

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
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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

OCD-ARTESIA  
REC'D: 8/13/2020

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

☒ AMENDED REPORT  
As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-46385</b>	<sup>2</sup> Pool Code <b>98220</b>	<sup>3</sup> Pool Name <b>Purple Sage; Wolfcamp (Gas)</b>
<sup>4</sup> Property Code <b>38476</b>	<sup>5</sup> Property Name <b>HONEY GRAHAM STATE COM</b>	<sup>6</sup> Well Number <b>702H</b>
<sup>7</sup> GRID NO. <b>229137</b>	<sup>8</sup> Operator Name <b>COG OPERATING, LLC</b>	<sup>9</sup> Elevation <b>3083'</b>

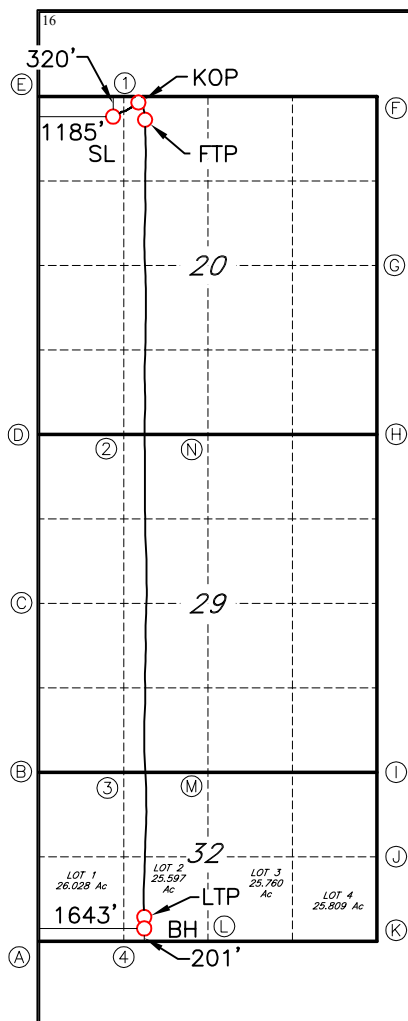
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
<b>D</b>	<b>20</b>	<b>26S</b>	<b>28E</b>		<b>320</b>	<b>NORTH</b>	<b>1185</b>	<b>WEST</b>	<b>EDDY</b>

<sup>11</sup> 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
<b>2</b>	<b>32</b>	<b>26S</b>	<b>28E</b>		<b>201</b>	<b>SOUTH</b>	<b>1643</b>	<b>WEST</b>	<b>EDDY</b>
<sup>12</sup> Dedicated Acres <b>761.51</b> <b>767.51</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.						

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.



**GEODETIC DATA**  
NAD 83 GRID - NM EAST  
**SURFACE LOCATION (SL)**  
N: 376350.1 - E: 609222.2  
LAT: 32.0344771° N-LONG: 104.1142602° W  
LAT: 32°02'04.1178" N-LONG: 104°06'51.3368" W  
**KICK OFF POINT (KOP)**  
97' FNL & 1576' FWL (Sec.20)  
N: 376570.1 - E: 609612.4  
LAT: 32.0350796° N-LONG: 104.1129994° W  
LAT: 32°02'06.2872" N-LONG: 104°06'46.7984" W  
MD=8895.00 - TVD=8874.65  
**FIRST TAKE POINT (FTP)**  
362' FNL & 1684' FWL (Sec.20)  
N: 376304.3 - E: 609721.5  
LAT: 32.0343486° N-LONG: 104.1126491° W  
LAT: 32°02'03.6545" N-LONG: 104°06'45.5372" W  
MD=9515.00 - TVD=9361.92  
**LAST TAKE POINT (LTP)**  
378' FSL & 1640' FWL (Sec.32)  
N: 364173.4 - E: 609678.5  
LAT: 32.0010013° N-LONG: 104.1128680° W  
LAT: 32°00'03.6046" N-LONG: 104°06'46.3246" W  
MD=21655.00 - TVD=9289.78  
**BOTTOM HOLE (BH)**  
N: 363996.6 - E: 609681.4  
LAT: 32.0005151° N-LONG: 104.1128597° W  
LAT: 32°00'01.8545" N-LONG: 104°06'46.2948" W

**CORNER DATA**  
NAD 83 GRID - NM EAST  
A: FOUND BRASS CAP "1995" N: 363793.5 - E: 608039.5  
B: FOUND BRASS CAP "1995" N: 366121.4 - E: 608035.0  
C: FOUND BRASS CAP "1995" N: 368761.0 - E: 608041.8  
D: FOUND BRASS CAP "1995" N: 371399.9 - E: 608048.9  
E: CALCULATED CORNER N: 376678.5 - E: 608036.7  
F: FOUND BRASS CAP "1995" N: 376640.9 - E: 613327.9  
G: FOUND BRASS CAP "1995" N: 373994.4 - E: 613329.1  
H: FOUND BRASS CAP "1995" N: 371341.8 - E: 613334.8  
I: FOUND BRASS CAP "1995" N: 366056.4 - E: 613343.5  
J: FOUND BRASS CAP "1995" N: 364641.9 - E: 613346.6  
K: FOUND BRASS CAP "1995" N: 363800.2 - E: 613348.4  
L: FOUND BRASS CAP "1995" N: 363796.6 - E: 610675.9  
M: FOUND BRASS CAP "1995" N: 366045.1 - E: 610671.1  
N: FOUND BRASS CAP "1995" N: 371370.8 - E: 610691.8  
**CALCULATED POINTS**  
1: N: 376669.1 - E: 609359.5  
2: N: 371385.4 - E: 609370.4  
3: N: 366083.3 - E: 609353.1  
4: N: 363795.1 - E: 609357.7

<sup>17</sup> 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 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

**Amanda Avery** 7/30/20

Signature Date  
**Amanda Avery**  
Printed Name  
**aavery@concho.com**  
E-mail Address

<sup>18</sup> 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.

**09-06-2019**

Date of Survey

Signature and Seal of Professional Surveyor

**19680**

Certificate Number

REV: 7-13-20 As Drill

Job No.: LS19090862AD



## **COG Operating LLC**

Eddy County, NM (NAD27 NME)

Honey Graham State Com

702H

OH / 65663

Design: Surveys (Ensign 155)

## **Standard Survey Report**

15 January, 2020



<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	USA Compass

<b>Project</b>	Eddy County, NM (NAD27 NME)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	New Mexico East 3001		

<b>Site</b>	Honey Graham State Com		
<b>Site Position:</b>		<b>Northing:</b>	376,292.96 usft
<b>From:</b>	Map	<b>Easting:</b>	568,037.63 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "
		<b>Latitude:</b>	32° 2' 3.673680 N
		<b>Longitude:</b>	104° 6' 49.578120 W
		<b>Grid Convergence:</b>	0.12 °

<b>Well</b>	702H		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 376,292.96 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 568,037.63 usft
<b>Position Uncertainty</b>	1.00 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	32° 2' 3.673680 N
		<b>Longitude:</b>	104° 6' 49.578120 W
		<b>Ground Level:</b>	3,083.00 usft

<b>Wellbore</b>	OH / 65663		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>
	User Defined	12/16/2019	6.89
			<b>Dip Angle (°)</b> 59.61
			<b>Field Strength (nT)</b> 47,773.30000000

<b>Design</b>	Surveys (Ensign 155)		
<b>Audit Notes:</b>			
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL
		<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>
	0.00	0.00	0.00
			<b>Direction (°)</b> 177.75

<b>Survey Program</b>	<b>Date</b>	1/15/2020		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
100.00	8,620.00	SDI - Gyro Surveys (OH / 65663)	Scientific Keeper	Scientific Drilling Intl. Standard Wireline Keeper
8,620.00	21,832.00	Phoenix MWD Surveys - SQC Corrected (	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

<b>Survey</b>									
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1.11	60.04	99.99	0.48	0.84	-0.45	1.11	1.11	0.00
125.00	1.84	61.42	124.99	0.80	1.40	-0.74	2.92	2.92	5.52
150.00	2.12	49.28	149.97	1.29	2.10	-1.21	2.01	1.12	-48.56
175.00	1.79	44.64	174.96	1.87	2.73	-1.76	1.46	-1.32	-18.56
200.00	1.06	351.15	199.95	2.38	2.97	-2.26	5.75	-2.92	-213.96
225.00	1.74	297.96	224.94	2.78	2.60	-2.68	5.57	2.72	-212.76
250.00	2.30	285.35	249.93	3.09	1.78	-3.02	2.85	2.24	-50.44
275.00	2.64	277.40	274.90	3.30	0.72	-3.27	1.93	1.36	-31.80
300.00	2.79	262.20	299.88	3.29	-0.45	-3.31	2.93	0.60	-60.80

