30-025-41201

OCD - HOBBS 07/26/2016 RECEIVED



January 20, 2016

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

Attn: Kanicia Castillo

RE: Goose State No 002H

Please find enclosed a copy of the survey from 0' to 10,645' ran on the above referenced well.

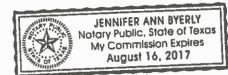
Sincere Keith Havelka Operations

STATE OF TEXAS § § COUNTY OF NUECES §

This instrument was acknowledged before me on the day of A.D., 2016, by Keith Havelka.

nn Byerly ary 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



				Company: Concho Lease/Well: Goose State No/002H	oncho State No/002H				
		D	Rlg Stat Latitude: Grid North Grid Co		Name: Independence 205 e/County: New Mexico/Lea VS-Azi: 0.00 Degrees 32.53625, Longitude: -103.58946 = True North -0.40 degs (NAD 27) orrection Applied = -0.40 degs	×.	H	SURVEY	SURVEY
				Depth Reference : RKB = 26 Foot	KB = 26 Foot				
			DRIL FII	DRILLOG HA GYRO SURVEY CALCULATIONS Filename:e state com 2h_gyro survey.ut Minimum Curvature Method Report Date/Time: 1/20/2016 / 14:03	EY CALCULATIONS 2h_gyro survey.ut rre Method 20/2016 / 14:03				
			ĕ	VES Survey International West Texas (432) 563-5444 Surveyor: Gene Heiss Goose State No 002H / API 30-025-41201	rnational as 444 e Heiss API 30-025-41201				
Measured	Incl	Drift				Vertical	Closure	Closure	Doalea
Depth	Angle	Direction	0VT	S-/N+	+E/-W	Section	Distance	Direction	Severity
FT	Deg	Deg	F	H	FI	Ħ	FI	Deg	Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	***
100.00	0.27	18.99	100.00	0.22	0.08	0.22	0.23	18.99	0.27
200.00	0.51	42.59	200.00	0.77	0.46	0.77	0.89	30.57	0.29
300.00	0.51	66.33	299.99	1.28	1.16	1.28	1.73	42.32	0.21
400.00	0.34	88.85	399.99	1.46	1.86	1.46	2.37	51.88	0.24
500.00	0.76	90.96	499.99	1.46	2.82	1.46	3.17	62.64	0.42
600.00	0.48	63.39	599.98	1.70	3.81	1.70	4.17	66.01	0.47
700.00	0.21	72.01	699.98	2.01	4.33	2.01	4.77	65.14	0.29
800.00 900.00	0.39 0.39	61.77	799.98 899.97	2.17 2.43	4.98 5.76	2.17 2.43	6.25 6.25	66.51 67.13	0.35 0.21
1000 00	0.13	36 36	000	2 68	5	526	60	80 98	000
1100.00	0.03	29.03	1099.97	2.80	6.20	2 80	0.02 6.81	65.72	000
1200.00	0.28	11.79	1199.97	3.07	6.27	3.07	6.98	63.93	0.25
1300.00	0.27	2.91	1299.97	3.55	6.33	3.55	7.26	60.76	0.04
1400.00	0.56	2.61	1399.97	4.27	6.37	4.27	7.67	56.13	0.29
1500.00	0.39	307.04	1499.96	4.97	6.12	4.97	7.88	50.91	0.47
1600.00	0.54	311.12	1599.96	5.49	5,49	5.49	7.76	45.03	0.15
				Page 1 of 4	4				
				VES Survey Date: 1/15/2016	: 1/15/2016				

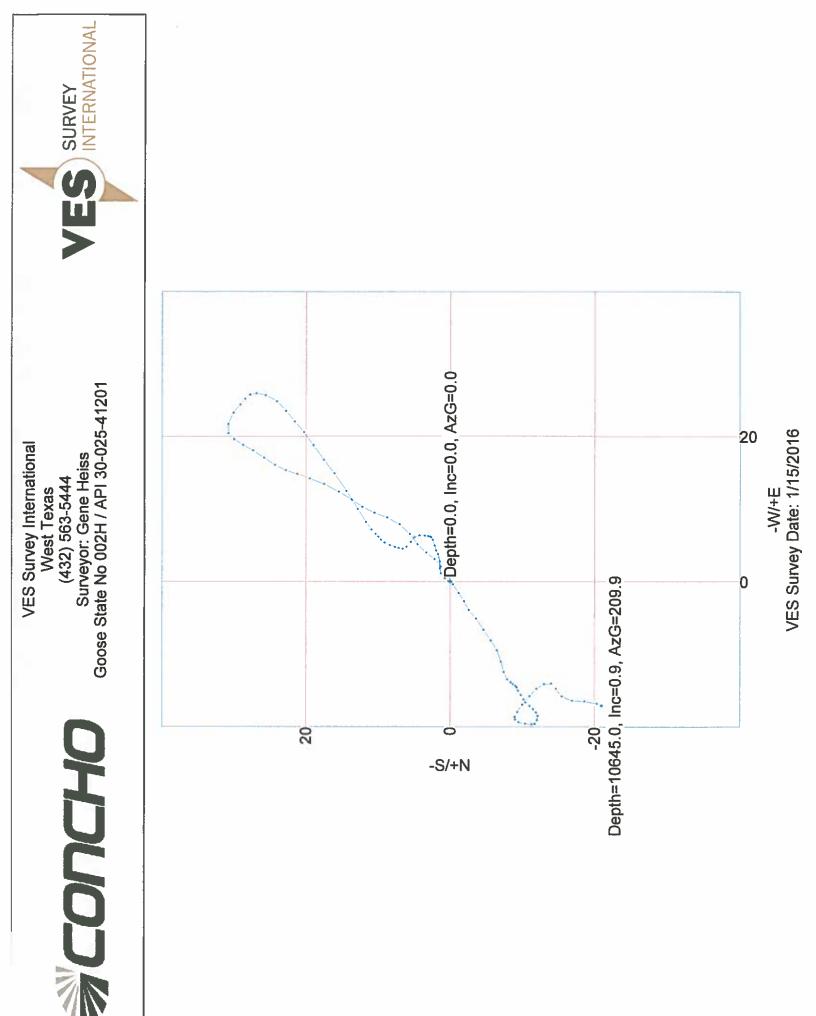
Measured	Incl	Drift				Vertical	Closure	Closure	Dogleg
Depth	Angle	Direction	۵۸L	S-IN+	+E/-W	Section	Distance	Direction	Severity
E	Deg	Deg	F	E	H	E	E	Deg	Deg/100
1700.00	0.47	310.88	1699.96	6.06	4.83	6.06	7.75	38.52	0.07
1800.00	0.34	4.25	1799.95	6.62	4.54	6.62	8.03	34.42	0.38
1900.00	0.31	17.52	1899.95	7.17	4.64	7.17	8.54	32.91	0.08
2000.00	0.32	11.52	1999.95	7.70	4.78	7.70	9.06	31.81	0.04
2100.00	0.55	23,91	2099.95	8,42	5.03	8.42	0.80	30.85	0.24
2200.00	0.37	31.49	2199.95	9.13	5.39	9.13	10.60	30.56	0.18
2300.00	0.37	46.49	2299.94	9.63	5.80	9.63	11.24	31.04	0.10
2400.00	0.24	54.87	2399.94	9.98	6.20	9.98	11.75	31.87	0.14
2500.00	0.40	40.67	2499.94	10.36	6.60	10.36	12.28	32.50	0.18
2600.00	0.52	49.42	2599.94	10.92	7.17	10.92	13.06	33.29	0.13
2700.00	1.00	56.08	2699.93	11.70	8.24	11.70	14.31	35.14	0.49
2800.00	1.41	59.10	2799.91	12.82	10.02	12.82	16.27	38.00	0.41
2900.00	1.96	56.73	2899.86	14.39	12.50	14.39	19.06	40.98	0.55
3000.00	1.41	53.09	2999.82	16.06	14.91	16.06	21.92	42.87	0.55
3100.00	1.35	50.91	3099.79	17.55	16.81	17.55	24.30	43.77	0.08
3200.00	1.45	57.49	3199.76	18.97	18.79	18.97	26.71	44.73	0.19
3300.00	1.11	49.64	3299.73	20.28	20.60	20.28	28.91	45.45	0.38
3400.00	1.14	46.35	3399.72	21.60	22.06	21.60	30.87	45.60	0.07
3600.00	1.05	54.45	3499.70	22.82	23.53	22.82	32.77	45.87	0.18
3600.00	1.08	38.86	3599.68	24.09	24.87	24.09	34.62	45.91	0.29
3700.00	1.01	14.95	3699.66	25.68	25.69	25.68	36.32	45.01	0.44
3800.00	0.47	6.55	3799.65	26.94	25.96	26,94	37.42	43.94	0.54
3900.00	0.60	331.68	3899.65	27.82	25.76	27.82	37.91	42.80	0.34
4000.00	0.44	304.31	3999,65	28,50	25.19	28.50	38.04	41.48	0.29
4100.00	0.76	313.60	4099.64	29.17	24.40	29.17	38.03	39.91	0.33
4200.00	0.90	305.26	4199.63	30.08	23.28	30.08	38.03	37.74	0.19
4300.00	1.10	287.01	4299.62	30.81	21.72	30.81	37.70	35.18	0.37
4400.00	0.51	231.61	4399.61	30.82	20.45	30.82	36.99	33.57	0.91
4500.00	0.85	219.96	4499.60	29.97	19.62	29.97	35.82	33.22	0.37
4600.00	0.78	207.94	4599.59	28.80	18.83	28.80	34.41	33.17	0.19
4700.00	1.05	209.91	4699.58	27.41	18.05	27.41	32.82	33.37	0.28
4800.00	1.05	214.90	4799.56	25.86	17.07	25.86	30.99	33.43	0.09
4900.00	1.00	212.23	4899.54	24.37	16.08	24.37	29.20	33.42	0.07
5000.00	0.96	198.48	4999.53	22.84	15.35	22.84	27.52	33.91	0.24
5100.00	0.97	197.94	5099.52	21.24	14.83	21.24	25.90	34.91	0.01
5200.00	1.17	199.63	5199.50	19.48	14.22	19.48	24.12	36.14	0.20
5300.00	1.25	203.15	5299.48	17.51	13.45	17.51	22.08	37.53	0.11
5400.00	1.45	209.78	5399.45	15.41	12.39	15.41	19.78	38.81	0.25
5500.00	0.96	214.54	5499.43	13.62	11.29	13.62	17.69	39.65	0.60
				Page 2 of 4	4				
				VES Survey Date: 1/15/2016	1/15/2016				

