

PO Box 1370
Artesia, NM 88211-1370
(575) 748-1288

30-015-41864

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 23 2014

August 15, 2014

COG, LLC
One Concho Center
600 W. Illinois Ave.
Midland, TX 79701

RECEIVED

RE: MYOX 19 State Com #3H
190' FSL & 2290' FEL
Sec. 19, T25S, R28E
Eddy County, New Mexico

Dear Sir,

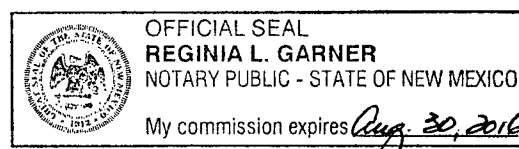
The attached is the Deviation Survey for the above captioned well.

Very truly yours,

Eddie LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 15th day of August, 2014.

Notary Public

MYOX 19 State Com #3H

Date	Depth	Deviation	Direction	TVD	Horiz Disp
7/23/2014	114	0.50	0.00	0.00	0.00
7/23/2014	271	0.30	0.00	0.00	0.00
7/25/2014	352	0.80	0.00	0.00	0.00
7/25/2014	560	0.10	0.00	0.00	0.00
7/25/2014	744	0.10	0.00	0.00	0.00
7/26/2014	836	0.30	0.00	0.00	0.00
7/26/2014	1018	0.10	0.00	0.00	0.00
7/27/2014	1233	0.60	0.00	0.00	0.00
7/27/2014	1662	1.90	0.00	0.00	0.00
7/27/2014	1753	2.40	0.00	0.00	0.00
7/27/2014	1784	2.70	0.00	0.00	0.00
7/27/2014	1814	2.50	0.00	0.00	0.00
7/27/2014	1825	2.40	0.00	0.00	0.00
7/27/2014	1843	2.80	0.00	0.00	0.00
7/27/2014	1902	1.80	0.00	0.00	0.00
7/27/2014	1936	1.50	0.00	0.00	0.00
7/27/2014	2028	0.80	0.00	0.00	0.00
7/28/2014	2092	0.40	0.00	0.00	0.00
7/28/2014	2122	0.00	0.00	0.00	0.00
7/29/2014	2305	0.00	0.00	0.00	0.00
7/30/2014	2530	0.20	0.00	0.00	0.00
7/30/2014	2744	0.40	0.00	0.00	0.00
7/30/2014	2924	1.00	0.00	0.00	0.00
7/30/2014	3145	2.30	0.00	0.00	0.00
7/30/2014	3302	0.40	0.00	0.00	0.00
7/30/2014	3333	0.20	0.00	0.00	0.00
7/30/2014	3392	0.10	0.00	0.00	0.00
7/30/2014	3426	0.20	0.00	0.00	0.00
7/31/2014	3756	0.30	0.00	0.00	0.00
7/31/2014	4029	0.20	0.00	0.00	0.00
7/31/2014	4249	1.80	0.00	0.00	0.00
7/31/2014	4344	0.60	0.00	0.00	0.00
7/31/2014	4502	1.70	0.00	0.00	0.00
7/31/2014	4625	0.50	0.00	0.00	0.00
7/31/2014	4783	0.00	0.00	0.00	0.00
8/1/2014	5004	0.10	0.00	0.00	0.00
8/1/2014	5225	0.00	0.00	0.00	0.00
8/1/2014	5336	0.40	0.00	0.00	0.00
8/1/2014	5571	1.00	0.00	0.00	0.00
8/1/2014	5761	0.20	0.00	0.00	0.00
8/2/2014	5948	0.10	0.00	0.00	0.00
8/2/2014	5998	0.30	0.00	0.00	0.00

Date	Depth	Deviation	Direction	TVD	Horiz Disp
8/2/2014	6204	1.30	0.00	0.00	0.00
8/2/2014	6472	1.30	0.00	0.00	0.00
8/3/2014	6425	1.90	0.00	0.00	0.00
8/3/2014	6678	1.50	0.00	0.00	0.00
8/3/2014	6867	2.00	0.00	0.00	0.00
8/3/2014	7041	2.80	0.00	0.00	0.00
8/3/2014	7281	2.50	0.00	0.00	0.00
8/4/2014	7262	3.10	2.50	7261.10	2.50
8/4/2014	7294	7.00	359.10	7292.00	5.34
8/5/2014	7356	15.00	3565.00	7381.00	0.00
8/5/2014	7433	19.00	357.20	7388.00	0.00
8/5/2014	7464	23.30	358.80	7419.00	0.00
8/5/2014	7483	32.50	0.50	7469.00	67.36
8/5/2014	7514	36.50	360.00	7495.00	84.91
8/5/2014	7577	41.60	358.00	7544.00	124.00
8/5/2014	7608	44.30	358.70	7567.05	145.53
8/5/2014	7640	45.30	359.00	7589.75	168.04
8/5/2014	7703	48.70	0.10	7632.78	213.98
8/6/2014	7766	50.40	359.70	7673.71	261.84
8/6/2014	7860	55.00	3.70	7730.88	336.40
8/7/2014	7869	56.40	2.50	7751.00	336.18
8/7/2014	7991	65.40	3.10	7798.00	448.47
8/7/2014	8054	71.80	4.20	7820.00	507.24
8/7/2014	8085	73.30	3.90	7830.00	536.00
8/7/2014	8211	83.00	5.30	7856.00	659.00
8/7/2014	8305	90.90	5.30	7861.00	753.00
8/7/2014	8400	92.70	5.30	7858.95	848.19
8/7/2014	8494	89.80	3.40	7856.90	942.10
8/7/2014	8589	90.00	3.10	7857.06	1037.08
8/8/2014	8777	89.40	2.90	7558.00	1225.06
8/8/2014	8892	89.80	3.20	7859.00	1320.04
8/8/2014	9061	90.00	1.20	7859.86	1509.03
8/8/2014	9156	89.00	2.00	7860.69	1604.02
8/8/2014	9250	89.40	1.90	7862.00	1698.01
8/8/2014	9345	90.60	1.40	7862.00	1792.00
8/8/2014	9534	90.40	0.80	7861.51	1981.96
8/8/2014	9628	89.10	0.30	7861.92	2075.92
8/9/2014	9723	90.00	359.90	7862.00	2170.84
8/9/2014	9818	88.80	0.50	7863.00	2265.77
8/9/2014	10007	89.40	1.30	7865.00	2454.70
8/9/2014	10101	90.80	1.70	7869.14	2548.60
8/9/2014	10196	89.10	2.90	7865.00	2643.20
8/9/2014	10290	91.60	2.60	7864.65	2737.67
8/9/2014	10385	89.20	0.90	7863.99	2832.65
8/9/2014	10479	89.80	0.70	7864.81	2926.62

