



June 4, 2015

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

HOBBS OCD

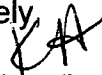
AUG 06 2015

RECEIVED

Attn: Kanicia Castillo

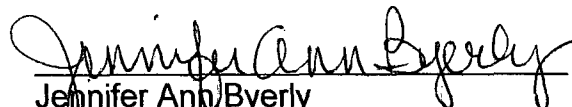
RE: **Bobwhite 12 4H**

Please find enclosed a copy of the survey from 0' to 9555' ran on the above referenced well.

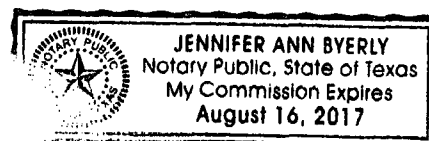
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

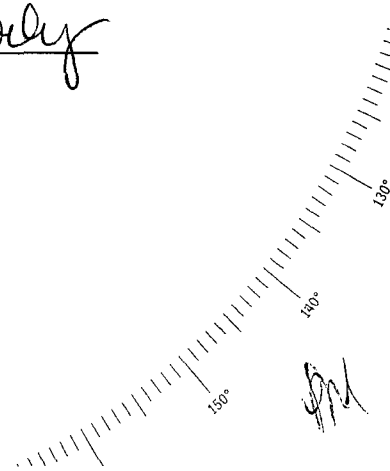
This instrument was acknowledged before me on the 4 day of June,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas

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



SEP 24 2015





Company: Concho
Lease/Well: Bobwhite 12 /4H
Location: D-12-21S-33E 160FLN 496FWL
Rig Name: Ensign 772
State/County: New Mexico/Eddy
VS-Azi: 0.00 Degrees
Latitude: 32.50008, Longitude: -103.53300
Grid Convergence Applied = -0.43 degs
Grid North = True North -0.43 degs



RKB : 31 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 6/4/2015 / 15:25

VES Survey International
Fort Worth Tx
Surveyor: Jason Wilson
(817) 718-1320
Bobwhite 12 4H / API 30-025-41092

HOBBS OCD
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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	****
65.00	0.38	138.73	65.00	-0.16	0.14	-0.16	0.22	138.73	0.59
100.00	0.25	151.02	100.00	-0.32	0.26	-0.32	0.41	140.98	0.43
200.00	0.71	157.56	200.00	-1.07	0.60	-1.07	1.23	150.98	0.46
300.00	0.25	175.61	299.99	-1.86	0.85	-1.86	2.05	155.53	0.47
400.00	0.40	123.88	399.99	-2.27	1.15	-2.27	2.55	153.13	0.31
500.00	0.62	156.31	499.99	-2.96	1.66	-2.96	3.40	150.77	0.36
600.00	0.23	144.16	599.98	-3.62	1.99	-3.62	4.13	151.18	0.40
700.00	0.08	163.20	699.98	-3.85	2.13	-3.85	4.40	151.05	0.15
800.00	0.12	83.68	799.98	-3.90	2.25	-3.90	4.51	150.03	0.13
900.00	0.11	79.76	899.98	-3.87	2.45	-3.87	4.58	147.69	0.01
1000.00	0.07	72.76	999.98	-3.84	2.61	-3.84	4.64	145.84	0.05
1100.00	0.16	64.78	1099.98	-3.76	2.78	-3.76	4.68	143.50	0.09
1200.00	0.28	24.47	1199.98	-3.48	3.01	-3.48	4.60	139.20	0.19
1300.00	0.16	22.13	1299.98	-3.13	3.16	-3.13	4.45	134.71	0.11
1400.00	0.08	37.74	1399.98	-2.94	3.26	-2.94	4.39	132.06	0.09
1500.00	0.19	43.52	1499.98	-2.76	3.42	-2.76	4.40	128.95	0.11