Math Math </th <th>Measured</th> <th>Incl Ande</th> <th>Direction</th> <th></th> <th>ANI. C</th> <th>TEL M</th> <th>Contion</th> <th>Distance</th> <th>Dimotion</th> <th>Concertion</th>	Measured	Incl Ande	Direction		ANI. C	TEL M	Contion	Distance	Dimotion	Concertion
und und v <th></th> <th>aißir</th> <th></th> <th>2 1</th> <th></th> <th></th> <th>Cacuol</th> <th></th> <th>Direcuoli</th> <th>Savering T</th>		aißir		2 1			Cacuol		Direcuoli	Savering T
	Ĩ	neg	neg	ī	Ĩ	Ĩ	-	-	Deg	Deg/100
	5600.00	1.07	214.43	5599.41	12.16	10.29	12.16	15.93	40.22	0.11
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5700.00	1.05	197.29	5699.39	10.52	9.49	10.52	14.17	42.05	0.32
1/1 2(5) 980.3 7.04 7.08 7.04 0.05 6.3 10 223.6 980.3 5.0 5.0 6.0 6.3 6.4 6.3 10 223.6 980.3 5.0 5.0 5.0 6.0 6.3 6.4 6.8 6.8 </td <td>5800.00</td> <td>1.10</td> <td>202.77</td> <td>5799.38</td> <td>8.76</td> <td>8.84</td> <td>8.76</td> <td>12.45</td> <td>45.27</td> <td>0.11</td>	5800.00	1.10	202.77	5799.38	8.76	8.84	8.76	12.45	45.27	0.11
	5900.00	1.17	215.19	5899.36	7.04	7.88	7.04	10.56	48.24	0.26
10 232.6 600.2 4.64 5.77 4.64 5.29 9.46 0.7 232.6 600.2 2.30 0.00.2 2.3 0.00 2.3 0.7 232.6 600.2 2.3 0.00 2.3 0.00 0.01 0.01 0.7 232.6 600.2 0.02 0.12 0.02 0.01 0.02 0.01 0.7 232.6 600.2 0.02 0.12 0.02 0.02 0.01	6000.00	1.04	231.86	5999.34	5.64	6.57	5.64	8.66	49.39	0.35
074 272.06 049.31 3.33 4.03 3.33 6.04 074 23.070 699.30 1.33 2.13 2.23 60.43 074 23.070 699.30 1.33 2.13 2.26 60.43 074 23.070 699.30 1.33 2.13 2.26 60.43 0.87 23.040 699.30 1.13 2.13 2.13 2.13 2.13 0.87 23.040 699.32 1.13 2.16 1.13 2.16 2.16 2.16 0.87 23.040 699.32 1.13 2.16 1.13 2.16 2.16 2.16 0.86 23.040 699.23 2.16 7.04 2.16	6100.00	1.00	232.65	6099.32	4.54	5.17	4.54	6.88	48.65	0.05
0.73 235,02 639,30 1,31 2,13 2,32 5,01 0.71 235,70 699,23 1,33 2,13 2,32 5,01 0.77 236,50 699,23 1,33 2,13 1,33 5,61 0.71 246,50 699,23 1,12 1,12 1,12 1,13 2,13 2,63 0.71 246,50 699,23 1,12 1,12 1,12 1,13 2,13 2,64 0.71 246,50 799,23 1,12 2,14 7,14 2,16 2,23 0.72 24,01 799,13 2,46 6,07 2,63 2,64 1.74 24,01 7,99 7,41 7,41 2,64 2,66 2,66	6200.00	0.94	212.95	6199.31	3.33	4.03	3.33	5.22	50.42	0.34
0.79 233.70 690.20 1.31 2.12 1.32 2.00 57.91 0.71 223.65 690.27 0.125 0.13 0.12 0.13 0.10 65.35 0.71 227.65 690.27 0.13 0.13 0.12 0.10 65.35 0.71 27.65 690.25 -1.32 -3.06 -1.32 -2.06 2.03 0.76 27.66 -1.32 -3.07 -1.32 -2.67 -2.66	6300.00	0.73	225.02	6299.30	2.19	3.13	2.19	3.82	55.01	0.27
	6400.00	0.79	233.70	6399.29	1.33	2.12	1.33	2.50	57.91	0.13
	6500.00	0.94	232.67	6499.28	0.42	0.91	0.42	1.00	65.25	0.15
	6600.00	0.77	246.63	6599.27	-0.35	-0.36	-0.35	0.50	226.16	0.27
071 26,64 679,25 -1,8 2,7 -1,8 2,3 3,3 2,3 2,3	6700.00	0.87	227.63	6699.26	-1.12	-1.54	-1.12	1.90	233.83	0.29
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6800.00	0.71	246.54	6799.25	-1.88	-2.67	-1.88	3.26	234.81	0.30
0.96 24.06 699.2 -5.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.52 -6.07 -3.51 -6.07 -3.51 -6.07 -3.61 -1.17 -2.55.36 -2.55.36 -2.55.36 -2.50 -2.51	6900.00	0.85	237.88	6899.24	-2.52	-3.86	-2.52	4.61	236.87	0.18
1.26 $2.4.06$ 709.21 4.60 6.61 9.07 $2.5.0$ 1.16 $2.23.00$ 739.16 6.47 9.47 6.47 1.17 $2.5.5.6$ 1.16 $2.43.7$ 739.16 7.71 $1.1.02$ 7.761 1.47 $2.5.5.6$ 0.87 $2.795.16$ 7.791 $1.1.02$ 7.71 $1.1.07$ $2.25.56$ 0.87 $2.81.56$ $7.99.14$ 9.74 $1.1.02$ 7.71 $1.2.47$ 7.741 $1.4.51$ $2.20.2$ 0.24 $2.20.12$ 7790.14 9.70 $1.4.16$ 8.70 $1.6.02$ $2.20.2$ 0.24 $2.20.12$ 7790.14 9.70 $1.4.16$ 8.70 $1.6.02$ $2.20.2$ 0.24 $2.20.12$ 799.14 9.70 $1.4.16$ 8.70 $2.20.2$ 0.24 $2.20.12$ 799.14 9.70 $1.4.16$ $2.27.2$ 0.24 $0.24.110$ $1.1.26$ $2.14.16$ <t< td=""><td>7000.00</td><td>0.96</td><td>224.08</td><td>6999.22</td><td>-3.52</td><td>-5.07</td><td>-3.52</td><td>6.17</td><td>236.27</td><td>0.24</td></t<>	7000.00	0.96	224.08	6999.22	-3.52	-5.07	-3.52	6.17	236.27	0.24
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7100.00	1.25	244.05	7099.21	-4.60	-6.64	-4.60	8.07	236.30	0.48
