

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
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

RECEIVED
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. FEED 1 + 2020
Santa Fe, NM 87505

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

☒ AMENDED REPORT
As Drilled

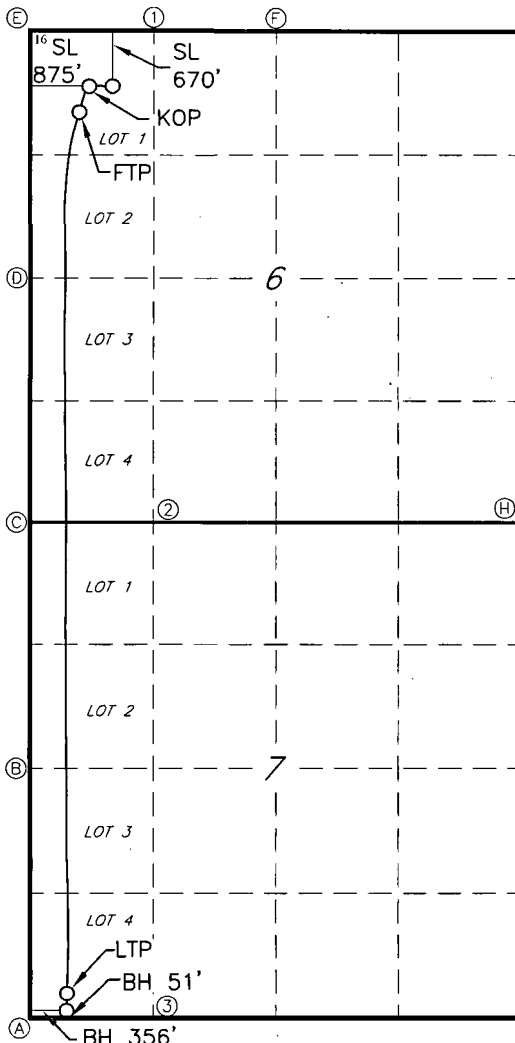
WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-45966		2 Pool Code 30215		3 Pool Name Hay Hollow; Bone Spring	
4 Property Code 308074		5 Property Name MYOX 6 STATE COM			6 Well Number 501H
7 OGRID NO. 229137		8 Operator Name COG OPERATING, LLC			9 Elevation 3079'

10 Surface Location									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
1	6	26S	28E		670	NORTH	875	WEST	EDDY

11 Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	7	26S	28E		51	SOUTH	356	WEST	EDDY
12 Dedicated Acres 318.88		13 Joint or Infill		14 Consolidation Code		15 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.



GEODETTIC DATA
NAD 83 GRID - NM EAST

SURFACE LOCATION (SL)
N: 391839.4 - E: 603567.4
LAT: 32.0770869° N
LONG: 104.1324160° W
LAT: 32.0437.5128° N
LONG: 104.0756.6972° W

KICK OFF POINT (KOP)
672'-FNL/624'-FWL (SEC.6)
N: 391836.4 - E: 603316.3
LAT: 32.0770800° N
LONG: 104.1332266° W
LAT: 32.0437.4881° N
LONG: 104.0759.6158° W
MD=7,405.00/TVD=7396.12

FIRST TAKE POINT (FTP)
946'-FNL/518'-FWL (SEC.6)
N: 391562.1 - E: 603211.0
LAT: 32.0763263° N
LONG: 104.1335682° W
LAT: 32.0434.7747° N
LONG: 104.0800.8457° W
MD=7,980.00/TVD=7854.00

LAST TAKE POINT (LTP)
237'-FSL/359'-FWL (SEC.7)
N: 382113.1 - E: 603081.8
LAT: 32.0503522° N
LONG: 104.1340417° W
LAT: 32.0301.2677° N
LONG: 104.0802.5501° W
MD=17,450.00/TVD=7845.61

BOTTOM HOLE ✓
N: 381927.1 - E: 603079.0
LAT: 32.0498409° N
LONG: 104.1340518° W
LAT: 32.0259.4273° N
LONG: 104.0802.5864° W
MD=17,636.00/TVD=7843.02

CORNER DATA
NAD 83 GRID - NM EAST

A: FOUND BRASS CAP "1940"
N 381870.7 - E 602723.2

B: FOUND 1" BAR
N 384528.2 - E 602714.9

C: FOUND 2 3/4" IRON PIPE
N 387187.1 - E 602707.2

D: FOUND BRASS CAP "1940"
N 389846.0 - E 602699.0

E: FOUND BRASS CAP "1940"
N 392505.8 - E 602690.5

F: FOUND BRASS CAP "1940"
N 392516.4 - E 605361.5

G: FOUND BRASS CAP "1940"
N 392514.2 - E 608024.8

H: CALCULATED CORNER
N 387235.7 - E 608011.7

I: CALCULATED CORNER
N 381957.1 - E 608001.2

CALCULATED POINTS

1: N 392511.1 - E 604026.3
2: N 387199.5 - E 604052.8
3: N 381892.3 - E 604042.7

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or 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.

Signature Amanda Avery 2/10/2020
Date

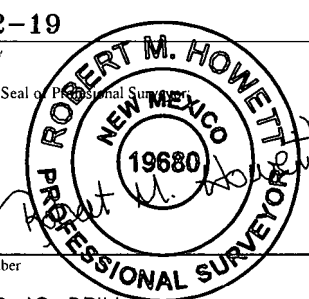
Printed Name
Amanda Avery

E-mail Address
aavery@concho.com

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

03-12-19
Date of Survey

Signature and Seal of Professional Surveyor


19680
Certificate Number

2/4/2020 AS-DRILL

Job No.: **LS19030359AD**

RUP 4-8-2020

RECEIVED

FEB 14 2020

Intent ☐ As Drilled ☐

EMNRD-OGD ARTESIA

API # 30-015-45966		
Operator Name: COG Operating LLC	Property Name: Myox 6 State Com	Well Number 501H

Kick Off Point (KOP)

UL 1	Section 6	Township 26S	Range 28E	Lot	Feet 670	From N/S North	Feet 875	From E/W West	County Eddy
Latitude 32.0770800					Longitude 104.1332266			NAD 83	

First Take Point (FTP)

UL 1	Section 6	Township 26S	Range 28E	Lot	Feet 946	From N/S North	Feet 518	From E/W West	County Eddy
Latitude 32.0763263					Longitude 104.1335682			NAD 83	

Last Take Point (LTP)

UL 4	Section 7	Township 26S	Range 28E	Lot	Feet 237	From N/S South	Feet 359	From E/W West	County Eddy
Latitude 32.0503522					Longitude 104.1340417			NAD 83	

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

☐ Yes

Is this well an infill well?

☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

RECEIVED

FEB 11 2020

COG

EMINRO-GODARTESIA

SURVEY REPORT

MYOX 6 STATE COM #501H

ENSIGN #155

7/29/2019

This survey is correct to the best of my knowledge and is supported by actual field data.