Date	Depth	Deviation	Direction	TVD	Horiz Disp
8/10/2014	10563	89.10	1.00	7865.40	3010.59
8/10/2014	10658	90.20	0.90	7866.19	3105.56
8/10/2014	10751	89.50	3.00	7866.44	3198.55
8/10/2014	10940	89.30	2.00	1868.75	3387.53
8/11/2014	11130	89.60	3.10	7870.00	3577.52
8/11/2014	11318	91.20	2.40	7871.00	3765.50
8/11/2014	11414	84.40	3.10	7870.80	3861.19
8/11/2014	11508	90.90	3.70	7870.56	3955.40
8/11/2014	11603	89.50	2.30	7872.00	4050.00
8/11/2014	11793	89.00	2.10	7875.79	4240.36
8/11/2014	11888	90.80	2.70	7875.95	4335.36
8/11/2014	12075	88.90	2.00	7877.18	4522.34
8/12/2014	12232	92.00	3.00	7875.20	7679.30



August 13, 2014

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

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 23 2014

RECEIVED

Attn: Kanicia Castillo

RE: **Myox 19 State Com No. 003H**

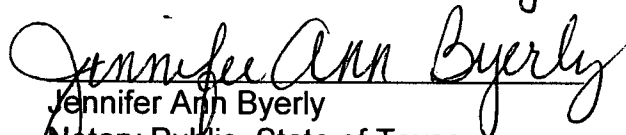
Please find enclosed a copy of the survey from 0.00' to 8150.00' ran on the above referenced well.

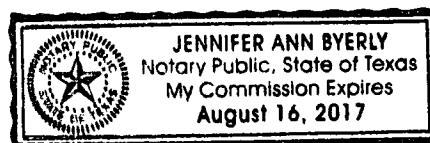
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 13 day of August,
A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating, LLC (Concho)

Lease/Well: Myox 19 State Com /No. 003H

Location: S-19 T25-S R28-E

Rig Name: Silver Oak #7

State/County: New Mexico/Eddy

Latitude: 32.11, Longitude: -104.12

GRID North is 0.11 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB = 18'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 8/13/2014 / 09:32