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	3.20	244.56	324.84	2.91	-1.68	-2.97	4.01	1.64	-70.56
350.00	3.57	231.74	349.80	2.13	-2.92	-2.24	3.36	1.48	-51.28
375.00	3.80	223.46	374.75	1.04	-4.11	-1.20	2.32	0.92	-33.12
400.00	3.99	216.74	399.69	-0.25	-5.20	0.05	1.98	0.76	-26.88
425.00	3.99	210.81	424.63	-1.70	-6.16	1.45	1.65	0.00	-23.72
450.00	4.18	207.01	449.57	-3.26	-7.02	2.98	1.32	0.76	-15.20
475.00	4.66	193.95	474.49	-5.05	-7.68	4.75	4.45	1.92	-52.24
500.00	5.09	185.78	499.40	-7.14	-8.04	6.82	3.26	1.72	-32.68
525.00	5.49	182.42	524.30	-9.44	-8.20	9.11	2.02	1.60	-13.44
550.00	5.55	182.03	549.18	-11.84	-8.29	11.51	0.28	0.24	-1.56
575.00	5.73	180.41	574.06	-14.30	-8.34	13.96	0.96	0.72	-6.48
600.00	5.72	178.36	598.93	-16.79	-8.32	16.45	0.82	-0.04	-8.20
625.00	5.91	172.69	623.81	-19.32	-8.12	18.98	2.42	0.76	-22.68
650.00	5.99	166.40	648.67	-21.86	-7.65	21.54	2.63	0.32	-25.16
675.00	5.97	162.23	673.53	-24.37	-6.94	24.07	1.74	-0.08	-16.68
700.00	6.03	156.96	698.40	-26.81	-6.03	26.56	2.22	0.24	-21.08
725.00	5.79	149.27	723.27	-29.10	-4.87	28.89	3.31	-0.96	-30.76
750.00	5.74	137.35	748.14	-31.11	-3.38	30.95	4.78	-0.20	-47.68
775.00	5.67	128.87	773.02	-32.80	-1.57	32.72	3.38	-0.28	-33.92
800.00	5.74	125.35	797.89	-34.30	0.41	34.29	1.43	0.28	-14.08
825.00	5.84	120.37	822.77	-35.67	2.52	35.74	2.05	0.40	-19.92
850.00	6.16	109.73	847.63	-36.76	4.88	36.93	4.62	1.28	-42.56
875.00	6.35	104.43	872.48	-37.56	7.49	37.83	2.43	0.76	-21.20
900.00	6.56	100.80	897.32	-38.17	10.23	38.55	1.84	0.84	-14.52
925.00	6.85	98.97	922.15	-38.67	13.10	39.16	1.44	1.16	-7.32
950.00	6.83	97.87	946.97	-39.11	16.05	39.71	0.53	-0.08	-4.40
975.00	6.80	98.89	971.80	-39.54	18.98	40.26	0.50	-0.12	4.08
1,000.00	6.92	98.89	996.62	-40.00	21.93	40.83	0.48	0.48	0.00
1,025.00	7.01	98.23	1,021.43	-40.45	24.93	41.40	0.48	0.36	-2.64
1,050.00	6.75	98.14	1,046.25	-40.88	27.90	41.94	1.04	-1.04	-0.36
1,075.00	5.75	96.84	1,071.10	-41.24	30.59	42.41	4.04	-4.00	-5.20
1,100.00	5.30	93.22	1,095.99	-41.45	32.99	42.71	2.28	-1.80	-14.48
1,125.00	4.85	90.38	1,120.89	-41.52	35.20	42.87	2.06	-1.80	-11.36
1,150.00	4.12	82.98	1,145.81	-41.42	37.15	42.85	3.72	-2.92	-29.60
1,175.00	3.13	65.46	1,170.76	-41.03	38.66	42.51	5.90	-3.96	-70.08
1,200.00	2.82	50.25	1,195.73	-40.35	39.75	41.88	3.38	-1.24	-60.84
1,225.00	2.76	39.83	1,220.70	-39.50	40.61	41.06	2.04	-0.24	-41.68
1,250.00	2.80	34.94	1,245.67	-38.53	41.35	40.13	0.96	0.16	-19.56
1,275.00	2.76	33.67	1,270.64	-37.53	42.03	39.15	0.29	-0.16	-5.08
1,300.00	2.77	33.18	1,295.61	-36.52	42.69	38.17	0.10	0.04	-1.96
1,325.00	2.73	26.63	1,320.58	-35.49	43.29	37.16	1.27	-0.16	-26.20
1,350.00	2.84	5.21	1,345.56	-34.34	43.62	36.02	4.16	0.44	-85.68
1,375.00	3.02	354.56	1,370.52	-33.07	43.61	34.75	2.29	0.72	-42.60

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
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<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	3.19	349.58	1,395.49	-31.73	43.42	33.41	1.27	0.68	-19.92	
1,425.00	3.29	346.22	1,420.45	-30.34	43.12	32.01	0.86	0.40	-13.44	
1,450.00	3.30	345.72	1,445.41	-28.95	42.78	30.61	0.12	0.04	-2.00	
1,475.00	3.33	346.03	1,470.36	-27.55	42.42	29.19	0.14	0.12	1.24	
1,500.00	3.43	345.07	1,495.32	-26.12	42.05	27.75	0.46	0.40	-3.84	
1,525.00	3.36	345.65	1,520.28	-24.69	41.68	26.31	0.31	-0.28	2.32	
1,550.00	3.35	346.04	1,545.23	-23.27	41.32	24.87	0.10	-0.04	1.56	
1,575.00	3.43	345.35	1,570.19	-21.84	40.96	23.43	0.36	0.32	-2.76	
1,600.00	3.41	346.62	1,595.15	-20.39	40.60	21.97	0.31	-0.08	5.08	
1,625.00	3.44	352.30	1,620.10	-18.92	40.32	20.49	1.36	0.12	22.72	
1,650.00	3.75	2.19	1,645.05	-17.36	40.25	18.93	2.77	1.24	39.56	
1,675.00	3.96	5.31	1,670.00	-15.69	40.37	17.26	1.19	0.84	12.48	
1,700.00	4.14	7.82	1,694.93	-13.93	40.57	15.52	1.01	0.72	10.04	
1,725.00	4.23	8.76	1,719.87	-12.13	40.83	13.72	0.45	0.36	3.76	
1,750.00	4.43	10.47	1,744.79	-10.27	41.15	11.88	0.95	0.80	6.84	
1,775.00	4.76	11.94	1,769.71	-8.30	41.54	9.93	1.40	1.32	5.88	
1,800.00	4.86	12.05	1,794.63	-6.25	41.97	7.90	0.40	0.40	0.44	
1,825.00	4.80	13.89	1,819.54	-4.20	42.45	5.87	0.66	-0.24	7.36	
1,850.00	4.76	16.13	1,844.45	-2.19	42.98	3.88	0.76	-0.16	8.96	
1,875.00	4.71	16.13	1,869.37	-0.21	43.56	1.92	0.20	-0.20	0.00	
1,900.00	4.55	17.19	1,894.28	1.73	44.14	0.01	0.73	-0.64	4.24	
1,925.00	4.02	24.20	1,919.21	3.47	44.79	-1.71	2.98	-2.12	28.04	
1,950.00	3.46	35.51	1,944.16	4.89	45.59	-3.09	3.69	-2.24	45.24	
1,975.00	3.27	40.63	1,969.12	6.04	46.49	-4.21	1.42	-0.76	20.48	
2,000.00	3.30	46.20	1,994.08	7.08	47.47	-5.21	1.28	0.12	22.28	
2,025.00	3.34	49.56	2,019.03	8.05	48.55	-6.14	0.79	0.16	13.44	
2,050.00	3.33	47.34	2,043.99	9.01	49.63	-7.06	0.52	-0.04	-8.88	
2,075.00	3.62	51.95	2,068.95	9.99	50.79	-7.99	1.61	1.16	18.44	
2,100.00	3.55	55.40	2,093.90	10.92	52.05	-8.87	0.91	-0.28	13.80	
2,125.00	3.54	55.83	2,118.85	11.79	53.32	-9.69	0.11	-0.04	1.72	
2,150.00	3.66	58.86	2,143.80	12.64	54.64	-10.48	0.90	0.48	12.12	
2,175.00	3.68	59.32	2,168.75	13.46	56.02	-11.25	0.14	0.08	1.84	
2,200.00	3.57	61.03	2,193.70	14.25	57.39	-11.98	0.62	-0.44	6.84	
2,225.00	3.03	65.92	2,218.66	14.89	58.67	-12.58	2.43	-2.16	19.56	
2,250.00	2.11	81.05	2,243.63	15.23	59.73	-12.88	4.54	-3.68	60.52	
2,275.00	1.79	97.46	2,268.62	15.26	60.57	-12.87	2.56	-1.28	65.64	
2,300.00	1.45	110.88	2,293.61	15.09	61.26	-12.68	2.03	-1.36	53.68	
2,325.00	1.45	112.54	2,318.60	14.86	61.84	-12.42	0.17	0.00	6.64	
2,350.00	1.39	111.86	2,343.59	14.62	62.42	-12.16	0.25	-0.24	-2.72	
2,375.00	1.26	109.06	2,368.59	14.42	62.96	-11.94	0.58	-0.52	-11.20	
2,400.00	0.89	83.27	2,393.58	14.35	63.41	-11.85	2.40	-1.48	-103.16	
2,425.00	0.92	75.13	2,418.58	14.43	63.80	-11.91	0.53	0.12	-32.56	
2,450.00	0.92	69.06	2,443.58	14.55	64.18	-12.02	0.39	0.00	-24.28	