JAKE ELGER

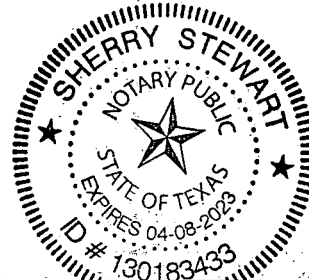
Notarized this date 05 of AUGUST, 2019

Sherry Stewart

Notary Signature

County of Midland

State of Texas



The Ultimate Partner In Wellbore Placement

SURVEY REPORT

MYOX 6 STATE COM #501H

KEEPER GYRO SURVEY

CUSTOMER COG
PROJECT Myox 6 State Com #501H
FIELD *

SDI JOB NO. OP.020124
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Myox 6 State Com #501H
Lat/Long 32.076964° N , 104.132022° W
Northing 391,781.9 ft
Easting 562,353.3 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.11 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

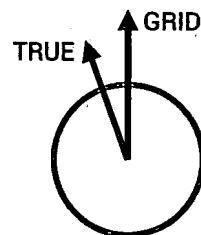
Lat/Long 32.076964° N , 104.132022° W
Northing 391,781.9 ft
Easting 562,353.3 ft
UWI 30-015-45966

DEPTH AND ELEVATION REFERENCE

Ground Level 3080 ft above Mean Sea Level
Reference Datum RKB
Reference Height 24 ft above G.L.
Reference Elevation 3104 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 182.80°
Calculation Method Minimum Curvature

**LOCAL GRAVITY REFERENCE INFORMATION**

Local Gravity 998.519 mG [computed]
True to Grid subtract 0.11°

WELL NOTES

Keeper Gyro Survey

OPERATORS

R. Franco

SDI Operator Name (Printed)

SIGNATURE

DATE



MD	INC	AZIM	TVD	VS	IN/S	TEAW	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.19	308.42	100.00	-0.10	0.10	-0.13	0.19	0.16	308.42
125.00	0.17	283.48	125.00	-0.13	0.14	-0.20	0.32	0.24	304.65
150.00	0.27	284.52	150.00	-0.15	0.16	-0.29	0.39	0.33	298.82
175.00	0.25	275.55	175.00	-0.16	0.18	-0.40	0.17	0.44	294.10
200.00	0.36	309.98	200.00	-0.21	0.23	-0.52	0.83	0.57	294.49
225.00	0.35	269.78	225.00	-0.25	0.28	-0.65	0.98	0.71	293.56
250.00	0.38	298.75	250.00	-0.28	0.32	-0.80	0.75	0.87	292.00
275.00	0.39	301.98	275.00	-0.36	0.41	-0.95	0.10	1.03	293.36
300.00	0.38	306.69	300.00	-0.45	0.51	-1.09	0.14	1.20	294.89
325.00	0.33	308.98	325.00	-0.54	0.60	-1.21	0.20	1.35	296.35
350.00	0.47	270.55	350.00	-0.58	0.65	-1.37	1.17	1.51	295.27
375.00	0.80	259.57	374.99	-0.53	0.62	-1.64	1.42	1.76	290.53
400.00	0.99	254.16	399.99	-0.43	0.52	-2.02	0.84	2.09	284.53
425.00	0.99	255.88	424.99	-0.29	0.41	-2.44	0.12	2.48	279.58
450.00	0.97	260.17	449.98	-0.18	0.32	-2.86	0.31	2.88	276.45
475.00	0.95	262.44	474.98	-0.10	0.26	-3.28	0.18	3.29	274.54
500.00	0.85	257.17	499.98	-0.01	0.19	-3.66	0.50	3.67	273.00
525.00	0.73	252.79	524.97	0.09	0.10	-3.99	0.56	4.00	271.49
550.00	0.70	252.21	549.97	0.20	0.01	-4.29	0.09	4.29	270.13
575.00	0.80	244.15	574.97	0.34	-0.11	-4.60	0.58	4.60	268.59
600.00	0.65	238.95	599.97	0.50	-0.26	-4.88	0.66	4.88	266.91
625.00	0.69	235.65	624.97	0.67	-0.42	-5.12	0.22	5.14	265.29
650.00	0.61	239.89	649.97	0.84	-0.57	-5.36	0.37	5.39	263.89
675.00	0.64	233.40	674.96	1.00	-0.72	-5.59	0.31	5.64	262.61
700.00	0.74	228.85	699.96	1.20	-0.91	-5.82	0.45	5.90	261.07
725.00	0.63	235.02	724.96	1.39	-1.10	-6.06	0.54	6.16	259.71
750.00	0.61	236.94	749.96	1.56	-1.25	-6.28	0.12	6.41	258.74
775.00	0.59	235.45	774.96	1.71	-1.40	-6.50	0.09	6.65	257.87
800.00	0.70	231.37	799.96	1.89	-1.57	-6.73	0.46	6.91	256.90
825.00	0.76	239.27	824.95	2.09	-1.75	-6.99	0.48	7.20	255.97
850.00	0.83	242.03	849.95	2.27	-1.92	-7.29	0.29	7.54	255.28

MD	INC	AZIM	TVD	VS	IN/S	TE/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
875.00	0.71	246.24	874.95	2.43	-2.06	-7.59	0.51	7.87	254.80
900.00	0.76	238.10	899.95	2.60	-2.21	-7.88	0.46	8.18	254.30
925.00	0.72	233.30	924.94	2.79	-2.40	-8.14	0.31	8.49	253.61
950.00	0.70	232.86	949.94	2.99	-2.58	-8.39	0.06	8.78	252.90
975.00	0.85	237.97	974.94	3.19	-2.77	-8.67	0.66	9.10	252.27
1000.00	0.89	237.04	999.94	3.41	-2.98	-8.99	0.16	9.47	251.68
1025.00	0.82	243.41	1024.93	3.61	-3.16	-9.31	0.46	9.84	251.25
1050.00	0.72	252.12	1049.93	3.76	-3.29	-9.62	0.63	10.17	251.12
1075.00	0.70	244.96	1074.93	3.88	-3.40	-9.91	0.36	10.48	251.05
1100.00	0.64	236.66	1099.93	4.04	-3.55	-10.17	0.46	10.77	250.78
1125.00	0.75	228.94	1124.93	4.23	-3.73	-10.41	0.57	11.06	250.28
1150.00	0.80	229.58	1149.92	4.47	-3.95	-10.66	0.18	11.37	249.67
1175.00	0.94	222.65	1174.92	4.74	-4.21	-10.93	0.70	11.72	248.93
1200.00	0.92	230.75	1199.92	5.03	-4.49	-11.23	0.53	12.09	248.20
1225.00	0.88	233.99	1224.92	5.29	-4.73	-11.54	0.26	12.47	247.71
1250.00	0.77	238.81	1249.91	5.50	-4.93	-11.84	0.51	12.82	247.39
1275.00	0.70	231.62	1274.91	5.70	-5.11	-12.10	0.46	13.14	247.10
1300.00	0.42	216.91	1299.91	5.87	-5.28	-12.28	1.25	13.36	246.73
1325.00	0.27	159.80	1324.91	6.00	-5.41	-12.31	1.43	13.45	246.28
1350.00	0.33	149.65	1349.91	6.12	-5.53	-12.26	0.33	13.44	245.73
1375.00	0.21	140.78	1374.91	6.21	-5.62	-12.19	0.50	13.42	245.23
1400.00	0.31	84.65	1399.91	6.24	-5.65	-12.09	1.06	13.35	244.94
1425.00	0.55	99.81	1424.91	6.24	-5.67	-11.91	1.02	13.19	244.55
1450.00	0.57	106.64	1449.91	6.29	-5.72	-11.67	0.29	13.00	243.87
1475.00	0.46	107.28	1474.91	6.34	-5.79	-11.45	0.44	12.83	243.19
1500.00	0.47	91.94	1499.90	6.37	-5.82	-11.25	0.50	12.67	242.64
1525.00	0.62	92.18	1524.90	6.36	-5.83	-11.02	0.58	12.47	242.11
1550.00	0.93	89.94	1549.90	6.35	-5.84	-10.68	1.27	12.17	241.35
1575.00	1.26	91.02	1574.90	6.33	-5.84	-10.20	1.31	11.76	240.21
1600.00	1.56	93.95	1599.89	6.33	-5.87	-9.59	1.24	11.24	238.53
1625.00	1.71	96.36	1624.88	6.36	-5.93	-8.88	0.66	10.68	236.24
1650.00	1.67	90.48	1649.87	6.37	-5.98	-8.14	0.71	10.10	233.71