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7200.00	0.84	223.00	7199.19	-5.61	-8.12	-5.61	9.87	235.36	0.56
0.86 251.69 739.16 -7.01 -11.02 -7.01 13.07 237.53 0.87 257.42 7499.16 -7.41 -12.47 -7.41 14.51 239.27 0.48 218.96 7.41 -7.41 -7.41 -7.41 239.27 0.48 216.96 789.14 -7.90 -13.47 -7.41 -16.72 239.39 0.24 220.12 7999.14 -9.70 -14.36 -9.03 16.21 239.39 0.22 206.11 7999.14 -9.70 -14.36 -9.24 17.72 237.82 0.23 265.93 999.14 -9.24 -14.38 -9.24 17.72 237.82 0.20 220.28 999.14 -9.14 -16.01 17.72 237.82 0.23 265.91 -10.47 -16.64 -10.47 17.72 237.82 0.24 220.28 8999.13 -11.64 -17.20	7300.00	1.04	249.57	7299.18	-6.47	-9.47	-6.47	11.47	235.68	0.47
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7400.00	0.85	251.69	7399.16	-7.01	-11.02	-7.01	13.07	237.53	0.19
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7500.00	0.87	257.42	7499.15	-7.41	-12.47	-7.41	14.61	239.27	0.09
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7600.00	0.48	218.96	7599.14	-7.90	-13,48	-7.90	15.63	239.61	0.58
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7700.00	0.24	220.11	7699.14	-8.39	-13.87	-8.39	16.21	238.85	0.24
$ \begin{array}{lcccccccccccccccccccccccccccccccccccc$	7800.00	0.24	220.12	7799.14	-8.70	-14.14	-8.70	16.60	238.39	0.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7900.00	0.22	206.11	7899.14	-9.03	-14.36	-9.03	16.96	237.82	0.06
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	8000.00	0.16	255.45	7899.14	-9.24	-14.58	-9.24	17.26	237.63	0.17
0.50 230.28 8199.14 -9.82 -16.65 -9.82 18.47 237.88 0.29 250.71 8299.13 -10.47 -16.64 -0.19 19.16 237.88 0.30 220.92 8399.13 -10.47 -16.64 -10.47 19.66 237.88 0.30 220.32 8399.13 -11.51 -17.50 -11.51 237.86 237.82 0.43 222.18 8899.13 -11.51 -17.50 -11.51 21.02 236.54 0.43 232.26 8899.13 -11.51 -17.50 21.62 236.55 0.43 232.26 8899.13 -11.51 -17.50 21.62 236.55 0.43 232.26 8899.13 -11.51 21.63 236.55 0.20 266.11 8799.12 -12.20 -19.06 -11.51 236.55 0.21 13.99 9999.12 -11.76 22.67 236.62 236.62 0.31 13.99 9999.12 -11.76 <td>8100.00</td> <td>0.38</td> <td>245.93</td> <td>8099.14</td> <td>-9.41</td> <td>-15.01</td> <td>-9.41</td> <td>17.72</td> <td>237.92</td> <td>0.22</td>	8100.00	0.38	245.93	8099.14	-9.41	-15.01	-9.41	17.72	237.92	0.22
0.29 250.71 8299.13 -10.19 -16.22 -10.19 19.16 237.88 0.30 220.32 8399.13 -10.47 -16.64 -10.47 19.66 237.82 0.30 220.32 8399.13 -10.47 -16.64 -10.47 19.66 237.82 0.51 222.71 8499.13 -11.00 -17.12 -11.00 20.36 237.82 0.20 221.86 8699.13 -11.51 -17.59 -11.61 21.63 236.73 0.20 266.11 8799.12 -11.93 -17.59 -11.61 21.63 236.64 0.20 266.11 8799.12 -12.07 -19.06 23.64 236.62 0.21 237.66 -11.93 -14.66 -12.20 23.64 236.62 0.22 266.11 8799.12 -11.20 -18.61 -12.20 23.66 0.22 136.89 8999.12 -11.76 22.67 23.61 0.30 136.89 9999.12 </td <td>8200.00</td> <td>0.50</td> <td>230.28</td> <td>8199.14</td> <td>-9.82</td> <td>-15.65</td> <td>-9.82</td> <td>18.47</td> <td>237.88</td> <td>0.17</td>	8200.00	0.50	230.28	8199.14	-9.82	-15.65	-9.82	18.47	237.88	0.17
0.30 220.92 8339.13 -10.47 -16.64 -10.47 19.66 237.82 0.51 222.71 8499.13 -11.00 -17.12 -11.00 20.35 237.27 0.28 221.86 8699.13 -11.00 -17.12 -11.61 21.02 236.56 0.43 232.26 8699.13 -11.93 -17.59 -11.51 21.02 236.56 0.43 232.26 8699.13 -11.20 -17.59 21.63 236.56 0.20 266.11 8799.12 -12.20 -18.61 -12.20 236.56 0.20 293.16 8899.12 -11.20 -13.69 237.68 237.68 0.21 13.99 9999.12 -11.76 -19.60 -11.76 22.67 240.11 0.56 0.39 9199.12 -10.41 -19.66 -11.30 22.67 240.11 0.57 0.39 9199.12 -10.41 -19.66 -11.30 22.67 240.11 0.50 <td>8300.00</td> <td>0.29</td> <td>250.71</td> <td>8299.13</td> <td>-10.19</td> <td>-16.22</td> <td>-10.19</td> <td>19.16</td> <td>237.88</td> <td>0.25</td>	8300.00	0.29	250.71	8299.13	-10.19	-16.22	-10.19	19.16	237.88	0.25