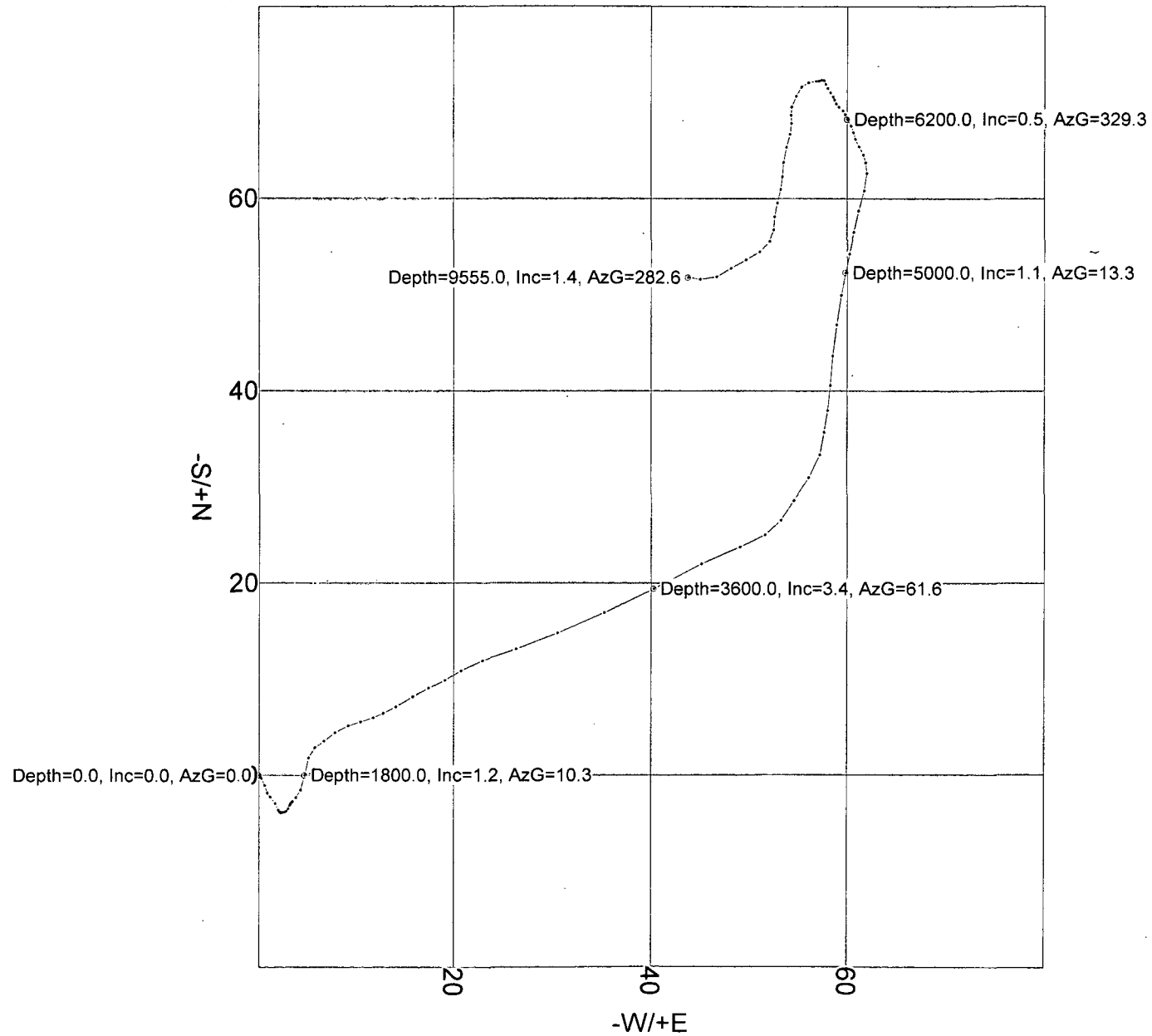
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1600.00	0.46	38.26	1599.98	-2.33	3.78	-2.33	4.44	121.67	0.27
1700.00	0.63	26.70	1699.97	-1.53	4.27	-1.53	4.54	109.69	0.21
1800.00	1.21	10.28	1799.96	0.00	4.71	0.00	4.71	90.01	0.63
1900.00	0.90	15.02	1899.94	1.80	5.10	1.80	5.41	70.59	0.32
2000.00	0.62	55.32	1999.94	2.86	5.75	2.86	6.42	63.51	0.59
2100.00	0.71	52.02	2099.93	3.55	6.68	3.55	7.56	62.00	0.09
2200.00	1.00	56.57	2199.92	4.41	7.89	4.41	9.04	60.80	0.31
2300.00	0.72	68.47	2299.91	5.13	9.21	5.13	10.54	60.90	0.33
2400.00	0.80	74.02	2399.90	5.55	10.47	5.55	11.85	62.07	0.11
2500.00	0.76	68.93	2499.89	5.98	11.76	5.98	13.19	63.04	0.08
2600.00	0.53	63.45	2599.88	6.43	12.79	6.43	14.32	63.33	0.24
2700.00	1.16	61.73	2699.87	7.11	14.09	7.11	15.79	63.23	0.63
2800.00	1.16	55.85	2799.85	8.16	15.82	8.16	17.80	62.72	0.12
2900.00	0.97	66.38	2899.83	9.07	17.43	9.07	19.65	62.53	0.28
3000.00	1.18	62.81	2999.82	9.87	19.12	9.87	21.52	62.69	0.22
3100.00	0.99	54.94	3099.80	10.84	20.74	10.84	23.41	62.41	0.24
3200.00	1.82	68.39	3199.77	11.92	22.93	11.92	25.84	62.53	0.89
3300.00	2.31	72.25	3299.70	13.12	26.32	13.12	29.41	63.51	0.50
3400.00	2.87	65.47	3399.60	14.77	30.52	14.77	33.91	64.17	0.64
3500.00	3.08	65.83	3499.46	16.91	35.25	16.91	39.09	64.37	0.21
3600.00	3.39	61.56	3599.31	19.42	40.30	19.42	44.74	64.27	0.40
3700.00	2.93	62.86	3699.15	22.00	45.18	22.00	50.25	64.04	0.47
3800.00	1.99	69.77	3799.06	23.77	49.09	23.77	54.54	64.17	0.99
3900.00	1.30	55.12	3899.02	25.01	51.64	25.01	57.38	64.16	0.80
4000.00	1.27	36.63	3998.99	26.55	53.23	26.55	59.48	63.49	0.41
4100.00	1.56	30.46	4098.96	28.60	54.58	28.60	61.62	62.34	0.32
4200.00	1.68	35.67	4198.92	30.97	56.12	30.97	64.10	61.11	0.20
4300.00	1.43	12.68	4298.89	33.38	57.25	33.38	66.27	59.76	0.67
4400.00	1.27	7.98	4398.86	35.69	57.68	35.69	67.83	58.25	0.19
4500.00	1.35	9.45	4498.83	37.95	58.03	37.95	69.34	56.81	0.08
4600.00	1.69	3.20	4598.80	40.59	58.30	40.59	71.04	55.15	0.38
4700.00	1.82	5.83	4698.75	43.65	58.55	43.65	73.03	53.30	0.15
4800.00	1.93	7.65	4798.70	46.89	58.93	46.89	75.31	51.49	0.13
4900.00	1.61	9.33	4898.65	49.95	59.38	49.95	77.60	49.93	0.32
5000.00	1.12	13.29	4998.62	52.29	59.84	52.29	79.47	48.85	0.50
5100.00	1.17	10.46	5098.60	54.25	60.25	54.25	81.07	48.00	0.07
5200.00	1.47	11.50	5198.57	56.51	60.69	56.51	82.92	47.04	0.31
5300.00	1.13	13.82	5298.55	58.72	61.18	58.72	84.80	46.18	0.35
5400.00	1.34	14.93	5398.52	60.81	61.72	60.81	86.64	45.43	0.21

