VES SURVEY INTERNATIONAL

I Adam Askew certify that I am employed by VES Survey International. That I did on the day(s) of 12/17/15 through 12/17/15 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 8,956.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho for the Eata Fajita State Well # 013H API # 30-025-42487 in Lea County / Parish New Mexico ; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

Adam Askew
Service Technician
Vaughn Energy Services

VES SURVEY INTERNATIONAL

December 29, 2015

HOBBS OCD

MAY 23 2016

RECEIVED

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

Attn: Kanicia Castillo

RE: **Eata Fajita State No 013H**

Please find enclosed a copy of the survey from 0' to 8956' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 29 day of December A.D., 2015, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com

JENNIFER ANN BYERLY
Notary Public, State of Texas
My Commission Expires
August 16, 2017

Company: Concho

Lease/Well: Eata Fajita State No/013H

Rig Name: Independence 205

State/County: New Mexico/Lea

VS-Azi: 0.00 Degrees

Latitude: 32.22530, Longitude: -103.59707

Grid North = True North -0.39 degs (NAD 27)

Grid Correction Applied = -0.39 degs

Depth Reference : RKB = 26 feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 12/29/2015 / 09:17

VES Survey International

Midland, Texas

432-563-5444

Surveyor: Adam Askew

Eata Fajita State No 013H / API 30-025-42487

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	0.28	213.29	100.00	-0.21	-0.13	-0.21	0.25	213.29	0.28
200.00	0.14	170.92	200.00	-0.53	-0.25	-0.53	0.59	205.29	0.20
300.00	0.29	205.14	300.00	-0.88	-0.34	-0.88	0.94	201.08	0.19
400.00	0.32	195.96	400.00	-1.37	-0.52	-1.37	1.47	200.81	0.06
500.00	0.51	162.41	499.99	-2.06	-0.46	-2.06	2.12	192.60	0.31
600.00	0.80	145.11	599.99	-3.06	0.07	-3.06	3.06	178.67	0.34
700.00	0.74	154.00	699.98	-4.21	0.75	-4.21	4.28	169.87	0.13
800.00	0.90	136.65	799.97	-5.37	1.58	-5.37	5.60	163.63	0.29
900.00	0.79	120.07	899.96	-6.29	2.71	-6.29	6.85	156.67	0.27
1000.00	1.15	105.23	999.94	-6.89	4.27	-6.89	8.11	148.23	0.43
1100.00	1.09	103.58	1099.92	-7.38	6.16	-7.38	9.61	140.14	0.06
1200.00	1.51	96.00	1199.90	-7.74	8.40	-7.74	11.42	132.66	0.45
1300.00	1.12	95.99	1299.87	-7.98	10.68	-7.98	13.33	126.77	0.40
1400.00	0.60	62.62	1399.86	-7.84	12.11	-7.84	14.43	122.92	0.70
1500.00	0.70	22.67	1499.86	-7.04	12.81	-7.04	14.62	118.77	0.46
1600.00	0.85	22.14	1599.85	-5.78	13.33	-5.78	14.53	113.46	0.14

