



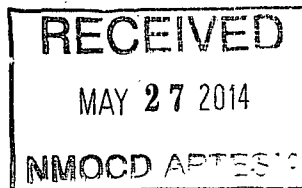
A GYRO TECHNOLOGIES INC. COMPANY

P.O. Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

15-40057

March 3, 2014

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



Attn: Kanicia Castillo

RE: Tarpan 33 Fee No. 002H

Please find enclosed a copy of the survey from 0.00' to 2400.00' ran on the above referenced well.

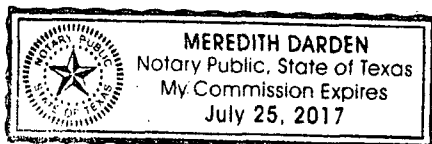
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 3rd day of March, A.D., 2014, by Keith Havelka.

Meredith Darden
Meredith Darden
Notary Public, State of Texas





Company: COG OPERATING LLC
Lease/Well: TARPAN 33 FEE/No. 002H

Rig Name: SILVER OAK # 3
State/County: New Mexico/EDDY
Latitude: 32.70, Longitude: -104.44
GRID North is 0.06 Degrees West of True North
VS-Azi: 359.31 Degrees



Depth Reference : R.K.B.= 17FT

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: TARPAN 2H.ut
Minimum Curvature Method
Report Date/Time: 3/4/2014 / 16:25

VAUGHN ENERGY SERVICES
MIDLAND, TX
432-563-5444

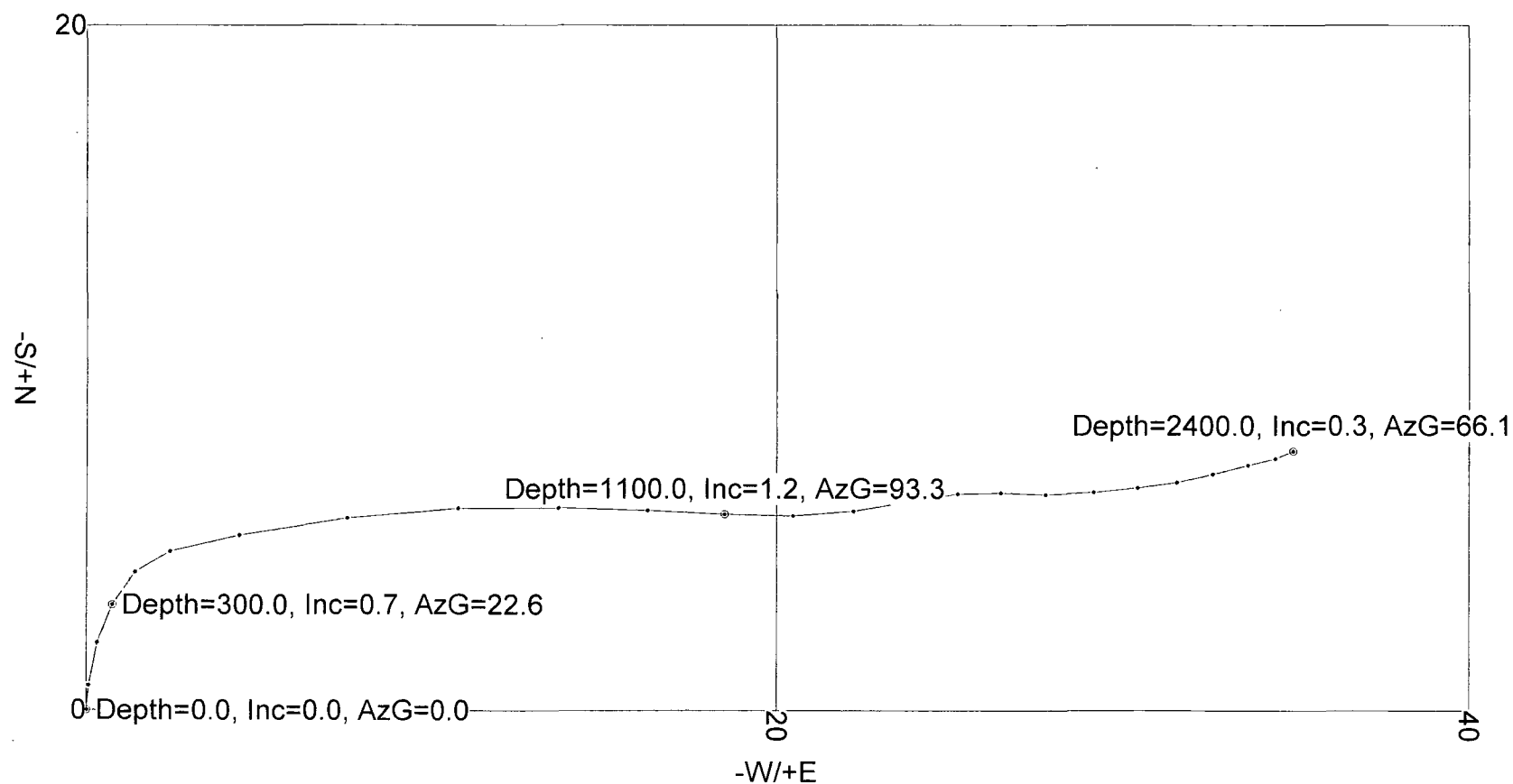
SURVEYOR : JAVIER ESTRADA
Tarpan 33 Fee No. 002H / API 30-015-40057