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	0.90	67.35	2,468.57	14.70	64.55	-12.15	0.13	-0.08	-6.84
2,500.00	0.91	66.32	2,493.57	14.85	64.91	-12.29	0.08	0.04	-4.12
2,525.00	0.92	67.56	2,518.57	15.01	65.28	-12.44	0.09	0.04	4.96
2,550.00	0.99	70.86	2,543.56	15.16	65.67	-12.57	0.36	0.28	13.20
2,575.00	0.93	68.91	2,568.56	15.30	66.06	-12.70	0.27	-0.24	-7.80
2,600.00	0.94	67.85	2,593.56	15.45	66.44	-12.83	0.08	0.04	-4.24
2,625.00	0.98	65.72	2,618.55	15.62	66.82	-12.98	0.21	0.16	-8.52
2,650.00	0.90	66.43	2,643.55	15.78	67.20	-13.13	0.32	-0.32	2.84
2,675.00	0.89	68.48	2,668.55	15.93	67.56	-13.27	0.13	-0.04	8.20
2,700.00	0.90	69.38	2,693.54	16.07	67.92	-13.39	0.07	0.04	3.60
2,725.00	0.99	69.95	2,718.54	16.22	68.31	-13.52	0.36	0.36	2.28
2,750.00	0.90	70.02	2,743.54	16.36	68.70	-13.65	0.36	-0.36	0.28
2,775.00	0.91	69.09	2,768.53	16.50	69.07	-13.77	0.07	0.04	-3.72
2,800.00	0.93	66.66	2,793.53	16.65	69.44	-13.91	0.18	0.08	-9.72
2,825.00	0.95	65.47	2,818.53	16.81	69.82	-14.06	0.11	0.08	-4.76
2,850.00	1.03	67.51	2,843.52	16.99	70.21	-14.22	0.35	0.32	8.16
2,875.00	1.03	71.67	2,868.52	17.14	70.63	-14.36	0.30	0.00	16.64
2,900.00	1.03	67.86	2,893.51	17.30	71.05	-14.49	0.27	0.00	-15.24
2,925.00	1.02	63.21	2,918.51	17.48	71.46	-14.66	0.34	-0.04	-18.60
2,950.00	1.80	57.93	2,943.50	17.79	71.99	-14.95	3.16	3.12	-21.12
2,975.00	2.57	53.42	2,968.48	18.33	72.77	-15.46	3.15	3.08	-18.04
3,000.00	2.93	54.71	2,993.46	19.04	73.75	-16.13	1.46	1.44	5.16
3,025.00	3.41	50.93	3,018.42	19.87	74.84	-16.92	2.09	1.92	-15.12
3,050.00	3.57	50.39	3,043.37	20.84	76.02	-17.84	0.65	0.64	-2.16
3,075.00	3.66	50.20	3,068.32	21.85	77.23	-18.80	0.36	0.36	-0.76
3,100.00	3.74	49.92	3,093.27	22.88	78.47	-19.78	0.33	0.32	-1.12
3,125.00	3.61	49.33	3,118.22	23.92	79.69	-20.77	0.54	-0.52	-2.36
3,150.00	3.65	49.23	3,143.17	24.95	80.89	-21.76	0.16	0.16	-0.40
3,175.00	3.76	49.49	3,168.11	26.00	82.12	-22.76	0.45	0.44	1.04
3,200.00	3.90	48.80	3,193.06	27.10	83.38	-23.80	0.59	0.56	-2.76
3,225.00	4.00	48.01	3,218.00	28.24	84.67	-24.89	0.46	0.40	-3.16
3,250.00	3.97	47.48	3,242.94	29.41	85.95	-26.01	0.19	-0.12	-2.12
3,275.00	4.09	45.52	3,267.88	30.62	87.23	-27.17	0.73	0.48	-7.84
3,300.00	4.14	44.54	3,292.81	31.89	88.50	-28.39	0.35	0.20	-3.92
3,325.00	4.23	45.40	3,317.75	33.18	89.79	-29.63	0.44	0.36	3.44
3,350.00	4.24	44.87	3,342.68	34.48	91.10	-30.88	0.16	0.04	-2.12
3,375.00	4.35	43.02	3,367.61	35.83	92.39	-32.17	0.71	0.44	-7.40
3,400.00	4.45	44.05	3,392.53	37.22	93.72	-33.51	0.51	0.40	4.12
3,425.00	4.55	42.48	3,417.46	38.65	95.06	-34.88	0.63	0.40	-6.28
3,450.00	4.58	42.14	3,442.38	40.12	96.40	-36.30	0.16	0.12	-1.36
3,475.00	4.70	41.48	3,467.30	41.63	97.75	-37.76	0.53	0.48	-2.64
3,500.00	4.74	41.43	3,492.21	43.17	99.11	-39.24	0.16	0.16	-0.20
3,525.00	4.92	40.32	3,517.12	44.76	100.49	-40.78	0.81	0.72	-4.44
3,550.00	5.00	40.82	3,542.03	46.40	101.89	-42.36	0.36	0.32	2.00