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
1675.00	1.68	88.50	1674.86	6.33	-5.97	-7.41	0.23	9.52	231.13
1700.00	1.81	81.08	1699.85	6.22	-5.90	-6.65	1.06	8.89	228.43
1725.00	1.74	73.51	1724.83	6.01	-5.73	-5.90	0.98	8.23	225.82
1750.00	1.42	62.30	1749.82	5.73	-5.48	-5.26	1.79	7.60	223.83
1775.00	1.19	29.13	1774.82	5.34	-5.11	-4.86	3.10	7.05	223.57
1800.00	1.38	20.84	1799.81	4.82	-4.60	-4.63	1.05	6.53	225.17
1825.00	1.54	21.37	1824.80	4.22	-4.01	-4.40	0.65	5.95	227.67
1850.00	1.63	26.70	1849.79	3.57	-3.38	-4.12	0.69	5.32	230.64
1875.00	1.66	32.45	1874.78	2.93	-2.75	-3.76	0.67	4.66	233.81
1900.00	1.57	33.83	1899.77	2.32	-2.16	-3.38	0.40	4.01	237.37
1925.00	1.27	40.01	1924.77	1.81	-1.66	-3.01	1.36	3.44	241.04
1950.00	0.73	58.63	1949.76	1.50	-1.37	-2.69	2.50	3.02	243.05
1975.00	0.50	91.45	1974.76	1.41	-1.29	-2.45	1.63	2.77	242.22
2000.00	0.61	109.91	1999.76	1.44	-1.34	-2.22	0.83	2.59	238.88
2025.00	0.86	115.28	2024.76	1.56	-1.46	-1.92	1.06	2.42	232.72
2050.00	1.03	106.52	2049.75	1.68	-1.61	-1.54	0.88	2.22	223.72
2075.00	1.20	114.97	2074.75	1.83	-1.78	-1.08	0.96	2.09	211.33
2100.00	1.17	121.75	2099.74	2.05	-2.03	-0.63	0.58	2.12	197.28
2125.00	0.98	115.58	2124.74	2.26	-2.25	-0.22	0.88	2.26	185.61
2150.00	0.36	355.41	2149.74	2.27	-2.27	-0.03	4.81	2.27	180.88
2175.00	0.94	328.77	2174.74	2.02	-2.01	-0.15	2.56	2.02	184.20
2200.00	1.13	323.22	2199.73	1.66	-1.64	-0.40	0.86	1.69	193.78
2225.00	1.18	322.33	2224.73	1.27	-1.24	-0.71	0.22	1.42	209.77
2250.00	1.17	331.98	2249.72	0.85	-0.81	-0.99	0.79	1.27	230.71
2275.00	1.20	327.82	2274.72	0.42	-0.36	-1.25	0.36	1.30	253.91
2300.00	1.09	331.76	2299.71	0.00	0.07	-1.50	0.54	1.50	272.73
2325.00	0.81	356.89	2324.71	-0.38	0.46	-1.62	1.98	1.68	285.76
2350.00	0.90	22.17	2349.71	-0.74	0.82	-1.55	1.54	1.75	297.69
2375.00	0.81	33.23	2374.70	-1.08	1.15	-1.38	0.75	1.80	309.64
2400.00	0.75	31.94	2399.70	-1.37	1.43	-1.20	0.27	1.87	320.04
2425.00	0.71	25.70	2424.70	-1.66	1.71	-1.05	0.34	2.00	328.54
2450.00	0.80	23.11	2449.70	-1.96	2.01	-0.91	0.38	2.21	335.65

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE	CLOSURE
ft	deg	deg	ft	ft	ft	ft	%/100ft	DIST	DIR
2475.00	0.82	18.44	2474.69	2.30	2.34	0.78	0.28	2.47	341.47
2500.00	0.97	9.93	2499.69	2.68	2.72	0.69	0.80	2.81	345.74
2525.00	1.05	332.68	2524.69	3.09	3.13	0.76	2.60	3.22	346.36
2550.00	2.07	301.59	2549.68	3.51	3.57	1.25	5.17	3.79	340.71
2575.00	2.52	293.92	2574.66	-3.92	4.03	-2.14	2.16	4.57	332.06
2600.00	2.78	291.81	2599.63	-4.32	4.48	-3.20	1.12	5.51	324.43
2625.00	2.70	294.88	2624.60	-4.74	4.95	-4.30	0.68	6.56	319.04
2650.00	2.66	293.97	2649.58	-5.17	5.44	-5.37	0.22	7.64	315.38
2675.00	2.65	291.16	2674.55	-5.56	5.88	-6.44	0.52	8.72	312.43
2700.00	2.48	287.17	2699.52	-5.88	6.25	-7.49	0.98	9.76	309.84
2725.00	2.17	275.16	2724.50	-6.03	6.45	-8.48	2.31	10.66	307.27
2750.00	2.03	262.95	2749.49	-5.98	6.44	-9.39	1.87	11.39	304.44
2775.00	1.94	262.02	2774.47	-5.82	6.33	-10.25	0.39	12.05	301.69
2800.00	1.96	260.74	2799.46	-5.65	6.20	-11.09	0.20	12.71	299.21
2825.00	1.95	263.16	2824.44	-5.49	6.08	-11.94	0.33	13.40	297.00
2850.00	1.92	262.30	2849.43	-5.34	5.98	-12.77	0.18	14.10	295.07
2875.00	1.98	258.86	2874.41	-5.16	5.84	-13.61	0.52	14.81	293.21
2900.00	1.96	261.77	2899.40	-4.98	5.69	-14.46	0.40	15.54	291.49
2925.00	2.12	255.51	2924.38	-4.76	5.51	-15.33	1.10	16.29	289.79
2950.00	1.95	263.55	2949.37	-4.55	5.35	-16.20	1.35	17.06	288.28
2975.00	1.96	260.16	2974.35	-4.39	5.23	-17.04	0.47	17.83	287.06
3000.00	2.03	261.12	2999.34	-4.21	5.09	-17.90	0.29	18.61	285.87
3025.00	2.20	261.29	3024.32	-4.02	4.95	-18.81	0.71	19.45	284.74
3050.00	2.19	266.01	3049.30	-3.87	4.84	-19.76	0.72	20.35	283.77
3075.00	2.33	265.62	3074.28	-3.75	4.77	-20.75	0.56	21.29	282.95
3100.00	2.30	266.33	3099.26	-3.63	4.70	-21.76	0.16	22.26	282.19
3125.00	2.22	266.61	3124.24	-3.52	4.64	-22.74	0.32	23.21	281.53
3150.00	2.14	265.40	3149.23	-3.41	4.57	-23.69	0.39	24.13	280.92
3175.00	2.04	267.33	3174.21	-3.31	4.51	-24.60	0.47	25.01	280.40
3200.00	2.08	262.91	3199.19	-3.19	4.44	-25.50	0.65	25.88	279.87
3225.00	1.96	264.58	3224.18	-3.05	4.34	-26.37	0.52	26.73	279.34
3250.00	2.06	264.39	3249.16	-2.92	4.26	-27.25	0.40	27.58	278.88

