

15-42951

April 16, 2015

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

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 26 2015

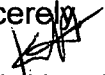
RECEIVED

Attn: Kanicia Castillo

RE: **Hearse 36 State Com 8H**

Please find enclosed a copy of the survey from 0' to 2423' ran on the above referenced well.

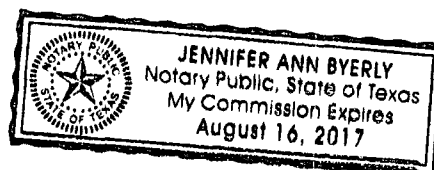
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 16 day of April,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG OPERATING
Lease/Well: HEARSE 36 STATE COM /8H

Rig Name: SILVEROAK 3
State/County: NEW MEXICO/EDDY
Latitude: 32.61, Longitude: -104.44
GRID North is 0.06 Degrees West of True North
VS-Azi: 0.42 Degrees



Depth Reference : RKB 18 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 4/16/2015 / 09:03

VES Survey International

Woodward, Oklahoma

580-254-5000

Surveyor: Michael Cook

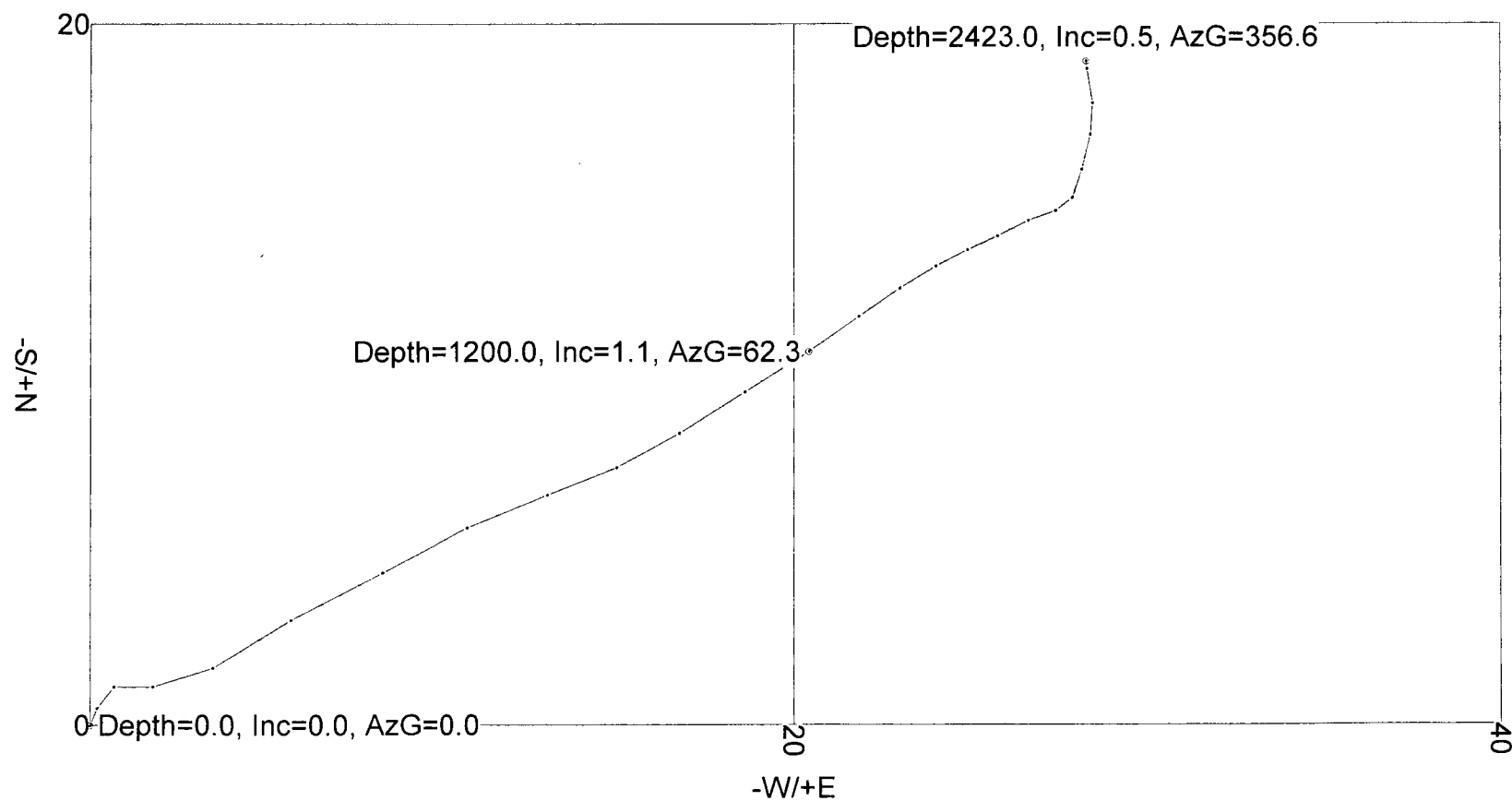
Hearse 36 State Com 8H / API 30-015-42951