VES Survey Date: 12/17/2015

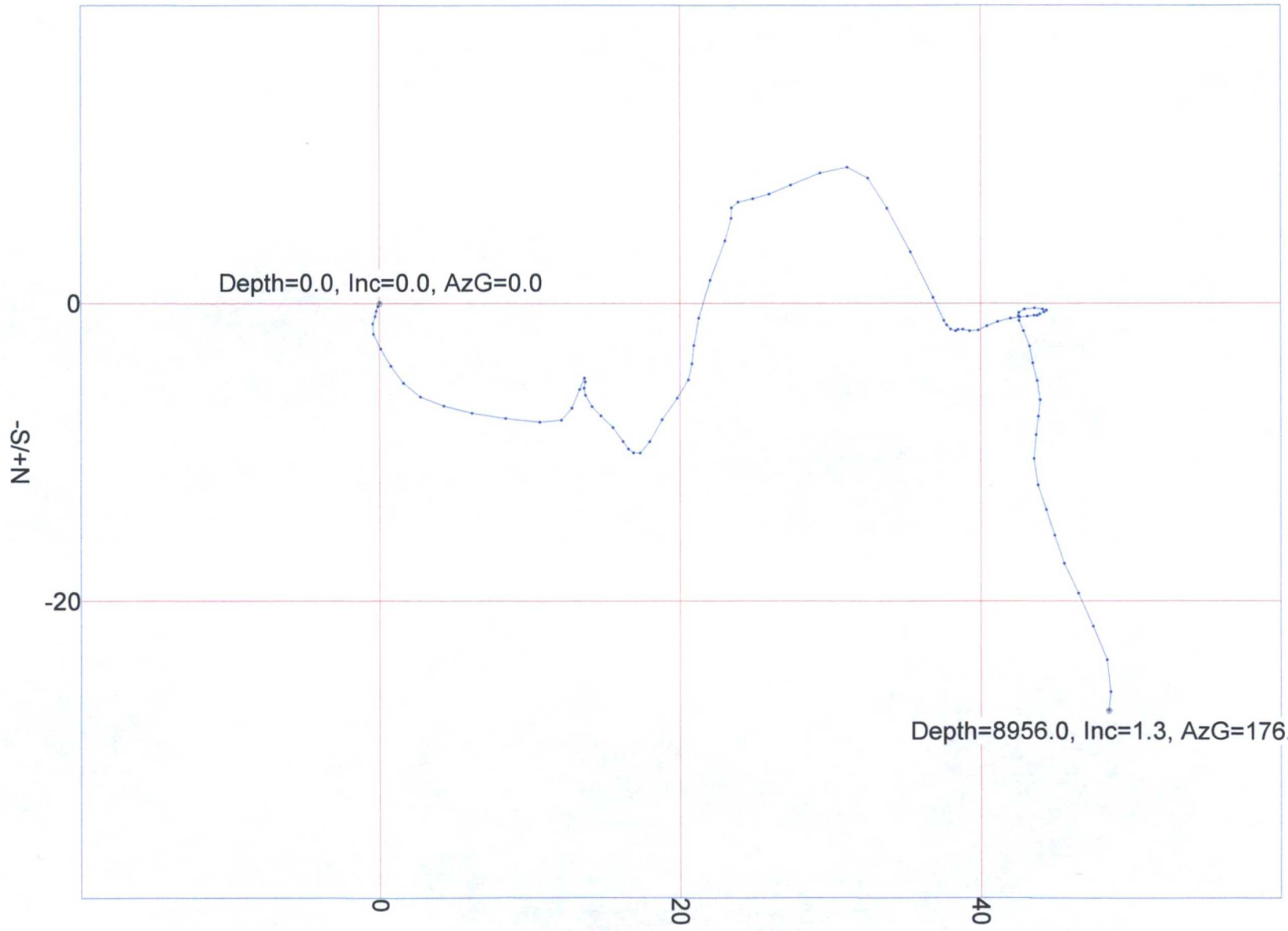
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	0.11	37.60	1699.84	-5.02	13.67	-5.02	14.56	110.18	0.74
1800.00	0.38	181.02	1799.84	-5.27	13.72	-5.27	14.70	111.03	0.47
1900.00	0.14	222.54	1899.84	-5.70	13.63	-5.70	14.77	112.68	0.29
2000.00	0.49	154.00	1999.84	-6.17	13.73	-6.17	15.05	114.19	0.45
2100.00	0.51	148.41	2099.83	-6.93	14.15	-6.93	15.76	116.09	0.05
2200.00	0.50	124.23	2199.83	-7.55	14.75	-7.55	16.57	117.12	0.21
2300.00	0.80	140.94	2299.82	-8.35	15.55	-8.35	17.65	118.22	0.35
2400.00	0.51	151.47	2399.82	-9.28	16.21	-9.28	18.68	119.80	0.31
2500.00	0.22	131.76	2499.82	-9.80	16.56	-9.80	19.24	120.61	0.32
2600.00	0.27	122.31	2599.82	-10.05	16.90	-10.05	19.66	120.74	0.06
2700.00	0.32	65.57	2699.81	-10.06	17.35	-10.06	20.06	120.10	0.28
2800.00	0.85	30.23	2799.81	-9.30	17.99	-9.30	20.25	117.34	0.62
2900.00	1.09	28.35	2899.79	-7.82	18.81	-7.82	20.37	112.57	0.24
3000.00	0.93	41.97	2999.78	-6.38	19.81	-6.38	20.81	107.85	0.28
3100.00	0.76	17.69	3099.77	-5.14	20.55	-5.14	21.19	104.04	0.40
3200.00	0.52	4.68	3199.76	-4.06	20.79	-4.06	21.18	101.04	0.28
3300.00	0.90	7.79	3299.75	-2.83	20.94	-2.83	21.13	97.69	0.38
3400.00	1.24	11.69	3399.74	-0.99	21.26	-0.99	21.28	92.67	0.35