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	5.00	41.02	3,566.93	48.05	103.32	-43.95	0.07	0.00	0.80
3,600.00	5.18	40.11	3,591.84	49.73	104.76	-45.58	0.79	0.72	-3.64
3,625.00	5.29	39.99	3,616.73	51.48	106.23	-47.27	0.44	0.44	-0.48
3,650.00	5.39	41.04	3,641.62	53.25	107.74	-48.98	0.56	0.40	4.20
3,675.00	5.82	43.91	3,666.50	55.05	109.39	-50.71	2.05	1.72	11.48
3,700.00	6.08	45.76	3,691.37	56.88	111.22	-52.47	1.29	1.04	7.40
3,725.00	6.52	46.21	3,716.22	58.79	113.19	-54.30	1.77	1.76	1.80
3,750.00	6.91	49.20	3,741.05	60.75	115.35	-56.18	2.09	1.56	11.96
3,775.00	7.05	49.19	3,765.86	62.74	117.65	-58.07	0.56	0.56	-0.04
3,800.00	7.09	50.18	3,790.67	64.73	120.00	-59.97	0.51	0.16	3.96
3,825.00	7.13	50.22	3,815.48	66.71	122.38	-61.85	0.16	0.16	0.16
3,850.00	7.09	51.43	3,840.29	68.66	124.78	-63.71	0.62	-0.16	4.84
3,875.00	6.96	53.68	3,865.10	70.52	127.20	-65.48	1.22	-0.52	9.00
3,900.00	6.67	58.52	3,889.92	72.18	129.66	-67.03	2.57	-1.16	19.36
3,925.00	6.43	60.96	3,914.76	73.62	132.12	-68.37	1.47	-0.96	9.76
3,950.00	6.04	64.09	3,939.61	74.87	134.53	-69.53	2.07	-1.56	12.52
3,975.00	5.54	68.53	3,964.48	75.89	136.84	-70.46	2.68	-2.00	17.76
4,000.00	4.96	72.05	3,989.38	76.66	138.99	-71.15	2.65	-2.32	14.08
4,025.00	4.57	75.41	4,014.29	77.25	140.98	-71.65	1.92	-1.56	13.44
4,050.00	4.17	78.59	4,039.22	77.68	142.83	-72.01	1.87	-1.60	12.72
4,075.00	3.58	77.83	4,064.16	78.02	144.49	-72.29	2.37	-2.36	-3.04
4,100.00	2.99	80.41	4,089.12	78.29	145.89	-72.51	2.43	-2.36	10.32
4,125.00	2.75	82.66	4,114.09	78.48	147.13	-72.64	1.06	-0.96	9.00
4,150.00	2.71	82.61	4,139.06	78.63	148.31	-72.75	0.16	-0.16	-0.20
4,175.00	2.69	82.54	4,164.03	78.78	149.48	-72.86	0.08	-0.08	-0.28
4,200.00	2.68	83.60	4,189.01	78.93	150.64	-72.95	0.20	-0.04	4.24
4,225.00	2.70	81.75	4,213.98	79.08	151.81	-73.05	0.36	0.08	-7.40
4,250.00	2.78	82.34	4,238.95	79.24	152.99	-73.17	0.34	0.32	2.36
4,275.00	2.74	82.64	4,263.92	79.40	154.18	-73.28	0.17	-0.16	1.20
4,300.00	2.79	82.10	4,288.89	79.56	155.38	-73.40	0.23	0.20	-2.16
4,325.00	2.74	81.46	4,313.86	79.73	156.57	-73.52	0.24	-0.20	-2.56
4,350.00	2.79	82.18	4,338.83	79.90	157.77	-73.65	0.24	0.20	2.88
4,375.00	2.81	83.34	4,363.80	80.06	158.98	-73.75	0.24	0.08	4.64
4,400.00	2.81	82.51	4,388.77	80.21	160.19	-73.86	0.16	0.00	-3.32
4,425.00	2.77	83.54	4,413.74	80.35	161.40	-73.96	0.26	-0.16	4.12
4,450.00	2.82	81.97	4,438.71	80.51	162.61	-74.06	0.37	0.20	-6.28
4,475.00	2.82	80.39	4,463.68	80.70	163.83	-74.20	0.31	0.00	-6.32
4,500.00	2.95	80.04	4,488.65	80.91	165.07	-74.37	0.52	0.52	-1.40
4,525.00	2.90	80.21	4,513.62	81.13	166.32	-74.54	0.20	-0.20	0.68
4,550.00	2.85	80.44	4,538.59	81.34	167.56	-74.70	0.21	-0.20	0.92
4,575.00	2.93	80.20	4,563.56	81.55	168.80	-74.86	0.32	0.32	-0.96
4,600.00	2.87	79.17	4,588.52	81.78	170.05	-75.04	0.32	-0.24	-4.12
4,625.00	2.90	78.99	4,613.49	82.02	171.28	-75.23	0.13	0.12	-0.72



<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	3.10	75.68	4,638.46	82.31	172.56	-75.47	1.06	0.80	-13.24	
4,675.00	3.27	73.77	4,663.42	82.67	173.90	-75.78	0.80	0.68	-7.64	
4,700.00	3.35	73.11	4,688.38	83.08	175.28	-76.14	0.35	0.32	-2.64	
4,725.00	3.35	73.68	4,713.34	83.50	176.68	-76.50	0.13	0.00	2.28	
4,750.00	3.36	73.54	4,738.29	83.91	178.08	-76.86	0.05	0.04	-0.56	
4,775.00	3.30	74.14	4,763.25	84.32	179.48	-77.21	0.28	-0.24	2.40	
4,800.00	3.38	73.99	4,788.21	84.72	180.88	-77.55	0.32	0.32	-0.60	
4,825.00	3.46	73.24	4,813.16	85.14	182.31	-77.92	0.37	0.32	-3.00	
4,850.00	3.45	74.38	4,838.12	85.56	183.76	-78.28	0.28	-0.04	4.56	
4,875.00	3.45	73.80	4,863.07	85.97	185.20	-78.63	0.14	0.00	-2.32	
4,900.00	3.50	72.93	4,888.03	86.41	186.66	-79.01	0.29	0.20	-3.48	
4,925.00	3.50	74.12	4,912.98	86.84	188.12	-79.39	0.29	0.00	4.76	
4,950.00	3.46	74.91	4,937.93	87.24	189.58	-79.73	0.25	-0.16	3.16	
4,975.00	3.47	72.19	4,962.89	87.67	191.03	-80.10	0.66	0.04	-10.88	
5,000.00	3.96	65.54	4,987.84	88.26	192.54	-80.63	2.61	1.96	-26.60	
5,025.00	4.53	60.28	5,012.77	89.11	194.18	-81.41	2.76	2.28	-21.04	
5,050.00	4.71	59.02	5,037.69	90.12	195.92	-82.36	0.83	0.72	-5.04	
5,075.00	4.96	57.80	5,062.60	91.23	197.71	-83.40	1.08	1.00	-4.88	
5,100.00	4.93	58.28	5,087.50	92.37	199.54	-84.46	0.20	-0.12	1.92	
5,125.00	5.03	57.68	5,112.41	93.52	201.38	-85.54	0.45	0.40	-2.40	
5,150.00	5.02	57.91	5,137.31	94.69	203.23	-86.64	0.09	-0.04	0.92	
5,175.00	4.95	58.72	5,162.22	95.83	205.08	-87.70	0.40	-0.28	3.24	
5,200.00	4.99	59.19	5,187.12	96.95	206.94	-88.75	0.23	0.16	1.88	
5,225.00	5.05	58.75	5,212.03	98.07	208.81	-89.80	0.29	0.24	-1.76	
5,250.00	5.14	58.66	5,236.93	99.23	210.71	-90.88	0.36	0.36	-0.36	
5,275.00	5.23	58.57	5,261.83	100.40	212.64	-91.98	0.36	0.36	-0.36	
5,300.00	5.10	59.14	5,286.73	101.57	214.56	-93.06	0.56	-0.52	2.28	
5,325.00	5.24	59.22	5,311.62	102.72	216.50	-94.14	0.56	0.56	0.32	
5,350.00	5.17	59.36	5,336.52	103.88	218.45	-95.22	0.28	-0.28	0.56	
5,375.00	5.25	59.19	5,361.42	105.04	220.40	-96.31	0.33	0.32	-0.68	
5,400.00	5.26	59.34	5,386.31	106.21	222.37	-97.40	0.07	0.04	0.60	
5,425.00	5.21	58.89	5,411.21	107.38	224.33	-98.49	0.26	-0.20	-1.80	
5,450.00	5.31	58.99	5,436.10	108.56	226.29	-99.60	0.40	0.40	0.40	
5,475.00	5.36	58.60	5,461.00	109.77	228.28	-100.72	0.25	0.20	-1.56	
5,500.00	5.30	59.17	5,485.89	110.97	230.26	-101.84	0.32	-0.24	2.28	
5,525.00	5.36	58.73	5,510.78	112.17	232.25	-102.96	0.29	0.24	-1.76	
5,550.00	5.37	59.20	5,535.67	113.37	234.26	-104.09	0.18	0.04	1.88	
5,575.00	5.16	59.42	5,560.56	114.54	236.23	-105.18	0.84	-0.84	0.88	
5,600.00	5.12	60.19	5,585.46	115.67	238.17	-106.23	0.32	-0.16	3.08	
5,625.00	5.05	60.04	5,610.37	116.77	240.09	-107.26	0.29	-0.28	-0.60	
5,650.00	4.97	59.47	5,635.27	117.87	241.97	-108.28	0.38	-0.32	-2.28	
5,675.00	5.01	60.30	5,660.17	118.96	243.85	-109.30	0.33	0.16	3.32	
5,700.00	4.92	59.91	5,685.08	120.04	245.73	-110.30	0.38	-0.36	-1.56	



