



COG Operating

Lea County, New Mexico (NAD27)

Fascinator Fee Com

#1H

Wellbore #1

Design: Surveys

Standard Survey Report

08 November, 2016

Company:	COG Operating	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, New Mexico (NAD27)	TVD Reference:	WELL @ 3342.00usft (McVay #8)
Site:	Fascinator Fee Com	MD Reference:	WELL @ 3342.00usft (McVay #8)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe DB

Project	Lea County, New Mexico (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	#1H			
Well Position	+N/-S	0.00 usft	Northing:	430,950.60 usft
	+E/-W	0.00 usft	Easting:	788,423.20 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft
			Ground Level:	3,316.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	10/12/2016	7.00	60.07	48,066

Design	Surveys				
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	4.67	

Survey Program	Date 11/8/2016				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	885.00	Scientific Keeper Gyro (Wellbore #1)	GYRO-NS	OWSG Gyrocompass Gyro	
1,038.00	20,261.00	MS MWD (Wellbore #1)	MWD	OWSG 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	
100.00	0.67	64.36	100.00	0.25	0.53	0.30	0.67	0.67	0.00	
200.00	0.62	65.08	199.99	0.73	1.54	0.86	0.05	-0.05	0.72	
300.00	0.58	64.17	299.99	1.18	2.49	1.38	0.04	-0.04	-0.91	
400.00	0.50	66.78	399.98	1.58	3.35	1.84	0.08	-0.08	2.61	
500.00	0.13	67.37	499.98	1.79	3.85	2.10	0.37	-0.37	0.59	
600.00	0.18	231.95	599.98	1.74	3.83	2.04	0.31	0.05	164.58	
700.00	0.52	255.43	699.98	1.53	3.27	1.79	0.36	0.34	23.48	
800.00	1.02	238.99	799.97	0.95	2.07	1.12	0.54	0.50	-16.44	
885.00	0.90	242.37	884.96	0.25	0.83	0.32	0.16	-0.14	3.98	
Final Scientific Gyro Survey - Tie-In to Scientific Gyro - 885.00' MD										
1,038.00	0.30	216.21	1,037.95	-0.63	-0.47	-0.66	0.42	-0.39	-17.10	
1,225.00	4.70	133.60	1,224.74	-6.31	4.79	-5.90	2.50	2.35	-44.18	
1,412.00	4.10	130.30	1,411.18	-15.91	15.44	-14.61	0.35	-0.32	-1.76	
1,600.00	3.80	127.30	1,598.74	-24.04	25.52	-21.88	0.19	-0.16	-1.60	