3500.00	1.81	19.80	3499.70	1.55	22.01	1.55	22.07	85.98	0.61
3600.00	1.42	21.37	3599.66	4.18	23.00	4.18	23.37	79.70	0.39
3700.00	0.42	356.98	3699.65	5.70	23.43	5.70	24.11	76.33	1.05
3800.00	0.38	4.34	3799.64	6.40	23.43	6.40	24.29	74.74	0.07
3900.00	0.48	82.33	3899.64	6.78	23.87	6.78	24.81	74.15	0.54
4000.00	0.67	72.81	3999.64	7.01	24.84	7.01	25.81	74.25	0.22
4100.00	0.64	75.37	4099.63	7.32	25.94	7.32	26.95	74.24	0.04
4200.00	1.14	62.26	4199.62	7.93	27.36	7.93	28.49	73.85	0.54
4300.00	1.29	72.13	4299.60	8.74	29.32	8.74	30.59	73.41	0.26
4400.00	0.83	86.78	4399.58	9.12	31.12	9.12	32.43	73.66	0.53
4500.00	1.16	139.66	4499.57	8.39	32.50	8.39	33.57	75.53	0.94
4600.00	1.59	153.64	4599.54	6.38	33.77	6.38	34.37	79.31	0.54
4700.00	2.22	150.93	4699.48	3.45	35.33	3.45	35.50	84.43	0.64
4800.00	1.70	157.51	4799.42	0.39	36.84	0.39	36.84	89.40	0.56
4900.00	0.25	137.63	4899.41	-1.15	37.55	-1.15	37.57	91.76	1.47
5000.00	0.17	169.04	4999.40	-1.46	37.73	-1.46	37.76	92.22	0.14
5100.00	0.31	119.81	5099.40	-1.74	38.00	-1.74	38.04	92.62	0.24
5200.00	0.10	72.71	5199.40	-1.85	38.32	-1.85	38.37	92.77	0.26
5300.00	0.12	54.04	5299.40	-1.76	38.49	-1.76	38.53	92.62	0.04
5400.00	0.28	100.40	5399.40	-1.75	38.81	-1.75	38.85	92.58	0.21
5500.00	0.27	108.19	5499.40	-1.86	39.27	-1.86	39.31	92.71	0.04

