



July 24, 2015

15-39971

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

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 09 2015

Attn: Kanicia Castillo

RECEIVED

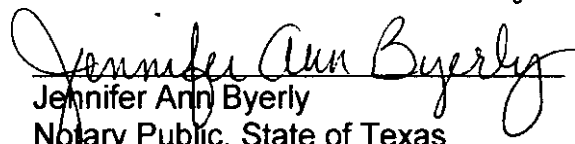
RE: Pinto 36 State Com No 006H

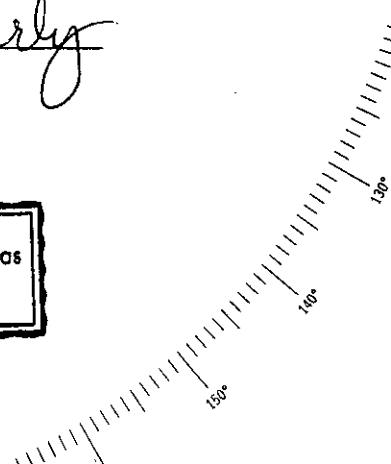
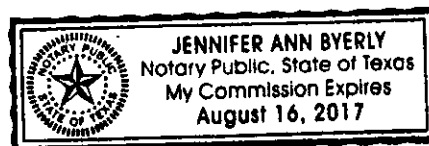
Please find enclosed a copy of the survey from 0' to 1973' ran on the above referenced well.

Sincerely, 
Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 24 day of July,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas

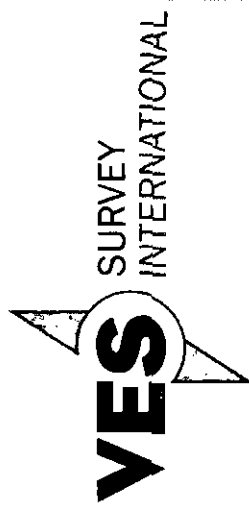




Company: Cog Operating LLC
Lease/Well: Pinto 36 State Com No/006H

Rig Name: Silver Oak 3
State/County: New Mexico /Eddy
VS-Azi: 0.00 Degrees

Latitude: 32.69738, Longitude: -104.43924
Grid North = True North +0.06 degs



Depth Reference : R.K.B = 18 Ft

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: pinto 36 state com 6h-de_01.ut
Minimum Curvature Method
Report Date/Time: 7/24/2015 / 14:47