0.51 22.7.1 8499.13 -11.00 -17.12 -11.00 20.35 237.27 0.28 221.86 8699.13 -11.51 -17.59 -11.51 21.02 236.79 0.20 256.11 8799.12 -11.93 -11.93 21.63 236.54 0.20 256.11 8799.12 -11.20 -18.64 -11.93 21.63 236.52 0.20 256.11 8799.12 -12.20 -18.64 -11.93 21.63 237.56 0.21 293.16 8899.12 -11.30 -19.08 -12.20 23.65 237.68 0.22 316.89 8999.12 -11.76 -19.08 -12.07 23.66 237.68 0.37 13.99 9099.12 -11.76 22.67 230.04 0.37 13.98 9099.12 -11.30 -19.66 -11.76 22.67 230.04 0.37 0.39 9199.12 -11.30 -19.66 -11.76 22.67 240.11 0.66	8400.00	0.30	220.92	8399.13	-10.47	-16.64	-10.47	19.66	237.82	0.15
0.28 221.86 8599.13 -11.51 -17.59 -11.51 21.02 236.79 0.43 232.26 8699.13 -11.93 -11.93 21.63 236.54 0.43 235.61 8799.12 -12.20 -18.51 -11.93 21.63 236.52 0.43 256.11 8799.12 -12.20 -18.51 -12.20 231.6 235.62 0.20 256.11 8799.12 -12.20 -18.51 -12.20 231.6 235.62 0.20 293.16 8999.12 -12.07 -19.60 -11.76 22.57 237.68 0.37 13.99 9099.12 -11.30 -19.60 -11.76 22.67 239.04 0.37 13.99 9099.12 -11.30 -19.66 -11.76 22.67 239.04 0.37 13.99 9099.12 -11.30 -19.66 -11.76 22.67 240.11 0.38 0.44 29.21 29.66 239.04 240.11 24.139	8500.00	0.51	222.71	8499.13	-11.00	-17.12	-11.00	20.35	237.27	0.21
0.43 232.26 8699.13 -11.93 -18.04 -11.93 21.63 236.54 0.20 256.11 8799.12 -12.20 -18.51 -12.20 256.17 236.62 0.20 256.11 8799.12 -12.20 -18.51 -12.20 236.62 236.62 0.20 256.11 8799.12 -12.07 -19.08 -12.07 22.17 236.62 0.21 316.89 8999.12 -11.76 -19.08 -12.07 22.57 237.68 0.37 13.99 9099.12 -11.76 -19.60 -11.76 22.86 239.04 0.37 13.99 9099.12 -11.30 -19.66 -11.76 22.86 230.04 0.37 0.39 9199.12 -10.41 -19.57 21.63 240.11 0.44 29.28 9239.11 -9.51 -10.41 22.17 241.99 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 24.68	8600.00	0.28	221.86	8599.13	-11.51	-17.59	-11.51	21.02	236.79	0.23
0.20 256.11 8799.12 -12.20 -18.51 -12.20 23.17 236.62 0.49 293.16 8899.12 -12.07 -19.08 -12.07 23.57 237.68 0.49 293.16 8899.12 -12.07 -19.08 -12.07 23.62 237.68 0.22 316.89 8999.12 -11.76 -19.60 -11.76 22.86 239.04 0.37 13.99 9099.12 -11.30 -19.66 -11.30 22.67 240.11 0.66 0.39 9199.12 -10.41 -19.66 -11.30 22.67 240.11 0.68 0.39 9199.12 -10.41 19.57 -10.41 22.17 240.11 0.44 29.28 9239.11 -9.51 21.59 243.68 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	8700.00	0.43	232.26	8699.13	-11.93	-18.04	-11.93	21.63	236.54	0.16
0.49 293.16 8899.12 -12.07 -19.08 -12.07 22.57 237.68 0.22 316.89 8999.12 -11.76 -19.60 -11.76 22.86 239.04 0.37 13.99 9099.12 -11.76 -19.66 -11.30 22.67 240.11 0.66 0.39 9199.12 -10.41 -19.66 -11.30 22.67 240.11 0.66 0.39 9199.12 -10.41 -19.66 -11.30 22.67 240.11 0.68 0.39 9199.12 -10.41 -19.67 21.67 241.99 0.64 29.28 9399.11 -9.51 -19.01 23.15 243.88 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	8800.00	0.20	256.11	8799.12	-12.20	-18.51	-12.20	22.17	236.62	0.26
0.22 316.89 8999.12 -11.76 -19.60 -11.76 22.86 239.04 0.37 13.99 9099.12 -11.30 -19.66 -11.30 22.67 240.11 0.37 13.99 9099.12 -11.30 -19.66 -11.30 22.67 240.11 0.56 0.39 9199.12 -10.41 -19.57 -10.41 22.17 241.99 0.44 29.28 9299.11 -9.51 -19.38 -9.51 21.59 243.88 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	8900.00	0.49	293.16	8899.12	-12.07	-19.08	-12.07	22.57	237.68	0.35
0.37 13.99 9099.12 -11.30 -19.66 -11.30 22.67 240.11 0.66 0.39 9199.12 -10.41 -19.57 -10.41 22.17 241.99 0.64 29.28 9299.11 -9.51 -19.38 -9.51 21.59 243.88 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 243.68	9000.00	0.22	316.89	8999.12	-11.76	-19.60	-11.76	22.86	239.04	0.30
0.66 0.39 9199.12 -10.41 -19.57 -10.41 22.17 241.99 0.44 29.28 9299.11 -9.51 -9.51 21.59 243.88 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	9100.00	0.37	13.99	9099.12	-11.30	-19.66	-11.30	22.67	240.11	0.32
0.44 29.28 9299.11 -9.51 -19.38 -9.51 21.59 243.88 0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	9200.00	0.66	0.39	9199.12	-10.41	-19.57	-10.41	22.17	241.99	0.30
0.30 46.62 9399.11 -8.99 -19.01 -8.99 21.03 244.68	9300.00	0.44	29.28	9299.11	-9.51	-19.38	-9.51	21.59	243.88	0.34
	9400.00	0.30	46.62	9399.11	-8.99	-19.01	-8.99	21.03	244.68	0.18