MS Energy Services
Survey Report



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Site:	Fascinator Fee Com	MD Reference:	WELL @ 3342.00usft (McVay #8)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe 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)
1,789.00	3.70	124.20	1,787.33	-31.26	35.54	-28.26	0.12	-0.05	-1.64
1,978.00	3.80	125.90	1,975.93	-38.36	45.66	-34.52	0.08	0.05	0.90
2,167.00	3.60	124.30	2,164.53	-45.38	55.64	-40.70	0.12	-0.11	-0.85
2,357.00	3.40	129.50	2,354.18	-52.32	64.91	-46.86	0.20	-0.11	2.74
2,547.00	4.10	104.00	2,543.79	-57.55	75.85	-51.18	0.94	0.37	-13.42
2,735.00	4.70	101.10	2,731.23	-60.66	89.93	-53.13	0.34	0.32	-1.54
2,925.00	4.90	98.70	2,920.56	-63.38	105.59	-54.58	0.15	0.11	-1.26
3,114.00	5.20	95.40	3,108.83	-65.41	122.09	-55.25	0.22	0.16	-1.75
3,304.00	5.80	90.40	3,297.96	-66.29	140.27	-54.65	0.40	0.32	-2.63
3,494.00	6.20	88.20	3,486.92	-66.03	160.12	-52.78	0.24	0.21	-1.16
3,683.00	6.20	88.60	3,674.81	-65.46	180.53	-50.55	0.02	0.00	0.21
3,873.00	5.10	104.20	3,863.89	-67.28	198.97	-50.86	0.99	-0.58	8.21
4,062.00	4.00	106.10	4,052.30	-71.17	213.45	-53.56	0.59	-0.58	1.01
4,252.00	3.90	103.00	4,241.85	-74.46	226.11	-55.81	0.12	-0.05	-1.63
4,441.00	5.70	95.20	4,430.18	-76.76	241.72	-56.83	1.01	0.95	-4.13
4,630.00	6.50	104.20	4,618.11	-80.24	261.44	-58.68	0.66	0.42	4.76
4,820.00	7.00	107.80	4,806.79	-86.41	282.89	-63.09	0.34	0.26	1.89
5,009.00	4.60	115.70	4,994.81	-93.22	300.69	-68.43	1.34	-1.27	4.18
5,198.00	5.10	111.40	5,183.14	-99.57	315.34	-73.57	0.33	0.26	-2.28
5,387.00	2.30	115.00	5,371.73	-104.24	326.60	-77.31	1.49	-1.48	1.90
5,576.00	2.30	114.70	5,560.57	-107.43	333.48	-79.92	0.01	0.00	-0.16
5,765.00	1.80	120.10	5,749.45	-110.50	339.50	-82.50	0.28	-0.26	2.86
5,954.00	1.50	100.10	5,938.37	-112.43	344.50	-84.00	0.34	-0.16	-10.58
6,143.00	1.60	104.20	6,127.31	-113.51	349.49	-84.68	0.08	0.05	2.17
6,332.00	1.40	103.40	6,316.24	-114.69	354.30	-85.46	0.11	-0.11	-0.42
6,521.00	1.60	88.90	6,505.18	-115.17	359.18	-85.55	0.23	0.11	-7.67
6,710.00	1.40	76.40	6,694.11	-114.58	364.06	-84.56	0.20	-0.11	-6.61
6,899.00	1.40	79.40	6,883.06	-113.61	368.58	-83.23	0.04	0.00	1.59
7,089.00	3.30	74.80	7,072.89	-111.75	376.14	-80.76	1.00	1.00	-2.42
7,278.00	2.90	71.40	7,261.61	-108.80	385.92	-77.02	0.23	-0.21	-1.80
7,467.00	2.80	79.70	7,450.38	-106.45	394.99	-73.94	0.22	-0.05	4.39
7,656.00	2.70	89.30	7,639.16	-105.57	403.98	-72.33	0.25	-0.05	5.08
7,845.00	2.60	86.40	7,827.96	-105.25	412.71	-71.30	0.09	-0.05	-1.53
8,034.00	2.30	84.80	8,016.79	-104.63	420.77	-70.03	0.16	-0.16	-0.85
8,224.00	4.00	97.40	8,206.49	-105.14	431.14	-69.69	0.96	0.89	6.63
8,414.00	3.70	93.20	8,396.07	-106.34	443.83	-69.85	0.22	-0.16	-2.21
8,603.00	3.30	95.00	8,584.71	-107.15	455.34	-69.72	0.22	-0.21	0.95
8,792.00	4.70	98.70	8,773.25	-108.80	468.41	-70.30	0.75	0.74	1.96
8,981.00	4.30	94.40	8,961.67	-110.51	483.13	-70.81	0.28	-0.21	-2.28
9,170.00	4.10	87.70	9,150.16	-110.78	496.95	-69.96	0.28	-0.11	-3.54
9,360.00	4.50	76.10	9,339.63	-108.72	510.97	-66.76	0.50	0.21	-6.11
9,549.00	5.60	85.90	9,527.89	-106.28	527.37	-62.99	0.74	0.58	5.19
9,738.00	5.10	105.60	9,716.09	-107.88	544.66	-63.18	1.00	-0.26	10.42



