.050252 / -104.001575	County or Parish/State: EDDY / NM
Well Number: 703H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM57261	Unit or CA Name:	Unit or CA Number:
US Well Number: 300154681400X1	Well Status: Drilling Well	Operator: COG OPERATING LLC

Subsequent Report

Sundry ID: 2715696

Type of Submission: Subsequent Report	Type of Action: Hydraulic Fracturing
Date Sundry Submitted: 02/14/2023	Time Sundry Submitted: 01:06
Date Operation Actually Began: 06/23/2020	

Actual Procedure: correction***** 6/23/20 Test 9 5/8" x 5 1/2" annulus to 1500# 6/25/20 Set CBD @ 20,185' and test csg to 9519 psi. Good Test. 11/10/20 – 12/2/20 Perf 10,270' – 19,930'(864 Shots) Frac w/ 24,497,047# proppant & 585,182 BBL Clean fluid. 1/10/21 – 1/13/21 Drilled out CFPs. Clean down to PBTD @ 20,231'. 1/16/21 Set 2 7/8 6.5# L-80tbg @ 9407. Packer @9391. 1/31/21 - Began flowback, testing, and date of first production.

Received by OCD: 3/16/2023 8:52:17 AM

Page 29 of 31

Well Name: HAMBONE FEDERAL COM	Well Location: T26S / R29E / SEC 8 / SESE / 32.050252 / -104.001575	County or Parish/State: EDDY / NM
Well Number: 703H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM57261	Unit or CA Name:	Unit or CA Number:
US Well Number: 300154681400X1	Well Status: Drilling Well	Operator: COG OPERATING LLC

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: KAYLA ESTRADA	Signed on: FEB 14, 2023 01:06 PM
Name: COG OPERATING LLC	
Title: Regulatory Coordinator	
Street Address: 600 W ILLINOISE AVE	
City: MIDLAND	State: TX
Phone: (432) 688-6837	
Email address: KAYLA.L.ESTRADA@CONOCOPHILLIPS.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: JONATHON W SHEPARD	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752345972	BLM POC Email Address: jshepard@blm.gov
Disposition: Accepted	Disposition Date: 02/23/2023
Signature: Jonathon Shepard	

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

ACKNOWLEDGMENTS

Action 197841

ACKNOWLEDGMENTS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 197841
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 197841

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 197841
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	None	1/21/2025