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
5500.00	0.78	355.91	5498.51	62.62	61.97	62.62	88.10	44.70	0.66
5600.00	0.50	354.24	5598.50	63.73	61.88	63.73	88.82	44.16	0.28
5700.00	0.50	332.98	5698.50	64.55	61.64	64.55	89.25	43.68	0.18
5800.00	0.61	332.04	5798.49	65.40	61.19	65.40	89.56	43.10	0.11
5900.00	0.38	340.64	5898.49	66.18	60.84	66.18	89.89	42.59	0.24
6000.00	0.47	346.20	5998.49	66.89	60.63	66.89	90.28	42.19	0.10
6100.00	0.38	333.14	6098.48	67.58	60.38	67.58	90.62	41.78	0.13
6200.00	0.49	329.26	6198.48	68.24	60.01	68.24	90.88	41.33	0.12
6300.00	0.19	357.77	6298.48	68.78	59.79	68.78	91.13	41.00	0.34
6400.00	0.35	312.86	6398.48	69.15	59.55	69.15	91.26	40.74	0.26
6500.00	0.26	308.40	6498.48	69.50	59.15	69.50	91.27	40.40	0.09
6600.00	0.28	334.20	6598.48	69.86	58.87	69.86	91.36	40.12	0.12
6700.00	0.22	339.79	6698.47	70.26	58.69	70.26	91.55	39.87	0.06
6800.00	0.18	336.40	6798.47	70.60	58.56	70.60	91.72	39.68	0.04
6900.00	0.41	326.21	6898.47	71.04	58.30	71.04	91.90	39.37	0.23
7000.00	0.19	333.49	6998.47	71.49	58.02	71.49	92.07	39.06	0.22
7100.00	0.34	336.10	7098.47	71.91	57.83	71.91	92.28	38.80	0.15
7200.00	0.13	344.21	7198.47	72.30	57.67	72.30	92.48	38.58	0.21
7300.00	0.28	253.55	7298.47	72.34	57.41	72.34	92.35	38.43	0.31
7400.00	0.06	255.66	7398.47	72.26	57.12	72.26	92.11	38.33	0.22
7500.00	0.27	265.00	7498.47	72.23	56.84	72.23	91.91	38.20	0.21
7600.00	0.66	256.22	7598.46	72.07	56.05	72.07	91.30	37.87	0.40
7700.00	0.41	205.53	7698.46	71.61	55.34	71.61	90.50	37.70	0.51
7800.00	0.83	211.18	7798.45	70.67	54.81	70.67	89.43	37.80	0.43
7900.00	0.59	188.76	7898.45	69.54	54.36	69.54	88.26	38.02	0.36
8000.00	0.38	177.13	7998.44	68.69	54.30	68.69	87.56	38.32	0.23
8100.00	0.59	179.07	8098.44	67.84	54.32	67.84	86.91	38.68	0.21
8200.00	0.74	191.92	8198.43	66.69	54.20	66.69	85.94	39.10	0.21
8300.00	0.89	198.33	8298.42	65.33	53.82	65.33	84.64	39.48	0.17
8400.00	0.98	184.34	8398.41	63.74	53.51	63.74	83.23	40.01	0.24
8500.00	0.71	183.90	8498.40	62.27	53.41	62.27	82.04	40.62	0.26
8600.00	0.80	190.76	8598.39	60.96	53.23	60.96	80.93	41.13	0.13
8700.00	0.88	194.82	8698.38	59.53	52.91	59.53	79.64	41.63	0.10
8800.00	0.79	186.66	8798.37	58.10	52.63	58.10	78.40	42.17	0.15
8900.00	0.76	180.55	8898.36	56.76	52.54	56.76	77.34	42.79	0.09
9000.00	0.78	218.77	8998.35	55.56	52.11	55.56	76.17	43.16	0.50
9100.00	0.93	227.03	9098.34	54.48	51.09	54.48	74.69	43.16	0.19
9200.00	0.98	249.10	9198.33	53.62	49.70	53.62	73.12	42.83	0.37
9300.00	1.06	232.86	9298.31	52.76	48.17	52.76	71.44	42.39	0.30