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	0.84	4.84	100.00	0.73	0.06	0.73	0.73	4.84	0.84
200.00	0.64	19.24	199.99	1.98	0.31	1.98	2.00	8.81	0.27
300.00	0.73	22.59	299.98	3.09	0.73	3.08	3.18	13.36	0.10
400.00	0.63	46.56	399.97	4.06	1.38	4.04	4.29	18.77	0.30
500.00	0.74	70.07	499.97	4.66	2.39	4.63	5.23	27.12	0.30
600.00	1.61	79.62	599.95	5.13	4.37	5.08	6.74	40.43	0.89
700.00	2.06	82.13	699.89	5.63	7.53	5.54	9.41	53.23	0.46
800.00	1.71	88.76	799.84	5.91	10.81	5.78	12.32	61.34	0.41
900.00	1.57	90.81	899.80	5.92	13.68	5.76	14.91	66.59	0.15
1000.00	1.38	92.57	999.77	5.85	16.25	5.65	17.27	70.21	0.20
1100.00	1.18	93.29	1099.74	5.74	18.49	5.51	19.36	72.77	0.20
1200.00	1.09	89.15	1199.72	5.69	20.47	5.44	21.25	74.47	0.12
1300.00	0.91	81.49	1299.71	5.82	22.21	5.55	22.96	75.31	0.23
1400.00	0.90	79.07	1399.69	6.09	23.76	5.80	24.53	75.63	0.04
1500.00	0.79	81.52	1499.68	6.34	25.21	6.03	26.00	75.89	0.12
1600.00	0.67	97.96	1599.67	6.36	26.47	6.04	27.22	76.49	0.24
1700.00	0.82	87.46	1699.67	6.31	27.76	5.97	28.47	77.20	0.21
1800.00	0.77	86.62	1799.66	6.38	29.15	6.03	29.84	77.65	0.05

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	0.69	81.25	1899.65	6.51	30.42	6.14	31.11	77.92	0.11
2000.00	0.60	83.21	1999.64	6.67	31.54	6.29	32.23	78.07	0.09
2100.00	0.62	70.23	2099.64	6.91	32.57	6.52	33.30	78.02	0.14
2200.00	0.58	81.58	2199.63	7.17	33.58	6.76	34.34	77.95	0.13
2300.00	0.36	67.30	2299.63	7.36	34.37	6.95	35.15	77.91	0.24
2400.00	0.28	66.12	2399.63	7.58	34.88	7.16	35.70	77.73	0.09



VAUGHN ENERGY SERVICES
MIDLAND, TX
432-563-5444
SURVEYOR : JAVIER ESTRADA
Tarpan 33 Fee No. 002H / API 30-015-40057





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



February 19, 2014

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

RE: Tarpan 33 Fee #2H
150' FSL & 1040' FWL
Sec. 33, T18S, R26E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

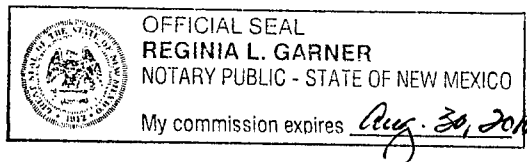
A handwritten signature in cursive script that reads "Chris Graham".

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 19th day of February, 2014.

A handwritten signature in cursive script that reads "Regina L. Garner".