VES Survey International

West Texas

(432) 563-5444

Surveyor: Cody Johnson

Myox 19 State Com No. 003H / API 30-015-41864

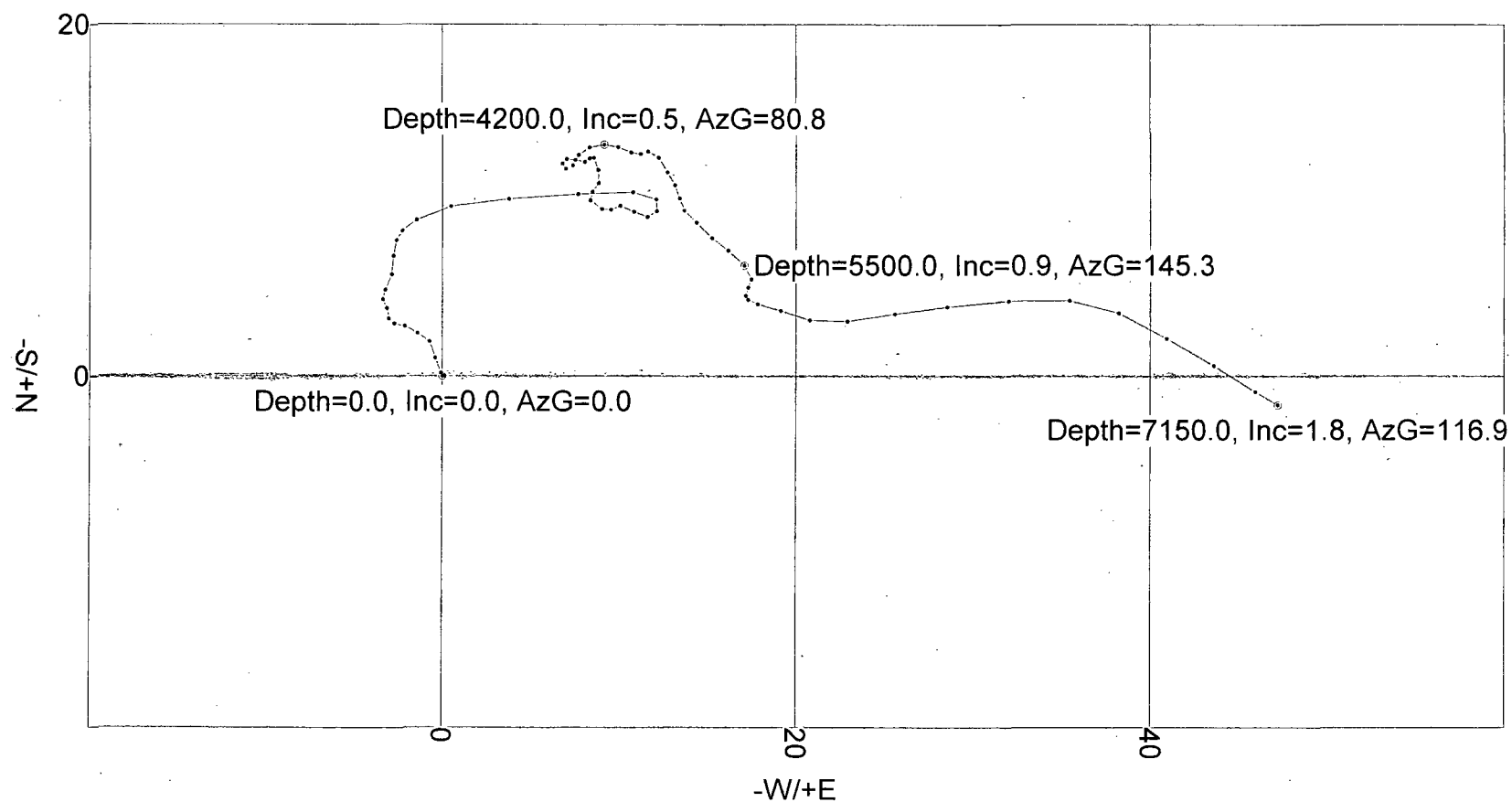
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.14	88.06	100.00	0.00	0.13	0.00	0.13	88.06	0.14
200.00	0.42	298.44	200.00	0.18	-0.07	0.18	0.19	339.36	0.55
300.00	0.80	357.38	299.99	1.05	-0.42	1.05	1.13	338.24	0.68
400.00	0.41	309.76	399.99	1.98	-0.73	1.98	2.11	339.76	0.60
500.00	0.53	301.28	499.99	2.45	-1.40	2.45	2.83	330.20	0.14
600.00	0.44	296.84	599.98	2.87	-2.14	2.87	3.58	323.22	0.10
700.00	0.31	263.06	699.98	3.01	-2.75	3.01	4.08	317.51	0.25
800.00	0.37	353.66	799.98	3.29	-3.06	3.29	4.49	317.11	0.48
900.00	0.32	343.54	899.98	3.88	-3.17	3.88	5.01	320.71	0.08
1000.00	0.33	326.85	999.98	4.39	-3.41	4.39	5.56	322.14	0.10
1100.00	0.49	45.00	1099.97	4.93	-3.27	4.93	5.92	326.49	0.53
1200.00	0.66	7.51	1199.97	5.80	-2.89	5.80	6.48	333.53	0.40
1300.00	0.54	2.00	1299.96	6.84	-2.80	6.84	7.39	337.76	0.13
1400.00	0.51	20.02	1399.96	7.74	-2.63	7.74	8.17	341.24	0.17
1500.00	0.25	57.58	1499.96	8.28	-2.29	8.28	8.59	344.54	0.35
1600.00	0.90	52.20	1599.95	8.88	-1.48	8.88	9.00	350.53	0.65
1700.00	1.59	78.31	1699.93	9.64	0.50	9.64	9.65	2.97	0.88
1800.00	2.22	85.48	1799.87	10.07	3.79	10.07	10.76	20.64	0.68

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
1900.00	2.28	86.45	1899.79	10.35	7.72	10.35	12.91	36.71	0.07
2000.00	1.26	90.77	1999.75	10.46	10.80	10.46	15.04	45.93	1.03
2100.00	0.52	152.81	2099.73	10.04	12.11	10.04	15.73	50.32	1.11
2200.00	0.35	211.98	2199.73	9.38	12.15	9.38	15.35	52.32	0.45
2300.00	0.44	259.83	2299.73	9.05	11.61	9.05	14.72	52.05	0.33
2400.00	0.60	312.54	2399.73	9.34	10.85	9.34	14.32	49.27	0.48
2500.00	0.43	268.02	2499.72	9.69	10.09	9.69	13.99	46.18	0.42
2600.00	0.31	215.00	2599.72	9.45	9.57	9.45	13.45	45.34	0.34
2700.00	0.52	304.69	2699.72	9.49	9.04	9.49	13.11	43.59	0.60