<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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	4.87	59.96	5,709.99	121.11	247.58	-111.30	0.20	-0.20	0.20	
5,750.00	4.70	60.48	5,734.90	122.15	249.39	-112.26	0.70	-0.68	2.08	
5,775.00	4.52	60.46	5,759.82	123.14	251.13	-113.18	0.72	-0.72	-0.08	
5,800.00	4.32	61.62	5,784.75	124.07	252.82	-114.05	0.88	-0.80	4.64	
5,825.00	4.21	61.59	5,809.68	124.95	254.46	-114.87	0.44	-0.44	-0.12	
5,850.00	4.30	60.82	5,834.61	125.85	256.08	-115.70	0.43	0.36	-3.08	
5,875.00	4.30	60.31	5,859.54	126.77	257.71	-116.55	0.15	0.00	-2.04	
5,900.00	4.29	61.47	5,884.47	127.68	259.35	-117.40	0.35	-0.04	4.64	
5,925.00	4.30	59.39	5,909.40	128.60	260.98	-118.26	0.62	0.04	-8.32	
5,950.00	4.36	59.14	5,934.33	129.57	262.60	-119.16	0.25	0.24	-1.00	
5,975.00	4.33	58.65	5,959.26	130.55	264.22	-120.07	0.19	-0.12	-1.96	
6,000.00	4.25	58.37	5,984.19	131.52	265.82	-120.98	0.33	-0.32	-1.12	
6,025.00	4.08	58.28	6,009.12	132.48	267.36	-121.88	0.68	-0.68	-0.36	
6,050.00	3.98	56.86	6,034.06	133.42	268.84	-122.76	0.57	-0.40	-5.68	
6,075.00	3.90	57.63	6,059.00	134.35	270.29	-123.63	0.38	-0.32	3.08	
6,100.00	4.06	57.40	6,083.94	135.28	271.75	-124.51	0.64	0.64	-0.92	
6,125.00	4.08	57.64	6,108.88	136.23	273.25	-125.40	0.11	0.08	0.96	
6,150.00	4.09	57.67	6,133.81	137.18	274.75	-126.29	0.04	0.04	0.12	
6,175.00	4.20	57.29	6,158.75	138.16	276.28	-127.20	0.45	0.44	-1.52	
6,200.00	4.13	57.63	6,183.68	139.13	277.81	-128.12	0.30	-0.28	1.36	
6,225.00	4.16	58.38	6,208.61	140.09	279.34	-129.02	0.25	0.12	3.00	
6,250.00	4.06	56.38	6,233.55	141.06	280.85	-129.92	0.70	-0.40	-8.00	
6,275.00	4.09	52.32	6,258.49	142.09	282.29	-130.90	1.16	0.12	-16.24	
6,300.00	4.12	46.98	6,283.42	143.25	283.65	-132.00	1.53	0.12	-21.36	
6,325.00	4.12	44.91	6,308.36	144.50	284.94	-133.20	0.59	0.00	-8.28	
6,350.00	4.08	44.39	6,333.29	145.77	286.20	-134.42	0.22	-0.16	-2.08	
6,375.00	4.01	43.62	6,358.23	147.04	287.43	-135.64	0.35	-0.28	-3.08	
6,400.00	3.76	42.76	6,383.17	148.27	288.59	-136.83	1.03	-1.00	-3.44	
6,425.00	3.57	43.91	6,408.12	149.43	289.68	-137.95	0.81	-0.76	4.60	
6,450.00	3.61	44.01	6,433.07	150.56	290.77	-139.03	0.16	0.16	0.40	
6,475.00	3.35	45.57	6,458.03	151.64	291.84	-140.06	1.11	-1.04	6.24	
6,500.00	3.22	45.77	6,482.99	152.64	292.86	-141.02	0.52	-0.52	0.80	
6,525.00	3.12	44.89	6,507.95	153.61	293.85	-141.96	0.44	-0.40	-3.52	
6,550.00	3.00	44.93	6,532.91	154.56	294.79	-142.86	0.48	-0.48	0.16	
6,575.00	2.91	44.31	6,557.88	155.47	295.69	-143.75	0.38	-0.36	-2.48	
6,600.00	2.80	44.53	6,582.85	156.36	296.56	-144.60	0.44	-0.44	0.88	
6,625.00	2.82	42.48	6,607.82	157.25	297.41	-145.45	0.41	0.08	-8.20	
6,650.00	2.86	43.41	6,632.79	158.16	298.25	-146.33	0.24	0.16	3.72	
6,675.00	2.86	42.78	6,657.76	159.07	299.10	-147.20	0.13	0.00	-2.52	
6,700.00	2.90	43.23	6,682.73	159.99	299.96	-148.09	0.18	0.16	1.80	
6,725.00	2.90	43.23	6,707.69	160.91	300.83	-148.98	0.00	0.00	0.00	
6,750.00	2.87	44.37	6,732.66	161.82	301.70	-149.85	0.26	-0.12	4.56	
6,775.00	2.74	47.87	6,757.63	162.67	302.58	-150.66	0.86	-0.52	14.00	
6,800.00	2.80	48.29	6,782.60	163.47	303.48	-151.43	0.25	0.24	1.68	

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)
6,825.00	2.58	51.91	6,807.58	164.23	304.38	-152.15	1.11	-0.88	14.48
6,850.00	2.49	53.45	6,832.55	164.90	305.26	-152.79	0.45	-0.36	6.16
6,875.00	2.19	56.97	6,857.53	165.48	306.09	-153.34	1.33	-1.20	14.08
6,900.00	1.77	67.34	6,882.52	165.89	306.85	-153.72	2.20	-1.68	41.48
6,925.00	1.51	76.19	6,907.51	166.12	307.53	-153.92	1.45	-1.04	35.40
6,950.00	1.26	89.17	6,932.50	166.20	308.12	-153.98	1.60	-1.00	51.92
6,975.00	1.23	87.29	6,957.49	166.22	308.66	-153.97	0.20	-0.12	-7.52
7,000.00	1.22	88.68	6,982.49	166.24	309.20	-153.97	0.13	-0.04	5.56
7,025.00	1.34	84.22	7,007.48	166.27	309.75	-153.98	0.62	0.48	-17.84
7,050.00	1.27	89.46	7,032.47	166.30	310.32	-153.99	0.55	-0.28	20.96
7,075.00	1.24	92.32	7,057.47	166.29	310.87	-153.96	0.28	-0.12	11.44
7,100.00	1.33	82.54	7,082.46	166.32	311.43	-153.97	0.95	0.36	-39.12
7,125.00	1.40	76.82	7,107.45	166.43	312.01	-154.05	0.61	0.28	-22.88
7,150.00	1.85	69.19	7,132.44	166.64	312.69	-154.24	1.99	1.80	-30.52
7,175.00	2.21	58.71	7,157.43	167.04	313.48	-154.60	2.06	1.44	-41.92
7,200.00	2.36	60.85	7,182.41	167.54	314.34	-155.07	0.69	0.60	8.56
7,225.00	2.63	59.68	7,207.38	168.08	315.28	-155.57	1.10	1.08	-4.68
7,250.00	2.77	59.12	7,232.36	168.68	316.30	-156.13	0.57	0.56	-2.24
7,275.00	2.73	58.83	7,257.33	169.29	317.32	-156.71	0.17	-0.16	-1.16
7,300.00	2.86	58.91	7,282.30	169.92	318.37	-157.29	0.52	0.52	0.32
7,325.00	2.95	54.39	7,307.27	170.62	319.42	-157.95	0.98	0.36	-18.08
7,350.00	3.11	52.85	7,332.23	171.41	320.49	-158.69	0.72	0.64	-6.16
7,375.00	3.09	51.36	7,357.19	172.24	321.55	-159.48	0.33	-0.08	-5.96
7,400.00	3.13	49.36	7,382.16	173.10	322.60	-160.30	0.46	0.16	-8.00
7,425.00	3.21	48.26	7,407.12	174.01	323.64	-161.17	0.40	0.32	-4.40
7,450.00	3.20	46.85	7,432.08	174.95	324.67	-162.07	0.32	-0.04	-5.64
7,475.00	3.08	45.60	7,457.04	175.90	325.66	-162.98	0.55	-0.48	-5.00
7,500.00	3.10	44.10	7,482.01	176.86	326.61	-163.90	0.33	0.08	-6.00
7,525.00	3.12	45.09	7,506.97	177.82	327.56	-164.83	0.23	0.08	3.96
7,550.00	3.06	44.45	7,531.93	178.78	328.51	-165.74	0.28	-0.24	-2.56
7,575.00	2.90	43.28	7,556.90	179.72	329.41	-166.65	0.68	-0.64	-4.68
7,600.00	2.69	41.42	7,581.87	180.62	330.23	-167.51	0.91	-0.84	-7.44
7,625.00	2.46	37.54	7,606.84	181.48	330.95	-168.35	1.15	-0.92	-15.52
7,650.00	2.44	37.17	7,631.82	182.33	331.60	-169.17	0.10	-0.08	-1.48
7,675.00	2.43	38.10	7,656.80	183.17	332.25	-169.99	0.16	-0.04	3.72
7,700.00	2.63	42.51	7,681.78	184.01	332.96	-170.80	1.12	0.80	17.64
7,725.00	3.11	51.30	7,706.74	184.86	333.88	-171.61	2.60	1.92	35.16
7,750.00	3.22	51.78	7,731.71	185.72	334.96	-172.42	0.45	0.44	1.92
7,775.00	3.35	51.34	7,756.66	186.61	336.08	-173.27	0.53	0.52	-1.76
7,800.00	3.74	52.81	7,781.62	187.56	337.30	-174.17	1.60	1.56	5.88
7,825.00	4.10	53.25	7,806.56	188.59	338.66	-175.14	1.45	1.44	1.76
7,850.00	4.15	53.20	7,831.49	189.66	340.11	-176.16	0.20	0.20	-0.20
7,875.00	4.27	53.44	7,856.43	190.76	341.58	-177.20	0.49	0.48	0.96