Notary Public

TARPAN 33 FED #2 H

Date	Depth	Deviation	Direction
2/4/2014	114	0.40	0.00
2/4/2014	359	0.30	0.00
2/5/2014	847	1.30	0.00
2/5/2014	1160	0.90	0.00
2/7/2014	1419	0.40	0.00
2/7/2014	1919	0.50	0.00
2/8/2014	2400	0.50	0.00
2/8/2014	2545	5.30	343.50
2/8/2014	2576	9.80	338.30
2/8/2014	2607	14.20	339.70
2/8/2014	2638	18.80	340.00
2/8/2014	2669	23.30	339.80
2/9/2014	2700	26.50	340.60
2/9/2014	2732	30.10	339.60
2/9/2014	2763	34.10	343.00
2/9/2014	2793	37.10	348.40
2/9/2014	2825	37.90	349.70
2/9/2014	2856	41.90	349.00
2/9/2014	2919	49.20	345.70
2/9/2014	2950	52.40	345.60
2/9/2014	2981	55.80	346.00
2/9/2014	3012	59.50	346.50
2/9/2014	3043	62.30	347.50
2/9/2014	3074	65.50	348.80
2/9/2014	3105	12.80	351.20
2/9/2014	3137	69.90	351.50
2/9/2014	3168	72.20	351.30
2/9/2014	3199	74.30	351.20
2/9/2014	3230	75.60	350.90
2/10/2014	3281	77.30	351.00
2/10/2014	3313	78.20	351.00
2/10/2014	3344	78.90	351.10
2/10/2014	3376	79.60	351.10
2/10/2014	3407	80.40	351.30
2/10/2014	3438	81.20	351.30
2/10/2014	3469	82.20	351.30
2/10/2014	3500	83.20	351.40
2/10/2014	3532	84.30	351.40
2/10/2014	3563	85.30	351.60
2/10/2014	3594	86.60	351.80
2/10/2014	3626	88.20	352.20
2/10/2014	3657	89.70	352.20
2/10/2014	3720	92.40	352.20

Date	Depth	Deviation	Direction
2/10/2014	3751	93.00	353.80
2/10/2014	3783	93.10	355.30
2/10/2014	3814	92.80	356.80
2/10/2014	3845	92.60	358.45
2/10/2014	3877	92.10	359.00
2/11/2014	4220	91.40	0.90
2/11/2014	4313	91.80	0.60
2/11/2014	4406	93.00	0.50
2/11/2014	4499	92.20	359.60
2/11/2014	4593	93.10	359.20
2/11/2014	4687	93.00	358.70
2/11/2014	4780	91.80	0.90
2/11/2014	4875	90.80	1.70
2/11/2014	4968	90.80	2.10
2/11/2014	5061	90.70	0.90
2/11/2014	5155	89.70	359.50
2/11/2014	5248	90.60	359.30
2/11/2014	5341	90.30	358.90
2/12/2014	5435	91.00	358.90
2/12/2014	5528	91.70	358.80
2/12/2014	5622	90.60	358.40
2/12/2014	5715	91.30	358.30
2/12/2014	5809	91.10	357.20
2/12/2014	5903	90.40	357.80
2/12/2014	5997	90.70	357.70
2/12/2014	6091	90.60	357.30
2/12/2014	6185	90.30	358.70
2/13/2014	6279	90.70	359.30
2/13/2014	6373	90.60	359.50
2/13/2014	6467	90.40	0.30
2/13/2014	6560	90.90	1.40
2/13/2014	6635	91.70	1.20
2/13/2014	6747	91.30	2.00
2/13/2014	6841	91.50	1.90
2/13/2014	6934	91.90	1.30
2/14/2014	7027	92.30	2.80
2/14/2014	7120	92.70	3.00
2/15/2014	7214	91.50	2.90
2/15/2014	7308	92.40	2.60
2/15/2014	7401	90.40	2.50
2/15/2014	7495	90.80	2.60
2/15/2014	7552	89.50	3.20



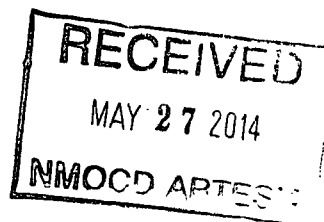
COG Operating LLC

Eddy County, NM (NAD 27 NME)