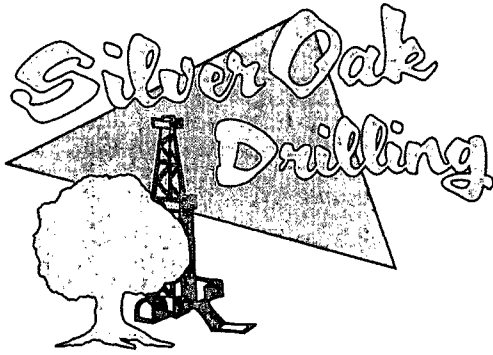
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.60	22.46	100.00	0.48	0.20	0.49	0.52	22.46	0.60
200.00	0.35	63.94	199.99	1.10	0.67	1.11	1.29	31.43	0.41
300.00	0.96	99.02	299.99	1.10	1.77	1.12	2.09	58.14	0.71
400.00	1.25	52.38	399.97	1.64	3.47	1.66	3.83	64.72	0.92
500.00	1.76	62.95	499.94	3.00	5.70	3.04	6.44	62.22	0.58
600.00	1.61	62.52	599.89	4.35	8.31	4.41	9.38	62.39	0.15
700.00	1.54	61.54	699.86	5.64	10.75	5.72	12.14	62.31	0.08
800.00	1.30	75.54	799.83	6.56	13.03	6.66	14.59	63.26	0.42
900.00	1.15	60.44	899.80	7.34	15.00	7.45	16.70	63.91	0.35
1000.00	1.16	61.56	999.78	8.32	16.76	8.44	18.71	63.60	0.02
1100.00	1.37	53.76	1099.76	9.51	18.61	9.64	20.90	62.94	0.27
1200.00	1.10	62.30	1199.73	10.66	20.43	10.81	23.04	62.44	0.32
1300.00	0.90	45.65	1299.72	11.66	21.84	11.82	24.76	61.91	0.35
1400.00	0.74	66.59	1399.71	12.47	23.00	12.63	26.16	61.54	0.34
1500.00	0.65	49.48	1499.70	13.09	24.02	13.27	27.36	61.41	0.23
1600.00	0.54	78.23	1599.70	13.56	24.92	13.74	28.37	61.45	0.32
1700.00	0.56	52.33	1699.69	13.95	25.76	14.14	29.29	61.56	0.25
1800.00	0.59	73.68	1799.69	14.39	26.63	14.59	30.27	61.62	0.21
1900.00	0.36	64.15	1899.68	14.67	27.41	14.87	31.09	61.84	0.24

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
2000.00	0.36	38.90	1999.68	15.05	27.89	15.25	31.69	61.64	0.16
2100.00	0.65	7.30	2099.68	15.85	28.15	16.06	32.31	60.62	0.39
2200.00	0.53	20.74	2199.67	16.84	28.39	17.05	33.01	59.32	0.18
2300.00	0.55	348.51	2299.67	17.75	28.45	17.95	33.53	58.05	0.30
2400.00	0.58	353.09	2399.66	18.72	28.30	18.93	33.93	56.51	0.05
2423.00	0.51	356.64	2422.66	18.94	28.28	19.14	34.03	56.19	0.32