2800.00	0.41	311.93	2799.72	9.99	8.40	9.99	13.05	40.04	0.13
2900.00	0.53	57.66	2899.71	10.48	8.52	10.48	13.51	39.11	0.75
3000.00	0.30	352.03	2999.71	10.98	8.88	10.98	14.12	38.94	0.49
3100.00	0.57	359.13	3099.71	11.73	8.83	11.73	14.69	36.97	0.27
3200.00	0.35	309.63	3199.71	12.42	8.59	12.42	15.10	34.67	0.43
3300.00	0.26	179.64	3299.71	12.39	8.36	12.39	14.95	34.00	0.55
3400.00	0.31	274.19	3399.70	12.19	8.09	12.19	14.63	33.57	0.42
3500.00	0.34	289.13	3499.70	12.30	7.54	12.30	14.43	31.50	0.09
3600.00	0.22	256.61	3599.70	12.36	7.07	12.36	14.24	29.78	0.19
3700.00	0.26	195.61	3699.70	12.10	6.82	12.10	13.89	29.43	0.24
3800.00	0.31	108.38	3799.70	11.80	7.02	11.80	13.73	30.75	0.39
3900.00	0.35	27.30	3899.70	11.98	7.41	11.98	14.09	31.74	0.43
4000.00	0.44	30.31	3999.70	12.59	7.75	12.59	14.78	31.61	0.10
4100.00	0.47	77.59	4099.69	13.01	8.35	13.01	15.46	32.68	0.37
4200.00	0.48	80.80	4199.69	13.17	9.17	13.17	16.05	34.85	0.03
4300.00	0.48	117.36	4299.69	13.04	9.96	13.04	16.41	37.37	0.30
4400.00	0.43	109.94	4399.68	12.72	10.69	12.72	16.62	40.05	0.08
4500.00	0.22	77.21	4499.68	12.63	11.23	12.63	16.91	41.65	0.28
4600.00	0.27	66.29	4599.68	12.77	11.64	12.77	17.28	42.35	0.07
4700.00	0.66	138.40	4699.68	12.44	12.24	12.44	17.45	44.53	0.63
4800.00	0.50	162.48	4799.67	11.60	12.75	11.60	17.23	47.71	0.29
4900.00	0.50	137.62	4899.67	10.86	13.17	10.86	17.07	50.49	0.21
5000.00	0.48	183.45	4999.67	10.12	13.44	10.12	16.82	53.02	0.38
5100.00	0.45	134.41	5099.66	9.42	13.69	9.42	16.62	55.46	0.39
5200.00	0.67	134.42	5199.66	8.74	14.39	8.74	16.84	58.73	0.23
5300.00	0.75	136.88	5299.65	7.85	15.26	7.85	17.16	62.79	0.08
5400.00	0.59	115.65	5399.64	7.15	16.18	7.15	17.69	66.17	0.29
5500.00	0.88	145.27	5499.64	6.29	17.08	6.29	18.20	69.77	0.46
5600.00	0.17	196.75	5599.63	5.52	17.47	5.52	18.33	72.46	0.78
5700.00	0.41	203.40	5699.63	5.05	17.29	5.05	18.01	73.70	0.25