Tarpan 33 Fee

#2H

WB1/Job #1410167



Survey: Phoenix MWD Survey

Standard Survey Report

16 February, 2014





Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD 27 NME)	TVD Reference:	KB @ 3396.00usft (Silver Oak 3)
Site:	Tarpan 33 Fee	MD Reference:	KB @ 3396.00usft (Silver Oak 3)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410167	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass, 5000 GCR DB

Project:	Eddy County, NM (NAD 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Tarpan 33 Fee		
Site Position:		Northing:	617,397.20 usft
From:	Map	Easting:	483,282.60 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 50.32117 N
		Longitude:	104° 23' 15.63587 W
		Grid Convergence:	-0.03 °

Well:	#2H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 41' 50.23730 N
		Longitude:	104° 23' 30.49217 W
		Ground Level:	3,378.00 usft

Wellbore:	WB1/Job #1410167		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	2/7/2014	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			48,546

Design:	Surveys (Silver Oak 3)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			358.47

Survey Program	Date: 2/16/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	2,400.00	VES Gyro Survey (WB1/Job #1410167)	VES-ISCWSA-GYRO-3
2,451.00	7,613.00	Phoenix MWD Survey (WB1/Job #141016)	MWD
			Description
			Biaxial Semi-Cont. Gyro
			MWD - Standard

Survey	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	2,400.00	0.28	66.12	2,399.63	7.58	34.88	6.65	0.00	0.00	0.00
Tie-on to Gyro										
	2,451.00	0.40	80.00	2,450.62	7.66	35.17	6.72	0.28	0.24	27.22
First Phoenix MWD Survey										
	2,482.00	0.40	103.00	2,481.62	7.66	35.38	6.71	0.51	0.00	74.19
	2,513.00	0.70	15.90	2,512.62	7.81	35.54	6.86	2.54	0.97	-280.97
	2,545.00	5.30	343.50	2,544.57	9.42	35.17	8.48	14.76	14.38	-101.25
	2,576.00	9.80	338.30	2,575.30	13.25	33.79	12.34	14.67	14.52	-16.77
	2,607.00	14.20	339.70	2,605.61	19.27	31.49	18.42	14.22	14.19	4.52



Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD, 27 NME)	TVD Reference:	KB @ 3396.00usft (Silver Oak 3)
Site:	Tarpan 33 Fee	MD Reference:	KB @ 3396.00usft (Silver Oak 3)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410167	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR DB