VES Survey Date: 12/17/2015

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
5600.00	0.44	70.01	5599.40	-1.80	39.85	-1.80	39.89	92.59	0.28
5700.00	0.29	54.70	5699.40	-1.52	40.42	-1.52	40.44	92.16	0.18
5800.00	0.59	74.18	5799.39	-1.24	41.12	-1.24	41.14	91.72	0.33
5900.00	0.45	76.61	5899.39	-1.01	42.00	-1.01	42.01	91.37	0.14
6000.00	0.26	93.21	5999.39	-0.93	42.60	-0.93	42.61	91.25	0.21
6100.00	0.31	76.53	6099.39	-0.88	43.10	-0.88	43.11	91.17	0.10
6200.00	0.22	90.43	6199.39	-0.82	43.56	-0.82	43.57	91.07	0.11
6300.00	0.03	89.03	6299.39	-0.82	43.77	-0.82	43.78	91.07	0.19
6400.00	0.20	56.73	6399.39	-0.72	43.94	-0.72	43.95	90.94	0.18
6500.00	0.16	72.45	6499.39	-0.58	44.22	-0.58	44.22	90.75	0.07
6600.00	0.10	28.82	6599.39	-0.47	44.39	-0.47	44.39	90.60	0.11
6700.00	0.08	207.57	6699.39	-0.46	44.40	-0.46	44.40	90.59	0.18
6800.00	0.31	299.57	6799.38	-0.39	44.13	-0.39	44.13	90.50	0.33
6900.00	0.35	258.91	6899.38	-0.31	43.59	-0.31	43.59	90.41	0.23
7000.00	0.42	266.62	6999.38	-0.39	42.92	-0.39	42.92	90.53	0.08
7100.00	0.25	182.01	7099.38	-0.64	42.55	-0.64	42.55	90.86	0.47
7200.00	0.03	285.03	7199.38	-0.85	42.52	-0.85	42.53	91.14	0.26
7300.00	0.38	168.43	7299.38	-1.17	42.56	-1.17	42.58	91.57	0.39
7400.00	0.50	148.47	7399.38	-1.86	42.85	-1.86	42.89	92.48	0.19
7500.00	0.78	164.25	7499.37	-2.88	43.26	-2.88	43.36	93.81	0.33
7600.00	0.53	178.20	7599.36	-4.00	43.46	-4.00	43.65	95.26	0.30
7700.00	0.90	158.98	7699.35	-5.19	43.76	-5.19	44.07	96.77	0.43
7800.00	0.65	188.32	7799.35	-6.48	43.96	-6.48	44.43	98.39	0.46
7900.00	0.63	183.99	7899.34	-7.59	43.84	-7.59	44.49	99.83	0.05
8000.00	0.80	188.52	7999.33	-8.83	43.70	-8.83	44.58	101.43	0.17
8100.00	1.05	182.98	8099.32	-10.44	43.55	-10.44	44.78	103.48	0.27
8200.00	1.06	160.12	8199.30	-12.23	43.81	-12.23	45.49	105.59	0.42
8300.00	0.92	162.65	8299.29	-13.87	44.37	-13.87	46.48	107.36	0.14
8400.00	1.15	161.73	8399.27	-15.59	44.92	-15.59	47.55	109.14	0.23
8500.00	1.13	161.07	8499.25	-17.48	45.56	-17.48	48.80	110.99	0.02
8600.00	1.41	149.76	8599.23	-19.48	46.50	-19.48	50.41	112.73	0.37
8700.00	1.40	162.82	8699.20	-21.71	47.48	-21.71	52.21	114.57	0.32
8800.00	1.41	153.08	8799.17	-23.97	48.40	-23.97	54.01	116.35	0.24
8900.00	1.28	196.06	8899.14	-26.14	48.65	-26.14	55.22	118.25	0.99
8956.00	1.34	176.27	8955.13	-27.39	48.52	-27.39	55.71	119.45	0.81

VES Survey Date: 12/17/2015

VES Survey International
Midland, Texas
432-563-5444
Surveyor: Adam Askew
Eata Fajita State No 013H / API 30-025-42487



VES Survey Date: 12/17/2015

CONCHO

COG Operating LLC.

Lea County, NM
Eata Fajita State
#13H

OH

Survey: MWD #1

Survey Report - Geographic

29 December, 2015

CONCHO

Wellplanning

Survey Report - Geographic

Company:	COG Operating LLC.	**Local Co-ordinate Reference:**	Well #13H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Well:	#13H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project	Lea County, NM		
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	Eata Fajita State				
Site Position:		**Northing:**	446,468.40 usft	**Latitude:**	32° 13' 31.198 N
From:	Map	**Easting:**	726,689.60 usft	**Longitude:**	103° 36' 0.988 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.39 °