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
9400.00	0.90	244.16	9398.30	51.86	46.73	51.86	69.81	42.02	0.25
9500.00	1.15	275.06	9498.28	51.61	45.02	51.61	68.48	41.10	0.59
9555.00	1.44	282.57	9553.27	51.81	43.80	51.81	67.84	40.21	0.61



VES Survey International
Fort Worth Tx
Surveyor: Jason Wilson
(817) 718-1320
Bobwhite 12 4H / API 30-025-41092



VES Survey Date: 5/28/2015



COG Operating, LLC

Lea County, NM

Sec 12, T21S, R33E

Bobwhite 12 State Com #4H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

11 June, 2015

HOBBS OCD

AUG 06 2015

RECEIVED





HP
Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Bobwhite 12 State Com #4H
Project:	Lea County, NM	TVD Reference:	Well @ 3814.0usft (Ensign #772)
Site:	Sec 12, T21S, R33E	MD Reference:	Well @ 3814.0usft (Ensign #772)
Well:	Bobwhite 12 State Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

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	Sec 12, T21S, R33E		
Site Position:		Northing:	546,536.20 usft
From:	Map	Easting:	746,867.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 29' 59.966 N
		Longitude:	103° 31' 57.395 W
		Grid Convergence:	0.43 °

Well	Bobwhite 12 State Com #4H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 29' 59.966 N
		Longitude:	103° 31' 57.395 W
		Ground Level:	3,783.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/5/2015	7.18	60.35	48,323

Design	Wellbore #1			
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	179.55

Survey Program	Date 6/11/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
65.0	9,555.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
9,623.0	16,226.0	MWD (Wellbore #1)	MWD default	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
0.0	0.00	0.00	0.0	0.0	0.0	546,536.20	746,867.10	32° 29' 59.966 N	103° 31' 57.395 W
65.0	0.38	138.73	65.0	-0.2	0.1	546,536.04	746,867.24	32° 29' 59.964 N	103° 31' 57.394 W
100.0	0.25	151.02	100.0	-0.3	0.3	546,535.89	746,867.35	32° 29' 59.963 N	103° 31' 57.392 W
200.0	0.71	157.56	200.0	-1.1	0.6	546,535.12	746,867.69	32° 29' 59.955 N	103° 31' 57.388 W
300.0	0.25	175.61	300.0	-1.9	0.9	546,534.33	746,867.95	32° 29' 59.947 N	103° 31' 57.385 W
400.0	0.40	123.88	400.0	-2.3	1.2	546,533.92	746,868.25	32° 29' 59.943 N	103° 31' 57.382 W
500.0	0.62	156.31	500.0	-3.0	1.7	546,533.23	746,868.76	32° 29' 59.936 N	103° 31' 57.376 W
600.0	0.23	144.16	600.0	-3.6	2.0	546,532.57	746,869.10	32° 29' 59.930 N	103° 31' 57.372 W
700.0	0.08	163.20	700.0	-3.9	2.1	546,532.34	746,869.23	32° 29' 59.928 N	103° 31' 57.371 W
800.0	0.12	83.68	800.0	-3.9	2.3	546,532.29	746,869.36	32° 29' 59.927 N	103° 31' 57.369 W
900.0	0.11	79.76	900.0	-3.9	2.5	546,532.32	746,869.56	32° 29' 59.927 N	103° 31' 57.367 W