Page 3 of 4 VES Survey Date: 1/15/2016

Dogleg Severity Deg/100	0.37 0.38	0.30 0.07	0.18	0.30	0.42	0.54	0.45	0.58	0.05	0.23	0.53
Closure Direction Deg	244.33 242.58	239.40 236.14	230.92	227.30	225.05	225.15	225.62	224.10	221.55	219.58	219.12
Closure Distance FT	20.69 20.26	19.69 19.26	19.02	19.22	19.87	20.81	22.13	23.55	24.87	26.37	27.10
Vertical Section FT	-8.97 -9.33	-10.02 -11.01	-11.99	-13.03	-14.04	-14.68	-15.48	-16.91	-18.61	-20.33	-21.03
+E/-W FT	-18.65 -17.99	-16.94 -15.80	-14.76	-14.12	-14.06	-14.76	-15.82	-16.39	-16.50	-16.80	-17.10
+N/-S FT	-8.97 -9.33	-10.02 -11.01	-11.99	-13.03	-14.04	-14.68	-15.48	-16.91	-18.61	-20.33	-21.03
QVT 전	9499.11 9599.10	9699.10 9799.09	9899.08	9999.07	10099.06	10199.06	10299.05	10399.04	10499.02	10599.01	10644.00
Drift Direction Deg	131.16 113.73	130.89 130.43	137.12	160.68	197.83	249.65	220.35	184.04	183.41	196.71	209.94
Incl Angle Deg	0.26 0.62	0.83 0.90	0.74	0.69	0.52	0.68	0.90	0.95	1.00	1.01	0.94
Measured Depth FT	9500.00 9600.00	9700.00 9800.00	9900.00	10000.00	10100.00	10200.00	10300.00	10400.00	10500.00	10600.00	10645.00

Page 4 of 4 VES Survey Date: 1/15/2016





I Gene Heiss certify that I am employed by VES Survey International. That I did on the day(s) of 01/15/16 through 01/15/16 conduct or supervise the taking of a survey from a Rate Gyro 10,645.00 feet; that the data is true, correct, complete and 0.00 feet to a depth of depth of 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 Goose State Well # 30-025-41201 2H API # County / Parish in New Mexico ; and that I have reviewed this report and Lea find that it conforms to the principles and procedures as set forth by VES Survey International.

Gene Heiss Service Technician VES Survey International



COG Operating LLC

Lea County, NM (NAD27 NME) Goose State #2H

OH

Survey: MWD #1

Survey Report - Geographic

02 February, 2016



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Wellplanning

Survey Report - Geographic

Company:	COG Operat	ing LLC			Local Co-o	rdinate Referen	ce:	Well #2H		to while con-
Project:	Lea County,	NM (NAD27	NME)		TVD Refer	ance:		WELL @ 3741.	Busft (Original Well E	lev)
	Goose State				MD Refere	nce:		-	Pusft (Original Well E	
a control and a control of the contr	#2H				North Refe			Grid	ousie (ongine men e	
and the second se	OH				Protote and the location	culation Method		Minimum Curva	hina	
and the second se	он				Database:			EDM 5000.1 Sir		
									All Announces of the manufacture of the second	
Project	Lea Co	unty, NM (N/	AD27 NME	Ξ)	Lines of the	3.4		A MARINE AND		
Map System: Geo Datum: Map Zone:	NAD 192	Plane 1927 7 (NADCON ico East 300	CONUS)		System I	Datum:		Mean Sea Leve	9	
Site	Goose	State				****				11155
Site Position:				Northing:	55	9,599.30 usft	Latitude:			32" 32' 10,489
From:	Мар			Easting:	72	9,248.10 usft	Longitude	:		103" 35' 22.048
Position Uncertain	•		usft	Slot Radius:		13-3/16 "	Grid Conv			0,40
10/-11	4011	_					_			
Well Well Position	#2H +N/-S		0.0 usft	Madhian				-		
Nell Losidou	+N/-S +E/-W		0.0 usit	Northing:		559,599,30		atitude:		32" 32' 10,489
				Easting:		729,246.10		.ongitude:		103* 35' 22 048
Position Uncertain	ity		0.0 usît	Wellhead Elev	vation:		usft (Ground Level:		3,715.9 us
Wellbore	ОН				in linia Isana manja					
Magnetica	Mo	del Name	4	Sample Date		nation *)	Di	p Angle (*)	Field Stre (nT)	ngth
		IGRF201	5	12/26/2015		7.14		60.37		48,272
Design	ОН					and the second second				
Audit Notes:	and the second									
Version:	1.0			Phase:	ACTUAL	Tle	On Depth:			0.0
Vertical Section:	1. 1.		Depth Fr	and the second sec	+N/-S		J-W		Direction	1.1.1. E.
and the second s			(มา	sft) 0.0	(usft)	the second s	sft)		(*)	312.00
		_		0.0	0	.0	0.0		176.61	
Survey Program		Date	2/2/201	16		Service Service		12		
	То									
From		Surve	(Weilbo	re)	1	ool Name		Description		
From (usft)	(usft)	and the second se			h	IS-GYRO-MS		North sensing g	procompassing m/s	
	(usft)	645.0 GYRC	(OH)		1					
(usft)	(usft) .0 10,					1WD		MWD - Standar		
(usft) 100. 10,733.	(usft) .0 10,	645.0 GYRC				1WD		MWD - Standar		
(usft) 100. 10,733. Burvey	(usft) .0 10,	645.0 GYRC	#1 (OH)							
(usit) 100. 10,733. Burvey Measured	(usft) .0 10, .0 21,	845.0 GYRC 061.0 MWD	#1 (OH) Vertical	alui e	N	Мар	Maş Fasti			
(usit) 100. 10,733. Jurvey Measured	(usft) .0 10, .0 21,	645.0 GYRC	#1 (OH)	+N/-S (usft)			Ma; Easti (usfi	ng		Longitude

