



January 19, 2017

NW OIL CONSERVATION
ARTESIA DISTRICT
MAY 08 2017

RECEIVED

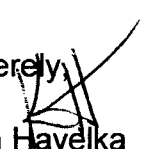
Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: **Myox 5 State Com No. 023H**

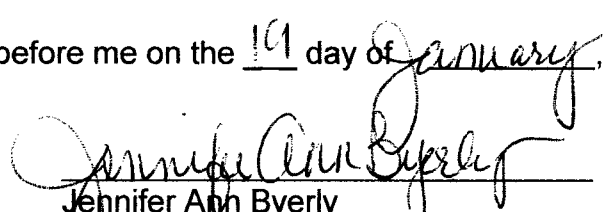
Please find enclosed a copy of the survey from 0' to 9350' ran on the above referenced well.

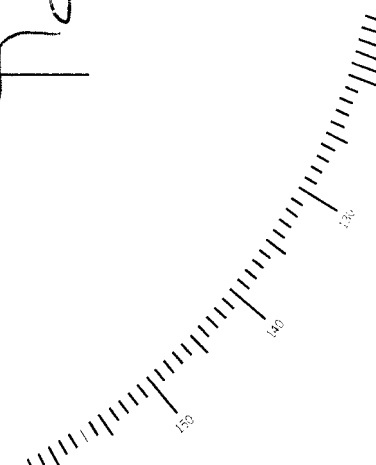
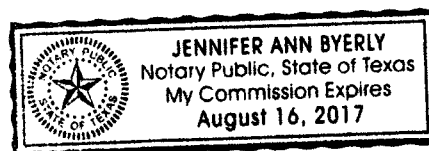
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 19 day of January,
A.D., 2017, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating
Lease/Well: Myox 5 State Com No./023H

Rig Name: Latshaw 44
State/County: New Mexico/Eddy
VS-Azi: 359.61 Degrees
Latitude: 32.06543, Longitude: -104.11186
Grid North = True North -0.12 degs (NAD 27)
Grid Correction Applied = -0.12 degs

Depth Reference : RKB = 25 Foot

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey-de_01.ut
Minimum Curvature Method
Report Date/Time: 1/19/2017 / 15:20

VES Survey International
Midland Tx
(432) 563-5444

Surveyor: Gene Heiss

Myox 5 State Com No. 023H / API 30-015-43972

NEW OIL CONSERVATION
ARTESIA DISTRICT
MAY 08 2017

RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
25.00	0.27	154.01	25.00	-0.05	0.03	-0.05	0.06	154.01	1.07
50.00	0.65	167.41	50.00	-0.24	0.08	-0.24	0.26	161.35	1.58
75.00	0.78	162.11	75.00	-0.54	0.17	-0.55	0.57	163.09	0.59
100.00	0.98	139.37	99.99	-0.87	0.36	-0.87	0.94	157.67	1.59
125.00	1.07	117.66	124.99	-1.14	0.70	-1.14	1.34	148.33	1.59
150.00	1.03	100.64	149.99	-1.29	1.13	-1.30	1.72	138.76	1.26
175.00	1.00	110.37	174.98	-1.41	1.55	-1.42	2.10	132.14	0.70
200.00	1.28	114.40	199.98	-1.60	2.01	-1.61	2.57	128.44	1.18
225.00	1.40	108.18	224.97	-1.81	2.56	-1.83	3.13	125.27	0.74
250.00	1.29	101.67	249.96	-1.96	3.12	-1.98	3.69	122.13	0.75
275.00	1.14	100.34	274.96	-2.06	3.64	-2.09	4.18	119.52	0.60
300.00	1.06	110.04	299.95	-2.19	4.10	-2.21	4.65	118.05	0.81
325.00	1.18	108.73	324.95	-2.35	4.56	-2.38	5.13	117.22	0.53
350.00	1.26	111.06	349.94	-2.53	5.06	-2.56	5.66	116.54	0.35
375.00	1.30	100.11	374.94	-2.68	5.60	-2.71	6.20	115.56	0.99
400.00	1.20	99.14	399.93	-2.77	6.13	-2.81	6.73	114.28	0.40

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
425.00	1.09	96.90	424.93	-2.84	6.63	-2.88	7.21	113.18	0.47
450.00	1.03	103.68	449.92	-2.92	7.08	-2.97	7.66	112.40	0.56
475.00	1.03	94.20	474.92	-2.99	7.52	-3.04	8.10	111.67	0.68
500.00	1.16	88.91	499.91	-3.00	8.00	-3.06	8.54	110.56	0.65
525.00	0.86	88.28	524.91	-2.99	8.44	-3.05	8.95	109.51	1.20
550.00	1.03	88.17	549.91	-2.98	8.85	-3.04	9.34	108.60	0.68
575.00	1.24	92.31	574.90	-2.98	9.34	-3.04	9.81	107.70	0.91
600.00	1.22	92.06	599.90	-3.00	9.88	-3.07	10.32	106.90	0.09
625.00	1.46	97.46	624.89	-3.05	10.46	-3.12	10.90	106.27	1.09
650.00	1.67	96.53	649.88	-3.14	11.14	-3.21	11.57	105.72	0.85
675.00	1.45	92.99	674.87	-3.19	11.81	-3.27	12.24	105.13	0.98
700.00	1.63	95.48	699.86	-3.24	12.48	-3.33	12.90	104.57	0.79
725.00	1.71	97.51	724.85	-3.33	13.21	-3.42	13.62	104.14	0.40
750.00	1.45	96.18	749.84	-3.41	13.89	-3.50	14.30	103.79	1.04
775.00	1.64	95.77	774.83	-3.48	14.56	-3.58	14.97	103.44	0.73
800.00	1.66	98.37	799.82	-3.57	15.28	-3.67	15.69	103.15	0.32
825.00	1.50	96.35	824.81	-3.66	15.96	-3.77	16.37	102.91	0.70
850.00	1.47	121.96	849.80	-3.86	16.56	-3.98	17.00	103.13	2.63
875.00	1.63	146.65	874.79	-4.33	17.03	-4.45	17.57	104.27	2.72
900.00	1.93	167.00	899.78	-5.04	17.32	-5.15	18.03	106.22	2.78
925.00	2.15	174.16	924.77	-5.91	17.46	-6.03	18.43	108.71	1.36
950.00	2.53	182.57	949.75	-6.93	17.48	-7.05	18.81	111.63	2.03
975.00	2.86	190.56	974.72	-8.10	17.34	-8.21	19.14	115.03	2.01
1000.00	2.94	195.43	999.69	-9.33	17.06	-9.44	19.44	118.67	1.03
1025.00	2.95	195.98	1024.65	-10.57	16.71	-10.68	19.77	122.31	0.13
1050.00	3.11	195.55	1049.62	-11.84	16.35	-11.95	20.19	125.90	0.61
1075.00	3.16	194.42	1074.58	-13.16	16.00	-13.27	20.71	129.44	0.33
1100.00	3.04	196.13	1099.54	-14.46	15.64	-14.57	21.30	132.75	0.62
1125.00	3.10	194.89	1124.51	-15.75	15.28	-15.85	21.95	135.86	0.38
1150.00	3.33	190.28	1149.47	-17.12	14.98	-17.22	22.75	138.81	1.38
1175.00	3.19	192.44	1174.43	-18.51	14.70	-18.61	23.64	141.55	0.74
1200.00	3.29	193.48	1199.39	-19.89	14.38	-19.99	24.55	144.13	0.46
1225.00	2.92	190.67	1224.35	-21.22	14.10	-21.31	25.47	146.39	1.62
1250.00	3.19	192.41	1249.32	-22.52	13.83	-22.61	26.43	148.44	1.14
1275.00	3.24	195.98	1274.28	-23.88	13.49	-23.97	27.42	150.54	0.83
1300.00	3.35	193.85	1299.24	-25.27	13.12	-25.36	28.47	152.56	0.64
1325.00	2.98	203.74	1324.20	-26.57	12.68	-26.65	29.44	154.48	2.63
1350.00	3.02	204.58	1349.16	-27.76	12.15	-27.84	30.30	156.37	0.25
1375.00	3.02	205.86	1374.13	-28.95	11.59	-29.03	31.18	158.19	0.27

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1400.00	3.09	205.22	1399.09	-30.15	11.01	-30.23	32.10	159.94	0.34
1425.00	3.23	203.83	1424.06	-31.41	10.44	-31.48	33.10	161.62	0.63
1450.00	3.03	205.97	1449.02	-32.65	9.86	-32.71	34.11	163.19	0.92
1475.00	2.74	197.72	1473.99	-33.81	9.39	-33.88	35.09	164.48	2.02
1500.00	2.50	205.08	1498.96	-34.88	8.98	-34.94	36.01	165.56	1.67
1525.00	2.27	205.15	1523.94	-35.82	8.54	-35.87	36.82	166.59	0.92
1550.00	2.26	205.74	1548.92	-36.71	8.11	-36.76	37.60	167.53	0.09
1575.00	2.02	201.34	1573.90	-37.56	7.74	-37.61	38.35	168.36	1.19
1600.00	2.26	192.89	1598.88	-38.45	7.47	-38.50	39.17	169.01	1.60
1625.00	1.98	187.43	1623.87	-39.36	7.30	-39.41	40.03	169.49	1.40
1650.00	2.05	194.54	1648.85	-40.22	7.14	-40.27	40.85	169.94	1.04
1675.00	2.32	184.59	1673.83	-41.16	6.98	-41.21	41.75	170.37	1.85
1700.00	2.30	179.39	1698.81	-42.17	6.95	-42.21	42.74	170.64	0.84
1725.00	2.46	167.75	1723.79	-43.19	7.07	-43.24	43.77	170.71	2.03
1750.00	2.42	173.59	1748.77	-44.24	7.24	-44.29	44.83	170.71	1.01
1775.00	2.41	174.18	1773.75	-45.29	7.35	-45.34	45.88	170.78	0.10
1800.00	2.39	171.43	1798.73	-46.33	7.48	-46.38	46.93	170.82	0.47
1825.00	2.33	172.53	1823.70	-47.35	7.63	-47.40	47.96	170.85	0.31
1850.00	1.99	160.31	1848.69	-48.26	7.84	-48.31	48.89	170.77	2.27
1875.00	1.77	170.39	1873.67	-49.05	8.05	-49.10	49.70	170.68	1.59
1900.00	1.89	163.61	1898.66	-49.82	8.23	-49.88	50.50	170.62	0.99
1925.00	1.68	170.98	1923.65	-50.58	8.40	-50.64	51.27	170.57	1.25
1950.00	1.44	165.60	1948.64	-51.25	8.54	-51.30	51.95	170.54	1.11
1975.00	1.76	165.92	1973.63	-51.92	8.71	-51.98	52.65	170.48	1.27
2000.00	1.79	154.17	1998.62	-52.64	8.97	-52.70	53.40	170.33	1.46
2025.00	1.66	165.85	2023.61	-53.35	9.23	-53.41	54.14	170.18	1.50
2050.00	1.69	160.94	2048.60	-54.02	9.50	-54.08	54.85	170.02	1.74
2075.00	1.56	159.72	2073.59	-54.66	9.80	-54.73	55.53	169.84	1.13
2100.00	1.66	156.39	2098.58	-55.31	10.06	-55.38	56.22	169.69	0.55
2125.00	1.57	154.84	2123.57	-55.95	10.35	-56.02	56.90	169.52	0.38
2150.00	1.40	153.39	2148.56	-56.53	10.63	-56.61	57.53	169.35	0.69
2175.00	1.50	159.05	2173.55	-57.11	10.89	-57.19	58.14	169.21	0.69
2200.00	1.56	155.20	2198.54	-57.73	11.15	-57.80	58.79	169.07	0.47
2225.00	1.54	156.31	2223.53	-58.34	11.42	-58.42	59.45	168.92	0.13
2250.00	1.34	158.49	2248.52	-58.92	11.67	-59.00	60.07	168.80	0.84
2275.00	1.07	163.70	2273.52	-59.42	11.84	-59.50	60.59	168.73	1.17
2300.00	1.07	171.75	2298.51	-59.87	11.94	-59.95	61.05	168.72	0.60
2325.00	0.88	185.09	2323.51	-60.30	11.95	-60.38	61.47	168.79	1.19
2350.00	1.10	173.15	2348.51	-60.73	11.97	-60.81	61.89	168.85	1.19