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
5800.00	0.15	174.35	5799.63	4.59	17.16	4.59	17.76	75.02	0.29
5900.00	0.18	132.27	5899.63	4.35	17.29	4.35	17.83	75.86	0.12
6000.00	0.52	108.32	5999.63	4.11	17.83	4.11	18.30	77.03	0.36
6100.00	1.03	105.51	6099.62	3.72	19.13	3.72	19.48	78.98	0.51
6200.00	0.99	110.03	6199.60	3.19	20.80	3.19	21.05	81.29	0.09
6300.00	1.53	79.92	6299.58	3.13	22.93	3.13	23.14	82.24	0.83
6400.00	1.59	82.56	6399.54	3.54	25.61	3.54	25.85	82.14	0.09
6500.00	1.82	81.47	6499.50	3.95	28.56	3.95	28.83	82.12	0.24
6600.00	2.18	87.03	6599.44	4.29	32.03	4.29	32.31	82.38	0.41
6700.00	1.74	93.25	6699.38	4.30	35.44	4.30	35.70	83.08	0.49
6800.00	1.63	116.06	6799.34	3.59	38.23	3.59	38.40	84.63	0.67
6900.00	1.88	119.90	6899.29	2.15	40.92	2.15	40.98	86.99	0.28
7000.00	1.66	120.60	6999.24	0.60	43.59	0.60	43.60	89.22	0.22
7100.00	1.55	124.39	7099.20	-0.91	45.95	-0.91	45.96	91.13	0.15
7150.00	1.81	116.87	7149.18	-1.64	47.22	-1.64	47.24	91.99	0.67



VES Survey International
West Texas
(432) 563-5444
Surveyor: Cody Johnson
Myox 19 State Com No. 003H / API 30-015-41864



VES Survey Date: 08-03-2014



COG Operating, LLC.

Eddy County, N.M.

Section 19 T25-S R28-E Myox 19 State #3H

Myox 19 State #3H

Original Hole

Design: Original Hole

Survey Report - Geographic

12 August, 2014

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 23 2014

RECEIVED





Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Myox 19 State #3H
Project:	Eddy County, N.M.	TVD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Site:	Section 19 T25-S R28-E Myox 19 State #3H	MD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Well:	Myox 19 State #3H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Eddy County, N.M.		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Section 19 T25-S R28-E Myox 19 State #3H		
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Site Position:		Northing:	403,244.20 usft	Latitude:	32° 6' 30.466 N
From:	Map	Easting:	564,559.40 usft	Longitude:	104° 7' 29.381 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.11 °

Well	Myox 19 State #3H				
Well Position	+N/-S	0.0 usft	Northing:	403,244.20 usft	Latitude: 32° 6' 30.466 N
	+E/-W	0.0 usft	Easting:	564,559.40 usft	Longitude: 104° 7' 29.381 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 2,995.5 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/6/2014	7.46	59.91	48,184

Design	Original Hole				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	2.27

Survey Program	Date 8/12/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,150.0	VES Gyro Survey (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot	
7,262.0	12,279.0	Stryker MWD Survey (Original Hole)	MWD	MWD - Standard	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	403,244.20	564,559.40	32° 6' 30.466 N	104° 7' 29.381 W
100.0	0.14	88.06	100.0	0.0	0.1	403,244.20	564,559.52	32° 6' 30.466 N	104° 7' 29.379 W
200.0	0.42	298.44	200.0	0.2	-0.1	403,244.38	564,559.32	32° 6' 30.468 N	104° 7' 29.382 W
300.0	0.80	357.38	300.0	1.1	-0.4	403,245.25	564,558.97	32° 6' 30.477 N	104° 7' 29.386 W
400.0	0.41	309.76	400.0	2.0	-0.7	403,246.18	564,558.66	32° 6' 30.486 N	104° 7' 29.389 W
500.0	0.53	301.28	500.0	2.4	-1.4	403,246.65	564,557.99	32° 6' 30.491 N	104° 7' 29.397 W
600.0	0.44	296.84	600.0	2.9	-2.1	403,247.06	564,557.26	32° 6' 30.495 N	104° 7' 29.406 W
700.0	0.31	263.06	700.0	3.0	-2.8	403,247.20	564,556.64	32° 6' 30.496 N	104° 7' 29.413 W
800.0	0.37	353.66	800.0	3.3	-3.1	403,247.49	564,556.34	32° 6' 30.499 N	104° 7' 29.416 W
900.0	0.32	343.54	900.0	3.9	-3.2	403,248.08	564,556.23	32° 6' 30.505 N	104° 7' 29.418 W
1,000.0	0.33	326.85	1,000.0	4.4	-3.4	403,248.59	564,555.99	32° 6' 30.510 N	104° 7' 29.420 W