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
3275.00	2.04	267.33	3274.15	2.81	4.19	28.14	0.43	28.45	278.47
3300.00	2.10	264.13	3299.13	2.70	4.12	29.04	0.52	29.33	278.08
3325.00	2.06	263.20	3324.11	-2.56	4.02	-29.94	0.22	30.21	277.65
3350.00	2.18	262.78	3349.10	-2.40	3.91	-30.86	0.49	31.11	277.22
3375.00	2.14	261.93	3374.08	-2.23	3.78	-31.80	0.21	32.02	276.79
3400.00	2.17	264.33	3399.06	-2.07	3.67	-32.73	0.38	32.94	276.40
3425.00	2.19	266.08	3424.04	-1.94	3.59	-33.68	0.28	33.87	276.09
3450.00	2.27	265.06	3449.02	-1.82	3.52	-34.65	0.34	34.82	275.80
3475.00	2.28	264.08	3474.00	-1.68	3.42	-35.63	0.17	35.80	275.49
3500.00	2.16	267.00	3498.98	-1.56	3.35	-36.60	0.67	36.75	275.23
3525.00	2.20	268.43	3523.97	-1.47	3.31	-37.55	0.27	37.70	275.04
3550.00	2.01	268.99	3548.95	-1.41	3.29	-38.47	0.76	38.61	274.89
3575.00	1.95	266.41	3573.93	-1.33	3.25	-39.33	0.43	39.47	274.73
3600.00	1.83	263.78	3598.92	-1.22	3.18	-40.16	0.59	40.28	274.53
3625.00	1.78	260.20	3623.91	-1.07	3.08	-40.94	0.49	41.05	274.30
3650.00	1.70	261.94	3648.90	-0.92	2.96	-41.69	0.40	41.79	274.06
3675.00	1.74	259.41	3673.89	-0.76	2.84	-42.43	0.34	42.52	273.82
3700.00	1.63	257.72	3698.87	-0.58	2.69	-43.15	0.49	43.23	273.57
3725.00	1.53	259.87	3723.87	-0.41	2.56	-43.82	0.45	43.90	273.34
3750.00	1.67	251.37	3748.86	-0.20	2.38	-44.50	1.10	44.56	273.06
3775.00	1.60	249.80	3773.85	-0.06	2.14	-45.17	0.33	45.22	272.72
3800.00	1.63	249.72	3798.84	0.34	1.90	-45.83	0.12	45.87	272.37
3825.00	1.67	249.28	3823.83	0.63	1.65	-46.50	0.17	46.53	272.03
3850.00	1.60	246.98	3848.81	0.92	1.38	-47.17	0.39	47.19	271.68
3875.00	1.53	249.07	3873.81	1.21	1.13	-47.80	0.36	47.81	271.35
3900.00	1.57	248.09	3898.80	1.49	0.88	-48.43	0.20	48.43	271.04
3925.00	1.64	246.78	3923.79	1.79	0.61	-49.07	0.32	49.08	270.71
3950.00	1.99	251.66	3948.77	2.10	0.33	-49.81	1.50	49.82	270.38
3975.00	1.85	257.46	3973.76	2.36	0.11	-50.62	0.94	50.62	270.12
4000.00	1.94	253.55	3998.75	2.61	-0.10	-51.42	0.61	51.42	269.89
4025.00	1.90	256.89	4023.73	2.86	-0.31	-52.23	0.47	52.23	269.66
4050.00	1.83	256.43	4048.72	3.09	-0.50	-53.02	0.29	53.02	269.46

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
4075.00	2.01	255.49	4073.71	3.33	-0.70	-53.84	0.74	53.84	269.25
4100.00	1.97	254.73	4098.69	3.60	-0.93	-54.68	0.20	54.68	269.03
4125.00	1.97	256.32	4123.68	3.85	-1.14	-55.51	0.22	55.52	268.82
4150.00	1.96	256.90	4148.66	4.09	-1.34	-56.34	0.08	56.36	268.64
4175.00	2.15	255.03	4173.64	4.35	-1.56	-57.21	0.78	57.23	268.44
4200.00	1.88	258.63	4198.63	4.59	-1.76	-58.07	1.16	58.09	268.26
4225.00	1.90	256.46	4223.62	4.81	-1.94	-58.87	0.30	58.90	268.12
4250.00	1.87	253.23	4248.60	5.06	-2.15	-59.67	0.45	59.71	267.93
4275.00	1.98	253.00	4273.59	5.35	-2.40	-60.47	0.43	60.52	267.73
4300.00	2.02	249.77	4298.57	5.67	-2.68	-61.30	0.48	61.36	267.50
4325.00	2.11	250.40	4323.56	6.01	-2.98	-62.15	0.38	62.22	267.25
4350.00	2.07	247.15	4348.54	6.39	-3.31	-63.00	0.51	63.08	266.99
4375.00	2.04	249.04	4373.52	6.76	-3.65	-63.83	0.30	63.93	266.73
4400.00	2.09	249.98	4398.51	7.12	-3.96	-64.67	0.26	64.79	266.49
4425.00	2.07	248.76	4423.49	7.48	-4.28	-65.52	0.19	65.66	266.26
4450.00	2.23	248.03	4448.47	7.87	-4.63	-66.40	0.64	66.56	266.01
4475.00	2.42	247.33	4473.45	8.30	-5.01	-67.33	0.76	67.52	265.74
4500.00	2.75	256.21	4498.43	8.70	-5.36	-68.40	2.07	68.61	265.52
4525.00	3.51	268.32	4523.39	8.93	-5.53	-69.75	4.03	69.97	265.47
4550.00	3.76	268.36	4548.34	9.05	-5.57	-71.34	1.01	71.55	265.53
4575.00	3.69	268.60	4573.29	9.17	-5.61	-72.96	0.32	73.18	265.60
4600.00	3.43	269.04	4598.24	9.28	-5.65	-74.51	1.04	74.72	265.67
4625.00	3.26	266.20	4623.20	9.41	-5.71	-75.97	0.95	76.18	265.70
4650.00	3.07	265.61	4648.16	9.58	-5.80	-77.34	0.74	77.56	265.71
4675.00	3.00	263.83	4673.12	9.76	-5.93	-78.66	0.47	78.89	265.69
4700.00	3.03	263.69	4698.09	9.97	-6.07	-79.97	0.10	80.20	265.66
4725.00	2.90	264.29	4723.05	10.17	-6.20	-81.25	0.54	81.49	265.63
4750.00	2.82	266.37	4748.02	10.33	-6.31	-82.50	0.51	82.74	265.63
4775.00	3.07	265.47	4772.99	10.48	-6.40	-83.78	1.00	84.02	265.63
4800.00	3.12	274.61	4797.95	10.55	-6.40	-85.13	1.99	85.37	265.70
4825.00	3.34	281.07	4822.91	10.42	-6.20	-86.52	1.69	86.74	265.90
4850.00	3.25	279.47	4847.87	10.23	-5.95	-87.93	0.52	88.13	266.13