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
2375.00	0.78	184.39	2373.50	-81.13	11.98	-81.21	62.30	168.91	1.46
2400.00	0.87	187.69	2398.50	-81.49	12.01	-81.57	62.65	168.95	1.01
2425.00	0.90	188.65	2423.50	-81.86	12.02	-81.95	63.02	169.00	1.29
2450.00	0.83	200.65	2448.49	-82.23	11.93	-82.31	63.36	169.15	0.77
2475.00	0.87	209.56	2473.49	-82.56	11.77	-82.64	63.66	169.35	0.55
2500.00	1.05	221.73	2498.49	-82.90	11.52	-82.97	63.94	169.62	1.07
2525.00	1.01	222.47	2523.48	-83.23	11.22	-83.30	64.22	169.93	0.17
2550.00	0.94	218.93	2548.48	-83.55	10.95	-83.62	64.49	170.23	0.37
2575.00	0.98	217.97	2573.48	-83.88	10.69	-83.95	64.76	170.50	0.18
2600.00	1.27	212.18	2598.47	-84.28	10.41	-84.35	65.12	170.80	1.24
2625.00	0.97	216.90	2623.47	-84.68	10.14	-84.75	65.47	171.09	1.24
2650.00	1.16	205.29	2648.46	-85.08	9.90	-85.14	65.83	171.35	1.14
2675.00	1.01	206.20	2673.46	-85.51	9.70	-85.57	66.22	171.58	0.58
2700.00	1.01	219.96	2698.46	-85.87	9.46	-85.93	66.55	171.83	0.97
2725.00	0.96	215.49	2723.45	-86.21	9.19	-86.27	66.85	172.10	0.35
2750.00	1.34	213.14	2748.45	-86.63	8.91	-86.69	67.22	172.38	1.53
2775.00	0.99	209.91	2773.44	-87.06	8.64	-87.12	67.62	172.66	1.43
2800.00	1.13	226.47	2798.44	-87.42	8.36	-87.47	67.93	172.93	1.34
2825.00	1.04	217.04	2823.43	-87.77	8.04	-87.82	68.24	173.23	0.80
2850.00	1.24	206.66	2848.43	-88.19	7.78	-88.24	68.63	173.49	1.14
2875.00	1.07	218.77	2873.42	-88.61	7.52	-88.66	69.02	173.75	1.17
2900.00	1.21	218.70	2898.42	-89.00	7.21	-89.05	69.38	174.04	0.58
2925.00	1.05	213.23	2923.41	-89.40	6.91	-89.45	69.74	174.31	0.78
2950.00	1.06	208.61	2948.41	-89.79	6.68	-89.84	70.11	174.53	0.34
2975.00	1.16	215.88	2973.40	-90.20	6.42	-90.24	70.49	174.77	0.69
3000.00	1.12	209.44	2998.40	-90.62	6.15	-90.66	70.88	175.02	0.53
3025.00	1.56	210.33	3023.39	-91.12	5.86	-91.16	71.36	175.29	1.76
3050.00	1.77	206.93	3048.38	-91.76	5.52	-91.79	71.97	175.60	0.95
3075.00	1.64	205.67	3073.37	-92.42	5.19	-92.46	72.61	175.90	0.55
3100.00	1.83	204.94	3098.36	-93.11	4.86	-93.14	73.27	176.19	0.76
3125.00	1.69	206.21	3123.35	-93.80	4.53	-93.83	73.94	176.49	0.56
3150.00	1.70	206.63	3148.34	-94.46	4.20	-94.49	74.58	176.77	0.05
3175.00	1.80	201.12	3173.32	-95.16	3.90	-95.18	75.26	177.03	0.79
3200.00	1.83	204.39	3198.31	-95.89	3.59	-95.91	75.97	177.29	0.43
3225.00	1.96	207.46	3223.30	-96.63	3.23	-96.65	76.70	177.59	0.68
3250.00	2.13	207.65	3248.28	-97.42	2.82	-97.44	77.47	177.92	0.67
3275.00	2.08	207.63	3273.27	-98.24	2.39	-98.25	78.27	178.25	0.18
3300.00	2.13	209.21	3298.25	-99.04	1.95	-99.06	79.07	178.59	0.31
3325.00	1.99	208.05	3323.23	-99.83	1.52	-99.84	79.85	178.91	0.58
3350.00	2.48	210.42	3348.21	-80.69	1.04	-80.69	80.69	179.26	1.98

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
3375.00	1.96	211.30	3373.19	-81.52	0.55	-81.52	81.52	179.62	2.11
3400.00	2.06	211.42	3398.18	-82.27	0.09	-82.26	82.27	179.94	0.42
3425.00	2.02	211.18	3423.16	-83.03	-0.37	-83.02	83.03	180.26	0.16
3450.00	2.39	201.55	3448.14	-83.89	-0.79	-83.88	83.89	180.54	2.08
3475.00	2.20	308.14	3473.13	-84.08	-1.36	-84.06	84.09	180.93	14.71
3500.00	2.11	210.25	3498.12	-84.18	-1.97	-84.16	84.20	181.34	12.99
3525.00	2.31	212.73	3523.10	-85.00	-2.47	-84.98	85.03	181.67	0.89
3550.00	2.12	211.18	3548.09	-85.82	-2.99	-85.80	85.87	181.99	0.78
3575.00	2.18	211.14	3573.07	-86.62	-3.47	-86.60	86.69	182.30	0.22
3600.00	2.33	213.59	3598.05	-87.45	-4.00	-87.42	87.54	182.62	0.71
3625.00	2.59	215.72	3623.03	-88.33	-4.61	-88.30	88.45	182.99	1.10
3650.00	2.42	213.07	3648.00	-89.24	-5.23	-89.20	89.39	183.35	0.81
3675.00	2.46	217.11	3672.98	-90.11	-5.84	-90.06	90.29	183.71	0.70
3700.00	2.51	215.11	3697.96	-90.98	-6.48	-90.93	91.21	184.07	0.40
3725.00	2.67	219.13	3722.93	-91.88	-7.16	-91.83	92.16	184.46	0.98
3750.00	2.50	217.26	3747.90	-92.77	-7.86	-92.71	93.10	184.84	0.76
3775.00	2.83	209.25	3772.88	-93.74	-8.49	-93.68	94.12	185.18	1.99
3800.00	2.38	210.88	3797.85	-94.72	-9.06	-94.66	95.16	185.46	1.82
3825.00	2.68	205.22	3822.83	-95.70	-9.58	-95.63	96.18	185.71	1.54
3850.00	2.46	214.67	3847.80	-96.67	-10.13	-96.60	97.20	185.98	1.90
3875.00	2.30	210.24	3872.78	-97.54	-10.69	-97.47	98.13	186.25	0.97
3900.00	2.31	209.90	3897.76	-98.41	-11.19	-98.33	99.05	186.49	0.08
3925.00	2.32	208.49	3922.74	-99.30	-11.68	-99.21	99.98	186.71	0.23
3950.00	2.54	209.87	3947.72	-100.22	-12.20	-100.13	100.96	186.94	0.92
3975.00	2.37	209.95	3972.69	-101.15	-12.74	-101.06	101.95	187.18	0.67
4000.00	2.22	207.20	3997.67	-102.03	-13.22	-101.94	102.88	187.38	0.76
4025.00	2.27	209.05	4022.65	-102.89	-13.68	-102.80	103.80	187.57	0.35
4050.00	2.19	211.30	4047.64	-103.73	-14.17	-103.63	104.69	187.78	0.48
4075.00	2.52	207.45	4072.61	-104.63	-14.67	-104.52	105.65	187.98	1.46
4100.00	2.11	207.69	4097.59	-105.52	-15.13	-105.42	106.60	188.16	1.63
4125.00	2.11	205.74	4122.58	-106.34	-15.55	-106.23	107.47	188.32	0.29
4150.00	2.26	199.31	4147.56	-107.22	-15.91	-107.11	108.40	188.44	1.14
4175.00	2.40	210.62	4172.54	-108.14	-16.34	-108.02	109.36	188.59	1.92
4200.00	2.44	206.89	4197.52	-109.06	-16.85	-108.95	110.36	188.78	0.65
4225.00	2.12	217.71	4222.50	-109.90	-17.37	-109.78	111.27	188.98	2.15
4250.00	2.45	207.36	4247.48	-110.74	-17.90	-110.62	112.18	189.18	2.12
4275.00	2.16	211.82	4272.46	-111.62	-18.39	-111.49	113.13	189.36	1.38
4300.00	2.26	203.79	4297.44	-112.47	-18.84	-112.34	114.04	189.51	1.29
4325.00	2.14	205.16	4322.42	-113.34	-19.24	-113.21	114.96	189.63	0.50
4350.00	2.61	208.62	4347.40	-114.27	-19.71	-114.13	115.95	189.79	1.94

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
4375.00	2.22	203.96	4372.38	-115.21	-20.18	-115.07	116.96	189.93	1.74
4400.00	2.37	205.37	4397.36	-116.12	-20.59	-115.97	117.93	190.06	0.63
4425.00	2.36	204.88	4422.33	-117.05	-21.03	-116.90	118.92	190.19	0.08
4450.00	2.23	206.26	4447.31	-117.95	-21.46	-117.80	119.89	190.31	0.56
4475.00	2.25	203.71	4472.30	-118.84	-21.88	-118.69	120.84	190.43	0.41
4500.00	2.27	205.64	4497.28	-119.74	-22.29	-119.58	121.79	190.55	0.31
4525.00	2.26	203.79	4522.26	-120.63	-22.70	-120.48	122.75	190.66	0.30
4550.00	2.26	202.94	4547.24	-121.54	-23.09	-121.38	123.71	190.76	0.14
4575.00	2.24	204.70	4572.22	-122.43	-23.49	-122.27	124.67	190.86	0.29
4600.00	2.44	207.18	4597.20	-123.35	-23.94	-123.19	125.65	190.98	0.92
4625.00	2.55	207.43	4622.17	-124.32	-24.44	-124.15	126.70	191.12	0.44
4650.00	2.48	203.09	4647.15	-125.31	-24.90	-125.14	127.76	191.24	0.81
4675.00	2.54	206.23	4672.13	-126.31	-25.36	-126.13	128.83	191.35	0.60
4700.00	2.29	203.84	4697.10	-127.26	-25.81	-127.08	129.85	191.46	1.08
4725.00	2.18	202.09	4722.08	-128.16	-26.19	-127.98	130.81	191.55	0.51
4750.00	2.19	203.75	4747.07	-129.03	-26.56	-128.85	131.74	191.63	0.25
4775.00	2.17	203.99	4772.05	-129.90	-26.94	-129.72	132.67	191.72	0.09
4800.00	2.10	203.71	4797.03	-130.75	-27.32	-130.56	133.58	191.80	0.27
4825.00	2.10	199.58	4822.01	-131.60	-27.66	-131.41	134.48	191.87	0.60
4850.00	2.08	200.63	4847.00	-132.46	-27.97	-132.26	135.38	191.92	0.17
4875.00	1.98	200.37	4871.98	-133.29	-28.28	-133.09	136.25	191.98	0.37
4900.00	2.12	201.63	4896.97	-134.12	-28.60	-133.93	137.14	192.04	0.59
4925.00	1.92	199.97	4921.95	-134.95	-28.92	-134.75	138.01	192.09	0.83
4950.00	1.92	207.31	4946.94	-135.72	-29.25	-135.51	138.83	192.16	0.98
4975.00	1.98	196.55	4971.92	-136.50	-29.57	-136.30	139.67	192.22	1.48
5000.00	2.21	209.05	4996.90	-137.34	-29.92	-137.13	140.56	192.29	2.03
5025.00	1.91	201.93	5021.89	-138.15	-30.31	-137.94	141.43	192.38	1.56
5050.00	1.99	198.75	5046.87	-138.95	-30.61	-138.73	142.28	192.42	0.52
5075.00	2.18	196.83	5071.86	-139.81	-30.89	-139.60	143.18	192.46	0.81
5100.00	2.10	198.72	5096.84	-140.70	-31.17	-140.48	144.11	192.49	0.42
5125.00	2.22	204.85	5121.82	-141.57	-31.52	-141.35	145.04	192.55	1.04
5150.00	2.47	207.34	5146.80	-142.49	-31.97	-142.27	146.03	192.65	1.09
5175.00	2.31	207.35	5171.78	-143.41	-32.45	-143.19	147.04	192.75	0.62
5200.00	2.26	211.08	5196.76	-144.28	-32.94	-144.05	147.99	192.86	0.64
5225.00	2.33	209.02	5221.74	-145.15	-33.44	-144.92	148.95	192.97	0.45
5250.00	2.45	206.32	5246.72	-146.07	-33.92	-145.84	149.96	193.07	0.64
5275.00	2.30	211.50	5271.70	-146.98	-34.42	-146.74	150.95	193.18	1.04
5300.00	2.49	211.79	5296.67	-147.87	-34.97	-147.63	151.95	193.30	0.77
5325.00	2.42	205.21	5321.65	-148.81	-35.48	-148.56	152.98	193.41	1.17
5350.00	2.35	208.67	5346.63	-149.73	-35.95	-149.49	153.99	193.50	0.63