Stryker Directional
Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Myox 19 State #3H
Project:	Eddy County, N.M.	TVD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Site:	Section 19 T25-S R28-E Myox 19 State #3H	MD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Well:	Myox 19 State #3H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,100.0	0.49	45.00	1,100.0	4.9	-3.3	403,249.13	564,556.13	32° 6' 30.515 N	104° 7' 29.419 W	
1,200.0	0.66	7.51	1,200.0	5.8	-2.9	403,250.01	564,556.51	32° 6' 30.524 N	104° 7' 29.414 W	
1,300.0	0.54	2.00	1,300.0	6.8	-2.8	403,251.05	564,556.60	32° 6' 30.534 N	104° 7' 29.413 W	
1,400.0	0.51	20.02	1,400.0	7.7	-2.6	403,251.94	564,556.77	32° 6' 30.543 N	104° 7' 29.411 W	
1,500.0	0.25	57.58	1,500.0	8.3	-2.3	403,252.47	564,557.11	32° 6' 30.548 N	104° 7' 29.407 W	
1,600.0	0.90	52.20	1,600.0	8.9	-1.5	403,253.07	564,557.91	32° 6' 30.554 N	104° 7' 29.398 W	
1,700.0	1.59	78.31	1,699.9	9.6	0.5	403,253.83	564,559.89	32° 6' 30.562 N	104° 7' 29.375 W	
1,800.0	2.22	85.48	1,799.9	10.1	3.8	403,254.27	564,563.18	32° 6' 30.566 N	104° 7' 29.337 W	
1,900.0	2.28	86.45	1,899.8	10.3	7.7	403,254.54	564,567.10	32° 6' 30.569 N	104° 7' 29.291 W	
2,000.0	1.26	90.77	1,999.7	10.5	10.8	403,254.65	564,570.18	32° 6' 30.570 N	104° 7' 29.255 W	
2,100.0	0.52	152.81	2,099.7	10.0	12.1	403,254.23	564,571.49	32° 6' 30.565 N	104° 7' 29.240 W	
2,200.0	0.35	211.98	2,199.7	9.4	12.1	403,253.57	564,571.53	32° 6' 30.559 N	104° 7' 29.240 W	
2,300.0	0.44	259.83	2,299.7	9.0	11.6	403,253.24	564,570.99	32° 6' 30.556 N	104° 7' 29.246 W	
2,400.0	0.60	312.54	2,399.7	9.3	10.8	403,253.53	564,570.23	32° 6' 30.558 N	104° 7' 29.255 W	
2,500.0	0.43	268.02	2,499.7	9.7	10.1	403,253.87	564,569.47	32° 6' 30.562 N	104° 7' 29.264 W	
2,600.0	0.31	215.00	2,599.7	9.4	9.5	403,253.64	564,568.94	32° 6' 30.560 N	104° 7' 29.270 W	
2,700.0	0.52	304.69	2,699.7	9.5	9.0	403,253.67	564,568.41	32° 6' 30.560 N	104° 7' 29.276 W	
2,800.0	0.41	311.93	2,799.7	10.0	8.4	403,254.17	564,567.77	32° 6' 30.565 N	104° 7' 29.283 W	
2,900.0	0.53	57.66	2,899.7	10.5	8.5	403,254.66	564,567.90	32° 6' 30.570 N	104° 7' 29.282 W	
3,000.0	0.30	352.03	2,999.7	11.0	8.8	403,255.16	564,568.25	32° 6' 30.575 N	104° 7' 29.278 W	
3,100.0	0.57	359.13	3,099.7	11.7	8.8	403,255.92	564,568.21	32° 6' 30.582 N	104° 7' 29.278 W	
3,200.0	0.35	309.63	3,199.7	12.4	8.6	403,256.61	564,567.97	32° 6' 30.589 N	104° 7' 29.281 W	
3,300.0	0.26	179.64	3,299.7	12.4	8.3	403,256.58	564,567.73	32° 6' 30.589 N	104° 7' 29.284 W	
3,400.0	0.31	274.19	3,399.7	12.2	8.1	403,256.37	564,567.46	32° 6' 30.587 N	104° 7' 29.287 W	
3,500.0	0.34	289.13	3,499.7	12.3	7.5	403,256.49	564,566.91	32° 6' 30.588 N	104° 7' 29.293 W	
3,600.0	0.22	256.61	3,599.7	12.3	7.0	403,256.54	564,566.45	32° 6' 30.588 N	104° 7' 29.299 W	
3,700.0	0.26	195.61	3,699.7	12.1	6.8	403,256.28	564,566.20	32° 6' 30.586 N	104° 7' 29.302 W	
3,800.0	0.31	108.38	3,799.7	11.8	7.0	403,255.98	564,566.39	32° 6' 30.583 N	104° 7' 29.299 W	
3,900.0	0.35	27.30	3,899.7	12.0	7.4	403,256.16	564,566.79	32° 6' 30.585 N	104° 7' 29.295 W	
4,000.0	0.44	30.31	3,999.7	12.6	7.7	403,256.76	564,567.12	32° 6' 30.591 N	104° 7' 29.291 W	
4,100.0	0.47	77.59	4,099.7	13.0	8.3	403,257.18	564,567.72	32° 6' 30.595 N	104° 7' 29.284 W	
4,200.0	0.48	80.80	4,199.7	13.1	9.1	403,257.34	564,568.53	32° 6' 30.596 N	104° 7' 29.274 W	
4,300.0	0.48	117.36	4,299.7	13.0	9.9	403,257.21	564,569.32	32° 6' 30.595 N	104° 7' 29.265 W	
4,400.0	0.43	109.94	4,399.7	12.7	10.6	403,256.89	564,570.04	32° 6' 30.592 N	104° 7' 29.257 W	
4,500.0	0.22	77.21	4,499.7	12.6	11.2	403,256.81	564,570.58	32° 6' 30.591 N	104° 7' 29.251 W	
4,600.0	0.27	66.29	4,599.7	12.7	11.6	403,256.94	564,570.99	32° 6' 30.592 N	104° 7' 29.246 W	
4,700.0	0.66	138.40	4,699.7	12.4	12.2	403,256.61	564,571.58	32° 6' 30.589 N	104° 7' 29.239 W	
4,800.0	0.50	162.48	4,799.7	11.6	12.7	403,255.76	564,572.10	32° 6' 30.581 N	104° 7' 29.233 W	
4,900.0	0.50	137.62	4,899.7	10.8	13.1	403,255.02	564,572.52	32° 6' 30.573 N	104° 7' 29.228 W	
5,000.0	0.48	183.45	4,999.7	10.1	13.4	403,254.28	564,572.79	32° 6' 30.566 N	104° 7' 29.225 W	
5,100.0	0.45	134.41	5,099.7	9.4	13.6	403,253.59	564,573.05	32° 6' 30.559 N	104° 7' 29.222 W	
5,200.0	0.67	134.42	5,199.7	8.7	14.3	403,252.91	564,573.75	32° 6' 30.552 N	104° 7' 29.214 W	
5,300.0	0.75	136.88	5,299.7	7.8	15.2	403,252.02	564,574.61	32° 6' 30.543 N	104° 7' 29.204 W	
5,400.0	0.59	115.65	5,399.6	7.1	16.1	403,251.32	564,575.52	32° 6' 30.537 N	104° 7' 29.193 W	
5,500.0	0.88	145.27	5,499.6	6.3	17.0	403,250.46	564,576.42	32° 6' 30.528 N	104° 7' 29.183 W	
5,600.0	0.17	196.75	5,599.6	5.5	17.4	403,249.69	564,576.82	32° 6' 30.520 N	104° 7' 29.178 W	
5,700.0	0.41	203.40	5,699.6	5.0	17.2	403,249.22	564,576.63	32° 6' 30.516 N	104° 7' 29.180 W	
5,800.0	0.15	174.35	5,799.6	4.6	17.1	403,248.76	564,576.50	32° 6' 30.511 N	104° 7' 29.182 W	
5,900.0	0.18	132.27	5,899.6	4.3	17.2	403,248.53	564,576.63	32° 6' 30.509 N	104° 7' 29.180 W	
6,000.0	0.52	108.32	5,999.6	4.1	17.8	403,248.28	564,577.18	32° 6' 30.506 N	104° 7' 29.174 W	
6,100.0	1.03	105.51	6,099.6	3.7	19.1	403,247.90	564,578.48	32° 6' 30.503 N	104° 7' 29.159 W	
6,200.0	0.99	110.03	6,199.6	3.2	20.8	403,247.36	564,580.15	32° 6' 30.497 N	104° 7' 29.140 W	
6,300.0	1.53	79.92	6,299.6	3.1	22.9	403,247.30	564,582.28	32° 6' 30.497 N	104° 7' 29.115 W	
6,400.0	1.59	82.56	6,399.5	3.5	25.6	403,247.71	564,584.97	32° 6' 30.501 N	104° 7' 29.084 W	
6,500.0	1.82	81.47	6,499.5	3.9	28.5	403,248.13	564,587.92	32° 6' 30.505 N	104° 7' 29.049 W	