HP
Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Bobwhite 12 State Com #4H
Project:	Lea County, NM	TVD Reference:	Well @ 3814.0usft (Ensign #772)
Site:	Sec 12, T21S, R33E	MD Reference:	Well @ 3814.0usft (Ensign #772)
Well:	Bobwhite 12 State Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,000.0	0.07	72.76	1,000.0	-3.9	2.6	546,532.35	746,869.71	32° 29' 59.928 N	103° 31' 57.365 W
1,100.0	0.16	64.78	1,100.0	-3.8	2.8	546,532.43	746,869.89	32° 29' 59.928 N	103° 31' 57.363 W
1,200.0	0.28	24.47	1,200.0	-3.5	3.0	546,532.71	746,870.12	32° 29' 59.931 N	103° 31' 57.360 W
1,300.0	0.16	22.13	1,300.0	-3.1	3.2	546,533.06	746,870.28	32° 29' 59.935 N	103° 31' 57.358 W
1,400.0	0.08	37.74	1,400.0	-3.0	3.3	546,533.25	746,870.37	32° 29' 59.936 N	103° 31' 57.357 W
1,500.0	0.19	43.52	1,500.0	-2.8	3.4	546,533.42	746,870.53	32° 29' 59.938 N	103° 31' 57.355 W
1,600.0	0.46	38.26	1,600.0	-2.3	3.8	546,533.86	746,870.89	32° 29' 59.942 N	103° 31' 57.351 W
1,700.0	0.63	26.70	1,700.0	-1.5	4.3	546,534.66	746,871.39	32° 29' 59.950 N	103° 31' 57.345 W
1,800.0	1.21	10.28	1,800.0	0.0	4.7	546,536.19	746,871.82	32° 29' 59.965 N	103° 31' 57.340 W
1,900.0	0.90	15.02	1,899.9	1.8	5.1	546,537.99	746,872.21	32° 29' 59.983 N	103° 31' 57.335 W
2,000.0	0.62	55.32	1,999.9	2.9	5.8	546,539.06	746,872.86	32° 29' 59.994 N	103° 31' 57.328 W
2,100.0	0.71	52.02	2,099.9	3.5	6.7	546,539.75	746,873.80	32° 30' 0.000 N	103° 31' 57.317 W
2,200.0	1.00	56.57	2,199.9	4.4	7.9	546,540.61	746,875.01	32° 30' 0.009 N	103° 31' 57.302 W
2,300.0	0.72	68.47	2,299.9	5.1	9.2	546,541.32	746,876.32	32° 30' 0.016 N	103° 31' 57.287 W
2,400.0	0.80	74.02	2,399.9	5.5	10.5	546,541.74	746,877.58	32° 30' 0.020 N	103° 31' 57.272 W
2,500.0	0.76	68.93	2,499.9	6.0	11.8	546,542.17	746,878.87	32° 30' 0.024 N	103° 31' 57.257 W
2,600.0	0.53	63.45	2,599.9	6.4	12.8	546,542.62	746,879.90	32° 30' 0.028 N	103° 31' 57.245 W
2,700.0	1.16	61.73	2,699.9	7.1	14.1	546,543.31	746,881.21	32° 30' 0.035 N	103° 31' 57.230 W
2,800.0	1.16	55.85	2,799.9	8.2	15.8	546,544.35	746,882.94	32° 30' 0.045 N	103° 31' 57.210 W
2,900.0	0.97	66.38	2,899.8	9.1	17.5	546,545.26	746,884.55	32° 30' 0.054 N	103° 31' 57.191 W
3,000.0	1.18	62.81	2,999.8	9.9	19.1	546,546.07	746,886.24	32° 30' 0.062 N	103° 31' 57.171 W
3,100.0	0.99	54.94	3,099.8	10.8	20.8	546,547.04	746,887.87	32° 30' 0.072 N	103° 31' 57.152 W
3,200.0	1.82	68.39	3,199.8	11.9	23.0	546,548.12	746,890.05	32° 30' 0.082 N	103° 31' 57.126 W
3,300.0	2.31	72.25	3,299.7	13.1	26.3	546,549.32	746,893.44	32° 30' 0.094 N	103° 31' 57.086 W
3,400.0	2.87	65.47	3,399.6	14.8	30.5	546,550.97	746,897.64	32° 30' 0.110 N	103° 31' 57.037 W
3,500.0	3.08	65.83	3,499.5	16.9	35.3	546,553.11	746,902.37	32° 30' 0.131 N	103° 31' 56.982 W