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5375.00	2.74	203.43	5371.61	-150.73	-36.43	-150.48	155.07	193.59	1.83
5400.00	2.69	214.97	5396.58	-151.76	-37.01	-151.51	156.21	193.70	2.19
5425.00	2.64	211.94	5421.55	-152.73	-37.65	-152.47	157.30	193.85	0.59
5450.00	2.81	214.27	5446.52	-153.73	-38.30	-153.47	158.43	193.99	0.81
5475.00	3.12	204.02	5471.49	-154.86	-38.92	-154.59	159.68	194.11	2.45
5500.00	2.76	214.60	5496.46	-155.98	-39.54	-155.70	160.91	194.23	2.61
5525.00	2.67	187.76	5521.43	-157.05	-39.96	-156.77	162.05	194.28	5.05
5550.00	2.69	213.20	5546.40	-158.11	-40.36	-157.84	163.18	194.32	4.72
5575.00	2.73	211.40	5571.37	-159.11	-40.99	-158.83	164.31	194.45	0.38
5600.00	2.61	209.02	5596.35	-160.12	-41.58	-159.83	165.43	194.56	0.65
5625.00	2.59	211.22	5621.32	-161.10	-42.15	-160.81	166.52	194.66	0.41
5650.00	2.61	207.41	5646.30	-162.09	-42.70	-161.79	167.62	194.76	0.70
5675.00	2.58	201.05	5671.27	-163.12	-43.17	-162.82	168.73	194.82	1.16
5700.00	2.66	207.61	5696.24	-164.16	-43.64	-163.86	169.86	194.89	1.24
5725.00	2.75	207.09	5721.22	-165.20	-44.18	-164.90	171.01	194.97	0.39
5750.00	2.76	204.54	5746.19	-166.28	-44.70	-165.98	172.19	195.05	0.49
5775.00	2.63	210.75	5771.16	-167.32	-45.24	-167.01	173.33	195.13	1.27
5800.00	2.53	206.50	5796.14	-168.31	-45.78	-168.00	174.43	195.22	0.88
5825.00	2.54	207.53	5821.11	-169.30	-46.29	-168.98	175.51	195.29	0.19
5850.00	2.64	211.90	5846.09	-170.28	-46.85	-169.95	176.60	195.38	0.88
5875.00	2.51	213.59	5871.06	-171.22	-47.45	-170.89	177.68	195.49	0.61
5900.00	2.77	200.99	5896.03	-172.24	-47.97	-171.91	178.80	195.56	2.53
5925.00	2.51	210.17	5921.01	-173.28	-48.46	-172.94	179.93	195.63	1.98
5950.00	2.45	204.60	5945.98	-174.23	-48.96	-173.90	180.98	195.70	0.99
5975.00	2.46	204.55	5970.96	-175.21	-49.40	-174.86	182.04	195.75	0.04
6000.00	2.71	203.47	5995.94	-176.23	-49.86	-175.89	183.15	195.80	1.04
6025.00	2.65	202.33	6020.91	-177.31	-50.32	-176.97	184.31	195.84	0.31
6050.00	2.43	206.08	6045.88	-178.32	-50.77	-177.97	185.41	195.89	1.10
6075.00	2.37	204.56	6070.86	-179.27	-51.22	-178.92	186.44	195.94	0.37
6100.00	2.31	206.79	6095.84	-180.19	-51.66	-179.83	187.45	196.00	0.44
6125.00	2.37	198.85	6120.82	-181.13	-52.05	-180.77	188.46	196.03	1.32
6150.00	2.17	202.78	6145.80	-182.05	-52.40	-181.69	189.44	196.06	1.00
6175.00	2.30	209.23	6170.78	-182.93	-52.83	-182.56	190.40	196.11	1.13
6200.00	2.21	209.69	6195.76	-183.78	-53.32	-183.42	191.36	196.18	0.35
6225.00	2.39	193.86	6220.74	-184.71	-53.68	-184.34	192.35	196.20	2.64
6250.00	2.15	206.29	6245.72	-185.64	-54.01	-185.26	193.33	196.22	2.20
6275.00	2.37	202.90	6270.70	-186.53	-54.42	-186.16	194.31	196.26	1.05
6300.00	2.40	193.23	6295.68	-187.52	-54.74	-187.14	195.35	196.27	1.61
6325.00	2.36	195.75	6320.66	-188.52	-55.00	-188.15	196.38	196.26	0.44
6350.00	2.54	199.15	6345.64	-189.54	-55.32	-189.16	197.45	196.27	0.93

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
6375.00	2.57	201.81	6370.61	-190.59	-55.71	-190.20	198.56	196.29	0.48
6400.00	2.50	191.89	6395.59	-191.64	-56.03	-191.26	199.66	196.30	1.78
6425.00	2.13	188.60	6420.57	-192.63	-56.22	-192.25	200.67	196.27	1.56
6450.00	2.19	193.66	6445.55	-193.56	-56.40	-193.17	201.60	196.24	0.80
6475.00	2.18	204.67	6470.53	-194.45	-56.71	-194.06	202.55	196.26	1.68
6500.00	2.08	179.98	6495.52	-195.34	-56.91	-194.95	203.46	196.24	3.66
6525.00	1.94	181.16	6520.50	-196.21	-56.92	-195.82	204.30	196.18	0.57
6550.00	1.91	186.36	6545.49	-197.05	-56.97	-196.66	205.12	196.13	0.71
6575.00	2.07	175.76	6570.47	-197.92	-56.98	-197.52	205.96	196.06	1.60
6600.00	2.00	173.47	6595.45	-198.80	-56.90	-198.41	206.78	195.97	0.43
6625.00	2.08	170.84	6620.44	-199.68	-56.78	-199.29	207.59	195.87	0.49
6650.00	2.43	168.71	6645.42	-200.65	-56.60	-200.26	208.48	195.75	1.45
6675.00	2.38	169.42	6670.40	-201.68	-56.40	-201.29	209.41	195.62	0.22
6700.00	2.38	167.74	6695.38	-202.69	-56.20	-202.31	210.34	195.50	0.28
6725.00	2.76	174.46	6720.35	-203.80	-56.03	-203.41	211.36	195.37	1.95
6750.00	2.66	165.06	6745.32	-204.96	-55.82	-204.57	212.42	195.24	1.82
6775.00	2.48	166.84	6770.30	-206.05	-55.55	-205.66	213.40	195.09	0.79
6800.00	2.73	166.02	6795.27	-207.15	-55.28	-206.77	214.40	194.94	1.02
6825.00	2.42	167.25	6820.25	-208.25	-55.02	-207.87	215.39	194.80	1.26
6850.00	2.22	176.99	6845.23	-209.25	-54.88	-208.87	216.32	194.70	1.77
6875.00	2.26	181.43	6870.21	-210.22	-54.87	-209.84	217.26	194.63	0.71
6900.00	2.20	173.72	6895.19	-211.19	-54.83	-210.81	218.19	194.55	1.22
6925.00	2.43	173.56	6920.17	-212.19	-54.71	-211.81	219.13	194.46	0.93
6950.00	2.23	180.36	6945.15	-213.20	-54.66	-212.83	220.10	194.38	1.37
6975.00	2.20	178.00	6970.13	-214.17	-54.64	-213.79	221.03	194.31	0.38
7000.00	2.14	177.34	6995.11	-215.12	-54.60	-214.74	221.94	194.24	0.25
7025.00	2.14	179.24	7020.09	-216.05	-54.58	-215.68	222.84	194.18	0.29
7050.00	2.27	178.44	7045.07	-217.01	-54.56	-216.64	223.77	194.11	0.53
7075.00	2.22	193.22	7070.06	-217.98	-54.65	-217.60	224.73	194.08	2.32
7100.00	2.00	189.78	7095.04	-218.88	-54.84	-218.50	225.64	194.07	1.01
7125.00	2.04	183.24	7120.02	-219.75	-54.94	-219.37	226.52	194.04	0.94
7150.00	2.00	189.69	7145.01	-220.63	-55.04	-220.25	227.39	194.01	0.92
7175.00	2.30	165.88	7169.99	-221.54	-54.99	-221.17	228.27	193.94	3.73
7200.00	2.17	193.18	7194.97	-222.49	-54.97	-222.11	229.18	193.88	4.24
7225.00	2.13	180.66	7219.96	-223.42	-55.09	-223.03	230.11	193.85	1.88
7250.00	2.28	183.91	7244.94	-224.38	-55.13	-224.00	231.05	193.80	0.78
7275.00	2.00	182.43	7269.92	-225.31	-55.18	-224.93	231.97	193.76	1.13
7300.00	2.25	184.47	7294.90	-226.24	-55.24	-225.85	232.88	193.72	1.03
7325.00	2.10	195.53	7319.88	-227.17	-55.40	-226.78	233.82	193.70	1.78
7350.00	2.21	193.48	7344.87	-228.08	-55.63	-227.69	234.76	193.71	0.55

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
7375.00	1.73	191.97	7369.85	-228.91	-55.82	-228.53	235.62	193.70	1.93
7400.00	1.73	186.60	7394.84	-229.66	-55.94	-229.27	236.37	193.69	0.65
7425.00	1.66	185.82	7419.83	-230.39	-56.02	-230.01	237.11	193.67	0.30
7450.00	1.82	183.39	7444.82	-231.15	-56.08	-230.76	237.85	193.64	0.69
7475.00	1.73	183.57	7469.81	-231.92	-56.13	-231.53	238.62	193.61	0.33
7500.00	2.09	191.67	7494.79	-232.74	-56.25	-232.36	239.44	193.59	1.78
7525.00	2.11	174.54	7519.78	-233.65	-56.29	-233.26	240.33	193.55	2.48
7550.00	2.07	180.29	7544.76	-234.56	-56.25	-234.17	241.21	193.49	0.84
7575.00	1.93	182.82	7569.74	-235.43	-56.28	-235.04	242.06	193.44	0.66
7600.00	2.20	182.30	7594.73	-236.33	-56.32	-235.94	242.94	193.40	1.11
7625.00	2.15	184.95	7619.71	-237.27	-56.38	-236.88	243.88	193.37	0.46
7650.00	2.30	177.33	7644.69	-238.24	-56.39	-237.85	244.82	193.32	1.32
7675.00	2.24	170.45	7669.67	-239.22	-56.29	-238.83	245.76	193.24	1.11
7700.00	2.12	183.71	7694.65	-240.17	-56.24	-239.78	246.66	193.18	2.07
7725.00	2.44	175.06	7719.63	-241.16	-56.22	-240.77	247.62	193.12	1.89
7750.00	2.09	183.82	7744.61	-242.14	-56.21	-241.76	248.58	193.07	1.97
7775.00	2.31	182.08	7769.60	-243.10	-56.26	-242.72	249.53	193.03	0.91
7800.00	1.93	191.38	7794.58	-244.02	-56.36	-243.63	250.44	193.00	2.06
7825.00	2.10	186.16	7819.56	-244.89	-56.49	-244.50	251.32	192.99	1.01
7850.00	1.87	181.22	7844.55	-245.75	-56.55	-245.36	252.17	192.96	1.16
7875.00	1.67	179.71	7869.54	-246.52	-56.55	-246.13	252.92	192.92	0.81
7900.00	1.37	185.84	7894.53	-247.18	-56.58	-246.79	253.57	192.89	1.37
7925.00	1.13	199.33	7919.52	-247.71	-56.69	-247.32	254.11	192.89	1.51
7950.00	1.34	193.03	7944.52	-248.22	-56.84	-247.83	254.65	192.90	1.01
7975.00	1.41	188.75	7969.51	-248.81	-56.95	-248.42	255.25	192.89	0.50
8000.00	1.36	182.82	7994.50	-249.42	-57.01	-249.02	255.85	192.88	0.61
8025.00	1.28	181.21	8019.49	-249.99	-57.04	-249.60	256.42	192.85	0.39
8050.00	1.10	182.24	8044.48	-250.51	-57.05	-250.11	256.92	192.83	0.72
8075.00	1.20	189.92	8069.48	-251.01	-57.11	-250.61	257.42	192.82	0.73
8100.00	1.42	195.41	8094.48	-251.56	-57.23	-251.17	257.99	192.82	1.01
8125.00	1.48	191.36	8119.47	-252.18	-57.38	-251.78	258.62	192.82	0.48
8150.00	1.50	186.74	8144.46	-252.82	-57.48	-252.42	259.27	192.81	0.49
8175.00	1.43	184.74	8169.45	-253.45	-57.54	-253.06	259.90	192.79	0.33
8200.00	1.18	189.88	8194.45	-254.02	-57.61	-253.62	260.47	192.78	1.13
8225.00	1.09	220.57	8219.44	-254.45	-57.81	-254.05	260.94	192.80	2.43
8250.00	1.15	224.36	8244.44	-254.81	-58.14	-254.41	261.36	192.85	0.37
8275.00	1.14	227.57	8269.43	-255.16	-58.50	-254.76	261.78	192.91	0.26
8300.00	1.07	225.21	8294.43	-255.49	-58.85	-255.09	262.18	192.97	0.32
8325.00	1.06	229.47	8319.42	-255.81	-59.19	-255.40	262.57	193.03	0.32
8350.00	1.06	224.68	8344.42	-256.12	-59.53	-255.71	262.95	193.09	0.35