MS Energy Services
Survey Report



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Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,927.00	3.90	106.00	9,904.50	-111.91	558.93	-66.03	0.64	-0.63	0.21
10,116.00	4.20	128.10	10,093.04	-117.95	570.55	-71.11	0.84	0.16	11.69
10,211.00	4.00	128.90	10,187.80	-122.18	575.87	-74.89	0.22	-0.21	0.84
10,305.00	3.30	126.50	10,281.61	-125.85	580.59	-78.16	0.76	-0.74	-2.55
10,400.00	3.40	122.80	10,376.44	-129.00	585.16	-80.93	0.25	0.11	-3.89
10,494.00	3.30	115.70	10,470.28	-131.68	589.94	-83.22	0.45	-0.11	-7.55
10,589.00	3.10	111.80	10,565.13	-133.82	594.79	-84.95	0.31	-0.21	-4.11
10,683.00	3.10	113.30	10,659.00	-135.77	599.48	-86.52	0.09	0.00	1.60
10,778.00	2.90	113.10	10,753.87	-137.73	604.05	-88.10	0.21	-0.21	-0.21
10,873.00	2.60	112.00	10,848.76	-139.48	608.26	-89.50	0.32	-0.32	-1.16
10,967.00	2.30	103.30	10,942.67	-140.72	612.07	-90.42	0.51	-0.32	-9.26
11,062.00	2.20	107.10	11,037.60	-141.69	615.67	-91.09	0.19	-0.11	4.00
11,156.00	2.10	96.10	11,131.53	-142.40	619.11	-91.53	0.45	-0.11	-11.70
11,251.00	1.80	84.00	11,226.48	-142.43	622.32	-91.29	0.53	-0.32	-12.74
11,345.00	1.30	69.70	11,320.44	-141.91	624.79	-90.57	0.67	-0.53	-15.21
11,440.00	1.60	62.30	11,415.41	-140.92	626.98	-89.40	0.37	0.32	-7.79
11,534.00	0.60	31.90	11,509.40	-139.89	628.40	-88.26	1.20	-1.06	-32.34
11,629.00	0.30	287.80	11,604.39	-139.39	628.43	-87.76	0.77	-0.32	-109.58
11,724.00	1.40	242.40	11,699.38	-139.85	627.16	-88.33	1.27	1.16	-47.79
11,818.00	1.80	225.90	11,793.35	-141.41	625.08	-90.05	0.64	0.43	-17.55
11,913.00	1.50	217.10	11,888.31	-143.44	623.26	-92.22	0.41	-0.32	-9.26
11,954.00	1.30	216.10	11,929.29	-144.25	622.66	-93.07	0.49	-0.49	-2.44
12,046.00	1.30	216.80	12,021.27	-145.93	621.42	-94.85	0.02	0.00	0.76
12,140.00	1.90	356.50	12,115.25	-145.22	620.69	-94.21	3.20	0.64	148.62
12,235.00	15.10	353.50	12,209.00	-131.30	619.19	-80.45	13.90	13.89	-3.16
12,330.00	32.10	358.20	12,295.75	-93.49	616.98	-42.95	17.99	17.89	4.95
12,424.00	46.40	357.60	12,368.35	-34.21	614.75	15.95	15.22	15.21	-0.64
12,519.00	58.60	358.90	12,426.07	40.98	612.53	90.71	12.89	12.84	1.37
12,614.00	69.40	2.30	12,467.67	126.21	613.54	175.75	11.81	11.37	3.58
12,708.00	75.50	7.60	12,496.02	215.42	621.33	265.29	8.42	6.49	5.64
12,803.00	81.40	11.70	12,515.04	307.11	636.96	357.95	7.51	6.21	4.32
12,898.00	81.90	10.80	12,528.83	399.29	655.30	451.32	1.07	0.53	-0.95
12,992.00	82.50	5.40	12,541.60	491.46	668.41	544.25	5.73	0.64	-5.74
13,087.00	86.00	359.80	12,551.12	585.83	672.68	638.66	6.93	3.68	-5.89
13,182.00	92.20	356.90	12,552.62	680.73	669.94	733.01	7.20	6.53	-3.05
13,277.00	93.70	357.80	12,547.73	775.49	665.56	827.11	1.84	1.58	0.95
13,371.00	91.70	358.50	12,543.30	869.34	662.53	920.39	2.25	-2.13	0.74
13,466.00	91.40	359.60	12,540.73	964.29	660.95	1,014.90	1.20	-0.32	1.16
13,561.00	91.90	3.20	12,537.99	1,059.20	663.27	1,109.69	3.82	0.53	3.79
13,656.00	93.00	3.80	12,533.93	1,153.94	669.07	1,204.58	1.32	1.16	0.63
13,778.00	91.70	1.30	12,528.93	1,275.70	674.49	1,326.38	2.31	-1.07	-2.05
13,872.00	91.90	359.60	12,525.98	1,369.65	675.23	1,420.08	1.82	0.21	-1.81
13,967.00	92.30	358.50	12,522.50	1,464.57	673.65	1,514.55	1.23	0.42	-1.16