VES Survey International
(432) 563-5444
West Texas

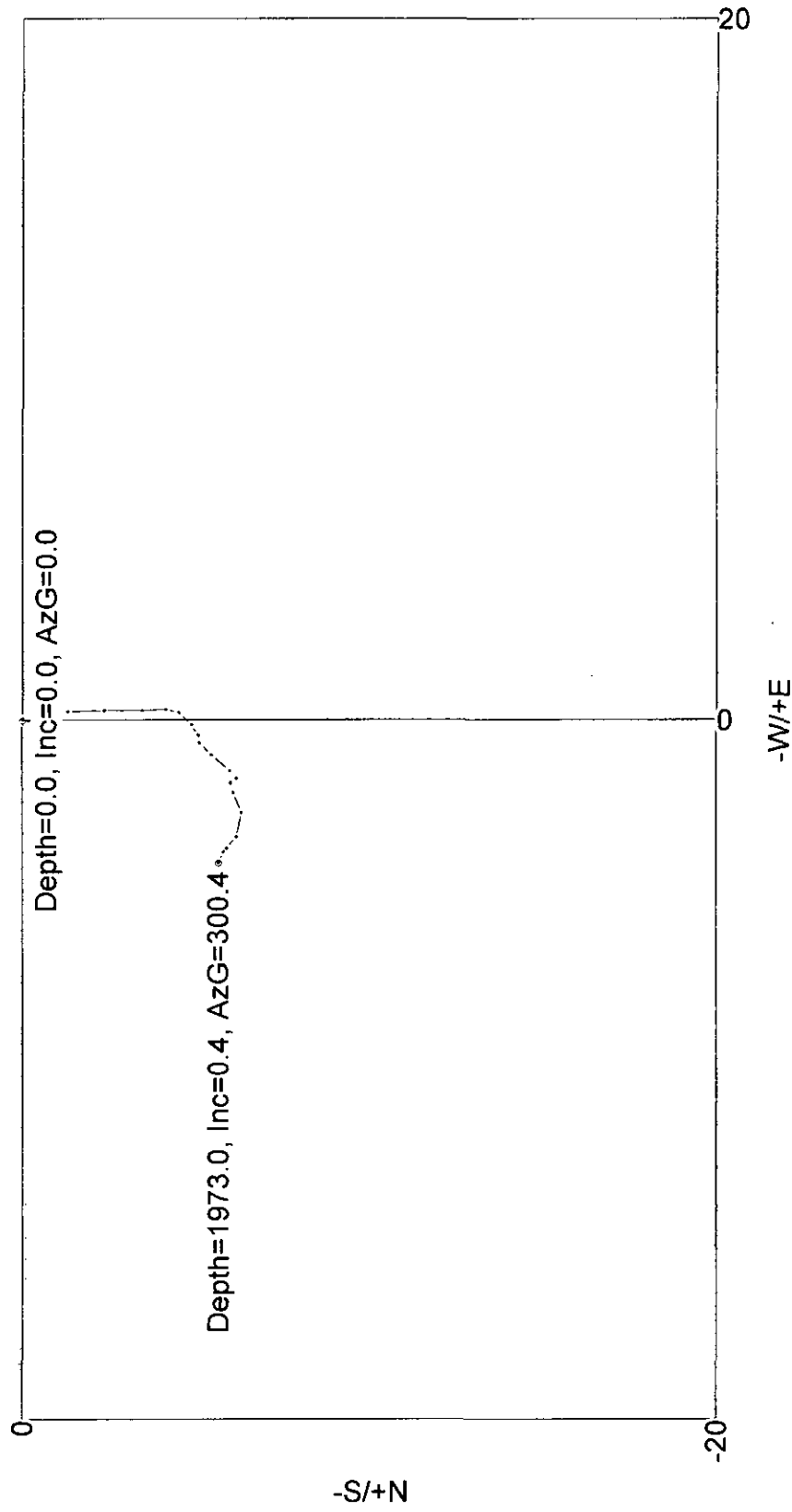
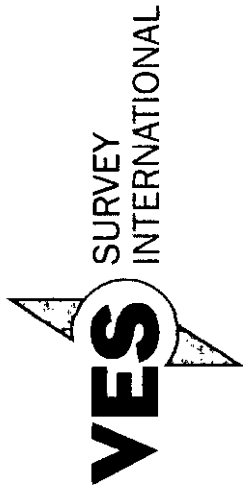
Surveyor: Javier Estrada
Pinto 36 State Com No 006H / API 30-015-39971