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
8375.00	0.92	211.84	8369.41	-256.46	-59.80	-256.04	263.34	193.13	1.06
8400.00	0.75	193.86	8394.41	-256.79	-59.94	-256.37	263.69	193.14	1.23
8425.00	0.69	163.49	8419.41	-257.09	-59.94	-256.68	263.99	193.12	1.53
8450.00	0.76	168.17	8444.41	-257.40	-59.86	-256.99	264.27	193.09	0.37
8475.00	0.97	177.90	8469.41	-257.77	-59.82	-257.36	264.63	193.07	1.02
8500.00	1.16	168.87	8494.40	-258.23	-59.77	-257.82	265.06	193.03	0.99
8525.00	1.25	161.77	8519.40	-258.74	-59.63	-258.33	265.52	192.98	0.72
8550.00	1.37	150.38	8544.39	-259.26	-59.40	-258.85	265.98	192.90	1.14
8575.00	1.27	140.91	8569.38	-259.74	-59.08	-259.33	266.37	192.81	0.96
8600.00	1.05	144.25	8594.38	-260.14	-58.77	-259.73	266.69	192.73	0.90
8625.00	1.18	151.71	8619.37	-260.55	-58.51	-260.15	267.04	192.66	0.78
8650.00	1.51	154.74	8644.37	-261.07	-58.25	-260.67	267.49	192.58	1.33
8675.00	1.49	148.08	8669.36	-261.65	-57.94	-261.25	267.99	192.49	0.70
8700.00	1.52	145.64	8694.35	-262.20	-57.58	-261.80	268.44	192.39	0.27
8725.00	1.53	141.39	8719.34	-262.73	-57.18	-262.34	268.88	192.28	0.46
8750.00	1.21	145.37	8744.33	-263.21	-56.82	-262.82	269.27	192.18	1.33
8775.00	1.26	154.64	8769.33	-263.68	-56.56	-263.29	269.67	192.11	0.83
8800.00	1.43	157.58	8794.32	-264.21	-56.32	-263.82	270.15	192.03	0.71
8825.00	1.37	161.10	8819.31	-264.78	-56.10	-264.40	270.66	191.96	0.42
8850.00	1.24	158.27	8844.31	-265.32	-55.91	-264.93	271.14	191.90	0.58
8875.00	1.19	154.37	8869.30	-265.80	-55.69	-265.41	271.57	191.83	0.38
8900.00	1.06	154.55	8894.30	-266.24	-55.48	-265.86	271.96	191.77	0.52
8925.00	0.93	158.54	8919.29	-266.64	-55.31	-266.26	272.32	191.72	0.59
8950.00	0.76	153.79	8944.29	-266.98	-55.16	-266.60	272.62	191.67	0.73
8975.00	0.70	154.11	8969.29	-267.26	-55.02	-266.88	272.87	191.63	0.25
9000.00	0.67	179.39	8994.29	-267.55	-54.95	-267.17	273.13	191.61	1.20
9025.00	0.90	169.67	9019.28	-267.89	-54.92	-267.51	273.46	191.59	1.06
9050.00	0.86	171.85	9044.28	-268.26	-54.86	-267.88	273.82	191.56	0.23
9075.00	0.88	171.10	9069.28	-268.64	-54.80	-268.26	274.17	191.53	0.12
9100.00	0.86	171.84	9094.27	-269.01	-54.74	-268.64	274.53	191.50	0.12
9125.00	0.80	179.80	9119.27	-269.37	-54.72	-268.99	274.87	191.48	0.51
9150.00	0.73	177.70	9144.27	-269.71	-54.71	-269.33	275.20	191.47	0.28
9175.00	0.72	182.73	9169.27	-270.02	-54.71	-269.65	275.51	191.45	0.26
9200.00	0.74	187.77	9194.27	-270.34	-54.74	-269.96	275.83	191.45	0.26
9225.00	0.62	195.86	9219.26	-270.63	-54.80	-270.25	276.12	191.45	0.61
9250.00	0.55	187.69	9244.26	-270.88	-54.85	-270.50	276.38	191.45	0.44
9275.00	0.52	183.53	9269.26	-271.11	-54.87	-270.73	276.61	191.44	0.20
9300.00	0.62	186.39	9294.26	-271.36	-54.90	-270.98	276.85	191.44	0.45
9325.00	0.53	185.32	9319.26	-271.61	-54.92	-271.23	277.10	191.43	0.38
9350.00	0.52	183.84	9344.26	-271.83	-54.94	-271.45	277.33	191.43	0.07

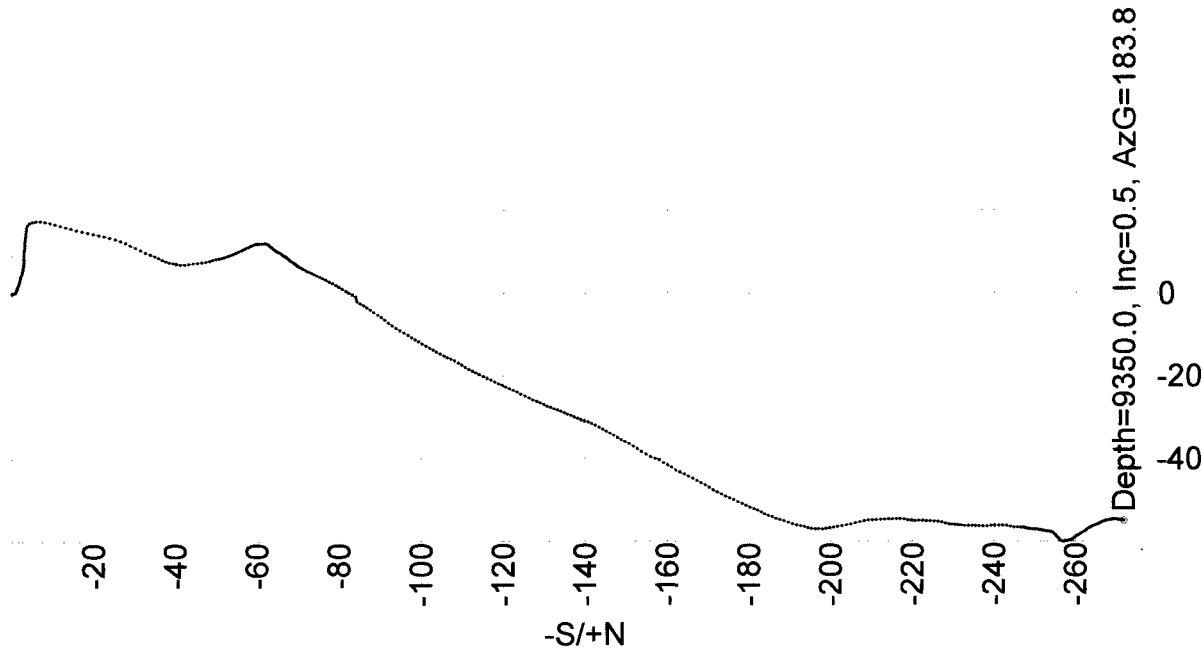


VES Survey International
Midland Tx

(432) 563-5444

Surveyor: Gene Heiss

Myox 5 State Com No. 023H / API 30-015-43972



-W/+E
VES Survey Date: 1/13/2017



I Gene Heiss certify that I am employed by VES Survey International. That I did on the day(s) of 01/13/17 through 01/13/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 9,350.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of COG Operating for the Myox 5 State Com Well # 23H API # 30-015-43972 in Eddy County / Parish New Mexico ; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.

A handwritten signature in black ink, appearing to read "Gene Heiss", written over a horizontal line.

Gene Heiss
Service Technician
VES Survey International



WATER OIL CONSERVATION

ARTESIA DISTRICT

MAY 08 2017

RECEIVED

COG Operating LLC

Eddy County, NM (NAD-27 2015)

Myox 5 State Com #23H

Myox 5 State Com #23H

30-015-43972

Lateral #1

Design: Lateral #1

Standard Survey Report

21 February, 2017





TDS
Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project Eddy County, NM (NAD-27 2015)

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

System Datum: Mean Sea Level

Site Myox 5 State Com #23H

Site Position:
From: Map
Position Uncertainty: 0.00 usft
Northing: 387,597.30 usft
Easting: 568,606.50 usft
Slot Radius: 13.20 in
Latitude: 32° 3' 55.537 N
Longitude: 104° 6' 42.700 W
Grid Convergence: 0.12 °

Well Myox 5 State Com #23H

Well Position +N/-S 0.00 usft **Northing:** 387,597.30 usft **Latitude:** 32° 3' 55.537 N
+E/-W 0.00 usft **Easting:** 568,606.50 usft **Longitude:** 104° 6' 42.700 W
Position Uncertainty 0.00 usft **Wellhead Elevation:** 0.00 usft **Ground Level:** 3,045.00 usft

Wellbore Lateral #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/22/2016	7.24	59.83	47,838

Design Lateral #1

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.61

Survey Program Date 2/21/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
25.00	9,350.00	VES Gyro #1 (Lateral #1)	VES-ISCWSA-GYRO-3	Biaxial Semi-Cont. Gyro
9,533.00	20,210.00	TDS MWD #2 (Lateral #1)	MWD	MWD - Standard

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
25.00	0.27	154.01	25.00	-0.05	0.03	-0.05	1.08	1.08	0.00
50.00	0.65	167.41	50.00	-0.24	0.08	-0.24	1.57	1.52	53.60
75.00	0.78	162.11	75.00	-0.54	0.17	-0.55	0.58	0.52	-21.20
100.00	0.98	139.37	99.99	-0.87	0.36	-0.87	1.59	0.80	-90.96
125.00	1.07	117.66	124.99	-1.14	0.70	-1.14	1.58	0.36	-86.84
150.00	1.03	100.64	149.99	-1.29	1.13	-1.30	1.25	-0.16	-68.08
175.00	1.00	110.37	174.98	-1.41	1.56	-1.42	0.70	-0.12	38.92
200.00	1.28	114.40	199.98	-1.60	2.01	-1.61	1.16	1.12	16.12
225.00	1.40	108.18	224.97	-1.81	2.56	-1.83	0.75	0.48	-24.88



TDS
Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
250.00	1.29	101.67	249.96	-1.96	3.13	-1.98	0.75	-0.44	-26.04
275.00	1.14	100.34	274.96	-2.06	3.65	-2.09	0.61	-0.60	-5.32
300.00	1.06	110.04	299.95	-2.19	4.11	-2.21	0.81	-0.32	38.80
325.00	1.18	108.73	324.95	-2.35	4.57	-2.38	0.49	0.48	-5.24
350.00	1.26	111.06	349.94	-2.53	5.07	-2.56	0.38	0.32	9.32
375.00	1.30	100.11	374.94	-2.68	5.60	-2.72	0.99	0.16	-43.80
400.00	1.20	99.14	399.93	-2.77	6.14	-2.81	0.41	-0.40	-3.88
425.00	1.09	96.90	424.93	-2.84	6.64	-2.88	0.47	-0.44	-8.96
450.00	1.03	103.68	449.92	-2.92	7.09	-2.97	0.56	-0.24	27.12
475.00	1.03	94.20	474.92	-2.99	7.53	-3.04	0.68	0.00	-37.92
500.00	1.16	88.91	499.91	-3.00	8.01	-3.06	0.66	0.52	-21.16
525.00	0.86	88.28	524.91	-2.99	8.45	-3.05	1.20	-1.20	-2.52
550.00	1.03	88.17	549.91	-2.98	8.86	-3.04	0.68	0.68	-0.44
575.00	1.24	92.31	574.90	-2.98	9.36	-3.05	0.90	0.84	16.56
600.00	1.22	92.06	599.89	-3.00	9.89	-3.07	0.08	-0.08	-1.00
625.00	1.46	97.46	624.89	-3.05	10.48	-3.13	1.08	0.96	21.60
650.00	1.67	96.53	649.88	-3.14	11.15	-3.21	0.85	0.84	-3.72
675.00	1.45	92.99	674.87	-3.20	11.83	-3.28	0.96	-0.88	-14.16
700.00	1.63	95.48	699.86	-3.25	12.50	-3.33	0.77	0.72	9.96
725.00	1.71	97.51	724.85	-3.33	13.22	-3.42	0.40	0.32	8.12
750.00	1.45	96.18	749.84	-3.41	13.91	-3.51	1.05	-1.04	-5.32
775.00	1.64	95.77	774.83	-3.48	14.58	-3.58	0.76	0.76	-1.64
800.00	1.66	98.37	799.82	-3.57	15.29	-3.67	0.31	0.08	10.40
825.00	1.50	96.35	824.81	-3.66	15.98	-3.77	0.68	-0.64	-8.08
850.00	1.47	121.96	849.80	-3.66	16.57	-3.98	2.64	-0.12	102.44
875.00	1.63	146.65	874.79	-4.33	17.04	-4.45	2.72	0.64	98.76
900.00	1.93	167.00	899.78	-5.04	17.33	-5.16	2.78	1.20	81.40
925.00	2.15	174.16	924.77	-5.92	17.47	-6.03	1.35	0.88	28.64
950.00	2.53	182.57	949.75	-6.93	17.50	-7.05	2.04	1.52	33.64
975.00	2.86	190.56	974.72	-8.10	17.36	-8.22	2.00	1.32	31.96
1,000.00	2.94	195.43	999.69	-9.33	17.07	-9.44	1.04	0.32	19.48
1,025.00	2.95	195.98	1,024.65	-10.57	16.73	-10.68	0.12	0.04	2.20
1,050.00	3.11	195.55	1,049.62	-11.84	16.37	-11.95	0.65	0.64	-1.72
1,075.00	3.16	194.42	1,074.58	-13.16	16.01	-13.27	0.32	0.20	-4.52
1,100.00	3.04	196.13	1,099.54	-14.46	15.66	-14.57	0.61	-0.48	6.84
1,125.00	3.10	194.89	1,124.51	-15.75	15.30	-15.86	0.36	0.24	-4.96
1,150.00	3.33	190.28	1,149.47	-17.12	15.00	-17.22	1.38	0.92	-18.44
1,175.00	3.19	192.44	1,174.43	-18.51	14.72	-18.61	0.74	-0.56	8.64
1,200.00	3.29	193.48	1,199.39	-19.89	14.40	-19.99	0.46	0.40	4.16
1,225.00	2.92	190.67	1,224.35	-21.21	14.12	-21.31	1.60	-1.48	-11.24
1,250.00	3.19	192.41	1,249.32	-22.52	13.85	-22.61	1.14	1.08	6.96
1,275.00	3.24	195.98	1,274.28	-23.88	13.50	-23.97	0.83	0.20	14.28
1,300.00	3.35	193.85	1,299.24	-25.27	13.13	-25.35	0.66	0.44	-8.52