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Survey Report



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Site:	Fascinator Fee Com	MD Reference:	WELL @ 3342.00usft (McVay #8)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe 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)
14,062.00	93.30	357.60	12,517.85	1,559.40	670.42	1,608.81	1.42	1.05	-0.95
14,157.00	93.70	357.90	12,512.05	1,654.15	666.70	1,702.94	0.53	0.42	0.32
14,251.00	89.60	357.00	12,509.35	1,748.00	662.52	1,796.13	4.47	-4.36	-0.96
14,346.00	90.20	357.10	12,509.51	1,842.87	657.63	1,890.29	0.64	0.63	0.11
14,441.00	91.20	359.40	12,508.35	1,937.81	654.73	1,984.68	2.64	1.05	2.42
14,536.00	88.70	356.80	12,508.44	2,032.74	651.58	2,079.04	3.80	-2.63	-2.74
14,630.00	91.50	357.30	12,508.27	2,126.61	646.74	2,172.20	3.03	2.98	0.53
14,728.00	89.60	357.20	12,507.33	2,224.49	642.04	2,269.37	1.94	-1.94	-0.10
14,822.00	93.40	359.40	12,504.87	2,318.39	639.25	2,362.74	4.67	4.04	2.34
14,917.00	94.80	0.10	12,498.08	2,413.14	638.84	2,457.14	1.65	1.47	0.74
15,011.00	92.60	359.90	12,492.01	2,506.94	638.84	2,550.63	2.35	-2.34	-0.21
15,106.00	93.60	1.90	12,486.88	2,601.78	640.33	2,645.28	2.35	1.05	2.11
15,200.00	91.70	0.90	12,482.53	2,695.65	642.62	2,739.02	2.28	-2.02	-1.06
15,295.00	91.30	2.40	12,480.04	2,790.58	645.36	2,833.85	1.63	-0.42	1.58
15,390.00	93.10	3.40	12,476.40	2,885.38	650.16	2,928.73	2.17	1.89	1.05
15,484.00	92.60	2.90	12,471.72	2,979.12	655.32	3,022.58	0.75	-0.53	-0.53
15,579.00	91.00	359.60	12,468.74	3,074.03	657.39	3,117.35	3.86	-1.68	-3.47
15,674.00	91.70	359.60	12,466.50	3,169.00	656.72	3,211.95	0.74	0.74	0.00
15,768.00	92.30	359.60	12,463.22	3,262.94	656.07	3,305.53	0.64	0.64	0.00
15,862.00	92.50	0.30	12,459.28	3,356.86	655.99	3,399.13	0.77	0.21	0.74