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
4875.00	3.14	278.75	4872.83	10.08	-5.73	-89.31	0.46	89.49	266.33
4900.00	2.89	279.64	4897.80	9.94	-5.52	-90.61	1.00	90.77	266.52
4925.00	2.90	278.38	4922.77	9.80	-5.32	-91.85	0.26	92.01	266.69
4950.00	2.93	275.15	4947.74	9.71	-5.17	-93.12	0.67	93.26	266.82
4975.00	2.87	276.67	4972.70	9.64	-5.04	-94.38	0.39	94.51	266.94
5000.00	2.91	277.12	4997.67	9.55	-4.89	-95.63	0.16	95.75	267.07
5025.00	2.95	276.29	5022.64	9.47	-4.74	-96.90	0.24	97.01	267.20
5050.00	3.01	277.48	5047.60	9.37	-4.58	-98.19	0.35	98.30	267.33
5075.00	3.37	288.85	5072.57	9.12	-4.26	-99.54	2.89	99.63	267.55
5100.00	3.88	296.32	5097.52	8.58	-3.65	-100.99	2.80	101.06	267.93
5125.00	3.96	297.45	5122.46	7.88	-2.87	-102.52	0.44	102.56	268.39
5150.00	3.83	297.95	5147.40	7.16	-2.08	-104.02	0.54	104.04	268.85
5175.00	3.76	294.87	5172.35	6.50	-1.35	-105.50	0.87	105.51	269.27
5200.00	3.50	294.15	5197.30	5.91	-0.69	-106.94	1.06	106.94	269.63
5225.00	3.39	297.70	5222.25	5.33	-0.04	-108.29	0.96	108.29	269.98
5250.00	3.23	291.80	5247.21	4.79	0.57	-109.60	1.50	109.60	270.30
5275.00	3.12	292.80	5272.17	4.32	-1.09	-110.88	0.48	110.88	270.57
5300.00	3.09	293.96	5297.13	3.85	-1.63	-112.12	0.29	112.13	270.83
5325.00	3.18	289.60	5322.10	3.40	2.14	-113.39	1.03	113.41	271.08
5350.00	3.51	285.18	5347.05	3.04	2.57	-114.78	1.65	114.81	271.28
5375.00	4.06	278.02	5372.00	2.79	2.89	-116.40	2.90	116.43	271.42
5400.00	4.16	277.73	5396.93	2.64	3.14	-118.17	0.41	118.21	271.52
5425.00	4.15	276.69	5421.87	2.50	3.37	-119.97	0.30	120.01	271.61
5450.00	4.13	275.78	5446.80	2.39	3.56	-121.76	0.27	121.81	271.68
5475.00	3.82	276.96	5471.74	2.28	3.75	-123.48	1.28	123.54	271.74
5500.00	3.75	278.55	5496.69	2.14	3.98	-125.12	0.50	125.18	271.82
5525.00	3.74	277.94	5521.64	1.98	4.21	-126.73	0.16	126.80	271.90
5550.00	3.82	273.98	5546.58	1.89	4.38	-128.37	1.08	128.45	271.96
5575.00	3.60	273.90	5571.53	1.86	4.49	-129.98	0.87	130.06	271.98
5600.00	3.52	271.08	5596.48	1.87	4.56	-131.53	0.77	131.61	271.99
5625.00	3.67	266.94	5621.43	1.97	4.53	-133.10	1.20	133.18	271.95
5650.00	3.44	267.08	5646.38	2.13	4.45	-134.64	0.92	134.72	271.89

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
5675.00	3.62	263.29	5671.34	2.34	4.32	-136.18	1.18	136.24	271.82
5700.00	3.75	261.48	5696.28	2.63	4.11	-137.77	0.71	137.83	271.71
5725.00	3.95	262.24	5721.23	2.94	3.87	-139.43	0.81	139.48	271.59
5750.00	4.97	262.71	5746.15	3.29	3.62	-141.36	4.10	141.40	271.47
5775.00	5.37	262.01	5771.05	3.70	3.32	-143.59	1.59	143.63	271.32
5800.00	5.35	261.76	5795.94	4.14	2.99	-145.90	0.11	145.93	271.17
5825.00	5.30	260.04	5820.83	4.62	2.62	-148.19	0.67	148.21	271.01
5850.00	5.08	260.10	5845.73	5.12	2.23	-150.42	0.89	150.44	270.85
5875.00	4.99	258.86	5870.63	5.63	1.83	-152.58	0.56	152.59	270.69
5900.00	5.00	257.31	5895.54	6.18	1.38	-154.71	0.54	154.71	270.51
5925.00	4.87	254.79	5920.45	6.80	0.86	-156.80	1.01	156.80	270.32
5950.00	4.89	253.64	5945.36	7.47	0.28	-158.84	0.40	158.84	270.10
5975.00	5.10	252.04	5970.26	8.22	-0.36	-160.92	0.99	160.92	269.87
6000.00	4.90	253.53	5995.17	8.96	1.00	-163.00	0.94	163.01	269.65
6025.00	5.02	265.27	6020.07	9.46	1.40	-165.12	4.08	165.12	269.52
6050.00	5.18	276.62	6044.97	9.53	1.36	-167.33	4.08	167.33	269.54
6075.00	5.42	277.30	6069.87	9.36	-1.08	-169.62	0.97	169.62	269.64
6100.00	5.45	279.08	6094.76	9.14	-0.74	-171.96	0.69	171.96	269.75
6125.00	5.43	278.20	6119.64	8.90	-0.38	-174.30	0.34	174.30	269.87
6150.00	5.52	275.88	6144.53	8.72	-0.09	-176.67	0.96	176.67	269.97
6175.00	5.53	274.21	6169.41	8.63	0.12	-179.07	0.65	179.07	270.04
6200.00	5.53	272.45	6194.30	8.60	0.26	-181.47	0.68	181.47	270.08
6225.00	5.36	271.58	6219.18	8.64	0.34	-183.84	0.76	183.84	270.11
6250.00	5.05	268.39	6244.08	8.75	0.35	-186.11	1.69	186.11	270.11
6275.00	4.82	267.61	6268.99	8.93	0.27	-188.26	0.97	188.26	270.08
6300.00	4.56	264.57	6293.90	9.16	0.13	-190.30	1.43	190.30	270.04
6325.00	4.26	262.47	6318.83	9.47	-0.08	-192.21	1.36	192.21	269.98
6350.00	3.88	262.59	6343.77	9.79	-0.31	-193.97	1.50	193.97	269.91
6375.00	3.77	260.06	6368.71	10.12	-0.56	-195.61	0.82	195.62	269.83
6400.00	3.66	256.79	6393.66	10.52	-0.89	-197.20	0.95	197.20	269.74
6425.00	3.38	257.20	6418.61	10.94	-1.23	-198.70	1.12	198.70	269.64
6450.00	3.14	259.78	6443.57	11.29	-1.52	-200.09	1.11	200.10	269.57