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	0.20	189.04	100.00	-0.17	-0.03	-0.17	0.18	189.04	0.20
200.00	0.41	152.34	200.00	-0.67	0.11	-0.67	0.68	170.50	0.28
300.00	0.36	188.78	300.00	-1.30	0.23	-1.30	1.32	169.87	0.25
400.00	0.85	174.13	399.99	-2.34	0.26	-2.34	2.36	173.67	0.51
500.00	0.42	192.05	499.98	-3.44	0.26	-3.44	3.45	175.67	0.47
600.00	0.38	160.73	599.98	-4.11	0.29	-4.11	4.12	175.91	0.22
700.00	0.24	250.99	699.98	-4.49	0.20	-4.49	4.49	177.40	0.45
800.00	0.38	205.80	799.98	-4.86	-0.14	-4.86	4.86	181.64	0.27
900.00	0.20	299.00	899.98	-5.07	-0.44	-5.07	5.09	184.95	0.44
1000.00	0.15	211.04	999.98	-5.09	-0.66	-5.09	5.13	187.40	0.25
1100.00	0.42	228.48	1099.98	-5.44	-1.00	-5.44	5.53	190.41	0.28
1200.00	0.38	212.77	1199.97	-5.96	-1.45	-5.96	6.14	193.69	0.11
1300.00	0.11	334.03	1299.97	-6.16	-1.68	-6.16	6.38	195.23	0.45
1400.00	0.14	319.05	1399.97	-5.98	-1.80	-5.98	6.24	196.76	0.04
1500.00	0.31	227.55	1499.97	-6.06	-2.08	-6.06	6.41	198.90	0.34
1600.00	0.44	262.05	1599.97	-6.30	-2.66	-6.30	6.84	202.88	0.26
1700.00	0.41	303.51	1699.97	-6.15	-3.34	-6.15	7.00	208.48	0.30
1800.00	0.11	338.91	1799.97	-5.87	-3.67	-5.87	6.92	212.03	0.32

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	0.08	272.07	1899.97	-5.78	-3.78	-5.78	6.90	213.18	0.11
1973.00	0.45	300.36	1972.97	-5.63	-4.08	-5.63	6.95	215.90	0.52



VES Survey International
(432) 563-5444
West Texas
Surveyor: Javier Estrada
Pinto 36 State Com No 006H / API 30-015-39971





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

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 09 2015

RECEIVED

July 28, 2015

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

RE: Pinto 36 State Com 6H
150' FSL & 2230' FWL
Sec. 36, T18S, R25E
Eddy County, New Mexico

Dear Sir,

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

Very truly yours,

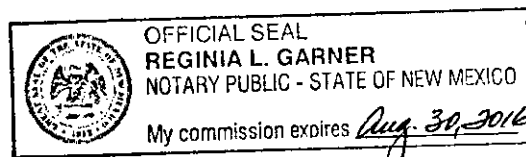
A handwritten signature in black ink, appearing to read "Eddie C. LaRue".

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 28th day of July, 2015.

A handwritten signature in black ink, appearing to read "Regina L. Garner".

Notary Public

PINTO 36 ST COM #6 H

Date	Depth	Deviation	Direction
7/19/2015	168	0.00	0.00
7/19/2015	343	0.30	0.00
7/19/2015	519	0.60	0.00
7/20/2015	697	0.50	0.00
7/20/2015	1140	0.40	0.00
7/21/2015	1391	0.50	0.00
7/21/2015	1833	0.40	0.00
7/22/2015	2091	3.10	4.50
7/22/2015	2123	5.20	7.60
7/22/2015	2155	7.60	9.30
7/22/2015	2218	13.40	10.00
7/22/2015	2249	15.90	10.50
7/22/2015	2281	18.60	10.80
7/22/2015	2312	21.50	8.90
7/22/2015	2406	29.90	10.30
7/22/2015	2438	33.20	9.60
7/22/2015	2469	36.20	10.10
7/22/2015	2500	39.30	10.40
7/23/2015	2564	46.30	10.30
7/23/2015	2596	49.60	10.40
7/23/2015	2627	53.20	10.30
7/23/2015	2659	56.60	9.70
7/23/2015	2690	59.80	9.10
7/23/2015	2742	65.10	7.90
7/23/2015	2773	68.40	7.60
7/23/2015	2804	71.30	8.10
7/23/2015	2835	74.10	8.40
7/23/2015	2867	77.40	8.60
7/23/2015	2899	80.40	9.00
7/23/2015	2931	84.20	9.10
7/23/2015	3025	89.50	7.40
7/23/2015	3120	92.20	4.40
7/24/2015	3310	91.90	360.00
7/24/2015	3405	90.40	0.20
7/24/2015	3499	90.40	0.10
7/24/2015	3594	91.30	0.70
7/24/2015	3689	91.30	0.60
7/24/2015	3783	91.50	0.40
7/24/2015	3878	91.40	0.20
7/24/2015	3973	91.60	359.90
7/24/2015	4067	91.60	359.40
7/24/2015	4163	91.70	0.40