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)	
7,900.00	4.44	54.59	7,881.35	191.87	343.11	-178.25	0.76	0.68	4.60	
7,925.00	4.64	54.92	7,906.28	193.02	344.73	-179.33	0.81	0.80	1.32	
7,950.00	4.71	54.68	7,931.19	194.19	346.39	-180.44	0.29	0.28	-0.96	
7,975.00	4.81	54.76	7,956.11	195.39	348.09	-181.57	0.40	0.40	0.32	
8,000.00	4.86	55.42	7,981.02	196.59	349.82	-182.71	0.30	0.20	2.64	
8,025.00	4.84	55.41	8,005.93	197.79	351.56	-183.84	0.08	-0.08	-0.04	
8,050.00	4.82	56.86	8,030.84	198.97	353.30	-184.94	0.49	-0.08	5.80	
8,075.00	4.72	56.85	8,055.75	200.10	355.04	-186.01	0.40	-0.40	-0.04	
8,100.00	4.86	57.53	8,080.66	201.23	356.80	-187.07	0.60	0.56	2.72	
8,125.00	4.82	57.93	8,105.58	202.36	358.58	-188.13	0.21	-0.16	1.60	
8,150.00	4.66	59.07	8,130.49	203.44	360.34	-189.14	0.74	-0.64	4.56	
8,175.00	4.04	63.43	8,155.42	204.36	362.00	-189.99	2.81	-2.48	17.44	
8,200.00	3.93	63.11	8,180.36	205.14	363.55	-190.71	0.45	-0.44	-1.28	
8,225.00	3.88	60.87	8,205.30	205.94	365.06	-191.45	0.64	-0.20	-8.96	
8,250.00	3.44	62.44	8,230.25	206.70	366.46	-192.15	1.80	-1.76	6.28	
8,275.00	3.33	66.36	8,255.20	207.33	367.79	-192.73	1.02	-0.44	15.68	
8,300.00	2.93	65.51	8,280.17	207.89	369.04	-193.24	1.61	-1.60	-3.40	
8,325.00	2.78	66.35	8,305.14	208.40	370.17	-193.70	0.62	-0.60	3.36	
8,350.00	2.73	67.13	8,330.11	208.87	371.28	-194.13	0.25	-0.20	3.12	
8,375.00	2.71	67.34	8,355.08	209.33	372.37	-194.55	0.09	-0.08	0.84	
8,400.00	2.69	68.18	8,380.05	209.78	373.46	-194.95	0.18	-0.08	3.36	
8,425.00	2.65	67.62	8,405.02	210.22	374.54	-195.35	0.19	-0.16	-2.24	
8,450.00	2.70	64.95	8,430.00	210.68	375.61	-195.78	0.54	0.20	-10.68	
8,475.00	2.60	64.22	8,454.97	211.18	376.65	-196.23	0.42	-0.40	-2.92	
8,500.00	2.55	62.03	8,479.95	211.69	377.66	-196.70	0.44	-0.20	-8.76	
8,525.00	2.66	60.28	8,504.92	212.24	378.65	-197.21	0.54	0.44	-7.00	
8,550.00	2.61	56.18	8,529.89	212.84	379.63	-197.77	0.78	-0.20	-16.40	
8,575.00	2.58	57.51	8,554.87	213.46	380.57	-198.35	0.27	-0.12	5.32	
8,600.00	2.98	50.00	8,579.84	214.18	381.55	-199.04	2.16	1.60	-30.04	
8,620.00	2.56	55.32	8,599.81	214.77	382.31	-199.59	2.46	-2.10	26.60	
Tie In										
8,801.00	1.55	51.71	8,780.70	218.58	387.56	-203.20	0.56	-0.56	-1.99	
First Phoenix MWD Survey										
8,895.00	2.14	71.19	8,874.65	219.94	390.22	-204.45	0.91	0.63	20.72	
8,927.00	3.64	83.64	8,906.61	220.24	391.79	-204.69	5.05	4.69	38.91	
8,958.00	5.35	92.13	8,937.51	220.30	394.22	-204.65	5.90	5.52	27.39	
8,990.00	6.53	97.21	8,969.34	220.02	397.51	-204.24	4.03	3.69	15.88	
9,014.00	7.63	97.24	8,993.15	219.64	400.45	-203.75	4.58	4.58	0.13	
9,045.00	11.21	105.82	9,023.73	218.56	405.39	-202.48	12.37	11.55	27.68	
9,077.00	14.46	117.54	9,054.93	215.87	411.93	-199.53	12.96	10.16	36.63	
9,108.00	18.65	127.45	9,084.65	211.06	419.30	-194.43	16.25	13.52	31.97	
9,140.00	23.23	134.00	9,114.53	203.56	427.91	-186.60	16.05	14.31	20.47	
9,171.00	27.04	137.72	9,142.59	194.09	437.05	-176.79	13.30	12.29	12.00	
9,202.00	31.03	143.08	9,169.70	182.49	446.59	-164.81	15.35	12.87	17.29	