15,957.00	93.30	1.30	12,454.48	3,451.73	657.31	3,493.79	1.35	0.84	1.05
16,052.00	92.30	1.50	12,449.84	3,546.59	659.63	3,588.52	1.07	-1.05	0.21
16,146.00	88.80	358.90	12,448.93	3,640.56	659.96	3,682.20	4.64	-3.72	-2.77
16,241.00	88.90	358.90	12,450.84	3,735.52	658.13	3,776.70	0.11	0.11	0.00
16,335.00	90.10	359.00	12,451.66	3,829.50	656.41	3,870.23	1.28	1.28	0.11
16,429.00	92.60	0.40	12,449.45	3,923.46	655.92	3,963.84	3.05	2.66	1.49
16,524.00	94.20	0.80	12,443.81	4,018.29	656.91	4,058.43	1.74	1.68	0.42
16,618.00	93.10	0.70	12,437.83	4,112.09	658.14	4,152.02	1.18	-1.17	-0.11
16,713.00	91.50	359.30	12,434.01	4,207.01	658.14	4,246.62	2.24	-1.68	-1.47
16,808.00	91.90	359.90	12,431.20	4,301.96	657.48	4,341.21	0.76	0.42	0.63
16,902.00	92.60	0.70	12,427.51	4,395.89	657.97	4,434.86	1.13	0.74	0.85
16,997.00	92.90	0.60	12,422.95	4,490.77	659.04	4,529.52	0.33	0.32	-0.11
17,091.00	91.90	0.40	12,419.01	4,584.68	659.86	4,623.19	1.08	-1.06	-0.21
17,186.00	92.10	358.90	12,415.70	4,679.62	659.28	4,717.76	1.59	0.21	-1.58
17,280.00	87.40	357.30	12,416.11	4,773.54	656.17	4,811.11	5.28	-5.00	-1.70
17,375.00	86.00	357.20	12,421.57	4,868.27	651.62	4,905.16	1.48	-1.47	-0.11
17,469.00	93.20	359.40	12,422.23	4,962.16	648.83	4,998.51	8.01	7.66	2.34
17,564.00	93.90	359.60	12,416.35	5,056.97	648.00	5,092.94	0.77	0.74	0.21
17,658.00	89.80	358.70	12,413.31	5,150.89	646.61	5,186.44	4.47	-4.36	-0.96
17,753.00	91.50	357.80	12,412.24	5,245.84	643.71	5,280.83	2.02	1.79	-0.95
17,847.00	92.40	357.00	12,409.04	5,339.68	639.45	5,374.02	1.28	0.96	-0.85
17,942.00	92.50	355.80	12,404.98	5,434.41	633.49	5,467.94	1.27	0.11	-1.26
18,037.00	90.00	356.40	12,402.90	5,529.16	627.03	5,561.85	2.71	-2.63	0.63
18,131.00	92.30	356.00	12,401.02	5,622.93	620.80	5,654.80	2.48	2.45	-0.43