Well	#13H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	446,463.90 usft	**Latitude:**	32° 13' 31.087 N
	+E/-W	0.0 usft	**Easting:**	727,679.80 usft	**Longitude:**	103° 35' 49.461 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,584.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	12/1/2015	7.13	60.08	48,094

Design	OH				
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	4.40

Survey Program **Date** 12/29/2015

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
100.0	8,956.0	GYRO (OH)	NS-GYRO-SS	NS Gyro single shots
9,031.0	14,250.0	MWD #1 (OH)	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**
8,956.0	1.34	176.27	8,955.1	-27.4	48.5	446,436.52	727,728.32	32° 13' 30.812 N	103° 35' 48.899 W
9,031.0	4.20	32.80	9,030.1	-25.9	50.1	446,437.95	727,729.87	32° 13' 30.827 N	103° 35' 48.880 W
9,062.0	10.20	33.50	9,060.8	-22.7	52.2	446,441.20	727,732.00	32° 13' 30.859 N	103° 35' 48.855 W
9,094.0	13.70	32.10	9,092.1	-17.1	55.8	446,446.77	727,735.58	32° 13' 30.913 N	103° 35' 48.813 W
9,125.0	16.70	28.70	9,122.0	-10.1	59.9	446,453.79	727,739.67	32° 13' 30.983 N	103° 35' 48.765 W
9,172.0	19.20	26.80	9,166.7	2.7	66.6	446,466.62	727,746.40	32° 13' 31.109 N	103° 35' 48.686 W
9,219.0	20.80	24.10	9,210.9	17.2	73.5	446,481.13	727,753.29	32° 13' 31.252 N	103° 35' 48.604 W
9,250.0	24.30	22.80	9,239.5	28.1	78.2	446,492.04	727,758.01	32° 13' 31.360 N	103° 35' 48.549 W
9,282.0	28.80	21.60	9,268.1	41.4	83.6	446,505.28	727,763.40	32° 13' 31.491 N	103° 35' 48.485 W
9,313.0	33.40	20.30	9,294.7	56.3	89.3	446,520.24	727,769.11	32° 13' 31.638 N	103° 35' 48.417 W
9,360.0	40.60	21.90	9,332.2	82.7	99.5	446,546.59	727,779.32	32° 13' 31.898 N	103° 35' 48.296 W