Date	Depth	Deviation	Direction
7/24/2015	4256	91.30	1.50
7/24/2015	4351	90.90	0.80
7/24/2015	4447	90.60	0.50
7/25/2015	4541	91.00	1.60
7/25/2015	4637	90.80	1.00
7/25/2015	4731	91.40	2.00
7/25/2015	4825	91.60	1.80
7/25/2015	4919	91.50	1.70
7/25/2015	5014	91.30	0.90
7/25/2015	5109	91.90	359.80
7/25/2015	5203	91.40	1.30
7/25/2015	5297	91.20	1.00
7/25/2015	5392	91.00	0.90
7/25/2015	5486	91.40	0.00
7/25/2015	5581	91.30	0.10
7/25/2015	5674	91.60	359.80
7/25/2015	5863	91.50	359.40
7/26/2015	6052	91.20	0.70
7/26/2015	6147	91.60	0.90
7/26/2015	6242	91.60	0.40
7/26/2015	6337	91.50	0.20
7/26/2015	6432	91.80	1.60
7/26/2015	6527	91.90	1.00
7/26/2015	6622	91.60	1.40
7/26/2015	6713	91.50	1.60
7/26/2015	6808	91.60	1.00
7/26/2015	6902	91.60	0.80
7/26/2015	6996	91.70	0.70
7/26/2015	7091	91.90	0.70



COG Operating LLC

Eddy County, NM (NAD27 NME)

Pinto 36 State Com

#6H

OH / Job #1513937

Design: Surveys (Silveroak 3)

Standard Survey Report

27 July, 2015





Phoenix Technology Services LP
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3513.00usft (Silver Oak 3)
Site:	Pinto 36 State Corn	MD Reference:	KB @ 3513.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	OH / Job #1513937	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silveroak 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	Pinto 36 State Corn		
Site Position:		Northing:	617,373.90 usft
From:	Map	Easting:	470,225.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 49.99854 N
		Longitude:	104° 25' 48.44242 W
		Grid Convergence:	-0.05 °

Well	#6H		
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' 50.57762 N
		Longitude:	104° 26' 21.27918 W
		Ground Level:	3,495.00 usft

Wellbore	OH / Job #1513937		
Magnetics	Model Name	Sample Date	Declination
	HDGM	7/14/2015	7.65
			Dip Angle
			60.55
			Field Strength
			48,443

Design	Surveys (Silveroak 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
			(°)
			1.85

Survey Program	Date 7/27/2015		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	1,973.00	VES Gyro Surveys (OH / Job #1513937)	NS-GYRO-MS
2,091.00	7,203.00	Phoenix MWD Survey (OH / Job #1513937)	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	0.20	189.04	100.00	-0.17	-0.03	-0.17	0.20	0.20	0.00	
200.00	0.41	152.34	200.00	-0.66	0.11	-0.66	0.28	0.21	-36.70	
300.00	0.36	188.78	300.00	-1.29	0.23	-1.28	0.25	-0.05	36.44	
400.00	0.85	174.13	399.99	-2.34	0.26	-2.33	0.51	0.49	-14.65	
500.00	0.42	192.05	499.98	-3.43	0.26	-3.42	0.47	-0.43	17.92	
600.00	0.38	160.73	599.98	-4.11	0.29	-4.09	0.22	-0.04	-31.32	
700.00	0.24	250.99	699.98	-4.49	0.20	-4.48	0.45	-0.14	90.26	
800.00	0.38	205.80	799.98	-4.85	-0.14	-4.86	0.27	0.14	-45.19	
900.00	0.20	299.00	899.98	-5.07	-0.44	-5.08	0.44	-0.18	93.20	