MS Energy Services
Survey Report



Company:	COG Operating	Local Co-ordinate Reference:	Well #1H
Project:	Lea County, New Mexico (NAD27)	TVD Reference:	WELL @ 3342.00usft (McVay #8)
Site:	Fascinator Fee Com	MD Reference:	WELL @ 3342.00usft (McVay #8)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	EDM 5000.14 Conroe 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)
18,226.00	94.00	357.50	12,395.80	5,717.62	615.42	5,748.75	2.38	1.79	1.58
18,320.00	89.30	356.90	12,393.09	5,811.44	610.83	5,841.88	5.04	-5.00	-0.64
18,415.00	91.30	359.30	12,392.59	5,906.38	607.68	5,936.25	3.29	2.11	2.53
18,509.00	91.10	359.60	12,390.63	6,000.35	606.78	6,029.84	0.38	-0.21	0.32
18,604.00	90.40	0.70	12,389.38	6,095.34	607.03	6,124.53	1.37	-0.74	1.16
18,699.00	88.50	1.60	12,390.29	6,190.32	608.94	6,219.34	2.21	-2.00	0.95
18,793.00	91.60	2.00	12,390.21	6,284.26	611.89	6,313.21	3.33	3.30	0.43
18,888.00	89.10	2.60	12,389.63	6,379.17	615.70	6,408.12	2.71	-2.63	0.63
18,982.00	90.70	4.80	12,389.80	6,472.97	621.77	6,502.10	2.89	1.70	2.34
19,077.00	89.80	4.70	12,389.38	6,567.64	629.63	6,597.10	0.95	-0.95	-0.11
19,172.00	90.20	3.00	12,389.38	6,662.42	636.01	6,692.08	1.84	0.42	-1.79
19,266.00	89.50	3.40	12,389.63	6,756.27	641.26	6,786.05	0.86	-0.74	0.43
19,361.00	88.80	5.00	12,391.04	6,851.00	648.22	6,881.03	1.84	-0.74	1.68
19,455.00	90.00	2.90	12,392.02	6,944.77	654.69	6,975.01	2.57	1.28	-2.23
19,550.00	91.40	0.90	12,390.86	7,039.70	657.84	7,069.89	2.57	1.47	-2.11
19,644.00	88.20	358.20	12,391.19	7,133.68	657.10	7,163.49	4.45	-3.40	-2.87
19,739.00	91.20	358.90	12,391.69	7,228.63	654.70	7,257.94	3.24	3.16	0.74
19,833.00	90.10	357.20	12,390.62	7,322.57	651.50	7,351.30	2.15	-1.17	-1.81
19,928.00	89.20	356.30	12,391.20	7,417.41	646.11	7,445.39	1.34	-0.95	-0.95
20,022.00	90.50	355.70	12,391.45	7,511.18	639.56	7,538.31	1.52	1.38	-0.64
20,117.00	89.10	353.10	12,391.78	7,605.72	630.29	7,631.78	3.11	-1.47	-2.74
20,211.00	90.60	350.90	12,392.02	7,698.79	617.21	7,723.48	2.83	1.60	-2.34
20,261.00	90.60	350.90	12,391.50	7,748.16	609.30	7,772.04	0.00	0.00	0.00
Projection to TD - 20261.00' MD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
885.00	884.96	0.25	0.83	Final Scientific Gyro Survey
885.00	884.96	0.25	0.83	Tie-In to Scientific Gyro - 885.00' MD
20,261.00	12,391.50	7,748.16	609.30	Projection to TD - 20261.00' MD

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

Well Name and Num: Fascinator Fee 1H
Location: Sec 30, T24S, R35E
Operator: COG
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.50	400	3.70	8414	91.70	13371	91.10	18501
0.70	916	3.30	8603	91.70	13778	89.80	19007
4.10	1412	4.10	8981	93.70	14157	89.50	19266
3.70	1789	4.10	9170	90.20	14346	91.20	19736
3.60	2167	4.50	9360	91.50	14630	90.50	20022
4.10	2547	5.60	9549	94.80	14917	90.60	20211
5.20	3014	5.10	9736	93.60	15106		
5.20	3494	4.20	10116	93.10	16390		
5.80	3873	3.10	10589	92.30	15768		
3.90	4252	2.90	10778	88.90	16241		
6.50	4630	2.60	10873	91.50	16713		
4.60	5009	2.10	11156	92.10	17186		
2.30	5387	0.60	11534	93.20	17469		
1.80	5765	1.30	11954	93.90	17564		
1.60	6143	1.30	12046	89.90	17658		
1.60	6521	46.40	12424	92.50	17942		
1.40	6899	81.90	12898	94.00	18226		

By: Mario G. Camacho

Subscribed and sworn to before me this 16th day of November, 2016

Tina Flemens
Notary Public, Lea County, New Mexico