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
6475.00	2.92	269.12	6468.54	11.49	-1.65	-201.40	2.16	201.41	269.53
6500.00	2.75	276.73	6493.51	11.49	-1.59	-202.63	1.65	202.64	269.55
6525.00	2.65	261.02	6518.48	11.56	-1.61	-203.80	2.98	203.81	269.55
6550.00	3.04	239.04	6543.45	12.05	-2.04	-204.94	4.60	204.95	269.43
6575.00	3.38	233.87	6568.41	12.88	-2.82	-206.10	1.78	206.12	269.22
6600.00	3.61	240.02	6593.36	13.77	-3.64	-207.38	1.76	207.41	268.99
6625.00	3.79	246.34	6618.31	14.56	-4.37	-208.82	1.79	208.86	268.80
6650.00	3.70	246.00	6643.26	15.30	-5.03	-210.31	0.40	210.37	268.63
6675.00	3.46	248.18	6668.21	15.97	-5.64	-211.75	1.09	211.82	268.48
6700.00	3.07	259.79	6693.17	16.44	-6.03	-213.11	3.07	213.19	268.38
6725.00	2.96	264.85	6718.13	16.68	-6.21	-214.41	1.14	214.50	268.34
6750.00	2.83	266.18	6743.10	16.84	-6.31	-215.67	0.59	215.76	268.32
6775.00	3.25	277.99	6768.07	16.85	-6.25	-216.98	2.99	217.07	268.35
6800.00	3.84	289.57	6793.02	16.54	-5.87	-218.47	3.72	218.55	268.46
6825.00	3.95	291.36	6817.96	16.02	-5.28	-220.06	0.64	220.13	268.63
6850.00	3.43	289.93	6842.91	15.53	-4.71	-221.57	2.10	221.62	268.78
6875.00	3.31	286.54	6867.87	15.14	-4.25	-222.96	0.94	223.00	268.91
6900.00	3.10	287.34	6892.83	14.80	-3.84	-224.30	0.86	224.33	269.02
6925.00	2.94	284.17	6917.79	14.50	-3.49	-225.57	0.93	225.59	269.11
6950.00	2.75	284.21	6942.76	14.26	-3.18	-226.77	0.74	226.79	269.20
6975.00	2.57	279.10	6967.74	14.08	-2.95	-227.90	1.18	227.92	269.26
7000.00	2.62	274.59	6992.71	14.00	-2.81	-229.03	0.84	229.04	269.30
7025.00	2.85	265.39	7017.68	14.06	-2.82	-230.22	1.97	230.23	269.30
7050.00	3.12	264.48	7042.65	14.24	-2.93	-231.51	1.11	231.53	269.27
7075.00	3.77	266.67	7067.60	14.42	-3.04	-233.01	2.65	233.03	269.25
7100.00	4.35	270.77	7092.54	14.54	-3.08	-234.78	2.61	234.80	269.25
7125.00	4.61	271.13	7117.46	14.61	-3.05	-236.73	1.04	236.75	269.26
7150.00	4.51	271.74	7142.38	14.66	-3.00	-238.72	0.45	238.74	269.28
7175.00	4.15	272.82	7167.31	14.67	-2.92	-240.61	1.46	240.63	269.30
7200.00	3.72	276.83	7192.25	14.62	-2.78	-242.32	2.06	242.33	269.34
7225.00	3.67	277.19	7217.20	14.50	-2.59	-243.92	0.22	243.93	269.39
7240.00	3.57	277.69	7232.17	14.42	-2.46	-244.86	0.72	244.87	269.42



PHOENIX
TECHNOLOGY SERVICES

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EMNRD-OCDARTESIA

COG Operating LLC

Eddy County, NM (NAD27 NME)

Myox 6 State Com

501H

OH / 65025

Survey: Phoenix MWD Surveys

Standard Survey Report

12 August, 2019



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 501H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3104.00usft (Ensign 155)
Site:	Myox 6 State Com	MD Reference:	RKB @ 3104.00usft (Ensign 155)
Well:	501H	North Reference:	Grid
Wellbore:	OH / 65025	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 155)	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	Myox 6 State Com		
Site Position:		Northing:	392,266.10 usft
From:	Map	Easting:	563,486.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 41.841669 N
		Longitude:	104° 7' 42.097797 W
		Grid Convergence:	0.11 °

Well	501H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 4' 37.071312 N
		Longitude:	104° 7' 54.931865 W
		Ground Level:	3,080.00 usft

Wellbore	OH / 65025		
Magnetics	Model Name	Sample Date	Declination
			(°)
	MVHD	8/18/2019	7.00
			Dip Angle (°)
			59.72
			Field Strength (nT)
			47,822.40443309

Design	Surveys (Ensign 155)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			182.80

Survey Program	Date 8/12/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	7,240.00	Scientific Gyros (OH / 65025)	Scientific Keeper
7,310.00	17,636.00	Phoenix MWD Surveys (OH / 65025)	MWD+HRGM
			Description
			Scientific Drilling Intl. Standard Wireline Keeper
			OWSG MWD + HRGM

Survey										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate	
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
7,240.00	3.57	277.69	7,232.17	-2.46	-244.86	14.42	0.00	0.00	0.00	
Tie In										
7,310.00	1.23	257.86	7,302.11	-2.33	-247.75	14.43	3.50	-3.34	-28.33	
First Phoenix MWD Survey										
7,404.00	2.80	261.08	7,396.05	-2.90	-251.01	15.16	1.67	1.67	3.43	
7,436.00	6.31	227.09	7,427.94	-4.22	-253.07	16.57	13.39	10.97	-106.22	
7,467.00	10.19	221.54	7,458.62	-7.43	-256.14	19.93	12.76	12.52	-17.90	
7,498.00	13.29	219.03	7,488.97	-12.25	-260.20	24.95	10.13	10.00	-8.10	
7,530.00	16.24	216.52	7,519.91	-18.71	-265.18	31.64	9.43	9.22	-7.84	