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)
9,234.00	34.49	149.86	9,196.61	168.05	456.10	-150.01	15.75	10.81	21.19
9,265.00	37.51	156.56	9,221.70	151.79	464.27	-133.44	16.00	9.74	21.61
9,297.00	41.28	161.75	9,246.43	132.81	471.46	-114.20	15.64	11.78	16.22
9,328.00	45.47	166.38	9,268.96	112.35	477.26	-93.52	16.96	13.52	14.94
9,359.00	49.92	168.20	9,289.82	89.99	482.29	-70.98	15.00	14.35	5.87
9,390.00	55.59	170.35	9,308.58	65.75	486.87	-46.59	19.10	18.29	6.94
9,422.00	59.77	170.62	9,325.69	39.09	491.33	-19.77	13.08	13.06	0.84
9,453.00	64.61	172.61	9,340.14	11.97	495.32	7.49	16.61	15.61	6.42
9,481.00	68.61	176.00	9,351.26	-13.60	497.86	33.13	18.09	14.28	12.10
FTP: 9481' MD									
9,484.00	69.04	176.35	9,352.35	-16.39	498.05	35.93	18.09	14.41	11.72
9,516.00	74.97	178.63	9,362.23	-46.78	499.37	66.35	19.73	18.53	7.13
9,547.00	80.57	179.91	9,368.79	-77.06	499.75	96.62	18.51	18.06	4.13
9,579.00	86.58	179.42	9,372.37	-108.84	499.94	128.39	18.84	18.78	-1.53
9,610.00	89.60	178.58	9,373.40	-139.82	500.48	159.36	10.11	9.74	-2.71
9,642.00	90.42	178.09	9,373.40	-171.80	501.41	191.35	2.99	2.56	-1.53
9,736.00	90.08	178.49	9,372.99	-265.76	504.21	285.35	0.56	-0.36	0.43
9,801.00	90.50	178.34	9,372.66	-330.73	506.01	350.34	0.69	0.65	-0.23
9,895.00	90.14	178.19	9,372.14	-424.69	508.86	444.34	0.41	-0.38	-0.16
9,990.00	90.50	179.82	9,371.60	-519.67	510.51	539.31	1.76	0.38	1.72
10,083.00	90.65	180.52	9,370.67	-612.66	510.23	632.22	0.77	0.16	0.75
10,177.00	93.18	182.26	9,367.53	-706.57	507.95	725.97	3.27	2.69	1.85
10,271.00	92.86	181.50	9,362.58	-800.39	504.87	819.59	0.88	-0.34	-0.81
10,365.00	91.91	181.69	9,358.67	-894.27	502.26	913.30	1.03	-1.01	0.20
10,459.00	90.30	181.12	9,356.85	-988.22	499.95	1,007.09	1.82	-1.71	-0.61
10,553.00	88.33	179.80	9,357.98	-1,082.21	499.20	1,100.97	2.52	-2.10	-1.40
10,648.00	89.06	178.79	9,360.14	-1,177.17	500.37	1,195.91	1.31	0.77	-1.06
10,742.00	89.99	178.70	9,360.92	-1,271.15	502.43	1,289.89	0.99	0.99	-0.10
10,836.00	89.83	178.89	9,361.07	-1,365.12	504.40	1,383.87	0.26	-0.17	0.20
10,930.00	91.02	180.66	9,360.37	-1,459.12	504.77	1,477.81	2.27	1.27	1.88
11,024.00	92.65	182.99	9,357.36	-1,553.01	501.78	1,571.51	3.02	1.73	2.48
11,118.00	90.62	183.22	9,354.68	-1,646.83	496.69	1,665.06	2.17	-2.16	0.24
11,212.00	90.65	183.54	9,353.64	-1,740.66	491.15	1,758.60	0.34	0.03	0.34
11,306.00	89.73	181.96	9,353.32	-1,834.55	486.64	1,852.24	1.95	-0.98	-1.68
11,401.00	90.22	180.71	9,353.37	-1,929.52	484.43	1,947.05	1.41	0.52	-1.32
11,495.00	89.08	178.90	9,353.94	-2,023.51	484.75	2,040.98	2.28	-1.21	-1.93
11,589.00	89.36	178.07	9,355.22	-2,117.47	487.23	2,134.96	0.93	0.30	-0.88
11,683.00	90.02	177.77	9,355.73	-2,211.40	490.64	2,228.96	0.77	0.70	-0.32
11,778.00	90.39	176.62	9,355.39	-2,306.29	495.29	2,323.96	1.27	0.39	-1.21
11,872.00	89.88	177.99	9,355.17	-2,400.18	499.71	2,417.95	1.56	-0.54	1.46
11,966.00	90.54	179.49	9,354.82	-2,494.15	501.78	2,511.93	1.74	0.70	1.60
12,060.00	90.87	178.75	9,353.67	-2,588.14	503.22	2,605.90	0.86	0.35	-0.79
12,155.00	91.48	177.85	9,351.72	-2,683.07	506.04	2,700.87	1.14	0.64	-0.95

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)	
12,249.00	87.88	179.49	9,352.24	-2,777.03	508.22	2,794.84	4.21	-3.83	1.74	
12,343.00	87.60	180.92	9,355.95	-2,870.95	507.89	2,888.68	1.55	-0.30	1.52	
12,437.00	86.75	179.46	9,360.58	-2,964.83	507.58	2,982.47	1.80	-0.90	-1.55	
12,531.00	88.51	180.92	9,364.47	-3,058.75	507.26	3,076.30	2.43	1.87	1.55	
12,624.00	90.24	181.95	9,365.48	-3,151.71	504.93	3,169.10	2.16	1.86	1.11	
12,718.00	90.76	181.43	9,364.66	-3,245.66	502.16	3,262.87	0.78	0.55	-0.55	
12,812.00	90.88	180.66	9,363.32	-3,339.64	500.45	3,356.71	0.83	0.13	-0.82	
12,906.00	90.27	179.82	9,362.38	-3,433.63	500.05	3,450.61	1.10	-0.65	-0.89	
13,000.00	90.77	181.20	9,361.52	-3,527.62	499.22	3,544.50	1.56	0.53	1.47	
13,095.00	90.36	181.56	9,360.59	-3,622.59	496.93	3,639.30	0.57	-0.43	0.38	
13,189.00	92.87	182.39	9,357.94	-3,716.48	493.69	3,733.00	2.81	2.67	0.88	
13,283.00	93.47	182.42	9,352.74	-3,810.26	489.75	3,826.55	0.64	0.64	0.03	
13,377.00	93.89	182.08	9,346.71	-3,903.99	486.07	3,920.06	0.57	0.45	-0.36	
13,472.00	91.44	180.16	9,342.29	-3,998.86	484.22	4,014.79	3.28	-2.58	-2.02	
13,567.00	90.81	179.00	9,340.42	-4,093.84	484.91	4,109.72	1.39	-0.66	-1.22	
13,661.00	90.85	177.38	9,339.06	-4,187.78	487.88	4,203.70	1.72	0.04	-1.72	
13,755.00	89.43	177.48	9,338.83	-4,281.68	492.10	4,297.70	1.51	-1.51	0.11	
13,850.00	90.39	179.47	9,338.98	-4,376.64	494.63	4,392.68	2.33	1.01	2.09	
13,944.00	90.70	178.74	9,338.09	-4,470.62	496.09	4,486.65	0.84	0.33	-0.78	
14,038.00	91.67	183.65	9,336.14	-4,564.55	494.14	4,580.43	5.32	1.03	5.22	
14,132.00	90.70	183.14	9,334.20	-4,658.37	488.57	4,673.95	1.17	-1.03	-0.54	
14,227.00	90.53	181.05	9,333.18	-4,753.29	485.10	4,768.67	2.21	-0.18	-2.20	
14,321.00	90.73	180.44	9,332.14	-4,847.28	483.88	4,862.54	0.68	0.21	-0.65	
14,415.00	89.54	180.28	9,331.92	-4,941.27	483.28	4,956.44	1.28	-1.27	-0.17	
14,509.00	89.54	179.70	9,332.68	-5,035.27	483.30	5,050.36	0.62	0.00	-0.62	
14,603.00	88.77	178.25	9,334.06	-5,129.24	484.98	5,144.33	1.75	-0.82	-1.54	
14,698.00	88.62	179.68	9,336.23	-5,224.20	486.70	5,239.28	1.51	-0.16	1.51	
14,792.00	88.80	180.28	9,338.34	-5,318.17	486.73	5,333.18	0.67	0.19	0.64	
14,885.00	88.88	180.34	9,340.23	-5,411.15	486.23	5,426.07	0.11	0.09	0.06	
14,980.00	87.52	178.65	9,343.21	-5,506.10	487.06	5,520.97	2.28	-1.43	-1.78	
15,075.00	88.36	179.39	9,346.63	-5,601.02	488.69	5,615.89	1.18	0.88	0.78	
15,169.00	89.60	180.40	9,348.30	-5,695.00	488.86	5,709.80	1.70	1.32	1.07	
15,263.00	91.11	180.64	9,347.72	-5,788.99	488.01	5,803.69	1.63	1.61	0.26	
15,357.00	91.79	181.09	9,345.34	-5,882.95	486.59	5,897.52	0.87	0.72	0.48	
15,451.00	91.16	180.52	9,342.92	-5,976.91	485.27	5,991.35	0.90	-0.67	-0.61	
15,544.00	91.61	179.43	9,340.67	-6,069.88	485.31	6,084.26	1.27	0.48	-1.17	
15,638.00	92.01	178.27	9,337.70	-6,163.81	487.19	6,178.19	1.30	0.43	-1.23	
15,732.00	91.50	177.63	9,334.82	-6,257.71	490.55	6,272.14	0.87	-0.54	-0.68	
15,826.00	90.88	180.47	9,332.87	-6,351.67	492.11	6,366.09	3.09	-0.66	3.02	
15,920.00	91.41	180.06	9,330.99	-6,445.65	491.68	6,459.98	0.71	0.56	-0.44	
16,014.00	90.71	178.73	9,329.25	-6,539.62	492.67	6,553.92	1.60	-0.74	-1.41	
16,109.00	90.62	177.66	9,328.15	-6,634.57	495.66	6,648.91	1.13	-0.09	-1.13	
16,203.00	88.37	177.38	9,328.98	-6,728.47	499.73	6,742.90	2.41	-2.39	-0.30	