Stryker Directional Survey Report - Geographic



Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Myox 19 State #3H
Project:	Eddy County, N.M.	TVD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Site:	Section 19 T25-S R28-E Myox 19 State #3H	MD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Well:	Myox 19 State #3H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude		Longitude
6,600.0	2.18	87.03	6,599.4	4.3	32.0	403,248.46	564,591.39	32° 6' 30.508 N		104° 7' 29.009 W
6,700.0	1.74	93.25	6,699.4	4.3	35.4	403,248.47	564,594.80	32° 6' 30.508 N		104° 7' 28.969 W
6,800.0	1.63	116.06	6,799.3	3.6	38.2	403,247.76	564,597.60	32° 6' 30.501 N		104° 7' 28.937 W
6,900.0	1.88	119.90	6,899.3	2.1	40.9	403,246.32	564,600.30	32° 6' 30.487 N		104° 7' 28.905 W
7,000.0	1.66	120.60	6,999.2	0.6	43.6	403,244.76	564,602.96	32° 6' 30.471 N		104° 7' 28.874 W
7,100.0	1.55	124.39	7,099.2	-0.9	45.9	403,243.26	564,605.33	32° 6' 30.456 N		104° 7' 28.847 W
7,150.0	1.81	116.87	7,149.2	-1.7	47.2	403,242.52	564,606.59	32° 6' 30.449 N		104° 7' 28.832 W
7150' VES Gyro Survey										
7,262.0	3.10	2.50	7,261.1	0.6	48.9	403,244.75	564,608.30	32° 6' 30.471 N		104° 7' 28.812 W
7,294.0	7.00	359.10	7,293.0	3.4	48.9	403,247.57	564,608.31	32° 6' 30.499 N		104° 7' 28.812 W
7,325.0	10.90	357.10	7,323.6	8.2	48.7	403,252.38	564,608.13	32° 6' 30.546 N		104° 7' 28.814 W
7,356.0	15.00	356.50	7,353.8	15.1	48.3	403,259.32	564,607.74	32° 6' 30.615 N		104° 7' 28.819 W
7,388.0	19.00	357.20	7,384.4	24.5	47.8	403,268.66	564,607.23	32° 6' 30.708 N		104° 7' 28.824 W
7,419.0	23.30	358.80	7,413.3	35.6	47.5	403,279.83	564,606.85	32° 6' 30.818 N		104° 7' 28.828 W
7,451.0	27.80	0.10	7,442.2	49.4	47.3	403,293.63	564,606.73	32° 6' 30.955 N		104° 7' 28.829 W
7,483.0	32.50	0.50	7,469.8	65.5	47.4	403,309.70	564,606.82	32° 6' 31.114 N		104° 7' 28.828 W
7,514.0	36.50	0.00	7,495.4	83.1	47.5	403,327.25	564,606.89	32° 6' 31.287 N		104° 7' 28.827 W
7,546.0	38.90	359.60	7,520.7	102.6	47.4	403,346.82	564,606.82	32° 6' 31.481 N		104° 7' 28.827 W
7,577.0	41.60	358.50	7,544.4	122.6	47.1	403,366.84	564,606.49	32° 6' 31.679 N		104° 7' 28.831 W
7,608.0	44.30	358.70	7,567.0	143.8	46.6	403,387.96	564,605.97	32° 6' 31.888 N		104° 7' 28.836 W
7,640.0	45.30	359.00	7,589.8	166.3	46.1	403,410.50	564,605.52	32° 6' 32.111 N		104° 7' 28.841 W
7,671.0	46.80	359.40	7,611.3	188.6	45.8	403,432.82	564,605.21	32° 6' 32.332 N		104° 7' 28.844 W
7,703.0	48.70	0.10	7,632.8	212.3	45.7	403,456.50	564,605.11	32° 6' 32.567 N		104° 7' 28.845 W
7,734.0	49.40	0.10	7,653.1	235.7	45.7	403,479.92	564,605.15	32° 6' 32.798 N		104° 7' 28.844 W
7,766.0	50.40	359.70	7,673.7	260.2	45.7	403,504.39	564,605.11	32° 6' 33.040 N		104° 7' 28.844 W
7,797.0	51.50	0.80	7,693.2	284.3	45.8	403,528.47	564,605.21	32° 6' 33.279 N		104° 7' 28.842 W
7,829.0	53.40	2.70	7,712.7	309.6	46.6	403,553.82	564,605.99	32° 6' 33.530 N		104° 7' 28.832 W
7,860.0	55.10	3.40	7,730.9	334.7	47.9	403,578.94	564,607.33	32° 6' 33.778 N		104° 7' 28.816 W
7,892.0	56.30	2.40	7,748.9	361.1	49.3	403,605.34	564,608.67	32° 6' 34.039 N		104° 7' 28.800 W
7,927.0	58.00	1.90	7,767.9	390.5	50.4	403,634.72	564,609.77	32° 6' 34.330 N		104° 7' 28.786 W
7,959.0	61.40	1.90	7,784.0	418.1	51.3	403,662.33	564,610.69	32° 6' 34.603 N		104° 7' 28.775 W
7,991.0	65.40	3.10	7,798.3	446.7	52.5	403,690.91	564,611.94	32° 6' 34.886 N		104° 7' 28.760 W
8,022.0	69.40	4.10	7,810.3	475.3	54.3	403,719.47	564,613.74	32° 6' 35.169 N		104° 7' 28.738 W
8,054.0	71.80	4.20	7,820.9	505.4	56.5	403,749.57	564,615.92	32° 6' 35.467 N		104° 7' 28.712 W
8,085.0	73.30	3.90	7,830.2	534.9	58.6	403,779.07	564,618.01	32° 6' 35.759 N		104° 7' 28.687 W
8,116.0	75.20	3.60	7,838.6	564.6	60.6	403,808.84	564,619.96	32° 6' 36.053 N		104° 7' 28.664 W
8,147.0	77.50	3.90	7,845.9	594.7	62.5	403,838.90	564,621.93	32° 6' 36.351 N		104° 7' 28.640 W
8,179.0	79.90	4.60	7,852.2	626.0	64.9	403,870.19	564,624.26	32° 6' 36.660 N		104° 7' 28.613 W
8,211.0	83.00	5.30	7,856.9	657.5	67.6	403,901.71	564,626.99	32° 6' 36.972 N		104° 7' 28.580 W
8,305.0	90.90	5.30	7,861.9	750.9	76.3	403,995.10	564,635.65	32° 6' 37.896 N		104° 7' 28.477 W
8,400.0	92.70	5.30	7,858.9	845.4	85.0	404,089.65	564,644.42	32° 6' 38.832 N		104° 7' 28.373 W
8,494.0	89.80	3.40	7,856.9	939.1	92.1	404,183.34	564,651.55	32° 6' 39.759 N		104° 7' 28.288 W
8,589.0	90.00	3.10	7,857.1	1,034.0	97.5	404,278.19	564,656.94	32° 6' 40.697 N		104° 7' 28.224 W
8,683.0	89.50	3.00	7,857.5	1,127.9	102.5	404,372.05	564,661.94	32° 6' 41.626 N		104° 7' 28.163 W
8,777.0	89.40	2.90	7,858.4	1,221.7	107.4	404,465.92	564,666.78	32° 6' 42.555 N		104° 7' 28.105 W
8,872.0	89.80	3.20	7,859.0	1,316.6	112.4	404,560.79	564,671.83	32° 6' 43.494 N		104° 7' 28.044 W
8,966.0	89.60	1.90	7,859.5	1,410.5	116.6	404,654.69	564,676.01	32° 6' 44.423 N		104° 7' 27.993 W
9,061.0	90.00	1.20	7,859.9	1,505.5	119.2	404,749.65	564,678.58	32° 6' 45.363 N		104° 7' 27.961 W
9,156.0	89.00	2.00	7,860.7	1,600.4	121.8	404,844.61	564,681.23	32° 6' 46.302 N		104° 7' 27.928 W
9,250.0	89.40	1.90	7,862.0	1,694.3	125.0	404,938.55	564,684.43	32° 6' 47.232 N		104° 7' 27.889 W
9,345.0	90.60	1.90	7,862.0	1,789.3	128.2	405,033.49	564,687.58	32° 6' 48.172 N		104° 7' 27.850 W
9,439.0	89.80	0.90	7,861.7	1,883.3	130.5	405,127.46	564,689.88	32° 6' 49.102 N		104° 7' 27.821 W
9,534.0	90.40	0.80	7,861.5	1,978.3	131.9	405,222.45	564,691.29	32° 6' 50.042 N		104° 7' 27.803 W
9,628.0	89.10	0.30	7,861.9	2,072.2	132.8	405,316.44	564,692.19	32° 6' 50.972 N		104° 7' 27.790 W
9,723.0	90.00	359.90	7,862.7	2,167.2	133.0	405,411.44	564,692.36	32° 6' 51.912 N		104° 7' 27.786 W