TDS
Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
1,325.00	2.98	203.74	1,324.20	-26.57	12.70	-26.66	2.63	-1.48	39.56
1,350.00	3.02	204.58	1,349.16	-27.76	12.16	-27.85	0.24	0.16	3.36
1,375.00	3.02	205.86	1,374.13	-28.95	11.60	-29.03	0.27	0.00	5.12
1,400.00	3.09	205.22	1,399.09	-30.16	11.03	-30.23	0.31	0.28	-2.56
1,425.00	3.23	203.83	1,424.06	-31.41	10.46	-31.48	0.64	0.56	-5.56
1,450.00	3.03	205.97	1,449.02	-32.65	9.88	-32.72	0.93	-0.80	8.56
1,475.00	2.74	197.72	1,473.99	-33.81	9.41	-33.88	2.02	-1.16	-33.00
1,500.00	2.50	205.08	1,498.96	-34.88	9.00	-34.94	1.65	-0.96	29.44
1,525.00	2.27	205.15	1,523.94	-35.82	8.56	-35.87	0.92	-0.92	0.28
1,550.00	2.26	205.74	1,548.92	-36.71	8.13	-36.76	0.10	-0.04	2.36
1,575.00	2.02	201.34	1,573.90	-37.56	7.76	-37.62	1.16	-0.96	-17.60
1,600.00	2.26	192.89	1,598.88	-38.45	7.49	-38.51	1.58	0.96	-33.80
1,625.00	1.98	187.43	1,623.87	-39.36	7.32	-39.41	1.38	-1.12	-21.84
1,650.00	2.05	194.54	1,648.85	-40.22	7.15	-40.27	1.04	0.28	28.44
1,675.00	2.32	184.59	1,673.83	-41.16	7.00	-41.21	1.86	1.08	-39.80
1,700.00	2.30	179.39	1,698.81	-42.17	6.96	-42.21	0.84	-0.08	-20.80
1,725.00	2.46	167.75	1,723.79	-43.19	7.08	-43.24	2.03	0.64	-46.56
1,750.00	2.42	173.59	1,748.77	-44.24	7.26	-44.29	1.01	-0.16	23.36
1,775.00	2.41	174.18	1,773.75	-45.29	7.37	-45.34	0.11	-0.04	2.36
1,800.00	2.39	171.43	1,798.73	-46.33	7.50	-46.38	0.47	-0.08	-11.00
1,825.00	2.33	172.53	1,823.70	-47.35	7.64	-47.40	0.30	-0.24	4.40
1,850.00	1.99	160.31	1,848.69	-48.26	7.86	-48.31	2.28	-1.36	-48.88
1,875.00	1.77	170.39	1,873.67	-49.05	8.07	-49.10	1.59	-0.88	40.32
1,900.00	1.89	163.61	1,898.66	-49.83	8.25	-49.88	0.99	0.48	-27.12
1,925.00	1.68	170.98	1,923.65	-50.58	8.42	-50.64	1.24	-0.84	29.48
1,950.00	1.44	165.60	1,948.64	-51.25	8.56	-51.31	1.12	-0.96	-21.52
1,975.00	1.76	165.92	1,973.63	-51.93	8.73	-51.98	1.28	1.28	1.28
2,000.00	1.79	154.17	1,998.62	-52.65	8.99	-52.71	1.46	0.12	-47.00
2,025.00	1.66	165.85	2,023.61	-53.35	9.25	-53.41	1.50	-0.52	46.72
2,050.00	1.69	150.94	2,048.60	-54.03	9.52	-54.09	1.74	0.12	-59.64
2,075.00	1.56	159.72	2,073.59	-54.67	9.81	-54.73	1.12	-0.52	35.12
2,100.00	1.66	156.39	2,098.58	-55.32	10.08	-55.39	0.55	0.40	-13.32
2,125.00	1.57	154.84	2,123.57	-55.96	10.37	-56.03	0.40	-0.36	-6.20
2,150.00	1.40	153.39	2,148.56	-56.54	10.65	-56.61	0.70	-0.68	-5.80
2,175.00	1.50	159.05	2,173.55	-57.12	10.90	-57.19	0.70	0.40	22.64
2,200.00	1.56	155.20	2,198.54	-57.74	11.16	-57.81	0.48	0.24	-15.40
2,225.00	1.54	156.31	2,223.53	-58.35	11.44	-58.43	0.14	-0.08	4.44
2,250.00	1.34	158.49	2,248.52	-58.93	11.68	-59.01	0.83	-0.80	8.72
2,275.00	1.07	163.70	2,273.52	-59.43	11.86	-59.51	1.16	-1.08	20.84
2,300.00	1.07	171.75	2,298.51	-59.88	11.96	-59.96	0.60	0.00	32.20
2,325.00	0.88	185.09	2,323.51	-60.31	11.97	-60.39	1.18	-0.76	53.36
2,350.00	1.10	173.15	2,348.51	-60.74	11.98	-60.82	1.20	0.88	-47.76
2,375.00	0.78	184.39	2,373.50	-61.14	12.00	-61.22	1.47	-1.28	44.96



TDS
Survey Report

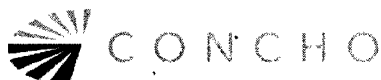


Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
2,400.00	0.87	167.69	2,398.50	-61.50	12.03	-61.58	1.02	0.36	-66.80
2,425.00	0.90	188.65	2,423.50	-61.88	12.04	-61.96	1.29	0.12	83.84
2,450.00	0.83	200.65	2,448.49	-62.24	11.94	-62.32	0.78	-0.28	48.00
2,475.00	0.87	209.56	2,473.49	-62.58	11.79	-62.65	0.55	0.16	35.64
2,500.00	1.05	221.73	2,498.49	-62.91	11.54	-62.99	1.08	0.72	48.68
2,525.00	1.01	222.47	2,523.48	-63.25	11.24	-63.32	0.17	-0.16	2.96
2,550.00	0.94	218.93	2,548.48	-63.57	10.96	-63.64	0.37	-0.28	-14.16
2,575.00	0.98	217.97	2,573.48	-63.90	10.70	-63.97	0.17	0.16	-3.84
2,600.00	1.27	212.18	2,598.47	-64.30	10.42	-64.37	1.24	1.16	-23.16
2,625.00	0.97	216.90	2,623.47	-64.70	10.15	-64.77	1.25	-1.20	18.88
2,650.00	1.16	205.29	2,648.46	-65.10	9.91	-65.17	1.15	0.76	-46.44
2,675.00	1.01	206.20	2,673.46	-65.53	9.71	-65.59	0.60	-0.60	3.64
2,700.00	1.01	219.96	2,698.45	-65.89	9.47	-65.96	0.97	0.00	55.04
2,725.00	0.96	215.49	2,723.45	-66.23	9.21	-66.29	0.37	-0.20	-17.88
2,750.00	1.34	213.14	2,748.45	-66.65	8.92	-66.71	1.53	1.52	-9.40
2,775.00	0.99	209.91	2,773.44	-67.08	8.66	-67.14	1.42	-1.40	-12.92
2,800.00	1.13	226.47	2,798.44	-67.44	8.37	-67.49	1.34	0.56	66.24
2,825.00	1.04	217.04	2,823.43	-67.79	8.06	-67.84	0.80	-0.36	-37.72
2,850.00	1.24	206.66	2,848.43	-68.21	7.80	-68.26	1.15	0.80	-41.52
2,875.00	1.07	218.77	2,873.42	-68.63	7.53	-68.68	1.19	-0.68	48.44
2,900.00	1.21	218.70	2,898.42	-69.02	7.22	-69.07	0.56	0.56	-0.28
2,925.00	1.05	213.23	2,923.41	-69.42	6.93	-69.47	0.77	-0.64	-21.88
2,950.00	1.06	208.61	2,948.41	-69.81	6.69	-69.86	0.34	0.04	-18.48
2,975.00	1.16	215.88	2,973.40	-70.22	6.43	-70.26	0.69	0.40	29.08
3,000.00	1.12	209.44	2,998.40	-70.64	6.16	-70.68	0.54	-0.16	-25.76
3,025.00	1.56	210.33	3,023.39	-71.15	5.87	-71.19	1.76	1.76	3.56
3,050.00	1.77	206.93	3,048.38	-71.78	5.53	-71.82	0.93	0.84	-13.60
3,075.00	1.64	205.67	3,073.37	-72.45	5.20	-72.49	0.54	-0.52	-5.04
3,100.00	1.83	204.94	3,098.36	-73.14	4.87	-73.17	0.77	0.76	-2.92
3,125.00	1.69	206.21	3,123.35	-73.83	4.54	-73.86	0.58	-0.56	5.08
3,150.00	1.70	206.63	3,148.34	-74.49	4.21	-74.52	0.06	0.04	1.68
3,175.00	1.80	201.12	3,173.32	-75.19	3.90	-75.21	0.78	0.40	-22.04
3,200.00	1.83	204.39	3,198.31	-75.92	3.60	-75.94	0.43	0.12	13.08
3,225.00	1.96	207.46	3,223.30	-76.66	3.24	-76.68	0.66	0.52	12.28
3,250.00	2.13	207.65	3,248.28	-77.45	2.82	-77.47	0.68	0.68	0.76
3,275.00	2.08	207.63	3,273.26	-78.27	2.40	-78.28	0.20	-0.20	-0.08
3,300.00	2.13	209.21	3,298.25	-79.07	1.96	-79.08	0.31	0.20	6.32
3,325.00	1.99	208.05	3,323.23	-79.86	1.53	-79.87	0.58	-0.56	-4.64
3,350.00	2.48	210.42	3,348.21	-80.71	1.05	-80.72	1.99	1.96	9.48
3,375.00	1.96	211.30	3,373.19	-81.54	0.56	-81.54	2.08	-2.08	3.52
3,400.00	2.06	211.42	3,398.18	-82.29	0.10	-82.29	0.40	0.40	0.48
3,425.00	2.02	211.18	3,423.16	-83.05	-0.36	-83.05	0.16	-0.16	-0.96
3,450.00	2.39	201.55	3,448.14	-83.91	-0.78	-83.91	2.09	1.48	-38.52
3,475.00	2.20	308.14	3,473.13	-84.10	-1.35	-84.09	14.73	-0.76	426.36



TDS
Survey Report



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Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
3,500.00	2.11	210.25	3,498.12	-84.20	-1.96	-84.19	13.00	-0.36	-391.56
3,525.00	2.31	212.73	3,523.10	-85.03	-2.47	-85.01	0.89	0.80	9.92
3,550.00	2.12	211.18	3,548.08	-85.84	-2.98	-85.82	0.80	-0.76	-6.20
3,575.00	2.18	211.14	3,573.07	-86.65	-3.46	-86.62	0.24	0.24	-0.16
3,600.00	2.33	213.59	3,598.05	-87.48	-3.99	-87.45	0.71	0.60	9.80
3,625.00	2.59	215.72	3,623.02	-88.36	-4.60	-88.33	1.10	1.04	8.52
3,650.00	2.42	213.07	3,648.00	-89.26	-5.22	-89.22	0.82	-0.68	-10.60
3,675.00	2.46	217.11	3,672.98	-90.13	-5.83	-90.09	0.71	0.16	16.16
3,700.00	2.51	215.11	3,697.95	-91.01	-6.47	-90.96	0.40	0.20	-8.00
3,725.00	2.67	219.13	3,722.93	-91.91	-7.15	-91.85	0.97	0.64	16.08
3,750.00	2.50	217.26	3,747.90	-92.79	-7.85	-92.74	0.76	-0.68	-7.48
3,775.00	2.83	209.25	3,772.88	-93.76	-8.48	-93.70	1.99	1.32	-32.04
3,800.00	2.38	210.88	3,797.85	-94.75	-9.05	-94.68	1.82	-1.80	6.52
3,825.00	2.68	205.22	3,822.83	-95.72	-9.56	-95.65	1.56	1.20	-22.64
3,850.00	2.46	214.67	3,847.80	-96.69	-10.12	-96.62	1.91	-0.88	37.80
3,875.00	2.30	210.24	3,872.78	-97.57	-10.68	-97.49	0.97	-0.64	-17.72
3,900.00	2.31	209.90	3,897.76	-98.44	-11.18	-98.36	0.07	0.04	-1.36
3,925.00	2.32	208.49	3,922.74	-99.32	-11.67	-99.24	0.23	0.04	-5.64
3,950.00	2.54	209.87	3,947.72	-100.24	-12.19	-100.16	0.91	0.88	5.52
3,975.00	2.37	209.95	3,972.69	-101.17	-12.72	-101.08	0.68	-0.68	0.32
4,000.00	2.22	207.20	3,997.67	-102.05	-13.20	-101.96	0.74	-0.60	-11.00
4,025.00	2.27	209.05	4,022.65	-102.91	-13.66	-102.82	0.35	0.20	7.40
4,050.00	2.19	211.30	4,047.64	-103.75	-14.15	-103.66	0.47	-0.32	9.00
4,075.00	2.52	207.45	4,072.61	-104.65	-14.65	-104.55	1.46	1.32	-15.40
4,100.00	2.11	207.69	4,097.59	-105.55	-15.12	-105.44	1.64	-1.64	0.96
4,125.00	2.11	205.74	4,122.58	-106.37	-15.54	-106.26	0.29	0.00	-7.80
4,150.00	2.26	199.31	4,147.56	-107.25	-15.90	-107.14	1.15	0.60	-25.72
4,175.00	2.40	210.62	4,172.54	-108.16	-16.33	-108.05	1.92	0.56	45.24
4,200.00	2.44	206.89	4,197.52	-109.09	-16.84	-108.97	0.65	0.16	-14.92
4,225.00	2.12	217.71	4,222.50	-109.93	-17.36	-109.81	2.14	-1.28	43.28
4,250.00	2.45	207.36	4,247.48	-110.77	-17.89	-110.64	2.11	1.32	-41.40
4,275.00	2.16	211.82	4,272.46	-111.64	-18.38	-111.52	1.36	-1.16	17.84
4,300.00	2.26	203.79	4,297.44	-112.50	-18.83	-112.36	1.30	0.40	-32.12
4,325.00	2.14	205.16	4,322.42	-113.37	-19.23	-113.24	0.52	-0.48	5.48
4,350.00	2.61	208.62	4,347.40	-114.29	-19.70	-114.15	1.96	1.88	13.84
4,375.00	2.22	203.96	4,372.38	-115.23	-20.17	-115.09	1.75	-1.56	-18.64
4,400.00	2.37	205.37	4,397.36	-116.14	-20.58	-116.00	0.64	0.60	5.64
4,425.00	2.36	204.88	4,422.33	-117.08	-21.02	-116.93	0.09	-0.04	-1.96
4,450.00	2.23	206.26	4,447.31	-117.98	-21.45	-117.83	0.56	-0.52	5.52
4,475.00	2.25	203.71	4,472.29	-118.87	-21.87	-118.71	0.41	0.08	-10.20
4,500.00	2.27	205.64	4,497.28	-119.76	-22.28	-119.61	0.31	0.08	7.72
4,525.00	2.26	203.79	4,522.26	-120.66	-22.69	-120.50	0.30	-0.04	-7.40
4,550.00	2.26	202.94	4,547.24	-121.56	-23.08	-121.40	0.13	0.00	-3.40