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)	
16,297.00	89.33	177.63	9,330.86	-6,822.36	503.82	6,836.88	1.06	1.02	0.27	
16,391.00	90.39	178.02	9,331.09	-6,916.29	507.39	6,930.88	1.20	1.13	0.41	
16,485.00	91.53	178.85	9,329.52	-7,010.24	509.95	7,024.86	1.50	1.21	0.88	
16,579.00	92.49	181.04	9,326.22	-7,104.18	510.05	7,118.72	2.54	1.02	2.33	
16,673.00	92.45	180.20	9,322.17	-7,198.08	509.03	7,212.52	0.89	-0.04	-0.89	
16,767.00	89.65	178.45	9,320.45	-7,292.05	510.14	7,306.45	3.51	-2.98	-1.86	
16,862.00	89.10	178.97	9,321.48	-7,387.02	512.28	7,401.43	0.80	-0.58	0.55	
16,956.00	88.13	181.06	9,323.76	-7,480.98	512.25	7,495.33	2.45	-1.03	2.22	
17,050.00	88.54	182.89	9,326.49	-7,574.88	509.01	7,589.03	1.99	0.44	1.95	
17,144.00	88.09	181.91	9,329.25	-7,668.76	505.08	7,682.67	1.15	-0.48	-1.04	
17,238.00	89.68	182.80	9,331.08	-7,762.66	501.22	7,776.35	1.94	1.69	0.95	
17,332.00	91.64	182.14	9,330.00	-7,856.56	497.17	7,870.02	2.20	2.09	-0.70	
17,426.00	91.13	180.93	9,327.73	-7,950.49	494.65	7,963.79	1.40	-0.54	-1.29	
17,519.00	92.22	179.99	9,325.01	-8,043.45	493.90	8,056.64	1.55	1.17	-1.01	
17,610.00	92.08	179.58	9,321.59	-8,134.38	494.24	8,147.52	0.48	-0.15	-0.45	
17,704.00	91.51	178.42	9,318.65	-8,228.32	495.88	8,241.45	1.37	-0.61	-1.23	
17,799.00	91.27	180.92	9,316.34	-8,323.29	496.43	8,336.36	2.64	-0.25	2.63	
17,893.00	90.76	182.59	9,314.68	-8,417.22	493.55	8,430.11	1.86	-0.54	1.78	
17,987.00	90.53	182.48	9,313.62	-8,511.12	489.39	8,523.78	0.27	-0.24	-0.12	
18,082.00	90.02	181.86	9,313.17	-8,606.05	485.80	8,618.49	0.85	-0.54	-0.65	
18,176.00	90.47	180.74	9,312.76	-8,700.03	483.66	8,712.31	1.28	0.48	-1.19	
18,270.00	90.54	179.19	9,311.93	-8,794.02	483.72	8,806.23	1.65	0.07	-1.65	
18,364.00	91.27	178.19	9,310.45	-8,887.98	485.87	8,900.21	1.32	0.78	-1.06	
18,458.00	90.76	179.19	9,308.78	-8,981.94	488.02	8,994.18	1.19	-0.54	1.06	
18,552.00	90.24	182.28	9,307.96	-9,075.92	486.81	9,088.03	3.33	-0.55	3.29	
18,647.00	90.98	181.69	9,306.95	-9,170.86	483.52	9,182.77	1.00	0.78	-0.62	
18,741.00	91.11	182.02	9,305.24	-9,264.79	480.48	9,276.51	0.38	0.14	0.35	
18,835.00	90.82	182.83	9,303.66	-9,358.69	476.50	9,370.18	0.92	-0.31	0.86	
18,930.00	88.53	182.11	9,304.19	-9,453.60	472.41	9,464.85	2.53	-2.41	-0.76	
19,023.00	88.77	181.51	9,306.39	-9,546.52	469.47	9,557.59	0.69	0.26	-0.65	
19,117.00	89.20	180.49	9,308.05	-9,640.49	467.83	9,651.43	1.18	0.46	-1.09	
19,211.00	91.62	179.93	9,307.38	-9,734.48	467.49	9,745.33	2.64	2.57	-0.60	
19,305.00	91.28	178.78	9,305.00	-9,828.44	468.55	9,839.26	1.28	-0.36	-1.22	
19,399.00	89.36	178.83	9,304.47	-9,922.42	470.51	9,933.24	2.04	-2.04	0.05	
19,493.00	90.16	177.82	9,304.87	-10,016.38	473.25	10,027.23	1.37	0.85	-1.07	
19,587.00	91.67	176.99	9,303.37	-10,110.26	477.51	10,121.22	1.83	1.61	-0.88	
19,681.00	89.31	177.55	9,302.56	-10,204.15	481.99	10,215.20	2.58	-2.51	0.60	
19,775.00	89.54	176.26	9,303.51	-10,298.00	487.06	10,309.18	1.39	0.24	-1.37	
19,868.00	90.00	177.21	9,303.88	-10,390.85	492.36	10,402.17	1.13	0.49	1.02	
19,962.00	88.86	177.96	9,304.82	-10,484.76	496.32	10,496.16	1.45	-1.21	0.80	
20,056.00	89.67	179.42	9,306.02	-10,578.72	498.47	10,590.14	1.78	0.86	1.55	
20,150.00	89.84	180.18	9,306.42	-10,672.72	498.80	10,684.08	0.83	0.18	0.81	
20,243.00	90.05	179.20	9,306.51	-10,765.72	499.30	10,777.02	1.08	0.23	-1.05	
20,338.00	90.22	179.53	9,306.29	-10,860.71	500.35	10,871.98	0.39	0.18	0.35	

<b>Company:</b>	COG Operating LLC	<b>Local Co-ordinate Reference:</b>	Well 702H
<b>Project:</b>	Eddy County, NM (NAD27 NME)	<b>TVD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Site:</b>	Honey Graham State Com	<b>MD Reference:</b>	RKB @ 3107.00usft (Ensign 155)
<b>Well:</b>	702H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH / 65663	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys (Ensign 155)	<b>Database:</b>	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)	
20,432.00	93.04	181.38	9,303.61	-10,954.66	499.61	10,965.83	3.59	3.00	1.97	
20,526.00	90.19	181.91	9,300.97	-11,048.57	496.91	11,059.56	3.08	-3.03	0.56	
20,620.00	90.62	183.76	9,300.30	-11,142.45	492.26	11,153.19	2.02	0.46	1.97	
20,714.00	92.04	182.85	9,298.12	-11,236.26	486.84	11,246.72	1.79	1.51	-0.97	
20,808.00	91.14	182.27	9,295.51	-11,330.13	482.65	11,340.35	1.14	-0.96	-0.62	
20,902.00	90.05	181.91	9,294.53	-11,424.06	479.22	11,434.07	1.22	-1.16	-0.38	
20,996.00	90.44	180.68	9,294.13	-11,518.04	477.09	11,527.89	1.37	0.41	-1.31	
21,090.00	91.42	180.50	9,292.61	-11,612.02	476.13	11,621.76	1.06	1.04	-0.19	
21,184.00	91.30	182.71	9,290.38	-11,705.95	473.49	11,715.51	2.35	-0.13	2.35	
21,277.00	91.58	182.86	9,288.04	-11,798.81	468.98	11,808.13	0.34	0.30	0.16	
21,370.00	91.61	183.24	9,285.45	-11,891.64	464.03	11,900.69	0.41	0.03	0.41	
21,464.00	88.53	182.13	9,285.34	-11,985.53	459.63	11,994.33	3.48	-3.28	-1.18	
21,558.00	88.73	181.13	9,287.58	-12,079.46	456.95	12,088.09	1.08	0.21	-1.06	
21,651.00	88.68	180.07	9,289.68	-12,172.43	455.98	12,180.95	1.14	-0.05	-1.14	
21,704.00	88.34	179.49	9,291.06	-12,225.41	456.19	12,233.90	1.27	-0.63	-1.10	
<b>LTP: 21704' MD</b>										
21,741.00	88.11	179.08	9,292.21	-12,262.39	456.65	12,270.87	1.27	-0.63	-1.10	
21,770.00	87.31	178.48	9,293.36	-12,291.36	457.26	12,299.84	3.45	-2.76	-2.07	
<b>Final Phoenix MWD Survey</b>										
21,832.00	87.31	178.48	9,296.27	-12,353.27	458.91	12,361.76	0.00	0.00	0.00	
<b>Projection to TD</b>										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
8,620.00	8,599.81	214.77	382.31	Tie In	
8,801.00	8,780.70	218.58	387.56	First Phoenix MWD Survey	
9,481.00	9,351.26	-13.60	497.86	FTP: 9481' MD	
21,704.00	9,291.06	-12,225.41	456.19	LTP: 21704' MD	
21,770.00	9,293.36	-12,291.36	457.26	Final Phoenix MWD Survey	
21,832.00	9,296.27	-12,353.27	458.91	Projection to TD	