Company:	COG Operating LLC.	**Local Co-ordinate Reference:**	Well #13H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Well:	#13H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,407.0	47.00	24.20	9,366.1	112.6	112.3	446,576.49	727,792.08	32° 13' 32.193 N	103° 35' 48.145 W
9,454.0	50.60	26.40	9,397.1	144.5	127.4	446,608.45	727,807.21	32° 13' 32.508 N	103° 35' 47.967 W
9,501.0	55.20	24.40	9,425.4	178.4	143.5	446,642.31	727,823.26	32° 13' 32.842 N	103° 35' 47.777 W
9,548.0	60.60	21.80	9,450.4	215.0	159.1	446,678.92	727,838.85	32° 13' 33.204 N	103° 35' 47.593 W
9,595.0	64.60	19.90	9,472.0	254.0	173.9	446,717.91	727,853.69	32° 13' 33.588 N	103° 35' 47.417 W
9,630.0	69.20	18.30	9,485.7	284.4	184.4	446,748.33	727,864.21	32° 13' 33.889 N	103° 35' 47.292 W
9,689.0	72.10	18.20	9,505.3	337.3	201.8	446,801.19	727,881.64	32° 13' 34.411 N	103° 35' 47.085 W
9,720.0	76.80	17.50	9,513.6	365.7	211.0	446,829.61	727,890.79	32° 13' 34.691 N	103° 35' 46.976 W
9,783.0	81.60	17.60	9,525.4	424.7	229.7	446,888.59	727,909.45	32° 13' 35.274 N	103° 35' 46.754 W
9,854.0	82.30	16.20	9,535.3	492.0	250.1	446,955.86	727,929.88	32° 13' 35.938 N	103° 35' 46.511 W
9,885.0	85.90	14.70	9,538.5	521.7	258.3	446,985.57	727,938.10	32° 13' 36.231 N	103° 35' 46.413 W
9,979.0	91.80	14.20	9,540.4	612.6	281.7	447,076.54	727,961.54	32° 13' 37.130 N	103° 35' 46.133 W
10,073.0	90.70	12.80	9,538.3	704.0	303.7	447,167.92	727,983.47	32° 13' 38.033 N	103° 35' 45.870 W
10,167.0	90.40	12.70	9,537.4	795.7	324.4	447,259.59	728,004.22	32° 13' 38.939 N	103° 35' 45.621 W
10,262.0	88.10	9.10	9,538.7	889.0	342.4	447,352.85	728,022.18	32° 13' 39.860 N	103° 35' 45.405 W
10,356.0	87.80	8.10	9,542.1	981.8	356.4	447,445.73	728,036.22	32° 13' 40.778 N	103° 35' 45.234 W
10,450.0	89.10	4.90	9,544.6	1,075.2	367.1	447,539.08	728,046.86	32° 13' 41.701 N	103° 35' 45.102 W
10,544.0	89.30	5.00	9,545.9	1,168.8	375.2	447,632.72	728,054.97	32° 13' 42.627 N	103° 35' 45.001 W
10,638.0	90.10	2.70	9,546.4	1,262.6	381.5	447,726.50	728,061.28	32° 13' 43.555 N	103° 35' 44.920 W
10,732.0	90.10	3.00	9,546.2	1,356.5	386.2	447,820.38	728,065.95	32° 13' 44.484 N	103° 35' 44.858 W
10,826.0	93.80	3.00	9,543.0	1,450.3	391.1	447,914.18	728,070.87	32° 13' 45.412 N	103° 35' 44.793 W
10,920.0	92.30	359.70	9,538.0	1,544.1	393.3	448,008.01	728,073.08	32° 13' 46.340 N	103° 35' 44.760 W
11,014.0	92.20	359.00	9,534.3	1,638.0	392.2	448,101.93	728,072.01	32° 13' 47.269 N	103° 35' 44.765 W
11,109.0	88.40	357.70	9,533.8	1,733.0	389.5	448,196.87	728,069.28	32° 13' 48.209 N	103° 35' 44.789 W
11,203.0	90.00	357.90	9,535.2	1,826.9	385.9	448,290.79	728,065.67	32° 13' 49.139 N	103° 35' 44.823 W
11,297.0	92.50	358.90	9,533.1	1,920.8	383.3	448,384.72	728,063.05	32° 13' 50.068 N	103° 35' 44.846 W
11,391.0	90.20	358.80	9,530.9	2,014.8	381.4	448,478.67	728,061.16	32° 13' 50.998 N	103° 35' 44.861 W
11,485.0	89.20	359.10	9,531.4	2,108.8	379.6	448,572.65	728,059.44	32° 13' 51.928 N	103° 35' 44.873 W
11,579.0	89.70	359.40	9,532.3	2,202.7	378.4	448,666.64	728,058.21	32° 13' 52.858 N	103° 35' 44.880 W
11,673.0	89.00	359.90	9,533.4	2,296.7	377.8	448,760.63	728,057.63	32° 13' 53.788 N	103° 35' 44.879 W