TDS
Survey Report



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Project: Eddy County, NM (NAD-27 2015)
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Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
4,575.00	2.24	204.70	4,572.22	-122.46	-23.48	-122.30	0.29	-0.08	7.04
4,600.00	2.44	207.18	4,597.20	-123.38	-23.93	-123.21	0.90	0.80	9.92
4,625.00	2.55	207.43	4,622.17	-124.35	-24.43	-124.18	0.44	0.44	1.00
4,650.00	2.48	203.09	4,647.15	-125.34	-24.89	-125.16	0.81	-0.28	-17.36
4,675.00	2.54	206.23	4,672.12	-126.33	-25.35	-126.16	0.60	0.24	12.56
4,700.00	2.29	203.84	4,697.10	-127.29	-25.80	-127.11	1.08	-1.00	-9.56
4,725.00	2.18	202.09	4,722.08	-128.18	-26.18	-128.00	0.52	-0.44	-7.00
4,750.00	2.19	203.75	4,747.07	-129.06	-26.55	-128.88	0.26	0.04	6.64
4,775.00	2.17	203.99	4,772.05	-129.93	-26.93	-129.74	0.09	-0.08	0.96
4,800.00	2.10	203.71	4,797.03	-130.78	-27.31	-130.59	0.28	-0.28	-1.12
4,825.00	2.10	199.58	4,822.01	-131.63	-27.65	-131.44	0.61	0.00	-16.52
4,850.00	2.08	200.63	4,847.00	-132.49	-27.96	-132.29	0.17	-0.08	4.20
4,875.00	1.98	200.37	4,871.98	-133.32	-28.27	-133.12	0.40	-0.40	-1.04
4,900.00	2.12	201.63	4,896.96	-134.15	-28.59	-133.95	0.59	0.56	5.04
4,925.00	1.92	199.97	4,921.95	-134.98	-28.91	-134.78	0.83	-0.80	-6.64
4,950.00	1.92	207.31	4,946.94	-135.74	-29.24	-135.54	0.98	0.00	29.36
4,975.00	1.98	196.55	4,971.92	-136.53	-29.56	-136.32	1.48	0.24	-43.04
5,000.00	2.21	209.05	4,996.90	-137.36	-29.91	-137.16	2.04	0.92	50.00
5,025.00	1.91	201.93	5,021.89	-138.17	-30.30	-137.96	1.58	-1.20	-28.48
5,050.00	1.99	198.75	5,046.87	-138.97	-30.60	-138.76	0.54	0.32	-12.72
5,075.00	2.18	196.83	5,071.86	-139.84	-30.88	-139.62	0.81	0.76	-7.68
5,100.00	2.10	198.72	5,096.84	-140.72	-31.16	-140.51	0.43	-0.32	7.56
5,125.00	2.22	204.85	5,121.82	-141.60	-31.51	-141.38	1.04	0.48	24.52
5,150.00	2.47	207.34	5,146.80	-142.52	-31.96	-142.29	1.08	1.00	9.96
5,175.00	2.31	207.35	5,171.78	-143.44	-32.44	-143.22	0.64	-0.64	0.04
5,200.00	2.26	211.08	5,196.76	-144.31	-32.93	-144.08	0.63	-0.20	14.92
5,225.00	2.33	209.02	5,221.74	-145.18	-33.43	-144.95	0.43	0.28	-8.24
5,250.00	2.45	206.32	5,246.72	-146.10	-33.91	-145.87	0.66	0.48	-10.80
5,275.00	2.30	211.50	5,271.70	-147.01	-34.41	-146.77	1.05	-0.60	20.72
5,300.00	2.49	211.79	5,296.67	-147.90	-34.96	-147.65	0.76	0.76	1.16
5,325.00	2.42	205.21	5,321.65	-148.84	-35.47	-148.59	1.16	-0.28	-26.32
5,350.00	2.35	208.67	5,346.63	-149.76	-35.94	-149.51	0.64	-0.28	13.84
5,375.00	2.74	203.43	5,371.60	-150.76	-36.42	-150.51	1.81	1.56	-20.96
5,400.00	2.69	214.97	5,396.58	-151.79	-37.00	-151.53	2.19	-0.20	46.16
5,425.00	2.64	211.94	5,421.55	-152.76	-37.64	-152.50	0.60	-0.20	-12.12
5,450.00	2.81	214.27	5,446.52	-153.75	-38.29	-153.49	0.81	0.68	9.32
5,475.00	3.12	204.02	5,471.49	-154.88	-38.91	-154.61	2.45	1.24	-41.00
5,500.00	2.76	214.60	5,496.46	-156.00	-39.53	-155.73	2.60	-1.44	42.32
5,525.00	2.67	187.76	5,521.43	-157.07	-39.95	-156.80	5.05	-0.36	-107.36
5,550.00	2.69	213.20	5,546.40	-158.14	-40.35	-157.86	4.72	0.08	101.76
5,575.00	2.73	211.40	5,571.37	-159.14	-40.98	-158.86	0.38	0.16	-7.20
5,600.00	2.61	209.02	5,596.35	-160.14	-41.57	-159.86	0.65	-0.48	-9.52
5,625.00	2.59	211.22	5,621.32	-161.13	-42.13	-160.83	0.41	-0.08	8.80



TDS
Survey Report



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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)
5,650.00	2.61	207.41	5,646.30	-162.11	-42.69	-161.82	0.70	0.08	-15.24
5,675.00	2.58	201.05	5,671.27	-163.14	-43.15	-162.85	1.16	-0.12	-25.44
5,700.00	2.66	207.61	5,696.24	-164.18	-43.62	-163.88	1.24	0.32	26.24
5,725.00	2.75	207.09	5,721.22	-165.23	-44.17	-164.93	0.37	0.36	-2.08
5,750.00	2.76	204.54	5,746.19	-166.31	-44.69	-166.00	0.49	0.04	-10.20
5,775.00	2.63	210.75	5,771.16	-167.35	-45.23	-167.04	1.28	-0.52	24.84
5,800.00	2.53	206.50	5,796.13	-168.34	-45.77	-168.02	0.86	-0.40	-17.00
5,825.00	2.54	207.53	5,821.11	-169.33	-46.27	-169.01	0.19	0.04	4.12
5,850.00	2.64	211.90	5,846.08	-170.31	-46.84	-169.98	0.89	0.40	17.48
5,875.00	2.51	213.59	5,871.06	-171.25	-47.44	-170.92	0.60	-0.52	6.76
5,900.00	2.77	200.99	5,896.03	-172.27	-47.96	-171.94	2.54	1.04	-50.40
5,925.00	2.51	210.17	5,921.01	-173.31	-48.45	-172.97	1.98	-1.04	36.72
5,950.00	2.45	204.60	5,945.98	-174.27	-48.95	-173.93	0.99	-0.24	-22.28
5,975.00	2.46	204.55	5,970.96	-175.24	-49.40	-174.90	0.04	0.04	-0.20
6,000.00	2.71	203.47	5,995.93	-176.27	-49.85	-175.93	1.02	1.00	-4.32
6,025.00	2.65	202.33	6,020.91	-177.35	-50.31	-177.00	0.32	-0.24	-4.56
6,050.00	2.43	206.08	6,045.88	-178.36	-50.76	-178.01	1.10	-0.88	15.00
6,075.00	2.37	204.56	6,070.86	-179.30	-51.21	-178.95	0.35	-0.24	-6.08
6,100.00	2.31	206.79	6,095.84	-180.22	-51.65	-179.87	0.44	-0.24	8.92
6,125.00	2.37	198.85	6,120.82	-181.16	-52.05	-180.80	1.32	0.24	-31.76
6,150.00	2.17	202.78	6,145.80	-182.09	-52.40	-181.73	1.01	-0.80	15.72
6,175.00	2.30	209.23	6,170.78	-182.96	-52.82	-182.60	1.13	0.52	25.80
6,200.00	2.21	209.69	6,195.76	-183.82	-53.31	-183.45	0.37	-0.36	1.84
6,225.00	2.39	193.86	6,220.74	-184.74	-53.67	-184.37	2.63	0.72	-63.32
6,250.00	2.15	206.29	6,245.72	-185.67	-54.00	-185.30	2.18	-0.96	49.72
6,275.00	2.37	202.90	6,270.70	-186.57	-54.41	-186.19	1.03	0.88	-13.56
6,300.00	2.40	193.23	6,295.68	-187.55	-54.73	-187.17	1.61	0.12	-38.68
6,325.00	2.36	195.75	6,320.66	-188.56	-54.99	-188.18	0.45	-0.16	10.08
6,350.00	2.54	199.15	6,345.64	-189.58	-55.31	-189.19	0.93	0.72	13.60
6,375.00	2.57	201.81	6,370.61	-190.62	-55.70	-190.24	0.49	0.12	10.64
6,400.00	2.50	191.89	6,395.59	-191.67	-56.03	-191.29	1.77	-0.28	-39.68
6,425.00	2.13	188.60	6,420.57	-192.67	-56.21	-192.28	1.57	-1.48	-13.16
6,450.00	2.19	193.66	6,445.55	-193.59	-56.39	-193.20	0.80	0.24	20.24
6,475.00	2.18	204.67	6,470.53	-194.49	-56.70	-194.10	1.68	-0.04	44.04
6,500.00	2.08	179.98	6,495.51	-195.37	-56.90	-194.98	3.66	-0.40	-98.76
6,525.00	1.94	181.16	6,520.50	-196.25	-56.91	-195.86	0.58	-0.56	4.72
6,550.00	1.91	186.36	6,545.48	-197.09	-56.96	-196.69	0.71	-0.12	20.80
6,575.00	2.07	175.76	6,570.47	-197.95	-56.97	-197.56	1.60	0.64	-42.40
6,600.00	2.00	173.47	6,595.45	-198.83	-56.89	-198.44	0.43	-0.28	-9.16
6,625.00	2.08	170.84	6,620.44	-199.72	-56.77	-199.32	0.49	0.32	-10.52
6,650.00	2.43	168.71	6,645.42	-200.68	-56.59	-200.29	1.44	1.40	-8.52
6,675.00	2.38	169.42	6,670.40	-201.71	-56.40	-201.32	0.23	-0.20	2.84
6,700.00	2.38	167.74	6,695.38	-202.73	-56.19	-202.34	0.28	0.00	-6.72
6,725.00	2.76	174.46	6,720.35	-203.84	-56.02	-203.45	1.94	1.52	26.88



TDS
Survey Report



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Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
6,750.00	2.66	165.06	6,745.32	-205.00	-55.81	-204.61	1.82	-0.40	-37.60
6,775.00	2.48	166.84	6,770.30	-206.08	-55.54	-205.70	0.79	-0.72	7.12
6,800.00	2.73	166.02	6,795.27	-207.19	-55.27	-206.81	1.01	1.00	-3.28
6,825.00	2.42	167.25	6,820.25	-208.28	-55.01	-207.90	1.26	-1.24	4.92
6,850.00	2.22	176.99	6,845.23	-209.28	-54.87	-208.90	1.77	-0.80	38.96
6,875.00	2.26	181.43	6,870.21	-210.26	-54.86	-209.88	0.71	0.16	17.76
6,900.00	2.20	173.72	6,895.19	-211.23	-54.82	-210.85	1.22	-0.24	-30.84
6,925.00	2.43	173.56	6,920.17	-212.23	-54.71	-211.85	0.92	0.92	-0.64
6,950.00	2.23	180.36	6,945.15	-213.24	-54.65	-212.86	1.36	-0.80	27.20
6,975.00	2.20	178.00	6,970.13	-214.21	-54.64	-213.83	0.38	-0.12	-9.44
7,000.00	2.14	177.34	6,995.11	-215.15	-54.60	-214.78	0.26	-0.24	-2.64
7,025.00	2.14	179.24	7,020.09	-216.09	-54.57	-215.71	0.28	0.00	7.60
7,050.00	2.27	178.44	7,045.07	-217.05	-54.55	-216.67	0.53	0.52	-3.20
7,075.00	2.22	193.22	7,070.05	-218.01	-54.65	-217.64	2.32	-0.20	59.12
7,100.00	2.00	189.78	7,095.04	-218.92	-54.83	-218.54	1.02	-0.88	-13.76
7,125.00	2.04	183.24	7,120.02	-219.79	-54.93	-219.41	0.94	0.16	-26.16
7,150.00	2.00	189.69	7,145.01	-220.66	-55.03	-220.28	0.92	-0.16	25.80
7,175.00	2.30	165.88	7,169.99	-221.58	-54.98	-221.20	3.74	1.20	-95.24
7,200.00	2.17	193.18	7,194.97	-222.53	-54.97	-222.15	4.25	-0.52	109.20
7,225.00	2.13	180.66	7,219.95	-223.45	-55.08	-223.07	1.88	-0.16	-50.08
7,250.00	2.28	183.91	7,244.94	-224.41	-55.12	-224.03	0.78	0.60	13.00
7,275.00	2.00	182.43	7,269.92	-225.35	-55.17	-224.96	1.14	-1.12	-5.92
7,300.00	2.25	184.47	7,294.90	-226.27	-55.23	-225.89	1.04	1.00	8.16
7,325.00	2.10	195.53	7,319.88	-227.20	-55.39	-226.82	1.78	-0.60	44.24
7,350.00	2.21	193.48	7,344.87	-228.11	-55.62	-227.73	0.54	0.44	-8.20
7,375.00	1.73	191.97	7,369.85	-228.95	-55.82	-228.56	1.93	-1.92	-6.04
7,400.00	1.73	186.60	7,394.84	-229.69	-55.94	-229.31	0.65	0.00	-21.48
7,425.00	1.66	185.82	7,419.83	-230.43	-56.02	-230.04	0.29	-0.28	-3.12
7,450.00	1.82	183.39	7,444.82	-231.19	-56.08	-230.80	0.70	0.64	-9.72
7,475.00	1.73	183.57	7,469.80	-231.96	-56.12	-231.57	0.36	-0.36	0.72
7,500.00	2.09	191.67	7,494.79	-232.78	-56.24	-232.39	1.80	1.44	32.40
7,525.00	2.11	174.64	7,519.77	-233.69	-56.29	-233.30	2.49	0.08	-68.12
7,550.00	2.07	180.29	7,544.76	-234.60	-56.25	-234.21	0.84	-0.16	22.60
7,575.00	1.93	182.82	7,569.74	-235.47	-56.27	-235.08	0.66	-0.56	10.12
7,600.00	2.20	182.30	7,594.73	-236.37	-56.31	-235.98	1.08	1.08	-2.08
7,625.00	2.15	184.95	7,619.71	-237.31	-56.37	-236.92	0.45	-0.20	10.60
7,650.00	2.30	177.33	7,644.69	-238.28	-56.39	-237.89	1.33	0.60	-30.48
7,675.00	2.24	170.45	7,669.67	-239.27	-56.28	-238.88	1.12	-0.24	-27.52
7,700.00	2.12	183.71	7,694.65	-240.21	-56.23	-239.82	2.07	-0.48	53.04
7,725.00	2.44	175.06	7,719.63	-241.20	-56.22	-240.81	1.88	1.28	-34.60
7,750.00	2.09	183.82	7,744.61	-242.19	-56.20	-241.80	1.97	-1.40	35.04
7,775.00	2.31	182.08	7,769.59	-243.14	-56.25	-242.75	0.92	0.88	-6.96
7,800.00	1.93	191.38	7,794.58	-244.06	-56.35	-243.67	2.05	-1.52	37.20