Phoenix Technology Services LP
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3513.00usft (Silver Oak 3)
Site:	Pinto 36 State Com	MD Reference:	KB @ 3513.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	OH / Job #1513937	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silveroak 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)
1,000.00	0.15	211.04	999.98	-5.09	-0.66	-5.11	0.25	-0.05	-87.96
1,100.00	0.42	228.48	1,099.98	-5.45	-1.00	-5.48	0.28	0.27	17.44
1,200.00	0.38	212.77	1,199.97	-5.97	-1.45	-6.02	0.12	-0.04	-15.71
1,300.00	0.11	334.03	1,299.97	-6.16	-1.68	-6.21	0.45	-0.27	121.26
1,400.00	0.14	319.05	1,399.97	-5.99	-1.80	-6.04	0.04	0.03	-14.98
1,500.00	0.31	227.55	1,499.97	-6.08	-2.08	-6.14	0.34	0.17	-91.50
1,600.00	0.44	262.05	1,599.97	-6.31	-2.66	-6.39	0.25	0.13	34.50
1,700.00	0.41	303.51	1,699.97	-6.17	-3.34	-6.27	0.30	-0.03	41.46
1,800.00	0.11	338.91	1,799.97	-5.88	-3.67	-6.00	0.33	-0.30	35.40
1,900.00	0.08	272.07	1,899.97	-5.79	-3.77	-5.91	0.11	-0.03	-66.84
1,973.00	0.45	300.36	1,972.97	-5.64	-4.07	-5.77	0.52	0.51	38.75
Tie-on to VES Gyro Survey									
2,091.00	3.10	4.50	2,090.90	-2.23	-4.22	-2.36	2.48	2.25	54.36
First Phoenix MWD Survey									
2,123.00	5.20	7.60	2,122.82	0.07	-3.96	-0.05	6.60	6.56	9.69
2,155.00	7.60	9.30	2,154.62	3.60	-3.43	3.49	7.52	7.50	5.31
2,186.00	10.50	10.40	2,185.23	8.40	-2.59	8.32	9.37	9.35	3.55
2,218.00	13.40	10.00	2,216.53	14.92	-1.42	14.87	9.07	9.06	-1.25
2,249.00	15.90	10.50	2,246.52	22.64	-0.02	22.63	8.07	8.06	1.61
2,281.00	18.60	10.80	2,277.08	31.96	1.74	32.00	8.44	8.44	0.94
2,312.00	21.50	8.90	2,306.20	42.43	3.54	42.53	9.59	9.35	-6.13
2,344.00	24.00	11.00	2,335.71	54.62	5.69	54.77	8.21	7.81	6.56
2,375.00	26.80	10.80	2,363.71	67.67	8.21	67.90	9.04	9.03	-0.65
2,406.00	29.90	10.30	2,390.98	82.14	10.90	82.45	10.03	10.00	-1.61
2,438.00	33.20	9.60	2,418.25	98.63	13.79	99.03	10.38	10.31	-2.19
2,469.00	36.20	10.10	2,443.73	116.02	16.81	116.50	9.72	9.68	1.61
2,500.00	39.30	10.40	2,468.24	134.69	20.19	135.27	10.02	10.00	0.97
2,532.00	42.90	10.30	2,492.35	155.38	23.96	156.08	11.25	11.25	-0.31
2,564.00	46.30	10.30	2,515.13	177.49	27.98	178.30	10.63	10.63	0.00
2,596.00	49.60	10.40	2,536.56	200.86	32.25	201.79	10.32	10.31	0.31
2,627.00	53.20	10.30	2,555.90	224.69	36.60	225.75	11.62	11.61	-0.32
2,658.00	56.60	9.70	2,573.72	249.66	41.00	250.85	11.08	10.97	-1.94
2,690.00	59.80	9.10	2,590.58	276.49	45.44	277.81	10.13	10.00	-1.88
2,721.00	63.00	8.60	2,605.42	303.38	49.63	304.82	10.42	10.32	-1.61
2,742.00	65.10	7.90	2,614.61	322.07	52.33	323.59	10.44	10.00	-3.33
2,773.00	68.40	7.60	2,626.85	350.28	56.17	351.92	10.68	10.65	-0.97
2,804.00	71.30	8.10	2,637.52	379.11	60.15	380.86	9.48	9.35	1.61
2,835.00	74.10	8.40	2,646.74	408.40	64.40	410.27	9.08	9.03	0.97
2,867.00	77.40	8.60	2,654.62	439.07	68.98	441.07	10.33	10.31	0.63
2,899.00	80.40	9.00	2,660.78	470.10	73.78	472.23	9.45	9.38	1.25
2,931.00	84.20	9.10	2,665.06	501.41	78.77	503.69	11.88	11.88	0.31
2,962.00	87.10	8.60	2,667.42	531.95	83.53	534.37	9.49	9.35	-1.61
2,993.00	89.30	7.60	2,668.39	562.62	87.89	565.17	7.79	7.10	-3.23