VES Survey International
Woodward, Oklahoma
580-254-5000
Surveyor: Michael Cook
Hearse 36 State Com 8H / API 30-015-42951





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

April 20, 2015

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

RE: Hearse 36 St Com #8H
150' FSL & 1650' FWL
Sec. 36, T19S, R25E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

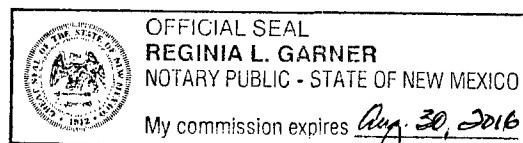
A handwritten signature in cursive script, appearing to read "Chris Graham".

Chris Graham
Drilling Superintendent

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 20th day of April, 2015.

A handwritten signature in cursive script, appearing to read "Regina L. Garner".

Notary Public

HEARSE 36 STATE COM #8H

Date	Depth	Deviation	Direction	TVD
4/3/2015	230	0.40	0.00	0.00
4/3/2015	492	1.90	0.00	0.00
4/3/2015	582	1.70	0.00	0.00
4/3/2015	648	1.60	0.00	0.00
4/3/2015	710	1.20	0.00	0.00
4/3/2015	1120	0.90	0.00	0.00
4/5/2015	1618	1.10	0.00	0.00
4/5/2015	1870	0.70	0.00	0.00
4/5/2015	2313	0.30	0.00	0.00
4/5/2015	2444	0.40	17.40	0.00
4/6/2015	2476	0.40	8.70	2475.00
4/6/2015	2539	5.30	351.20	2538.00
4/6/2015	2571	8.40	353.40	2570.00
4/6/2015	2634	13.50	356.90	2632.00
4/6/2015	2666	15.50	357.30	2663.00
4/6/2015	2697	18.10	357.80	2692.00
4/6/2015	2761	24.00	1.70	0.00
4/6/2015	2793	26.90	2.30	0.00
4/6/2015	2824	29.50	3.60	0.00
4/6/2015	2856	32.10	3.20	0.00
4/6/2015	2888	34.90	0.90	0.00
4/6/2015	2920	37.90	359.60	0.00
4/6/2015	3015	47.40	359.80	0.00
4/6/2015	3046	50.30	360.00	0.00
4/6/2015	3077	53.60	359.60	0.00
4/6/2015	3109	56.70	359.20	0.00
4/6/2015	3235	70.20	358.40	0.00
4/7/2015	3298	77.70	359.40	3090.00
4/7/2015	3329	81.40	0.00	3096.00
4/7/2015	3360	84.90	0.60	3099.00
4/7/2015	3380	86.80	0.40	0.00
4/7/2015	3411	89.20	0.60	0.00
4/7/2015	3507	91.60	0.50	0.00
4/7/2015	3601	90.50	0.70	0.00
4/7/2015	3696	90.10	1.10	0.00
4/7/2015	3791	89.40	358.90	0.00
4/8/2015	3884	89.30	358.90	0.00
4/8/2015	3979	88.80	359.90	0.00
4/9/2015	4070	89.50	0.70	0.00
4/9/2015	4168	89.40	0.60	0.00
4/9/2015	4263	90.90	0.60	0.00
4/9/2015	4357	91.30	0.50	0.00