TDS
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Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
7,825.00	2.10	186.16	7,819.56	-244.93	-56.48	-244.54	1.00	0.68	-20.88
7,850.00	1.87	181.22	7,844.55	-245.79	-56.54	-245.40	1.15	-0.92	-19.76
7,875.00	1.67	179.71	7,869.53	-246.56	-56.55	-246.17	0.82	-0.80	-6.04
7,900.00	1.37	185.84	7,894.53	-247.23	-56.58	-246.83	1.36	-1.20	24.52
7,925.00	1.13	199.33	7,919.52	-247.76	-56.69	-247.36	1.51	-0.96	53.96
7,950.00	1.34	193.03	7,944.51	-248.27	-56.84	-247.88	1.00	0.84	-25.20
7,975.00	1.41	188.75	7,969.51	-248.86	-56.95	-248.47	0.50	0.28	-17.12
8,000.00	1.36	182.82	7,994.50	-249.46	-57.01	-249.07	0.61	-0.20	-23.72
8,025.00	1.28	181.21	8,019.49	-250.04	-57.03	-249.64	0.35	-0.32	-6.44
8,050.00	1.10	182.24	8,044.49	-250.56	-57.05	-250.16	0.73	-0.72	4.12
8,075.00	1.20	189.92	8,069.48	-251.05	-57.10	-250.66	0.73	0.40	30.72
8,100.00	1.42	195.41	8,094.48	-251.61	-57.23	-251.21	1.01	0.88	21.96
8,125.00	1.48	191.36	8,119.47	-252.23	-57.37	-251.83	0.47	0.24	-16.20
8,150.00	1.50	186.74	8,144.46	-252.87	-57.48	-252.47	0.49	0.08	-18.48
8,175.00	1.43	184.74	8,169.45	-253.50	-57.54	-253.10	0.35	-0.28	-8.00
8,200.00	1.18	189.88	8,194.44	-254.07	-57.61	-253.67	1.10	-1.00	20.56
8,225.00	1.09	220.57	8,219.44	-254.50	-57.81	-254.10	2.43	-0.36	122.76
8,250.00	1.15	224.36	8,244.44	-254.86	-58.14	-254.46	0.38	0.24	15.16
8,275.00	1.14	227.57	8,269.43	-255.21	-58.50	-254.80	0.26	-0.04	12.84
8,300.00	1.07	225.21	8,294.43	-255.54	-58.85	-255.13	0.33	-0.28	-9.44
8,325.00	1.06	229.47	8,319.42	-255.86	-59.19	-255.45	0.32	-0.04	17.04
8,350.00	1.06	224.68	8,344.42	-256.17	-59.53	-255.76	0.35	0.00	-19.16
8,375.00	0.92	211.84	8,369.41	-256.51	-59.80	-256.09	1.05	-0.56	-51.36
8,400.00	0.75	193.86	8,394.41	-256.83	-59.94	-256.42	1.24	-0.68	-71.92
8,425.00	0.69	163.49	8,419.41	-257.14	-59.94	-256.72	1.53	-0.24	-121.48
8,450.00	0.76	168.17	8,444.41	-257.44	-59.86	-257.03	0.37	0.28	18.72
8,475.00	0.97	177.90	8,469.40	-257.82	-59.82	-257.40	1.02	0.84	38.92
8,500.00	1.16	168.87	8,494.40	-258.28	-59.76	-257.86	1.01	0.76	-36.12
8,525.00	1.25	161.77	8,519.39	-258.79	-59.63	-258.37	0.70	0.36	-28.40
8,550.00	1.37	150.38	8,544.39	-259.30	-59.39	-258.89	1.14	0.48	-45.56
8,575.00	1.27	140.91	8,569.38	-259.78	-59.07	-259.37	0.96	-0.40	-37.88
8,600.00	1.05	144.25	8,594.38	-260.18	-58.76	-259.77	0.92	-0.88	13.36
8,625.00	1.18	151.71	8,619.37	-260.59	-58.51	-260.19	0.78	0.52	29.84
8,650.00	1.51	154.74	8,644.36	-261.12	-58.25	-260.71	1.35	1.32	12.12
8,675.00	1.49	148.08	8,669.36	-261.69	-57.93	-261.29	0.70	-0.08	-26.64
8,700.00	1.52	145.64	8,694.35	-262.24	-57.57	-261.84	0.28	0.12	-9.76
8,725.00	1.53	141.39	8,719.34	-262.77	-57.18	-262.38	0.45	0.04	-17.00
8,750.00	1.21	145.37	8,744.33	-263.25	-56.82	-262.86	1.33	-1.28	15.92
8,775.00	1.26	154.64	8,769.33	-263.72	-56.55	-263.33	0.82	0.20	37.08
8,800.00	1.43	157.58	8,794.32	-264.26	-56.32	-263.86	0.73	0.68	11.76
8,825.00	1.37	161.10	8,819.31	-264.83	-56.10	-264.44	0.42	-0.24	14.08
8,850.00	1.24	158.27	8,844.30	-265.36	-55.90	-264.97	0.58	-0.52	-11.32
8,875.00	1.19	154.37	8,869.30	-265.85	-55.69	-265.46	0.39	-0.20	-15.60



TDS
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
8,900.00	1.06	154.55	8,894.29	-266.29	-55.48	-265.90	0.52	-0.52	0.72
8,925.00	0.93	158.54	8,919.29	-266.69	-55.31	-266.30	0.59	-0.52	15.96
8,950.00	0.76	153.79	8,944.29	-267.02	-55.16	-266.64	0.73	-0.68	-19.00
8,975.00	0.70	154.11	8,969.29	-267.31	-55.02	-266.93	0.24	-0.24	1.28
9,000.00	0.67	179.39	8,994.28	-267.59	-54.95	-267.21	1.20	-0.12	101.12
9,025.00	0.90	169.67	9,019.28	-267.93	-54.91	-267.55	1.06	0.92	-38.88
9,050.00	0.86	171.85	9,044.28	-268.31	-54.85	-267.93	0.21	-0.16	8.72
9,075.00	0.88	171.10	9,069.28	-268.69	-54.79	-268.31	0.09	0.08	-3.00
9,100.00	0.86	171.84	9,094.27	-269.06	-54.74	-268.68	0.09	-0.08	2.96
9,125.00	0.80	179.80	9,119.27	-269.42	-54.71	-269.04	0.52	-0.24	31.84
9,150.00	0.73	177.70	9,144.27	-269.76	-54.70	-269.38	0.30	-0.28	-8.40
9,175.00	0.72	182.73	9,169.27	-270.07	-54.71	-269.69	0.26	-0.04	20.12
9,200.00	0.74	187.77	9,194.26	-270.39	-54.73	-270.01	0.27	0.08	20.16
9,225.00	0.62	195.86	9,219.26	-270.68	-54.79	-270.30	0.61	-0.48	32.36
9,250.00	0.55	187.69	9,244.26	-270.93	-54.85	-270.55	0.43	-0.28	-32.68
9,275.00	0.52	183.53	9,269.26	-271.16	-54.87	-270.78	0.20	-0.12	-16.64
9,300.00	0.62	186.39	9,294.26	-271.41	-54.89	-271.03	0.42	0.40	11.44
9,325.00	0.53	185.32	9,319.26	-271.66	-54.92	-271.28	0.36	-0.36	-4.28
9,350.00	0.52	183.84	9,344.26	-271.89	-54.94	-271.50	0.07	-0.04	-5.92
Tie-In to VES Gyro									
9,533.00	0.80	175.30	9,527.24	-273.99	-54.89	-273.61	0.16	0.15	-4.67
First TDS MWD Survey									
9,596.00	1.00	171.00	9,590.24	-274.97	-54.76	-274.59	0.33	0.32	-6.83
9,659.00	0.90	172.40	9,653.23	-276.00	-54.61	-275.62	0.16	-0.16	2.22
9,691.00	0.70	171.80	9,685.22	-276.45	-54.55	-276.07	0.63	-0.63	-1.88
9,723.00	1.40	271.90	9,717.22	-276.63	-54.91	-276.24	5.22	2.19	312.81
9,754.00	5.00	291.30	9,748.17	-276.12	-56.55	-275.73	11.96	11.61	62.58
9,786.00	8.00	301.30	9,779.96	-274.46	-59.76	-274.04	9.99	9.38	31.25
9,817.00	10.40	297.60	9,810.56	-272.04	-64.08	-271.60	7.97	7.74	-11.94
9,849.00	12.80	295.00	9,841.90	-269.20	-69.85	-268.72	7.67	7.50	-8.13
9,881.00	15.60	302.10	9,872.92	-265.42	-76.71	-264.89	10.29	8.75	22.19
9,912.00	18.80	309.60	9,902.54	-260.02	-84.09	-259.44	12.54	10.32	24.19
9,944.00	21.70	314.80	9,932.56	-252.56	-92.27	-251.92	10.66	9.06	16.25
9,976.00	24.20	322.00	9,962.03	-243.22	-100.51	-242.53	11.73	7.81	22.50
10,008.00	26.90	330.70	9,990.91	-231.73	-108.09	-230.99	14.43	8.44	27.19
10,040.00	30.10	335.70	10,019.03	-218.10	-114.94	-217.31	12.47	10.00	15.63
10,073.00	33.50	339.50	10,047.08	-202.02	-121.54	-201.19	11.95	10.30	11.52
10,105.00	37.40	343.00	10,073.14	-184.45	-127.47	-183.57	13.74	12.19	10.94
10,136.00	40.10	349.40	10,097.33	-165.62	-132.06	-164.72	15.57	8.71	20.65
10,168.00	42.90	356.20	10,121.30	-144.61	-134.68	-143.69	16.57	8.75	21.25
10,200.00	46.50	0.30	10,144.05	-122.12	-135.34	-121.20	14.41	11.25	12.81
10,231.00	50.70	3.30	10,164.55	-98.89	-134.59	-97.97	15.37	13.55	9.68
10,263.00	56.00	4.20	10,183.64	-73.28	-132.91	-72.37	16.72	16.56	2.81
10,295.00	61.20	4.80	10,200.31	-46.06	-130.76	-45.17	16.33	16.25	1.88