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Site:	Section 19 T25-S R28-E Myox 19 State #3H	MD Reference:	GL 2995.5+18 @ 3013.5usft (Silver Oak 7)
Well:	Myox 19 State #3H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,818.0	88.80	0.50	7,863.7	2,262.2	133.3	405,506.43	564,692.69	32° 6' 52.852 N	104° 7' 27.780 W
9,912.0	89.90	0.70	7,864.7	2,356.2	134.3	405,600.42	564,693.67	32° 6' 53.782 N	104° 7' 27.767 W
10,007.0	89.40	1.30	7,865.3	2,451.2	135.9	405,695.40	564,695.33	32° 6' 54.722 N	104° 7' 27.745 W
10,101.0	90.80	1.70	7,865.1	2,545.2	138.4	405,789.37	564,697.79	32° 6' 55.652 N	104° 7' 27.715 W
10,196.0	89.10	2.90	7,865.2	2,640.1	142.2	405,884.29	564,701.60	32° 6' 56.591 N	104° 7' 27.668 W
10,290.0	91.60	2.60	7,864.6	2,734.0	146.7	405,978.17	564,706.11	32° 6' 57.520 N	104° 7' 27.613 W
10,385.0	89.20	0.90	7,864.0	2,828.9	149.6	406,073.11	564,709.01	32° 6' 58.460 N	104° 7' 27.578 W
10,479.0	89.80	0.70	7,864.8	2,922.9	150.9	406,167.10	564,710.32	32° 6' 59.390 N	104° 7' 27.560 W
10,563.0	89.10	1.00	7,865.6	3,006.9	152.2	406,251.08	564,711.57	32° 7' 0.221 N	104° 7' 27.544 W
10,658.0	90.20	0.90	7,866.2	3,101.9	153.7	406,346.07	564,713.15	32° 7' 1.161 N	104° 7' 27.523 W
10,751.0	89.50	3.00	7,866.4	3,194.8	156.9	406,439.01	564,716.31	32° 7' 2.081 N	104° 7' 27.485 W
10,846.0	89.20	1.60	7,867.5	3,289.7	160.7	406,533.92	564,720.12	32° 7' 3.020 N	104° 7' 27.438 W
10,940.0	89.30	2.00	7,868.7	3,383.7	163.7	406,627.87	564,723.07	32° 7' 3.950 N	104° 7' 27.402 W
11,035.0	89.20	1.90	7,870.0	3,478.6	166.9	406,722.80	564,726.31	32° 7' 4.889 N	104° 7' 27.362 W
11,130.0	89.60	3.10	7,871.0	3,573.5	171.0	406,817.71	564,730.45	32° 7' 5.828 N	104° 7' 27.312 W
11,224.0	89.40	2.70	7,871.8	3,667.4	175.8	406,911.58	564,735.21	32° 7' 6.757 N	104° 7' 27.254 W
11,318.0	91.20	2.40	7,871.3	3,761.3	180.0	407,005.48	564,739.39	32° 7' 7.686 N	104° 7' 27.203 W
11,414.0	89.40	3.10	7,870.8	3,857.2	184.6	407,101.37	564,743.99	32° 7' 8.635 N	104° 7' 27.148 W
11,508.0	90.90	3.70	7,870.6	3,951.0	190.2	407,195.20	564,749.57	32° 7' 9.564 N	104° 7' 27.081 W
11,603.0	89.50	2.30	7,870.2	4,045.9	195.1	407,290.06	564,754.54	32° 7' 10.502 N	104° 7' 27.021 W
11,698.0	87.40	2.50	7,872.8	4,140.7	199.1	407,384.94	564,758.52	32° 7' 11.441 N	104° 7' 26.972 W
11,793.0	89.00	2.10	7,875.8	4,235.6	202.9	407,479.81	564,762.33	32° 7' 12.380 N	104° 7' 26.926 W
11,888.0	90.80	2.70	7,876.0	4,330.5	206.9	407,574.73	564,766.30	32° 7' 13.319 N	104° 7' 26.878 W
11,981.0	89.40	1.70	7,875.8	4,423.5	210.5	407,667.65	564,769.87	32° 7' 14.239 N	104° 7' 26.834 W
12,075.0	88.90	2.00	7,877.2	4,517.4	213.5	407,761.59	564,772.91	32° 7' 15.169 N	104° 7' 26.797 W
12,169.0	91.30	3.00	7,877.0	4,611.3	217.6	407,855.50	564,777.01	32° 7' 16.098 N	104° 7' 26.747 W
12,232.0	92.00	3.00	7,875.2	4,674.2	220.9	407,918.38	564,780.30	32° 7' 16.720 N	104° 7' 26.707 W
12,279.0	92.00	3.00	7,873.6	4,721.1	223.4	407,965.29	564,782.76	32° 7' 17.184 N	104° 7' 26.677 W

12279' MD Projected to Bit - EOL Myox 19 State #3H

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,150.0	7,149.2	-1.7	47.2	7150' VES Gyro Survey
12,279.0	7,873.6	4,721.1	223.4	12279' MD Projected to Bit