Phoenix Technology Services LP
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD27, NME)	TVD Reference:	KB @ 3513.00usft (Silver Oak 3)
Site:	Pinto 36 State Com	MD Reference:	KB @ 3513.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	OH / Job #1513937	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silveroak 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)
3,025.00	89.50	7.40	2,668.72	594.35	92.07	597.01	0.88	0.63	-0.63
3,120.00	92.20	4.40	2,667.31	688.81	101.83	691.74	4.25	2.84	-3.16
3,214.00	91.40	1.20	2,664.36	782.64	106.42	785.67	3.51	-0.85	-3.40
3,310.00	91.90	360.00	2,661.60	878.59	107.42	881.60	1.35	0.52	-1.25
3,405.00	90.40	0.20	2,659.69	973.57	107.59	976.54	1.59	-1.58	0.21
3,499.00	90.40	0.10	2,659.03	1,067.57	107.84	1,070.49	0.11	0.00	-0.11
3,594.00	91.30	0.70	2,657.63	1,162.56	108.50	1,165.45	1.14	0.95	0.63
3,689.00	91.30	0.60	2,655.47	1,257.52	109.58	1,260.41	0.11	0.00	-0.11
3,783.00	91.50	0.40	2,653.17	1,351.49	110.40	1,354.35	0.30	0.21	-0.21
3,878.00	91.40	0.20	2,650.77	1,446.46	110.89	1,449.29	0.24	-0.11	-0.21
3,973.00	91.60	359.90	2,648.28	1,541.43	110.98	1,544.21	0.38	0.21	-0.32
4,067.00	91.60	359.40	2,645.66	1,635.39	110.40	1,638.10	0.53	0.00	-0.53
4,163.00	91.70	0.40	2,642.89	1,731.35	110.24	1,734.00	1.05	0.10	1.04
4,256.00	91.30	1.50	2,640.46	1,824.30	111.78	1,826.96	1.26	-0.43	1.18
4,351.00	90.90	0.80	2,638.64	1,919.26	113.68	1,921.93	0.85	-0.42	-0.74
4,447.00	90.60	0.50	2,637.38	2,015.25	114.77	2,017.90	0.44	-0.31	-0.31
4,541.00	91.00	1.60	2,636.07	2,109.22	116.49	2,111.88	1.25	0.43	1.17
4,637.00	90.80	1.00	2,634.56	2,205.19	118.67	2,207.87	0.66	-0.21	-0.63
4,731.00	91.40	2.00	2,632.75	2,299.14	121.13	2,301.85	1.24	0.64	1.06
4,825.00	91.60	1.80	2,630.29	2,393.05	124.25	2,395.82	0.30	0.21	-0.21
4,919.00	91.50	1.70	2,627.75	2,486.97	127.12	2,489.78	0.15	-0.11	-0.11
5,014.00	91.30	0.90	2,625.43	2,581.92	129.27	2,584.75	0.87	-0.21	-0.84
5,109.00	91.90	359.80	2,622.78	2,676.88	129.85	2,679.68	1.32	0.63	-1.16
5,203.00	91.40	1.30	2,620.07	2,770.83	130.75	2,773.61	1.68	-0.53	1.60
5,297.00	91.20	1.00	2,617.94	2,864.79	132.64	2,867.58	0.38	-0.21	-0.32
5,392.00	91.00	0.90	2,616.11	2,959.76	134.21	2,962.55	0.24	-0.21	-0.11