	10.010.0									
	10,645.0	0.94	209.94	10,644.0	-21.0	-17.1	559,578.26	729,231.02	32* 32' 10 282 N	103° 35' 22.249 W
L	10,733.0	1,60	182.90	10,732.0	-22,9	-17.5	559,578.41	729,230,60	32* 32' 10.263 N	103° 35' 22.254 W
L	10,764.0	6.60	172.40	10,762.9	-25.1	-17.3	559,574.21	729,230.81	32" 32' 10 242 N	103* 35' 22.252 W
L	10,795.0	11.00	173.60	10,793.5	-29.8	-16.7	559,569,50	729,231.38	32" 32' 10.195 N	103° 35' 22.245 W
Į.	10,827.0	13.50	178.00	10,824.8	-36.6	-16.2	559,582,74	729,231.85	32" 32' 10,128 N	103° 35' 22.241 W
L	10,858.0	16,10	181.60	10,854.8	-44.5	-16.2	559,554,82	729,231.86	32" 32' 10.050 N	103* 35' 22.241 W
L	10,890.0	20.00	175.50	10,885.2	-54_4	-15.9	559,544,93	729,232.16	32" 32' 9,952 N	103* 35' 22,238 W
Ľ	10,921.0	23.70	171.00	10,913.9	-65.8	-14.5	559,533,48	729,233 55	32° 32' 9.838 N	103* 35' 22.223 W
L	10,968.0	30.10	166.10	10,955.8	-86.6	-10.2	559,512.69	729,237.87	32° 32' 9,632 N	103° 35' 22.174 W
ŀ	11,015.0	35.40	163.10	10,995.4	-111.1	-3.4	559,488.20	729,244.66	32° 32' 9,390 N	103* 35' 22.097 W
L	11,062.0	40.10	160.50	11,032.5	-138.4	5.6	559,460.89	729,253 68	32° 32' 9.119 N	103° 35' 21,994 W
	10,890.0 10,921.0 10,968.0 11,015.0	20.00 23.70 30.10 35.40	175.50 171.00 166.10 163.10	10,885 2 10,913 9 10,955 8 10,995 4	-54.4 -65.8 -86.6 -111.1	-15.9 -14.5 -10.2 -3.4	559,544,93 559,533,48 559,512,69 559,488,20	729,231.86 729,232.16 729,233.55 729,237.87 729,244.66	32" 32' 10.050 N 32" 32' 9.952 N 32" 32' 9.838 N 32" 32' 9.632 N 32" 32' 9.632 N 32" 32' 9.390 N	103° 35' 22.241 W 103° 35' 22.238 W 103° 35' 22.223 W 103° 35' 22.274 W 103° 35' 22.174 W 103° 35' 22.097 W



Wellplanning

Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Weil #2H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3741.9usft (Original Well Elev)
Site:	Goose State	MD Reference:	WELL @ 3741.Busft (Original Well Elev)
Well:	#2H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	ОН	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
	11,109.0	43.30	159.30	11,067.6	-167.8	16.3	559,431.54	729,264,43	32* 32' 8.828 N	and the second se
	11,156.0	48.20	158.60	11,100.4	-199.2	28.4	559,400,13	729,276.53	32* 32* 8,516 N	103" 35" 21.871 W
	11,203.0	53.80	160.50	11,130.0	-233.4	41.2	559,365,92	729,289.26	32* 32* 8,177 N	103" 35' 21,732 W 103" 35' 21,586 W
	11,250.0	58,40	162.80	11,156.2	-270.4	53.4	559,328.90	729 301 51	32* 32' 7.809 N	103* 35' 21,446 W
	11,297.0	62.10	164.10	11,179.5	-309.5	65.0	559,289,79	729,313,13	32" 32' 7.422 N	103" 35' 21.313 W
	11,344.0	65 20	165.40	11,200.3	-350,1	76.1	559,249,16	729,324.20	32" 32" 7.019 N	103* 35' 21,187 W
	11,391.0	68.10	165.40	11,219.0	-391.9	87.0	559 207,41	729,335.07	32" 32' 6.605 N	103" 35' 21,064 W
	11,485.0	77,40	162.00	11,246.8	-477.9	112.2	559,121,37	729,360,30	32" 32' 5.752 N	103* 35' 20,776 W
	11,518.0	83.60	161.30	11,252.3	-508.8	122.4	559,090.50	729,370.55	32* 32' 5 446 N	103* 35' 20.659 W
	11,612.0	85.70	162.60	11,261.0	-597,8	151.4	559,001,52	729,399.54	32" 32' 4 563 N	103* 35' 20.328 W
	11,706.0	87.00	164.50	11,267.0	-687,7	178.0	558,911,55	729,428.10	32" 32' 3.671 N	103" 35' 20.025 W
1	11,800.0	89.20	166 20	11,270.1	-778.6	201.8	558,820.67	729,449.86	32" 32' 2.770 N	103" 35' 19,755 W
	11,894.0	88.80	166,70	11,271,8	-870.0	223.8	558,729.30	729,471.88	32" 32' 1.865 N	103" 35' 19 505 W
	11,988.0	88.10	169.90	11,274,3	-962.0	242.B	558,637.30	729,490.93	32" 32' 0.953 N	103° 35' 19 290 W
	12,082.0	89.30	173,70	11,276.5	-1,055.0	256.2	558,544.30	729,504,33	32" 32' 0.032 N	103* 35' 19.141 W
1	12,176.0	89.00	176,80	11,277,8	-1,148.7	264.0	558,450,65	729,512.12	32" 31' 59,104 N	103* 35' 19.058 W
	12,270.0	69.70	178.00	11,278.9	-1,242.6	268.3	558,356.75	729,516.38	32" 31' 58.175 N	103" 35' 19.016 W
	12,365.0	88.50	177,90	11,280.4	-1,337.5	271.7	558,261.83	729,519.78	32" 31' 57.236 N	103" 35' 18.984 W