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)
2,638.00	18.80	340.00	2,635.33	27.53	28.46	26.76	14.84	14.84	0.97
2,669.00	23.30	339.80	2,664.25	37.98	24.64	37.31	14.52	14.52	-0.65
2,700.00	26.50	340.60	2,692.36	50.26	20.22	49.71	10.38	10.32	2.58
2,732.00	30.10	339.60	2,720.54	64.52	15.05	64.10	11.35	11.25	-3.13
2,763.00	34.10	343.00	2,746.79	80.13	9.80	79.84	14.15	12.90	10.97
2,794.00	37.10	348.40	2,772.00	97.60	5.38	97.43	14.01	9.68	17.42
2,825.00	37.90	349.90	2,796.60	116.14	1.83	116.05	3.92	2.58	4.84
2,856.00	41.90	349.00	2,820.37	135.68	-1.82	135.68	13.04	12.90	-2.90
2,887.00	45.50	347.30	2,842.78	156.63	-6.23	156.75	12.21	11.61	-5.48
2,919.00	49.20	345.70	2,864.46	179.51	-11.73	179.76	12.13	11.56	-5.00
2,950.00	52.40	345.60	2,884.05	202.78	-17.68	203.18	10.33	10.32	-0.32
2,981.00	55.80	346.00	2,902.23	227.12	-23.84	227.68	11.02	10.97	1.29
3,012.00	59.50	346.50	2,918.81	252.56	-30.06	253.27	12.01	11.94	1.61
3,043.00	62.30	347.50	2,933.89	278.95	-36.15	279.81	9.46	9.03	3.23
3,075.00	65.50	348.80	2,947.96	307.07	-42.05	308.08	10.64	10.00	4.06
3,106.00	67.80	351.20	2,960.25	335.09	-46.98	336.23	10.27	7.42	7.74
3,137.00	69.90	351.50	2,971.44	363.68	-51.33	364.92	6.83	6.77	0.97
3,168.00	72.20	351.30	2,981.50	392.66	-55.72	394.01	7.44	7.42	-0.65
3,199.00	74.30	351.20	2,990.43	422.00	-60.23	423.46	6.78	6.77	-0.32
3,230.00	75.60	350.90	2,998.48	451.57	-64.89	453.15	4.30	4.19	-0.97
3,250.00	76.70	351.00	3,003.27	470.75	-67.94	472.40	5.52	5.50	0.50
3,281.00	77.30	351.00	3,010.25	500.58	-72.67	502.35	1.94	1.94	0.00
3,313.00	78.20	351.00	3,017.03	531.47	-77.56	533.35	2.81	2.81	0.00
3,344.00	78.90	351.10	3,023.19	561.48	-82.29	563.48	2.28	2.26	0.32
3,376.00	79.60	351.10	3,029.16	592.54	-87.15	594.66	2.19	2.19	0.00
3,407.00	80.40	351.30	3,034.54	622.71	-91.82	624.94	2.66	2.58	0.65
3,438.00	81.20	351.30	3,039.50	652.96	-96.45	655.30	2.58	2.58	0.00
3,469.00	82.20	351.30	3,043.97	683.28	-101.09	685.74	3.23	3.23	0.00
3,501.00	83.20	351.40	3,048.04	714.66	-105.86	717.23	3.14	3.13	0.31
3,532.00	84.30	351.40	3,051.41	745.13	-110.47	747.81	3.55	3.55	0.00
3,563.00	85.30	351.60	3,054.22	775.66	-115.03	778.46	3.29	3.23	0.65
3,595.00	86.60	351.80	3,056.48	807.25	-119.64	810.16	4.11	4.06	0.63
3,626.00	88.20	352.20	3,057.89	837.91	-123.95	840.92	5.32	5.16	1.29
3,658.00	89.70	352.20	3,058.47	869.61	-128.29	872.73	4.69	4.69	0.00
3,689.00	91.20	352.20	3,058.23	900.32	-132.50	903.54	4.84	4.84	0.00
3,720.00	92.40	352.20	3,057.26	931.02	-136.71	934.34	3.87	3.87	0.00
3,751.00	93.00	353.80	3,055.80	961.75	-140.48	965.16	5.51	1.94	5.16
3,783.00	93.10	355.30	3,054.09	993.56	-143.51	997.04	4.69	0.31	4.69
3,814.00	92.80	356.80	3,052.50	1,024.45	-145.65	1,027.97	4.93	-0.97	4.84
3,845.00	92.60	358.40	3,051.04	1,055.39	-146.94	1,058.93	5.20	-0.65	5.16
3,876.00	92.10	359.00	3,049.77	1,086.35	-147.65	1,089.91	2.52	-1.61	1.94
3,939.00	92.50	359.00	3,047.24	1,149.29	-148.75	1,152.85	0.63	0.63	0.00
4,033.00	93.90	358.90	3,041.99	1,243.13	-150.47	1,246.70	1.49	1.49	-0.11



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County, NM (NAD 27-NME)	TVD Reference:	KB @ 3396.00usft (Silver Oak 3)
Site:	Tarpan 33 Fee:	MD Reference:	KB @ 3396.00usft (Silver Oak 3)
Well:	#2H	North Reference:	Grid:
Wellbore:	WB1/Job #1410167	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR DB