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Well:	501H	North Reference:	Grid
Wellbore:	OH / 65025	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 155)	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)
7,561.00	19.57	214.95	7,549.40	-26.45	-270.74	39.64	10.85	10.74	-5.06
7,593.00	22.13	212.49	7,579.30	-35.93	-277.05	49.42	8.45	8.00	-7.69
7,624.00	25.33	207.34	7,607.68	-46.75	-283.23	60.53	12.29	10.32	-16.61
7,655.00	28.45	202.02	7,635.33	-59.49	-289.05	73.54	12.70	10.06	-17.16
7,687.00	30.68	199.28	7,663.16	-74.26	-294.60	88.56	8.15	6.97	-8.56
7,718.00	33.00	199.03	7,689.50	-89.71	-299.97	104.26	7.50	7.48	-0.81
7,749.00	34.87	197.30	7,715.22	-106.15	-305.35	120.94	6.79	6.03	-5.58
7,781.00	37.34	196.19	7,741.07	-124.21	-310.78	139.24	7.98	7.72	-3.47
7,812.00	42.11	195.67	7,764.91	-143.26	-316.21	158.53	15.42	15.39	-1.68
7,844.00	47.53	195.81	7,787.59	-164.96	-322.33	180.51	16.94	16.94	0.44
7,874.00	53.03	196.10	7,806.76	-187.14	-328.67	202.97	18.35	18.33	0.97
7,905.00	59.49	196.91	7,823.97	-211.84	-336.00	228.00	20.95	20.84	2.61
7,936.00	65.86	197.37	7,838.19	-238.14	-344.11	254.67	20.59	20.55	1.48
7,949.00	67.19	197.60	7,843.37	-249.51	-347.70	266.20	10.36	10.23	1.77
7,981.00	72.65	197.08	7,854.35	-278.19	-356.65	295.28	17.13	17.06	-1.63
8,012.00	77.23	196.14	7,862.40	-306.87	-365.20	324.34	15.06	14.77	-3.03
8,043.00	79.71	195.35	7,868.60	-336.10	-373.44	353.94	8.38	8.00	-2.55
8,076.00	81.28	195.54	7,874.05	-367.47	-382.11	385.70	4.79	4.76	0.58
8,107.00	82.58	195.51	7,878.40	-397.05	-390.33	415.64	4.19	4.19	-0.10
8,138.00	84.32	195.53	7,881.94	-426.72	-398.57	445.68	5.61	5.61	0.06
8,170.00	85.99	195.78	7,884.64	-457.42	-407.17	476.76	5.28	5.22	0.78
8,201.00	87.63	195.84	7,886.37	-487.20	-415.60	506.92	5.29	5.29	0.19
8,232.00	89.74	195.93	7,887.08	-517.01	-424.08	537.11	6.81	6.81	0.29
8,296.00	90.71	191.84	7,886.83	-579.12	-439.44	599.90	6.57	1.52	-6.39
8,390.00	90.33	189.83	7,885.97	-671.44	-457.11	692.97	2.18	-0.40	-2.14
8,484.00	89.91	186.18	7,885.78	-764.51	-470.20	786.56	3.91	-0.45	-3.88
8,578.00	89.89	186.54	7,885.94	-857.93	-480.61	880.38	0.38	-0.02	0.38
8,672.00	89.03	183.93	7,886.83	-951.52	-489.18	974.28	2.92	-0.91	-2.78
8,766.00	89.05	184.18	7,888.40	-1,045.27	-495.83	1,068.25	0.27	0.02	0.27
8,862.00	89.18	184.49	7,889.88	-1,140.99	-503.09	1,164.20	0.35	0.14	0.32
8,956.00	90.32	182.87	7,890.29	-1,234.79	-509.12	1,258.18	2.11	1.21	-1.72
9,051.00	90.90	180.89	7,889.28	-1,329.73	-512.23	1,353.16	2.17	0.61	-2.08
9,146.00	93.53	178.94	7,885.61	-1,424.64	-512.10	1,447.96	3.45	2.77	-2.05
9,240.00	92.17	178.96	7,880.94	-1,518.51	-510.38	1,541.63	1.45	-1.45	0.02
9,334.00	92.75	179.18	7,876.90	-1,612.41	-508.85	1,635.34	0.66	0.62	0.23
9,428.00	93.01	179.38	7,872.18	-1,706.28	-507.67	1,729.05	0.35	0.28	0.21
9,522.00	92.81	179.38	7,867.41	-1,800.16	-506.66	1,822.76	0.21	-0.21	0.00
9,616.00	92.96	180.00	7,862.68	-1,894.03	-506.15	1,916.50	0.68	0.16	0.66
9,710.00	90.34	179.89	7,859.97	-1,987.99	-506.06	2,010.33	2.79	-2.79	-0.12
9,804.00	88.76	179.74	7,860.71	-2,081.98	-505.75	2,104.20	1.69	-1.68	-0.16
9,898.00	88.71	180.48	7,862.78	-2,175.96	-505.93	2,198.07	0.79	-0.05	0.79
9,992.00	88.23	181.30	7,865.29	-2,269.91	-507.39	2,291.99	1.01	-0.51	0.87
10,086.00	88.09	182.12	7,868.31	-2,363.82	-510.20	2,385.92	0.88	-0.15	0.87

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Well:	501H	North Reference:	Grid
Wellbore:	OH / 65025	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 155)	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)
10,179.00	89.16	180.42	7,870.54	-2,456.77	-512.26	2,478.86	2.16	1.15	-1.83
10,273.00	89.25	180.39	7,871.85	-2,550.75	-512.92	2,572.77	0.10	0.10	-0.03
10,367.00	89.53	181.06	7,872.85	-2,644.74	-514.11	2,666.70	0.77	0.30	0.71
10,461.00	89.83	178.93	7,873.37	-2,738.73	-514.10	2,760.58	2.29	0.32	-2.27
10,555.00	90.03	179.47	7,873.49	-2,832.72	-512.79	2,854.39	0.61	0.21	0.57
10,645.00	90.46	180.13	7,873.10	-2,922.72	-512.48	2,944.27	0.88	0.48	0.73
10,735.00	89.96	177.93	7,872.77	-3,012.70	-510.95	3,034.07	2.51	-0.56	-2.44
10,825.00	90.10	177.69	7,872.73	-3,102.64	-507.51	3,123.73	0.31	0.16	-0.27
10,915.00	90.48	178.93	7,872.27	-3,192.60	-504.86	3,213.45	1.44	0.42	1.38
11,007.00	90.69	179.52	7,871.33	-3,284.58	-503.61	3,305.26	0.68	0.23	0.64
11,099.00	90.68	180.54	7,870.23	-3,376.57	-503.66	3,397.15	1.11	-0.01	1.11
11,189.00	90.71	181.31	7,869.14	-3,466.55	-505.12	3,487.09	0.86	0.03	0.86
11,279.00	90.07	179.53	7,868.53	-3,556.55	-505.78	3,577.01	2.10	-0.71	-1.98
11,373.00	90.55	179.38	7,868.02	-3,650.54	-504.88	3,670.85	0.53	0.51	-0.16
11,465.00	90.53	179.68	7,867.15	-3,742.53	-504.13	3,762.69	0.33	-0.02	0.33
11,557.00	90.04	179.37	7,866.69	-3,834.53	-503.36	3,854.54	0.63	-0.53	-0.34
11,651.00	89.82	179.23	7,866.81	-3,928.52	-502.22	3,948.36	0.28	-0.23	-0.15
11,746.00	89.53	179.19	7,867.35	-4,023.51	-500.91	4,043.18	0.31	-0.31	-0.04
11,840.00	91.17	178.48	7,866.77	-4,117.49	-498.99	4,136.95	1.90	1.74	-0.76
11,934.00	91.54	178.61	7,864.55	-4,211.43	-496.61	4,230.66	0.42	0.39	0.14
12,028.00	91.61	179.28	7,861.97	-4,305.38	-494.88	4,324.41	0.72	0.07	0.71
12,122.00	91.16	179.34	7,859.69	-4,399.34	-493.75	4,418.21	0.48	-0.48	0.06
12,217.00	90.62	179.33	7,858.22	-4,494.32	-492.64	4,513.02	0.57	-0.57	-0.01
12,311.00	89.87	179.51	7,857.82	-4,588.32	-491.69	4,606.86	0.82	-0.80	0.19
12,405.00	89.96	180.01	7,857.96	-4,682.32	-491.30	4,700.73	0.54	0.10	0.53
12,499.00	90.11	180.26	7,857.90	-4,776.32	-491.52	4,794.62	0.31	0.16	0.27
12,593.00	89.89	180.56	7,857.90	-4,870.31	-492.19	4,888.54	0.40	-0.23	0.32
12,687.00	89.37	179.31	7,858.51	-4,964.31	-492.09	4,982.42	1.44	-0.55	-1.33
12,781.00	89.47	179.74	7,859.46	-5,058.30	-491.31	5,076.26	0.47	0.11	0.46
12,875.00	89.28	180.12	7,860.48	-5,152.29	-491.19	5,170.14	0.45	-0.20	0.40
12,970.00	89.19	180.85	7,861.75	-5,247.28	-492.00	5,265.05	0.77	-0.09	0.77
13,064.00	90.67	179.53	7,861.87	-5,341.28	-492.31	5,358.95	2.11	1.57	-1.40
13,159.00	91.37	179.92	7,860.17	-5,436.26	-491.85	5,453.80	0.84	0.74	0.41
13,254.00	91.42	180.53	7,857.86	-5,531.23	-492.23	5,548.67	0.64	0.05	0.64
13,348.00	91.68	181.25	7,855.32	-5,625.18	-493.68	5,642.59	0.81	0.28	0.77
13,443.00	91.33	181.81	7,852.82	-5,720.12	-496.22	5,737.53	0.69	-0.37	0.59
13,537.00	90.51	179.96	7,851.31	-5,814.09	-497.67	5,831.46	2.15	-0.87	-1.97
13,631.00	90.55	179.70	7,850.44	-5,908.08	-497.39	5,925.33	0.28	0.04	-0.28
13,725.00	91.00	180.36	7,849.17	-6,002.08	-497.44	6,019.21	0.85	0.48	0.70
13,819.00	89.32	178.90	7,848.91	-6,096.07	-496.84	6,113.06	2.37	-1.79	-1.55
13,914.00	88.60	179.02	7,850.64	-6,191.03	-495.11	6,207.83	0.77	-0.76	0.13
14,008.00	88.50	179.64	7,853.01	-6,285.00	-494.01	6,301.63	0.67	-0.11	0.66
14,103.00	88.62	179.83	7,855.40	-6,379.97	-493.57	6,396.46	0.24	0.13	0.20
14,197.00	88.38	180.89	7,857.86	-6,473.93	-494.16	6,490.34	1.16	-0.26	1.13