5,486.00	91.40	360.00	2,614.14	3,053.73	134.95	3,056.50	1.05	0.43	-0.96
5,581.00	91.30	0.10	2,611.91	3,148.71	135.04	3,151.43	0.15	-0.11	0.11
5,674.00	91.60	359.80	2,609.55	3,241.68	134.95	3,244.34	0.46	0.32	-0.32
5,768.00	91.60	359.60	2,606.93	3,335.64	134.46	3,338.24	0.21	0.00	-0.21
5,863.00	91.50	359.40	2,604.36	3,430.60	133.63	3,433.13	0.24	-0.11	-0.21
5,958.00	91.00	0.30	2,602.29	3,525.58	133.39	3,528.05	1.08	-0.53	0.95
6,052.00	91.20	0.70	2,600.48	3,619.56	134.21	3,622.00	0.48	0.21	0.43
6,147.00	91.60	0.90	2,598.16	3,714.52	135.53	3,716.96	0.47	0.42	0.21
6,242.00	91.60	0.40	2,595.51	3,809.47	136.61	3,811.90	0.53	0.00	-0.53
6,337.00	91.50	0.20	2,592.94	3,904.44	137.11	3,906.83	0.24	-0.11	-0.21
6,432.00	91.80	1.60	2,590.20	3,999.38	138.60	4,001.77	1.51	0.32	1.47
6,527.00	91.90	1.00	2,587.14	4,094.31	140.75	4,096.72	0.64	0.11	-0.63
6,622.00	91.60	1.40	2,584.24	4,189.24	142.74	4,191.67	0.53	-0.32	0.42
6,713.00	91.50	1.60	2,581.77	4,280.18	145.12	4,282.63	0.25	-0.11	0.22
6,808.00	91.60	1.00	2,579.20	4,375.12	147.28	4,377.59	0.64	0.11	-0.63
6,902.00	91.60	0.80	2,576.58	4,469.07	148.75	4,471.55	0.21	0.00	-0.21
6,996.00	91.70	0.70	2,573.87	4,563.03	149.98	4,565.49	0.15	0.11	-0.11
7,091.00	91.90	0.70	2,570.89	4,657.97	151.14	4,660.42	0.21	0.21	0.00



Phoenix Technology Services LP
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3513.00usft (Silver Oak 3)
Site:	Pinto 36 State Com	MD Reference:	KB @ 3513.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	OH / Job #1513937	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silveroak 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)
7,143.00	90.90	0.90	2,569.62	4,709.95	151.87	4,712.40	1.96	-1.92	0.38
Last Phoenix MWD Survey									
7,203.00	90.90	0.90	2,568.68	4,769.94	152.81	4,772.38	0.00	0.00	0.00
Projection to TD									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,973.00	1,972.97	-5.64	-4.07	Tie-on to VES Gyro Survey	
2,091.00	2,090.90	-2.23	-4.22	First Phoenix MWD Survey	
7,143.00	2,569.62	4,709.95	151.87	Last Phoenix MWD Survey	
7,203.00	2,568.68	4,769.94	152.81	Projection to TD	

Checked By: _____ Approved By: _____ Date: _____