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)
4,126.00	94.40	358.70	3,035.26	1,335.86	-152.41	1,339.45	0.58	0.54	-0.22
4,220.00	91.40	0.90	3,030.51	1,429.72	-152.73	1,433.29	3.96	-3.19	2.34
4,313.00	91.80	0.60	3,027.91	1,522.68	-151.52	1,526.18	0.54	0.43	-0.32
4,406.00	93.00	0.50	3,024.02	1,615.59	-150.62	1,619.04	1.29	1.29	-0.11
4,499.00	92.20	359.20	3,019.80	1,708.49	-150.87	1,711.91	1.64	-0.86	-1.40
4,593.00	93.10	359.20	3,015.45	1,802.38	-152.18	1,805.80	0.96	0.96	0.00
4,687.00	93.00	358.70	3,010.45	1,896.23	-153.90	1,899.67	0.54	-0.11	-0.53
4,781.00	91.80	0.90	3,006.51	1,990.14	-154.23	1,993.55	2.66	-1.28	2.34
4,875.00	90.80	1.70	3,004.38	2,084.09	-152.09	2,087.41	1.36	-1.06	0.85
4,968.00	90.80	2.10	3,003.08	2,177.03	-149.01	2,180.23	0.43	0.00	0.43
5,061.00	90.70	0.90	3,001.86	2,269.99	-146.58	2,273.09	1.29	-0.11	-1.29
5,155.00	89.70	359.50	3,001.54	2,363.99	-146.25	2,367.05	1.83	-1.06	-1.49
5,248.00	90.60	359.30	3,001.29	2,456.98	-147.22	2,460.03	0.99	0.97	-0.22
5,341.00	90.30	358.90	3,000.56	2,549.96	-148.68	2,553.03	0.54	-0.32	-0.43
5,435.00	91.00	358.90	2,999.50	2,643.94	-150.49	2,647.02	0.74	0.74	0.00
5,528.00	91.70	358.80	2,997.30	2,736.90	-152.35	2,739.99	0.76	0.75	-0.11
5,622.00	90.60	358.40	2,995.42	2,830.85	-154.65	2,833.97	1.25	-1.17	-0.43
5,715.00	91.30	358.30	2,993.88	2,923.80	-157.33	2,926.95	0.76	0.75	-0.11
5,809.00	91.10	357.20	2,991.91	3,017.70	-161.02	3,020.92	1.19	-0.21	-1.17
5,903.00	90.40	357.80	2,990.68	3,111.60	-165.12	3,114.90	0.98	-0.74	0.64
5,997.00	90.70	357.70	2,989.77	3,205.53	-168.81	3,208.89	0.34	0.32	-0.11
6,091.00	90.60	357.30	2,988.71	3,299.43	-172.91	3,302.87	0.44	-0.11	-0.43
6,185.00	90.30	358.70	2,987.97	3,393.37	-176.19	3,396.86	1.52	-0.32	1.49
6,279.00	90.70	359.30	2,987.15	3,487.35	-177.83	3,490.85	0.77	0.43	0.64
6,373.00	90.60	359.50	2,986.08	3,581.34	-178.81	3,584.83	0.24	-0.11	0.21
6,467.00	90.40	0.30	2,985.26	3,675.33	-178.98	3,678.80	0.88	-0.21	0.85
6,560.00	90.90	1.40	2,984.21	3,768.31	-177.60	3,771.71	1.30	0.54	1.18
6,653.00	91.70	1.30	2,982.10	3,861.26	-175.41	3,864.57	0.87	0.86	-0.11
6,747.00	91.30	2.00	2,979.64	3,955.19	-172.70	3,958.39	0.86	-0.43	0.74
6,840.00	91.50	1.90	2,977.36	4,048.11	-169.54	4,051.19	0.24	0.22	-0.11
6,934.00	91.90	1.30	2,974.58	4,142.03	-166.91	4,145.01	0.77	0.43	-0.64
7,027.00	92.30	2.80	2,971.17	4,234.91	-163.59	4,237.76	1.67	0.43	1.61
7,120.00	92.70	3.00	2,967.11	4,327.70	-158.89	4,330.40	0.48	0.43	0.22
7,214.00	91.50	2.90	2,963.67	4,421.51	-154.05	4,424.05	1.28	-1.28	-0.11
7,308.00	92.40	2.60	2,960.47	4,515.35	-149.55	4,517.73	1.01	0.96	-0.32
7,401.00	90.40	2.50	2,958.20	4,608.22	-145.41	4,610.46	2.15	-2.15	-0.11
7,495.00	90.80	2.60	2,957.21	4,702.12	-141.23	4,704.22	0.44	0.43	0.11
7,552.00	89.50	3.20	2,957.06	4,759.05	-138.34	4,761.05	2.51	-2.28	1.05
Last Phoenix MWD Survey									
7,613.00	89.50	3.20	2,957.60	4,819.95	-134.94	4,821.84	0.00	0.00	0.00
Projection to TD									



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #2H
Project:	Eddy County NM (NAD 27 NME)	TVD Reference:	KB @ 3396.00usft (Silver Oak 3)
Site:	Tarpan 331 Fee	MD Reference:	KB @ 3396.00usft (Silver Oak 3)
Well:	#2H	North Reference:	Grid
Wellbore:	WB1/Job #1410167	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR DB

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
2,400.00	2,399.63	7.58	34.88	Tie-on to Gyro
2,451.00	2,450.62	7.66	35.17	First Phoenix MWD Survey
7,552.00	2,957.06	4,759.05	-138.34	Last Phoenix MWD Survey
7,613.00	2,957.60	4,819.95	-134.94	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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