1	12,459.0	89.20	177.30	11,282.3	-1,431,4	275.8	558,167.93	729,523.71	32" 31' 56 308 N	103" 35' 18.945 W
	12,552.0	89.00	178.20	11,283.8	-1,524.3	279.3	558,075.01	729,527.36	32" 31' 55,387 N	103" 35' 18.910 W
	12,647.0	90.40	178.90	11,284.3	-1,619,3	281.7	557,980.05	729,529.77	32" 31' 54 447 N	103" 35' 18.890 W
	12,741.0	89.70	179.70	11,284.2	-1,713.2	282.8	557,886.06	729,530.92	32° 31' 53 517 N	103* 35' 18.884 W
	12,835.0	89.00	179.60	11,285.2	-1,807.2	283.4	557,792.06	729,531.49	32" 31' 52.586 N	103* 35' 18.885 W
1	12,929.0	90.10	178.10	11,286.0	-1,901.2	285.3	557,698.09	729,533.38	32* 31' 51.656 N	103* 35' 18.871 W
	13,023.0	89.30	178.10	11,286.5	-1,995,2	266.4	557,604.14	729,536.49	32° 31' 50.727 N	103° 35' 18.842 W
	13,120.0	89.50	178.40	11,287.5	-2,092.1	291.4	557,507,19	729,539.45	32° 31' 49.767 N	103° 35' 18.815 W
8	13,214.0	90.00	178.70	11,287,9	-2,186.1	293.7	557,413.23	729,541.83	32° 31' 48.837 N	103° 35' 18.795 W
	13,308.0	87.60	177.60	11,289.9	-2,280.0	296.8	557,319.30	729,544.87	32" 31' 47.908 N	103° 35' 18.767 W
	13,402.0	87.80	177.90	11,293.6	-2,373.9	300.5	557,225,45	729,548.55	32° 31' 46.979 N	103° 35' 18.732 W
	13,496.0	88.00	178,10	11,297.1	-2,467.7	303.7	557,131,57	729,551.83	32° 31' 46.049 N	103* 35' 18,701 W
	13,590.0	88.40	178.30	11,300.0	-2,561.6	306.7	557,037.67	729,554.78	32° 31' 45.120 N	103° 35' 18 675 W
	13,684.0 13,778.0	88.60 89,00	179.00 179.40	11,302.5	-2,655.6	308.9	556,943.72	729,557.00	32" 31" 44.190 N	103* 35' 18.656 W
	13,770.0	69.00 89.30	179.40	11,304.5	-2,749.5	310.2	556,849.75	729,558.31	32" 31' 43.260 N	103* 35' 18.849 W
	13,966.0	88.00	179.00	11,305.9 11,308.1	-2,843.5 -2,937.5	310.9 312.3	556,755.77	729,558.97	32° 31' 42.330 N	103° 35' 18.649 W
	14,060.0	87.90	178.50	11,311.4	-3,031.4	316.0	556,661.81 556,567.94	729,560.36	32° 31' 41.400 N	103° 35' 18,640 W
	14,154.0	88.20	177.40	11,314.6	-3,125.2	320.5	556,474.11	729,564.05 729,568.64	32° 31' 40.471 N 32° 31' 39.543 N	103° 35' 18.605 W
	14,248.0	88.70	177.80	11,317.2	-3,219.1	324.5	556,380.23	729,572.57	32° 31' 38,613 N	103° 35' 18.559 W 103° 35' 18.521 W
	14,343.0	89.00	178.00	11,319,1	-3,314.0	328.0	558,285.31	729,578.05	32* 31' 37.674 N	103° 35' 18.488 W
	14,437.0	89.30	178.50	11,320.5	-3,407.9	330,8	556,191.36	729,578.92	32* 31' 36.744 N	103° 35' 18.482 W
	14,531.0	89.70	178.90	11,321.3	-3,501.9	333.0	556,097.39	729,581.05	32" 31' 35.814 N	103° 35' 18,445 W
	14,625.0	89.10	177.00	11,322.3	-3,595,8	336,3	556,003.46	729,584.42	32* 31' 34.884 N	103* 35' 18.413 W
	14,719.0	89.50	177.20	11,323,4	-3.689.7	341.1	555,909.59	729,589.17	32* 31' 33,955 N	103* 35' 18 365 W
	14,613.0	90.00	177.30	11,323.8	-3,783,6	345.6	555,815.70	729,593,68	32" 31" 33.026 N	103* 35' 18 320 W
	14,907.0	87.70	177.60	11,325,7	-3,877.5	349.8	555,721.82	729,597.86	32* 31' 32.097 N	103° 35' 18.279 W
	15,001.0	88.00	177.80	11,329.2	-3,971.3	353.5	555,627.96	729,601.63	32" 31' 31.168 N	103° 35' 18.243 W
	15,095.0	87,10	175.20	11,333.3	-4,065.1	359.3	555,534.23	729,607,36	32* 31' 30.240 N	103° 35' 18 183 W
	15,189.0	87.50	175.60	11,337.7	-4,158.7	368.8	555,440 64	729,614,89	32" 31' 29.313 N	103° 35' 18.103 W
	15,283.0	88.50	177.00	11,341.0	-4,252.4	372.9	555,346.89	729,620.96	32" 31" 28.385 N	103° 35' 18.040 W
	15,377.0	89.10	177.50	11,342.9	-4 346.3	377,4	555,253.02	729,625.47	32* 31' 27.456 N	103° 35' 17.995 W
	15,471.0	89.40	177.70	11,344.2	-4,440.2	381.3	555,159.11	729,629.40	32* 31' 26.526 N	103* 35' 17.957 W
	15,565.0	69.90	178.40	11,344.8	-4,534.1	364.5	555,065,17	729,632.60	32* 31' 25.597 N	103* 35' 17,927 W
1	15,659.0	90.20	178.80	11,344.7	-4,628.1	386.8	554,971.20	729,634.90	32° 31' 24.667 N	103* 35' 17.908 W
-	15,754.0	88.60	178.00	11,345.7	-4,723.1	389.5	554,876.25	729,637.55	32° 31' 23.727 N	103" 35' 17.885 W
L	15,848.0	89.10	178.20	11,347.6	-4,817.0	392.6	554,782.32	729,640.66	32° 31' 22.797 N	103" 35' 17.856 W