3,600.0	3.39	61.56	3,599.3	19.4	40.3	546,555.62	746,907.42	32° 30' 0.155 N	103° 31' 56.923 W
3,700.0	2.93	62.86	3,699.2	22.0	45.2	546,558.19	746,912.29	32° 30' 0.180 N	103° 31' 56.866 W
3,800.0	1.99	69.77	3,799.1	23.8	49.1	546,559.96	746,916.20	32° 30' 0.197 N	103° 31' 56.820 W
3,900.0	1.30	55.12	3,899.0	25.0	51.7	546,561.21	746,918.76	32° 30' 0.209 N	103° 31' 56.790 W
4,000.0	1.27	36.63	3,999.0	26.5	53.3	546,562.75	746,920.35	32° 30' 0.225 N	103° 31' 56.771 W
4,100.0	1.56	30.46	4,099.0	28.6	54.6	546,564.81	746,921.70	32° 30' 0.245 N	103° 31' 56.755 W
4,200.0	1.68	35.67	4,198.9	31.0	56.1	546,567.17	746,923.25	32° 30' 0.268 N	103° 31' 56.737 W
4,300.0	1.43	12.68	4,298.9	33.4	57.3	546,569.58	746,924.37	32° 30' 0.292 N	103° 31' 56.724 W
4,400.0	1.27	7.98	4,398.9	35.7	57.7	546,571.90	746,924.80	32° 30' 0.315 N	103° 31' 56.718 W
4,500.0	1.35	9.45	4,498.8	38.0	58.1	546,574.15	746,925.15	32° 30' 0.337 N	103° 31' 56.714 W
4,600.0	1.69	3.20	4,598.8	40.6	58.3	546,576.79	746,925.43	32° 30' 0.363 N	103° 31' 56.711 W
4,700.0	1.82	5.83	4,698.8	43.6	58.6	546,579.84	746,925.67	32° 30' 0.393 N	103° 31' 56.708 W
4,800.0	1.93	7.65	4,798.7	46.9	59.0	546,583.09	746,926.05	32° 30' 0.425 N	103° 31' 56.703 W
4,900.0	1.61	9.33	4,898.6	49.9	59.4	546,586.14	746,926.51	32° 30' 0.456 N	103° 31' 56.697 W
5,000.0	1.12	13.29	4,998.6	52.3	59.9	546,588.48	746,926.96	32° 30' 0.479 N	103° 31' 56.692 W
5,100.0	1.17	10.46	5,098.6	54.2	60.3	546,590.44	746,927.37	32° 30' 0.498 N	103° 31' 56.687 W
5,200.0	1.47	11.50	5,198.6	56.5	60.7	546,592.70	746,927.81	32° 30' 0.520 N	103° 31' 56.681 W
5,300.0	1.13	13.82	5,298.5	58.7	61.2	546,594.91	746,928.30	32° 30' 0.542 N	103° 31' 56.675 W
5,400.0	1.34	14.93	5,398.5	60.8	61.7	546,597.00	746,928.84	32° 30' 0.563 N	103° 31' 56.669 W
5,500.0	0.78	355.91	5,498.5	62.6	62.0	546,598.81	746,929.09	32° 30' 0.581 N	103° 31' 56.666 W
5,600.0	0.50	354.24	5,598.5	63.7	61.9	546,599.92	746,929.00	32° 30' 0.592 N	103° 31' 56.667 W
5,700.0	0.50	332.98	5,698.5	64.5	61.7	546,600.74	746,928.76	32° 30' 0.600 N	103° 31' 56.670 W
5,800.0	0.61	332.04	5,798.5	65.4	61.2	546,601.60	746,928.31	32° 30' 0.608 N	103° 31' 56.675 W
5,900.0	0.38	340.64	5,898.5	66.2	60.9	546,602.39	746,927.95	32° 30' 0.616 N	103° 31' 56.679 W
6,000.0	0.47	346.20	5,998.5	66.9	60.6	546,603.10	746,927.74	32° 30' 0.623 N	103° 31' 56.681 W
6,100.0	0.38	333.14	6,098.5	67.6	60.4	546,603.79	746,927.49	32° 30' 0.630 N	103° 31' 56.684 W
6,200.0	0.49	329.26	6,198.5	68.3	60.0	546,604.46	746,927.13	32° 30' 0.637 N	103° 31' 56.688 W
6,300.0	0.19	357.77	6,298.5	68.8	59.8	546,604.99	746,926.90	32° 30' 0.642 N	103° 31' 56.691 W
6,400.0	0.35	312.86	6,398.5	69.2	59.6	546,605.36	746,926.67	32° 30' 0.646 N	103° 31' 56.694 W