TDS
Survey Report



Company: COG Operating LLC
Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
10,326.00	66.50	5.70	10,213.97	-18.36	-128.21	-17.49	17.29	17.10	2.90
10,358.00	72.50	5.00	10,225.17	11.47	-125.42	12.32	18.86	18.75	-2.19
10,389.00	77.50	3.30	10,233.19	41.32	-123.26	42.16	16.98	16.13	-5.48
10,421.00	83.80	1.70	10,238.39	72.85	-121.89	73.68	20.30	19.69	-5.00
10,452.00	90.60	1.10	10,239.90	103.78	-121.13	104.61	22.02	21.94	-1.94
10,512.00	92.40	2.10	10,238.33	163.74	-119.46	164.55	3.43	3.00	1.67
10,575.00	92.10	2.30	10,235.86	226.64	-117.04	227.44	0.57	-0.48	0.32
10,670.00	92.90	2.50	10,231.71	321.47	-113.07	322.23	0.87	0.84	0.21
10,765.00	91.20	1.80	10,228.31	416.34	-109.51	417.07	1.94	-1.79	-0.74
10,859.00	91.90	1.20	10,225.77	510.27	-107.05	510.99	0.98	0.74	-0.64
10,954.00	90.20	1.60	10,224.03	605.22	-104.73	605.92	1.84	-1.79	0.42
11,049.00	89.20	359.90	10,224.53	700.21	-103.48	700.90	2.08	-1.05	-1.79
11,143.00	87.80	358.10	10,226.99	794.15	-105.12	794.85	2.43	-1.49	-1.91
11,238.00	88.10	358.20	10,230.39	889.04	-108.19	889.76	0.33	0.32	0.11
11,332.00	88.90	358.00	10,232.85	982.96	-111.30	983.69	0.88	0.85	-0.21
11,426.00	88.90	359.00	10,234.65	1,076.91	-113.76	1,077.66	1.06	0.00	1.06
11,521.00	90.10	359.80	10,235.48	1,171.90	-114.76	1,172.65	1.52	1.26	0.84
11,615.00	90.50	1.00	10,234.99	1,265.89	-114.10	1,266.64	1.35	0.43	1.28
11,710.00	90.90	0.00	10,233.83	1,360.88	-113.27	1,361.62	1.13	0.42	-1.05
11,805.00	90.80	359.80	10,232.42	1,455.87	-113.44	1,456.61	0.24	-0.11	-0.21
11,900.00	90.40	359.60	10,231.42	1,550.86	-113.94	1,551.60	0.47	-0.42	-0.21
11,995.00	91.20	0.50	10,230.10	1,645.85	-113.85	1,646.59	1.27	0.84	0.95
12,090.00	91.40	0.60	10,227.94	1,740.82	-112.94	1,741.55	0.24	0.21	0.11
12,185.00	91.60	0.10	10,225.46	1,835.79	-112.36	1,836.51	0.57	0.21	-0.53
12,280.00	92.70	0.90	10,221.89	1,930.71	-111.53	1,931.43	1.43	1.16	0.84
12,375.00	90.90	1.90	10,218.91	2,025.63	-109.21	2,026.33	2.17	-1.89	1.05
12,470.00	90.30	2.50	10,217.91	2,120.56	-105.57	2,121.23	0.89	-0.63	0.63
12,565.00	89.10	0.50	10,218.41	2,215.52	-103.08	2,216.17	2.46	-1.26	-2.11
12,660.00	89.30	359.60	10,219.74	2,310.51	-103.00	2,311.16	0.97	0.21	-0.95
12,755.00	89.60	0.40	10,220.65	2,405.50	-103.00	2,406.15	0.90	0.32	0.84
12,850.00	89.30	359.20	10,221.56	2,500.49	-103.33	2,501.14	1.30	-0.32	-1.26
12,945.00	91.30	2.10	10,221.06	2,595.47	-102.25	2,596.11	3.71	2.11	3.05
13,039.00	93.40	3.60	10,217.21	2,689.27	-97.58	2,689.87	2.74	2.23	1.60
13,134.00	89.50	0.90	10,214.81	2,784.14	-93.86	2,784.71	4.99	-4.11	-2.84
13,229.00	88.70	0.00	10,216.30	2,879.12	-93.11	2,879.69	1.27	-0.84	-0.95
13,324.00	93.30	2.80	10,214.64	2,974.04	-90.79	2,974.59	5.67	4.84	2.95
13,420.00	90.00	0.20	10,211.88	3,069.95	-88.28	3,070.48	4.38	-3.44	-2.71
13,514.00	88.50	0.90	10,213.11	3,163.93	-87.38	3,164.46	1.76	-1.60	0.74
13,609.00	88.20	0.50	10,215.84	3,258.89	-86.22	3,259.40	0.53	-0.32	-0.42
13,705.00	89.10	0.30	10,218.10	3,354.86	-85.55	3,355.36	0.96	0.94	-0.21
13,799.00	90.80	1.70	10,218.18	3,448.84	-83.91	3,449.33	2.34	1.81	1.49
13,894.00	90.30	2.50	10,217.27	3,543.77	-80.43	3,544.23	0.99	-0.53	0.84
13,989.00	88.50	1.00	10,218.27	3,638.71	-77.53	3,639.16	2.47	-1.89	-1.58



TDS
Survey Report



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Project: Eddy County, NM (NAD-27 2015)
Site: Myox 5 State Com #23H
Well: Myox 5 State Com #23H
Wellbore: Lateral #1
Design: Lateral #1

Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
14,083.00	89.00	1.20	10,220.32	3,732.67	-75.72	3,733.10	0.57	0.53	0.21
14,178.00	86.40	358.20	10,224.13	3,827.58	-76.22	3,828.01	4.18	-2.74	-3.16
14,273.00	86.70	357.40	10,229.85	3,922.33	-79.86	3,922.79	0.90	0.32	-0.84
14,368.00	88.70	357.20	10,233.66	4,017.15	-84.33	4,017.63	2.12	2.11	-0.21
14,462.00	89.10	357.10	10,235.47	4,111.01	-89.00	4,111.52	0.44	0.43	-0.11
14,557.00	89.50	356.60	10,236.63	4,205.86	-94.22	4,206.41	0.67	0.42	-0.53
14,652.00	89.70	355.40	10,237.29	4,300.62	-100.85	4,301.21	1.28	0.21	-1.26
14,747.00	91.50	356.20	10,236.29	4,395.36	-107.81	4,395.99	2.07	1.89	0.84
14,841.00	92.90	359.00	10,232.69	4,489.20	-111.74	4,489.85	3.33	1.49	2.98
14,937.00	92.70	359.80	10,228.00	4,585.08	-112.75	4,585.74	0.86	-0.21	0.83
15,032.00	90.10	1.60	10,225.67	4,680.03	-111.58	4,680.68	3.33	-2.74	1.89
15,126.00	90.20	1.70	10,225.43	4,773.99	-108.88	4,774.62	0.15	0.11	0.11
15,221.00	90.90	3.30	10,224.52	4,868.89	-104.73	4,869.49	1.84	0.74	1.68
15,316.00	90.70	2.50	10,223.19	4,963.76	-99.93	4,964.33	0.87	-0.21	-0.84
15,411.00	90.80	2.30	10,221.95	5,058.67	-95.95	5,059.20	0.24	0.11	-0.21
15,505.00	91.70	2.40	10,219.90	5,152.56	-92.10	5,153.07	0.96	0.96	0.11
15,600.00	91.70	1.80	10,217.08	5,247.46	-88.62	5,247.94	0.63	0.00	-0.63
15,695.00	87.20	0.20	10,217.99	5,342.41	-86.96	5,342.88	5.03	-4.74	-1.68
15,792.00	88.00	0.40	10,222.05	5,439.33	-86.45	5,439.79	0.85	0.82	0.21
15,886.00	87.60	0.30	10,225.66	5,533.25	-85.88	5,533.71	0.44	-0.43	-0.11
15,981.00	89.20	0.50	10,228.31	5,628.21	-85.22	5,628.66	1.70	1.68	0.21
16,076.00	89.10	359.50	10,229.72	5,723.20	-85.22	5,723.65	1.06	-0.11	-1.05
16,171.00	88.80	359.60	10,231.46	5,818.18	-85.96	5,818.63	0.33	-0.32	0.11
16,265.00	90.80	0.20	10,231.79	5,912.17	-86.13	5,912.63	2.22	2.13	0.64
16,360.00	90.20	0.60	10,230.96	6,007.17	-85.46	6,007.61	0.76	-0.63	0.42
16,455.00	89.30	359.60	10,231.38	6,102.17	-85.30	6,102.61	1.42	-0.95	-1.05
16,550.00	88.00	358.40	10,233.61	6,197.12	-86.95	6,197.57	1.86	-1.37	-1.26
16,645.00	88.80	358.90	10,236.27	6,292.06	-89.19	6,292.52	0.99	0.84	0.53
16,739.00	90.10	359.50	10,237.17	6,386.04	-90.50	6,386.51	1.52	1.38	0.64
16,834.00	89.30	359.20	10,237.67	6,481.03	-91.58	6,481.51	0.90	-0.84	-0.32
16,929.00	90.00	0.10	10,238.25	6,576.03	-92.16	6,576.50	1.20	0.74	0.95
17,024.00	88.60	0.20	10,239.41	6,671.02	-91.91	6,671.49	1.48	-1.47	0.11
17,118.00	90.00	0.90	10,240.56	6,765.00	-91.01	6,765.47	1.67	1.49	0.74
17,213.00	90.80	1.30	10,239.89	6,859.98	-89.19	6,860.43	0.94	0.84	0.42
17,308.00	91.10	0.40	10,238.32	6,954.96	-87.78	6,955.39	1.00	0.32	-0.95
17,403.00	91.40	1.30	10,236.24	7,049.92	-86.37	7,050.35	1.00	0.32	0.95
17,498.00	91.30	0.60	10,234.01	7,144.88	-84.79	7,145.30	0.74	-0.11	-0.74
17,593.00	91.70	0.20	10,231.52	7,239.85	-84.13	7,240.25	0.60	0.42	-0.42
17,688.00	91.70	359.60	10,228.70	7,334.81	-84.30	7,335.21	0.63	0.00	-0.63
17,783.00	92.10	359.70	10,225.55	7,429.75	-84.88	7,430.16	0.43	0.42	0.11
17,877.00	91.00	1.10	10,223.01	7,523.71	-84.22	7,524.11	1.89	-1.17	1.49
17,972.00	89.60	1.40	10,222.51	7,618.68	-82.15	7,619.07	1.51	-1.47	0.32
18,067.00	88.00	0.00	10,224.50	7,713.65	-80.99	7,714.02	2.24	-1.68	-1.47
18,162.00	88.80	359.10	10,227.15	7,808.61	-81.73	7,808.99	1.27	0.84	-0.95



TDS
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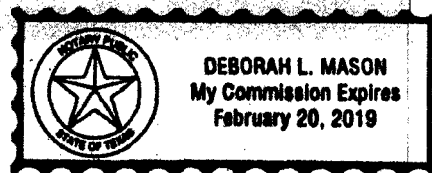
Local Co-ordinate Reference: Well Myox 5 State Com #23H
TVD Reference: KB @ 3070.00usft (Latshaw 44)
MD Reference: KB @ 3070.00usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
18,256.00	85.80	357.90	10,231.58	7,902.46	-84.19	7,902.85	3.44	-3.19	-1.28
18,311.00	87.30	359.50	10,234.89	7,957.34	-85.43	7,957.74	3.98	2.73	2.91
18,350.00	85.20	359.30	10,237.44	7,996.26	-85.84	7,996.66	5.41	-5.38	-0.51
18,445.00	88.50	3.30	10,242.66	8,091.05	-83.69	8,091.44	5.45	3.47	4.21
18,540.00	89.20	3.60	10,244.57	8,185.86	-77.97	8,186.20	0.80	0.74	0.32
18,635.00	91.00	3.50	10,244.40	8,280.68	-72.09	8,280.98	1.90	1.89	-0.11
18,730.00	95.70	4.90	10,238.85	8,375.23	-65.15	8,375.48	5.16	4.95	1.47
18,825.00	92.40	3.70	10,232.15	8,469.71	-58.04	8,469.91	3.70	-3.47	-1.26
18,920.00	93.30	3.80	10,227.42	8,564.39	-51.84	8,564.54	0.95	0.95	0.11
19,018.00	89.30	2.60	10,225.20	8,662.19	-46.37	8,662.31	4.26	-4.08	-1.22
19,112.00	88.70	3.20	10,226.84	8,756.06	-41.62	8,756.14	0.90	-0.64	0.64
19,207.00	86.90	1.40	10,230.49	8,850.90	-37.81	8,850.95	2.68	-1.89	-1.89
19,302.00	87.60	359.60	10,235.04	8,945.78	-36.98	8,945.83	2.03	0.74	-1.89
19,397.00	87.20	358.10	10,239.35	9,040.66	-38.88	9,040.72	1.63	-0.42	-1.58
19,492.00	90.20	358.00	10,241.51	9,135.57	-42.12	9,135.65	3.16	3.16	-0.11
19,586.00	88.00	355.70	10,242.99	9,229.41	-47.28	9,229.52	3.39	-2.34	-2.45
19,681.00	89.50	355.60	10,245.06	9,324.11	-54.48	9,324.26	1.58	1.58	-0.11
19,776.00	90.20	354.80	10,245.31	9,418.77	-62.43	9,418.98	1.12	0.74	-0.84
19,871.00	91.10	354.70	10,244.23	9,513.37	-71.12	9,513.63	0.95	0.95	-0.11
19,965.00	91.30	356.00	10,242.26	9,607.04	-78.74	9,607.35	1.40	0.21	1.38
20,060.00	92.20	355.30	10,239.36	9,701.72	-85.94	9,702.08	1.20	0.95	-0.74
Last TDS MWD Survey									
20,122.00	92.20	355.30	10,236.98	9,763.46	-91.02	9,763.86	0.00	0.00	0.00
PTB [TDS - TD]									
20,210.00	92.20	355.30	10,233.60	9,851.10	-98.23	9,851.54	0.00	0.00	0.00
PTB [COG - Deepened TD]									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
9,350.00	9,344.26	-271.89	-54.94	Tie-In to VES Gyro
9,533.00	9,527.24	-273.99	-54.89	First TDS MWD Survey
20,060.00	10,239.36	9,701.72	-85.94	Last TDS MWD Survey
20,122.00	10,236.98	9,763.46	-91.02	PTB [TDS - TD]
20,210.00	10,233.60	9,851.10	-98.23	PTB [COG - Deepened TD]



Checked By:

Deborah L. Mason

Approved By:

Samuel R. [Signature]

Date:

4/29/2017