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14,291.00	89.17	180.97	7,859.87	-6,567.90	-495.69	6,584.27	0.84	0.84	0.09
14,385.00	90.19	179.67	7,860.40	-6,661.89	-496.21	6,678.18	1.76	1.09	-1.38
14,479.00	90.78	178.59	7,859.60	-6,755.87	-494.79	6,771.98	1.31	0.63	-1.15
14,574.00	91.11	178.93	7,858.03	-6,850.84	-492.73	6,866.73	0.50	0.35	0.36
14,668.00	91.15	179.07	7,856.18	-6,944.81	-491.09	6,960.51	0.15	0.04	0.15
14,762.00	90.70	179.07	7,854.66	-7,038.78	-489.57	7,054.29	0.48	-0.48	0.00
14,856.00	90.85	179.73	7,853.39	-7,132.77	-488.58	7,148.12	0.72	0.16	0.70
14,951.00	91.16	180.19	7,851.72	-7,227.75	-488.51	7,242.99	0.58	0.33	0.48
15,045.00	90.61	179.43	7,850.27	-7,321.74	-488.20	7,336.85	1.00	-0.59	-0.81
15,140.00	90.85	179.58	7,849.06	-7,416.73	-487.38	7,431.68	0.30	0.25	0.16
15,235.00	91.21	180.04	7,847.35	-7,511.71	-487.07	7,526.54	0.61	0.38	0.48
15,329.00	91.40	180.48	7,845.21	-7,605.69	-487.49	7,620.42	0.51	0.20	0.47
15,423.00	89.06	180.27	7,844.84	-7,699.68	-488.11	7,714.33	2.50	-2.49	-0.22
15,518.00	88.85	180.65	7,846.57	-7,794.66	-488.87	7,809.23	0.46	-0.22	0.40
15,611.00	88.63	180.83	7,848.61	-7,887.63	-490.07	7,902.15	0.31	-0.24	0.19
15,705.00	89.42	179.80	7,850.21	-7,981.61	-490.59	7,996.05	1.38	0.84	-1.10
15,799.00	89.71	179.23	7,850.93	-8,075.60	-489.79	8,089.89	0.68	0.31	-0.61
15,893.00	90.16	179.91	7,851.03	-8,169.60	-489.09	8,183.74	0.87	0.48	0.72
15,988.00	88.76	179.92	7,851.93	-8,264.59	-488.95	8,278.61	1.47	-1.47	0.01
16,082.00	89.70	178.07	7,853.19	-8,358.57	-487.30	8,372.39	2.21	1.00	-1.97
16,176.00	90.65	177.52	7,852.91	-8,452.49	-483.68	8,466.03	1.17	1.01	-0.59
16,270.00	92.05	177.97	7,850.69	-8,546.39	-479.98	8,559.64	1.56	1.49	0.48
16,364.00	90.84	178.75	7,848.32	-8,640.32	-477.30	8,653.32	1.53	-1.29	0.83
16,458.00	90.21	179.16	7,847.46	-8,734.30	-475.58	8,747.11	0.80	-0.67	0.44
16,553.00	90.25	179.15	7,847.08	-8,829.29	-474.18	8,841.91	0.04	0.04	-0.01
16,647.00	90.42	179.64	7,846.53	-8,923.28	-473.19	8,935.75	0.55	0.18	0.52
16,739.00	90.23	179.70	7,846.01	-9,015.28	-472.66	9,027.61	0.22	-0.21	0.07
16,834.00	90.99	180.73	7,845.00	-9,110.27	-473.01	9,122.50	1.35	0.80	1.08
16,928.00	90.29	180.79	7,843.95	-9,204.26	-474.26	9,216.44	0.75	-0.74	0.06
17,023.00	90.55	180.99	7,843.25	-9,299.24	-475.74	9,311.38	0.35	0.27	0.21
17,117.00	89.11	181.09	7,843.53	-9,393.23	-477.44	9,405.33	1.54	-1.53	0.11
17,211.00	89.13	181.63	7,844.97	-9,487.19	-479.67	9,499.29	0.57	0.02	0.57
17,305.00	89.71	182.17	7,845.92	-9,581.13	-482.79	9,593.28	0.84	0.62	0.57
17,399.00	90.24	180.70	7,845.96	-9,675.10	-485.14	9,687.25	1.66	0.56	-1.56
17,493.00	90.54	180.68	7,845.32	-9,769.09	-486.28	9,781.18	0.32	0.32	-0.02
17,575.00	91.08	181.00	7,844.17	-9,851.07	-487.48	9,863.12	0.77	0.66	0.39
Final Phoenix MWD Survey									
17,586.60	91.08	181.00	7,843.95	-9,862.67	-487.68	9,874.72	0.00	0.00	0.00
LTP: 17587' MD									
17,636.00	91.08	181.00	7,843.02	-9,912.05	-488.54	9,924.08	0.00	0.00	0.00
Projection to TD									



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 501H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	RKB @ 3104.00usft (Ensign 155)
Site:	Myox 6 State Com	MD Reference:	RKB @ 3104.00usft (Ensign 155)
Well:	501H	North Reference:	Grid
Wellbore:	OH / 65025	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Ensign 155)	Database:	USA Compass

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,240.00	7,232.17	-2.46	-244.86	Tie In
7,310.00	7,302.11	-2.33	-247.75	First Phoenix MWD Survey
17,575.00	7,844.17	-9,851.07	-487.48	Final Phoenix MWD Survey
17,586.60	7,843.95	-9,862.67	-487.68	LTP: 17587' MD
17,636.00	7,843.02	-9,912.05	-488.54	Projection to TD