HP
Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Bobwhite 12 State Com #4H
Project:	Lea County, NM	TVD Reference:	Well @ 3814.0usft (Ensign #772)
Site:	Sec 12, T21S, R33E	MD Reference:	Well @ 3814.0usft (Ensign #772)
Well:	Bobwhite 12 State Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,500.0	0.26	308.40	6,498.5	69.5	59.2	546,605.71	746,926.27	32° 30' 0.649 N	103° 31' 56.698 W
6,600.0	0.28	334.20	6,598.5	69.9	58.9	546,606.07	746,925.98	32° 30' 0.653 N	103° 31' 56.702 W
6,700.0	0.22	339.79	6,698.5	70.3	58.7	546,606.47	746,925.81	32° 30' 0.657 N	103° 31' 56.704 W
6,800.0	0.18	336.40	6,798.5	70.6	58.6	546,606.80	746,925.68	32° 30' 0.660 N	103° 31' 56.705 W
6,900.0	0.41	326.21	6,898.5	71.0	58.3	546,607.24	746,925.42	32° 30' 0.664 N	103° 31' 56.708 W
7,000.0	0.19	333.49	6,998.5	71.5	58.1	546,607.68	746,925.15	32° 30' 0.669 N	103° 31' 56.711 W
7,100.0	0.34	336.10	7,098.5	71.9	57.9	546,608.10	746,924.95	32° 30' 0.673 N	103° 31' 56.713 W
7,200.0	0.13	344.21	7,198.5	72.3	57.7	546,608.48	746,924.80	32° 30' 0.677 N	103° 31' 56.715 W
7,300.0	0.28	253.55	7,298.5	72.3	57.4	546,608.52	746,924.54	32° 30' 0.677 N	103° 31' 56.718 W
7,400.0	0.06	255.66	7,398.5	72.2	57.2	546,608.44	746,924.25	32° 30' 0.676 N	103° 31' 56.722 W
7,500.0	0.27	265.00	7,498.5	72.2	56.9	546,608.41	746,923.97	32° 30' 0.676 N	103° 31' 56.725 W
7,600.0	0.66	256.22	7,598.5	72.0	56.1	546,608.25	746,923.17	32° 30' 0.675 N	103° 31' 56.734 W
7,700.0	0.41	205.53	7,698.5	71.6	55.4	546,607.79	746,922.46	32° 30' 0.670 N	103° 31' 56.743 W
7,800.0	0.83	211.18	7,798.5	70.6	54.8	546,606.85	746,921.93	32° 30' 0.661 N	103° 31' 56.749 W
7,900.0	0.59	188.76	7,898.4	69.5	54.4	546,605.72	746,921.48	32° 30' 0.650 N	103° 31' 56.754 W
8,000.0	0.38	177.13	7,998.4	68.7	54.3	546,604.88	746,921.41	32° 30' 0.641 N	103° 31' 56.755 W
8,100.0	0.59	179.07	8,098.4	67.8	54.3	546,604.03	746,921.44	32° 30' 0.633 N	103° 31' 56.755 W
8,200.0	0.74	191.92	8,198.4	66.7	54.2	546,602.89	746,921.31	32° 30' 0.622 N	103° 31' 56.756 W
8,300.0	0.89	198.33	8,298.4	65.3	53.8	546,601.52	746,920.94	32° 30' 0.608 N	103° 31' 56.761 W
8,400.0	0.98	184.34	8,398.4	63.7	53.5	546,599.93	746,920.63	32° 30' 0.592 N	103° 31' 56.765 W
8,500.0	0.71	183.90	8,498.4	62.3	53.4	546,598.46	746,920.52	32° 30' 0.578 N	103° 31' 56.766 W
8,600.0	0.80	190.76	8,598.4	60.9	53.3	546,597.15	746,920.35	32° 30' 0.565 N	103° 31' 56.768 W
8,700.0	0.88	194.82	8,698.4	59.5	52.9	546,595.72	746,920.02	32° 30' 0.551 N	103° 31' 56.772 W
8,800.0	0.79	186.66	8,798.4	58.1	52.6	546,594.30	746,919.75	32° 30' 0.537 N	103° 31' 56.775 W
8,900.0	0.76	180.55	8,898.4	56.7	52.6	546,592.95	746,919.66	32° 30' 0.523 N	103° 31' 56.777 W
9,000.0	0.78	218.77	8,998.4	55.6	52.1	546,591.75	746,919.23	32° 30' 0.512 N	103° 31' 56.782 W
9,100.0	0.93	227.03	9,098.3	54.5	51.1	546,590.67	746,918.21	32° 30' 0.501 N	103° 31' 56.794 W
9,200.0	0.98	249.10	9,198.3	53.6	49.7	546,589.81	746,916.81	32° 30' 0.493 N	103° 31' 56.810 W
9,300.0	1.06	232.86	9,298.3	52.7	48.2	546,588.95	746,915.28	32° 30' 0.484 N	103° 31' 56.828 W
9,400.0	0.90	244.16	9,398.3	51.8	46.7	546,588.05	746,913.83	32° 30' 0.475 N	103° 31' 56.845 W
9,500.0	1.15	275.06	9,498.3	51.6	45.0	546,587.79	746,912.13	32° 30' 0.473 N	103° 31' 56.865 W
9,555.0	1.44	282.57	9,553.3	51.8	43.8	546,587.99	746,910.90	32° 30' 0.475 N	103° 31' 56.879 W
Tie In @ 9555' MD / 9553' TVD									
9,623.0	1.90	291.30	9,621.2	52.4	41.9	546,588.59	746,909.02	32° 30' 0.481 N	103° 31' 56.901 W
9,716.0	1.90	300.80	9,714.2	53.7	39.2	546,589.94	746,906.26	32° 30' 0.495 N	103° 31' 56.933 W
9,810.0	1.50	304.20	9,808.1	55.2	36.8	546,591.43	746,903.90	32° 30' 0.510 N	103° 31' 56.961 W
9,905.0	1.40	303.10	9,903.1	56.6	34.8	546,592.76	746,901.90	32° 30' 0.523 N	103° 31' 56.984 W
9,999.0	1.50	316.00	9,997.1	58.1	33.0	546,594.27	746,900.08	32° 30' 0.538 N	103° 31' 57.005 W
10,094.0	1.90	308.90	10,092.0	60.0	30.9	546,596.16	746,897.99	32° 30' 0.557 N	103° 31' 57.029 W
10,188.0	1.60	305.90	10,186.0	61.7	28.6	546,597.90	746,895.72	32° 30' 0.574 N	103° 31' 57.056 W
10,284.0	1.90	315.10	10,282.0	63.6	26.4	546,599.82	746,893.51	32° 30' 0.593 N	103° 31' 57.081 W
10,378.0	1.40	311.70	10,375.9	65.5	24.5	546,601.69	746,891.55	32° 30' 0.612 N	103° 31' 57.104 W
10,472.0	0.80	313.50	10,469.9	66.7	23.1	546,602.90	746,890.22	32° 30' 0.624 N	103° 31' 57.119 W
10,566.0	0.60	318.40	10,563.9	67.5	22.3	546,603.72	746,889.42	32° 30' 0.632 N	103° 31' 57.129 W
10,662.0	0.30	335.50	10,659.9	68.1	21.9	546,604.33	746,888.98	32° 30' 0.638 N	103° 31' 57.134 W
10,756.0	0.30	355.90	10,753.9	68.6	21.8	546,604.79	746,888.86	32° 30' 0.643 N	103° 31' 57.135 W
10,850.0	0.20	111.50	10,847.9	68.8	21.9	546,604.98	746,888.99	32° 30' 0.645 N	103° 31' 57.134 W
10,945.0	0.60	158.10	10,942.9	68.3	22.2	546,604.46	746,889.33	32° 30' 0.640 N	103° 31' 57.130 W
10,987.0	0.50	151.40	10,984.9	67.9	22.4	546,604.09	746,889.50	32° 30' 0.636 N	103° 31' 57.128 W
11,015.0	0.60	150.90	11,012.9	67.7	22.5	546,603.86	746,889.63	32° 30' 0.634 N	103° 31' 57.126 W
11,046.0	1.10	182.50	11,043.9	67.2	22.6	546,603.42	746,889.70	32° 30' 0.629 N	103° 31' 57.125 W
11,078.0	2.60	209.90	11,075.9	66.3	22.2	546,602.48	746,889.32	32° 30' 0.620 N	103° 31' 57.130 W
11,109.0	5.00	203.10	11,106.8	64.4	21.3	546,600.63	746,888.44	32° 30' 0.602 N	103° 31' 57.140 W
11,141.0	8.40	196.20	11,138.6	60.9	20.1	546,597.10	746,887.24	32° 30' 0.567 N	103° 31' 57.155 W
11,173.0	11.90	193.40	11,170.1	55.4	18.7	546,591.65	746,885.83	32° 30' 0.513 N	103° 31' 57.172 W