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Survey

Wellplanning

Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #2H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	WELL @ 3741.9usft (Original Well Elev)
Site:	Goose State	MD Reference:	WELL @ 3741.9usft (Original Well Elev)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000 1 Single User Db

	Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-8	+E/-W	Map Northing	Map Easting		
	(usft)	(*)	(")	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
1	15,942.0	89.40	178.80	11,348.8	-4,910.9	395.0	554,688.36	729,643.12	32* 31' 21.867 N	103* 35' 17.835 W
	16,036.0	88.20	176.90	11,350.7	-5,004.9	398.6	554,594.45	729,646.65	32* 31' 20 938 N	103* 35' 17.801 W
	16,130.0	88.50	177.20	11,353.5	-5,098.7	403.4	554,500.61	729,651.49	32* 31' 20.009 N	103" 35' 17.752 W
	16,224.0	68 70	177.20	11,355.8	-5,192.5	408.0	554,406,75	729,656.08	32° 31' 19.080 N	103* 35' 17.706 W
	16,318.0	69.30	177.60	11,357.4	+5,286.4	412.2	554,312.87	729,660.34	32° 31' 18.151 N	103* 35' 17.664 W
	16,412.0	89.70	178.00	11,358.2	+5,380.4	415.9	554,218,94	729,663,95	32* 31' 17.221 N	103* 35' 17.630 W
	16,506.0	90.10	178.20	11,358.4	-5,474.3	419.0	554,124,99	729,667.06	32* 31" 16.291 N	103* 35' 17.601 W
	16,601.0	90.70	178.70	11,357.7	-5,569.3	421.5	554,030.03	729,669.63	32* 31' 15.351 N	103* 35' 17.579 W
	16,695.0	88.60	177.90	11,358.3	+5,663.2	424.3	553,936,08	729 672 42	32° 31' 14.421 N	103* 35' 17.554 W
	16,789.0	89.30	178.20	11,360.0	-5,757.2	427.5	553,842,15	729 675 62	32° 31' 13.492 N	103" 35' 17.524 W
	16,883.0	87.80	177.20	11,362.4	-5,851.0	431.3	553,748.26	729.679.39	32" 31' 12.562 N	103" 35' 17.488 W
	16,977.0	88.40	177.50	11,365.5	-5,944.9	435.6	553,854,41	729 683 73	32° 31' 11.634 N	103° 35' 17.445 W
	17,072.0	88.80	177,90	11,367.8	-6,039.8	439,4	553,559.52	729,687.55	32" 31' 10.694 N	103° 35' 17.408 W
	17,166.0	90.20	176.90	11,368.6	-6,133.7	443,7	553,465.62	729,691.81	32° 31' 9.765 N	103* 35' 17.366 W
	17,260.0	89.70	176.30	11,368.7	-6,227.5	449.3	553,371.79	729,697.38	32* 31" 8.836 N	103" 35' 17.309 W
	17,354.0	90.00	176.40	11,369.0	-8,321.3	455.3	553,277.98	729,703.37	32* 31' 7.907 N	103" 35' 17 246 W
	17,448.0	89.30	175.60	11,369.5	-6,415.1	461.8	553,184.21	729,709.93	32* 31' 6 979 N	103" 35' 17.177 W
1	17,535.0	89.60	175.10	11,370.4	-6,501.8	468.9	553,097,50	729,716.98	32° 31' 6.121 N	103' 35' 17.102 W
	17,629.0	88.10	175.30	11,372.3	-6,595.4	476.7	553,003.85	729,724.84	32° 31' 5.193 N	103' 35' 17.018 W
	17,724.0	87.00	175.90	11,376.3	-6,690.1	464.0	552,909.22	729,732,12	32° 31' 4 256 N	103" 35' 18.941 W
1	17,818.0	87.10	176.00	11,381.2	-6,783.7	490.7	552,815.58	729,738.75	32" 31' 3.329 N	103" 35' 16.871 W
	17,912,0	86.20	177.20	11,386.7	-6,877.4	496.2	552,721,91	729,744.32	32" 31' 2.402 N	103° 35' 16.813 W
	18,006.0	85.40	177.80	11,393.5	-6,971.1	500.3	552,628.25	729,748.41	32° 31' 1.475 N	103° 35' 16.773 W
	18,100.0	66.80	177.90	11,399.9	-7,064.8	503.8	552,534.54	729,751.93	32° 31' 0.548 N	103° 35' 16 740 W
	18,194.0	68.60	177.50	11,403.7	-7,158.6	507.6	552,440.69	729,755.70	32° 30' 59.619 N	103° 35' 16.704 W
	18,268.0	87.10	178.30	11,407.2	-7,252.5	511.0	552,348.83	729,759.14	32° 30' 58.690 N	103" 35' 16.671 W
	18,382.0	88.90	178.00	11,410.5	-7,348.4	514.1	552,252.94	729,762.17	32° 30' 57,760 N	103° 35' 16,643 W
	18,476.0	86.40	179.00	11,414.4	-7,440.2	516.5	552,159.06	729,764.63	32* 30' 56.831 N	103" 35' 16.622 W
	18,571.0	87.80	178.80	11,419.2	-7,535.1	518.4	552,064 20	729,766.45	32° 30' 55.893 N	103" 35' 16.609 W
	18,665.0	89.80	179.00	11 421 1	-7,629,1	520.2	551,970.24	729,768.26	32" 30' 54.963 N	103" 35" 16.595 W
	18,759.0	88.50	179.40	11,422.5	-7,723.0	521.5	551,876,26	729,769.57	32" 30' 54,033 N	103° 35' 16.588 W
	18,853.0	85.00	179.40	11,427.9	-7,816,9	522.5	551,782,43	729,770.55	32° 30' 53.104 N	103° 35' 16.584 W
	18,947.0	86.10	179.40	11,435.2	-7,910.6	523.4	551,688,72	729,771.53	32° 30' 52.177 N	103* 35' 16.580 W
	19,041.0	88.60	179.70	11,439.5	-8,004.5	524.2	551,594.83	729,772.27	32° 30' 51.248 N	103* 35' 16.579 W
	19,135.0	89.30	177.90	11,441.2	-8,098.4	526.1	551,500.87	729,774.24	32° 30' 50.318 N	103* 35' 16.564 W
t -	19,230.0	89.80	176.40	11,442.0	-8,193.3	530.9	551,406.00	729,778.96	32° 30' 49.379 N	103* 35' 16.516 W
	19,324.0	91.80	175.90	11,440.7	-8,287.1	537.2	551,312.22	729,785.27	32° 30' 48.450 N	103* 35' 16.450 W
	19,418.0	88.40	176.40	11,440.5	-8,380.9	543.5	551,218.45	729,791.58	32° 30' 47.522 N	103" 35' 16.384 W
	19,512.0	89.80	176.40	11,442.0	-8,474.7	549.4	551,124.65	729,797.48	32* 30' 46.594 N	103" 35' 16.323 W
[19,606.0	88.40	177.60	11,443.5	-8,568.5	554.3	551,030.79	729,802.40	32° 30' 45.664 N	103" 35' 16.273 W
	19,700.0	89.90	177.70	11,444.9	-8,662.4	558.2	550,936.89	729,806.26	32° 30' 44.735 N	103" 35' 16 236 W
	19,794.0	67,20	178.40	11,447.2	-8,756.3	561.4	550,842.98	729,809.45	32* 30' 43.806 N	103" 35' 16.206 W
	19,686.0	88.60	178.30	11,450.7	-8,850.2	564.1	550,749.08	729,812.16	32° 30' 42.876 N	103" 35' 16 182 W
	19,982.0	90.50	178.20	11,451,4	-8,944.2	566.9	550,655.14	729,815.03	32° 30' 41.946 N	103" 35' 16 157 W
1	20,077.0	88.80	179.40	11,452.0	-9,039.1	568.9	550,560.16	729,817.02	32° 30' 41.007 N	103* 35' 16.141 W
	20,171.0	86.40	179.40	11,455.9	-9,133.0	569,9	550,466,26	729,818.00	32* 30' 40,077 N	103* 35' 16.137 W
	20,265.0	87.90	179.60	11,460.6	-9,226.9	570.7	550,372.38	729,818.82	32* 30' 39,148 N	103* 35' 16,135 W
1.	20,359.0	89.80	179.60	11,462.5	-9,320.9	571.4	550,278 41	729,819.48	32* 30' 38 218 N	103" 35' 16 135 W
	20,453.0	91,50	180.10	11,461.4	-9,414.9	571.6	550,184.42	729,819.72	32" 30' 37, 288 N	103* 35' 16.140 W
	20,547.0	89.60	179.80	11,460.5	-9,508.9	571.7	550,090,42	729,819.81	32° 30' 36,358 N	103* 35' 16,147 W
	20,641.0	87.90	179.60	11,462.6	-9,602.9	572.2	549,996.45	729,820.30	32° 30' 35 428 N	103° 35' 16.149 W
1	20,735.0	89.40	179.60	11,464.8	-9,696.8	572.9	549,902.48	729,820.95	32° 30' 34 498 N	103° 35' 16 149 W
1	20,829.0	90.70	180.10	11,464.7	-9,790.8	573.1	549,808.49	729,821.20	32° 30' 33 568 N	103* 35' 16 154 W
	20,923.0	92.60	180,10	11,462.0	-9,864.8	572.9	549,714.53	729,821.04	32° 30' 32,639 N	103* 35' 16.163 W
_	21,011.0	87.90	179.50	11,461.6	-9,972.7	573.2	549,626,56	729,821.34	32* 30' 31.768 N	103* 35' 16.167 W



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Weliplanning

Survey Report - Geographic

Company:	COG Open	ating LLC			Local Co-o	rdinate Reference:	Well #2F	1	
Project:	Lea County	, NM (NAD27	NME)		TVD Refere	ince:	WELL @	3741.9usft (Original We	I Elev)
Site:	Goose Stat	e			MD Referen	108:		3741.9usft (Original We	
Nell:	#2H				North Refe	rence:	Grid		
Nellbore:	OH				Survey Cal	culation Method:	Minimun	1 Curvature	
Design:	ОН				Database:		EDM 50	00.1 Single User Db	
					and the second second	The second s		the second se	
Measured Depth (usft)	inclination (*)	Azimuth (*)	Vertical Depth (usft)	+N/-8 (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
Measured Depth			Depth		and the second se	Northing	Easting	Latitude 32° 30' 31 276 N	
Measured Depth (usft)	(*) 87.90	(*)	Depth (usft)	(usft)	(usft)	Northing (usft)	Easting (usft)		Longitude 103" 35' 16.166 V

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