11,767.0	89.30	359.90	9,534.7	2,390.7	377.7	448,854.62	728,057.47	32° 13' 54.719 N	103° 35' 44.874 W
11,861.0	89.60	0.10	9,535.7	2,484.7	377.7	448,948.62	728,057.47	32° 13' 55.649 N	103° 35' 44.866 W
11,955.0	89.50	0.10	9,536.4	2,578.7	377.8	449,042.61	728,057.63	32° 13' 56.579 N	103° 35' 44.857 W
12,049.0	90.20	0.30	9,536.6	2,672.7	378.2	449,136.61	728,057.96	32° 13' 57.509 N	103° 35' 44.846 W
12,143.0	87.90	0.00	9,538.2	2,766.7	378.4	449,230.59	728,058.21	32° 13' 58.439 N	103° 35' 44.835 W
12,238.0	87.80	0.00	9,541.8	2,861.6	378.4	449,325.52	728,058.21	32° 13' 59.378 N	103° 35' 44.828 W
12,332.0	87.80	0.20	9,545.4	2,955.6	378.6	449,419.45	728,058.37	32° 14' 0.308 N	103° 35' 44.818 W
12,426.0	88.20	0.20	9,548.6	3,049.5	378.9	449,513.40	728,058.70	32° 14' 1.237 N	103° 35' 44.807 W
12,520.0	88.50	0.60	9,551.4	3,143.5	379.6	449,607.36	728,059.36	32° 14' 2.167 N	103° 35' 44.792 W
12,614.0	88.30	0.10	9,554.0	3,237.4	380.1	449,701.32	728,059.93	32° 14' 3.097 N	103° 35' 44.778 W
12,709.0	90.10	1.20	9,555.3	3,332.4	381.2	449,796.30	728,061.01	32° 14' 4.037 N	103° 35' 44.757 W
12,803.0	90.60	0.50	9,554.7	3,426.4	382.6	449,890.28	728,062.40	32° 14' 4.967 N	103° 35' 44.734 W
12,897.0	90.60	0.40	9,553.7	3,520.4	383.3	449,984.27	728,063.14	32° 14' 5.897 N	103° 35' 44.718 W
12,991.0	90.50	0.60	9,552.8	3,614.4	384.2	450,078.27	728,063.96	32° 14' 6.827 N	103° 35' 44.700 W
13,085.0	91.30	1.10	9,551.4	3,708.3	385.6	450,172.24	728,065.35	32° 14' 7.757 N	103° 35' 44.677 W
13,179.0	90.00	0.10	9,550.3	3,802.3	386.5	450,266.23	728,066.34	32° 14' 8.687 N	103° 35' 44.658 W
13,273.0	90.40	359.80	9,550.0	3,896.3	386.5	450,360.23	728,066.26	32° 14' 9.617 N	103° 35' 44.651 W
13,367.0	91.10	0.00	9,548.7	3,990.3	386.3	450,454.22	728,066.09	32° 14' 10.547 N	103° 35' 44.646 W
13,461.0	87.10	358.60	9,550.2	4,084.3	385.1	450,548.18	728,064.95	32° 14' 11.477 N	103° 35' 44.651 W
13,555.0	86.80	358.10	9,555.2	4,178.1	382.4	450,642.01	728,062.24	32° 14' 12.405 N	103° 35' 44.675 W
13,649.0	84.30	357.00	9,562.5	4,271.7	378.4	450,735.63	728,058.24	32° 14' 13.332 N	103° 35' 44.715 W
13,743.0	88.60	358.80	9,568.3	4,365.5	375.0	450,829.36	728,054.81	32° 14' 14.260 N	103° 35' 44.747 W
13,838.0	89.30	358.80	9,570.1	4,460.4	373.0	450,924.32	728,052.82	32° 14' 15.200 N	103° 35' 44.763 W
13,932.0	90.10	359.20	9,570.6	4,554.4	371.4	451,018.31	728,051.18	32° 14' 16.130 N	103° 35' 44.774 W
14,026.0	90.00	359.20	9,570.5	4,648.4	370.1	451,112.30	728,049.86	32° 14' 17.060 N	103° 35' 44.782 W

Company:	COG Operating LLC.	**Local Co-ordinate Reference:**	Well #13H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3610.0usft (Original Well Elev)
Well:	#13H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,120.0	90.00	359.30	9,570.5	4,742.4	368.8	451,206.29	728,048.63	32° 14' 17.990 N	103° 35' 44.789 W
14,192.0	90.30	359.40	9,570.3	4,814.4	368.0	451,278.28	728,047.82	32° 14' 18.703 N	103° 35' 44.792 W
14,250.0	90.30	359.40	9,570.0	4,872.4	367.4	451,336.28	728,047.21	32° 14' 19.277 N	103° 35' 44.795 W
PBHL(EF#13H)									

Checked By: _____ Approved By: _____ Date: _____