Date	Depth	Deviation	Direction	TVD
4/10/2015	4546	91.50	359.80	0.00
4/10/2015	4641	91.90	359.00	0.00
4/10/2015	4736	91.20	359.10	0.00
4/10/2015	4830	90.20	359.10	0.00
4/11/2015	4924	90.00	359.70	3091.00
4/11/2015	5019	89.40	1.70	0.00
4/11/2015	5113	90.70	1.70	0.00
4/12/2015	5208	92.20	1.20	3089.00
4/12/2015	5303	92.10	0.00	3085.00
4/12/2015	5398	91.60	359.40	3082.00
4/12/2015	5587	89.30	359.30	0.00
4/12/2015	5682	88.80	0.50	0.00
4/12/2015	5777	90.00	0.60	0.00
4/12/2015	5870	89.90	0.40	0.00
4/12/2015	5965	89.40	359.40	0.00
4/12/2015	6059	89.10	0.20	0.00
4/13/2015	6154	90.10	0.30	3086.00
4/13/2015	6250	91.40	0.10	3085.00
4/13/2015	6345	90.20	359.70	3084.00
4/13/2015	6440	89.00	359.60	0.00
4/13/2015	6535	88.30	0.90	0.00
4/14/2015	6628	90.00	0.80	0.00
4/14/2015	6819	90.50	0.60	0.00
4/14/2015	6915	90.20	0.90	0.00
4/15/2015	7103	92.00	0.90	0.00
4/15/2015	7198	89.00	1.20	0.00
4/15/2015	7293	91.80	0.80	0.00
4/15/2015	7388	90.60	358.50	0.00
4/16/2015	7483	90.50	359.40	0.00

EOF



COG Operating LLC

Eddy County, NM (NAD27 NME)

Hearse 36 State Com

#8H

WB1 / Job #1513285

Design: Surveys (Silver Oak 3)

Standard Survey Report

16 April, 2015





Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: #8H
Project:	Eddy County, NM (NAD27, NME)	TVD Reference:	KB @ 3439.00usft (Silver Oak 3)
Site:	Hearse 36 State Com	MD Reference:	KB @ 3439.00usft (Silver Oak 3)
Well:	#8H	North Reference:	Grid
Wellbore:	WB1 / Job #1513285	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000, GCR

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

Site	Hearse 36 State Com		
Site Position:		Northing:	585,673.60 usft
From:	Map	Easting:	466,182.10 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 36' 36.26340 N
		Longitude:	104° 26' 35.37078 W
		Grid Convergence:	-0.06 °

Well	#8H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 36' 36.28994 N
		Longitude:	104° 26' 27.66751 W
		Ground Level:	3,421.00 usft

Wellbore	WB1 / Job #1513285		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	3/16/2015	7.72
			Dip Angle
			(°)
			Field Strength
			(nT)
			60.47
			48,440

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
			(°)
			0.42

Survey Program	Date 4/16/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	2,423.00	VES Gyro Surveys (WB1 / Job #1513285)	NS-GYRO-MS
2,444.00	7,592.00	Phoenix MWD Survey (WB1 / Job #15132)	PHX+MWD+HDGM
			Description
			North sensing gyrocompassing m/s
			PHX+MWD+HDGM

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.60	22.46	100.00	0.48	0.20	0.49	0.60	0.60	0.00
200.00	0.35	63.94	199.99	1.10	0.67	1.11	0.41	-0.25	41.48
300.00	0.96	99.02	299.99	1.10	1.78	1.12	0.70	0.61	35.08
400.00	1.25	52.38	399.97	1.64	3.47	1.66	0.91	0.29	-46.64
500.00	1.76	62.95	499.94	3.00	5.70	3.05	0.58	0.51	10.57
600.00	1.61	62.52	599.89	4.35	8.31	4.41	0.15	-0.15	-0.43
700.00	1.54	61.54	699.86	5.64	10.74	5.72	0.08	-0.07	-0.98
800.00	1.30	75.54	799.83	6.56	13.02	6.66	0.42	-0.24	14.00
900.00	1.15	60.44	899.80	7.34	14.99	7.45	0.35	-0.15	-15.10



Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well #8H
Project:	Eddy County, NM (NAD27-NME)	TVD Reference:	KB @ 3439.00usft (Silver Oak 3)
Site:	Hearse 36 State Com	MD Reference:	KB @ 3439.00usft (Silver Oak 3)
Well:	#8H	North Reference:	Grid
Wellbore:	WB1 / Job #1513285	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR

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)
1,000.00	1.16	61.56	999.78	8.32	16.75	8.44	0.02	0.01	1.12
1,100.00	1.37	53.76	1,099.76	9.51	18.61	9.64	0.27	0.21	-7.80
1,200.00	1.10	62.30	1,199.73	10.66	20.42	10.81	0.33	-0.27	8.54
1,300.00	0.90	45.65	1,299.72	11.65	21.83	11.81	0.35	-0.20	-16.65
1,400.00	0.74	66.59	1,399.71	12.46	22.99	12.63	0.34	-0.16	20.94
1,500.00	0.65	49.48	1,499.70	13.09	24.01	13.26	0.23	-0.09	-17.11
1,600.00	0.54	78.23	1,599.70	13.55	24.91	13.73	0.31	-0.11	28.75
1,700.00	0.56	52.33	1,699.69	13.94	25.75	14.13	0.25	0.02	-25.90
1,800.00	0.59	73.68	1,799.69	14.39	26.63	14.58	0.22	0.03	21.35
1,900.00	0.36	64.15	1,899.68	14.67	27.41	14.87	0.24	-0.23	-9.53
2,000.00	0.36	38.90	1,999.68	15.05	27.89	15.26	0.16	0.00	-25.25
2,100.00	0.65	7.30	2,099.68	15.86	28.16	16.06	0.39	0.29	-31.60
2,200.00	0.53	20.74	2,199.67	16.85	28.40	17.06	0.18	-0.12	13.44
2,300.00	0.55	348.51	2,299.67	17.76	28.46	17.96	0.30	0.02	-32.23
2,400.00	0.58	353.09	2,399.66	18.73	28.31	18.94	0.05	0.03	4.58
2,423.00	0.51	356.64	2,422.66	18.95	28.29	19.15	0.34	-0.30	15.43
Tie on to VES Gyro Survey									
2,444.00	0.40	17.40	2,443.66	19.11	28.30	19.32	0.94	-0.52	98.86
First Phoenix MWD Survey									
2,476.00	0.40	8.70	2,475.66	19.33	28.35	19.53	0.19	0.00	-27.19
2,508.00	2.40	352.00	2,507.65	20.10	28.28	20.31	6.31	6.25	-52.19
2,539.00	5.30	351.20	2,538.58	22.16	27.97	22.36	9.36	9.35	-2.58
2,571.00	8.40	353.40	2,570.35	25.94	27.47	26.14	9.72	9.69	6.88
2,603.00	11.00	355.80	2,601.89	31.31	26.98	31.51	8.22	8.13	7.50
2,634.00	13.50	356.90	2,632.18	37.87	26.57	38.07	8.10	8.06	3.55
2,666.00	15.50	357.30	2,663.16	45.88	26.17	46.07	6.26	6.25	1.25
2,697.00	18.10	357.80	2,692.83	54.83	25.79	55.01	8.40	8.39	1.61
2,729.00	21.00	359.80	2,722.98	65.53	25.57	65.72	9.30	9.06	6.25
2,761.00	24.00	1.70	2,752.54	77.77	25.75	77.96	9.65	9.38	5.94
2,793.00	26.90	2.30	2,781.44	91.51	26.23	91.70	9.10	9.06	1.88
2,824.00	29.50	3.60	2,808.75	106.14	26.99	106.33	8.62	8.39	4.19
2,856.00	32.10	3.20	2,836.24	122.49	27.96	122.70	8.15	8.13	-1.25
2,888.00	34.90	0.90	2,862.92	140.14	28.58	140.35	9.61	8.75	-7.19
2,920.00	37.90	359.60	2,888.68	159.13	28.66	159.33	9.68	9.38	-4.06
2,951.00	41.00	359.50	2,912.61	178.82	28.50	179.03	10.00	10.00	-0.32
2,983.00	44.00	359.60	2,936.20	200.44	28.33	200.64	9.38	9.38	0.31
3,015.00	47.40	359.80	2,958.55	223.34	28.21	223.54	10.63	10.63	0.63
3,046.00	50.30	360.00	2,978.94	246.68	28.17	246.88	9.37	9.35	0.65
3,077.00	53.60	359.60	2,998.05	271.08	28.09	271.28	10.69	10.65	-1.29
3,109.00	56.70	359.20	3,016.33	297.34	27.81	297.54	9.74	9.69	-1.25
3,141.00	60.00	359.00	3,033.12	324.57	27.38	324.77	10.33	10.31	-0.63
3,172.00	63.10	359.00	3,047.89	351.82	26.90	352.01	10.00	10.00	0.00
3,204.00	66.90	358.80	3,061.41	380.81	26.35	381.00	11.89	11.88	-0.63



Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: #8H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3439.00usft (Silver Oak 3)
Site:	Hearse 36 State Com	MD Reference:	KB @ 3439.00usft (Silver Oak 3)
Well:	#8H	North Reference:	Grid
Wellbore:	WB1 / Job: #1513285	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR

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)
3,235.00	70.20	358.40	3,072.74	409.65	25.64	409.83	10.71	10.65	-1.29
3,266.00	73.40	358.80	3,082.42	439.09	24.92	439.26	10.40	10.32	1.29
3,298.00	77.70	359.40	3,090.41	470.07	24.44	470.23	13.56	13.44	1.88
3,329.00	81.40	360.00	3,096.03	500.55	24.28	500.71	12.09	11.94	1.94
3,360.00	84.90	0.60	3,099.73	531.32	24.44	531.49	11.45	11.29	1.94
3,380.00	86.80	0.40	3,101.17	551.27	24.61	551.43	9.55	9.50	-1.00
3,411.00	89.20	0.60	3,102.25	582.24	24.89	582.41	7.77	7.74	0.65
3,507.00	91.60	0.50	3,101.58	678.23	25.81	678.40	2.50	2.50	-0.10
3,601.00	90.50	0.70	3,099.86	772.21	26.79	772.38	1.19	-1.17	0.21
3,696.00	90.10	1.10	3,099.36	867.19	28.28	867.38	0.60	-0.42	0.42
3,791.00	89.40	358.90	3,099.78	962.19	28.28	962.37	2.43	-0.74	-2.32
3,884.00	89.30	358.90	3,100.83	1,055.16	26.50	1,055.33	0.11	-0.11	0.00
3,979.00	88.80	359.90	3,102.41	1,150.14	25.50	1,150.30	1.18	-0.53	1.05
4,074.00	89.50	0.70	3,103.82	1,245.13	26.00	1,245.29	1.12	0.74	0.84
4,168.00	89.40	0.60	3,104.72	1,339.12	27.07	1,339.28	0.15	-0.11	-0.11
4,263.00	90.90	0.60	3,104.47	1,434.11	28.06	1,434.28	1.58	1.58	0.00
4,357.00	91.30	0.50	3,102.67	1,528.09	28.96	1,528.26	0.44	0.43	-0.11
4,451.00	91.30	0.50	3,100.53	1,622.06	29.78	1,622.24	0.00	0.00	0.00
4,546.00	91.50	359.80	3,098.21	1,717.03	30.03	1,717.21	0.77	0.21	-0.74
4,641.00	91.90	359.00	3,095.40	1,811.99	29.04	1,812.15	0.94	0.42	-0.84
4,736.00	91.20	359.10	3,092.83	1,906.94	27.46	1,907.09	0.74	-0.74	0.11
4,830.00	90.20	359.10	3,091.68	2,000.92	25.99	2,001.05	1.06	-1.06	0.00
4,924.00	90.00	359.70	3,091.51	2,094.91	25.00	2,095.04	0.67	-0.21	0.64
5,019.00	89.40	1.70	3,092.01	2,189.90	26.16	2,190.03	2.20	-0.63	2.11
5,113.00	90.70	1.70	3,091.93	2,283.85	28.95	2,284.01	1.38	1.38	0.00
5,208.00	92.20	1.20	3,089.52	2,378.79	31.36	2,378.96	1.66	1.58	-0.53
5,303.00	92.10	360.00	3,085.96	2,473.72	32.35	2,473.89	1.27	-0.11	-1.26
5,398.00	91.60	359.40	3,082.89	2,568.67	31.85	2,568.83	0.82	-0.53	-0.63
5,492.00	90.50	358.80	3,081.17	2,662.64	30.38	2,662.79	1.33	-1.17	-0.64
5,587.00	89.30	359.30	3,081.34	2,757.62	28.80	2,757.76	1.37	-1.26	0.53
5,682.00	88.80	0.50	3,082.91	2,852.61	28.63	2,852.74	1.37	-0.53	1.26
5,777.00	90.00	0.60	3,083.91	2,947.59	29.55	2,947.73	1.27	1.26	0.11
5,870.00	89.80	0.40	3,084.07	3,040.59	30.36	3,040.73	0.30	-0.22	-0.22
5,965.00	89.40	359.40	3,084.73	3,135.59	30.19	3,135.72	1.13	-0.42	-1.05
6,059.00	89.10	0.20	3,085.96	3,229.58	29.86	3,229.71	0.91	-0.32	0.85
6,154.00	90.10	0.30	3,086.63	3,324.57	30.28	3,324.71	1.06	1.05	0.11
6,250.00	91.40	0.10	3,085.37	3,420.56	30.61	3,420.69	1.37	1.35	-0.21
6,345.00	90.20	359.70	3,084.04	3,515.55	30.45	3,515.68	1.33	-1.26	-0.42
6,440.00	89.00	359.60	3,084.71	3,610.54	29.87	3,610.67	1.27	-1.26	-0.11
6,535.00	88.30	0.90	3,086.94	3,705.51	30.28	3,705.64	1.55	-0.74	1.37
6,628.00	90.30	0.80	3,088.08	3,798.49	31.66	3,798.62	2.15	2.15	-0.11
6,724.00	90.70	0.90	3,087.24	3,894.48	33.09	3,894.62	0.43	0.42	0.10
6,819.00	90.50	0.60	3,086.25	3,989.46	34.33	3,989.61	0.38	-0.21	-0.32
6,915.00	90.20	0.90	3,085.66	4,085.45	35.59	4,085.61	0.44	-0.31	0.31



Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well: #8H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3439.00usft (Silver Oak 3)
Site:	Hearse 36 State Com	MD Reference:	KB @ 3439.00usft (Silver Oak 3)
Well:	#8H	North Reference:	Grid
Wellbore:	WVB1 / Job #1513285	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	Database:	Compass 5000 GCR

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)
7,009.00	89.70	1.10	3,085.74	4,179.44	37.23	4,179.60	0.57	-0.53	0.21
7,103.00	92.00	0.90	3,084.35	4,273.41	38.87	4,273.58	2.46	2.45	-0.21
7,198.00	89.00	1.30	3,083.52	4,368.38	40.69	4,368.56	3.19	-3.16	0.42
7,293.00	91.80	0.80	3,082.86	4,463.35	42.43	4,463.54	2.99	2.95	-0.53
7,388.00	90.60	358.50	3,080.87	4,558.32	41.85	4,558.50	2.73	-1.26	-2.42
7,483.00	90.50	359.40	3,079.96	4,653.30	40.11	4,653.47	0.95	-0.11	0.95
7,532.00	90.30	359.20	3,079.61	4,702.29	39.51	4,702.45	0.58	-0.41	-0.41
Last Phoenix MWD Survey									
7,592.00	90.30	359.20	3,079.30	4,762.28	38.67	4,762.44	0.00	0.00	0.00
Projection to TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,423.00	2,422.66	18.95	28.29	Tie-on to VES Gyro Survey
2,444.00	2,443.66	19.11	28.30	First Phoenix MWD Survey
7,532.00	3,079.61	4,702.29	39.51	Last Phoenix MWD Survey
7,592.00	3,079.30	4,762.28	38.67	Projection to TD

Checked By: _____ Approved By: _____ Date: _____