HP
Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Bobwhite 12 State Com #4H
Project:	Lea County, NM	TVD Reference:	Well @ 3814.0usft (Ensign #772)
Site:	Sec 12, T21S, R33E	MD Reference:	Well @ 3814.0usft (Ensign #772)
Well:	Bobwhite 12 State Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,204.0	15.10	194.50	11,200.2	48.4	17.0	546,584.63	746,884.07	32° 30' 0.444 N	103° 31' 57.193 W
11,236.0	18.50	194.00	11,230.8	39.5	14.7	546,575.66	746,881.80	32° 30' 0.355 N	103° 31' 57.220 W
11,268.0	22.90	193.80	11,260.8	28.5	12.0	546,564.68	746,879.09	32° 30' 0.247 N	103° 31' 57.253 W
11,300.0	26.90	191.50	11,289.8	15.3	9.1	546,551.54	746,876.16	32° 30' 0.117 N	103° 31' 57.288 W
11,331.0	29.40	190.80	11,317.1	1.0	6.2	546,537.19	746,873.33	32° 29' 59.975 N	103° 31' 57.322 W
11,362.0	32.10	190.40	11,343.7	-14.6	3.3	546,521.61	746,870.42	32° 29' 59.821 N	103° 31' 57.358 W
11,394.0	34.50	191.00	11,370.5	-31.9	0.1	546,504.35	746,867.16	32° 29' 59.651 N	103° 31' 57.397 W
11,426.0	37.40	191.50	11,396.4	-50.3	-3.6	546,485.93	746,863.49	32° 29' 59.469 N	103° 31' 57.442 W
11,457.0	41.60	191.50	11,420.3	-69.6	-7.5	546,466.61	746,859.56	32° 29' 59.278 N	103° 31' 57.489 W
11,489.0	44.90	190.30	11,443.6	-91.1	-11.7	546,445.08	746,855.42	32° 29' 59.065 N	103° 31' 57.540 W
11,521.0	47.60	189.60	11,465.7	-113.9	-15.7	546,422.31	746,851.43	32° 29' 58.840 N	103° 31' 57.588 W
11,552.0	50.80	188.70	11,486.0	-137.1	-19.4	546,399.15	746,847.70	32° 29' 58.611 N	103° 31' 57.634 W
11,583.0	54.20	187.40	11,504.9	-161.4	-22.8	546,374.80	746,844.26	32° 29' 58.370 N	103° 31' 57.676 W
11,593.9	55.43	187.04	11,511.1	-170.2	-24.0	546,365.96	746,843.15	32° 29' 58.283 N	103° 31' 57.690 W
Crossed 330' Hard Line @ 11594' MD / 11511' TVD									
11,614.0	57.70	186.40	11,522.2	-186.9	-25.9	546,349.31	746,841.18	32° 29' 58.118 N	103° 31' 57.714 W
11,646.0	60.80	184.80	11,538.6	-214.3	-28.6	546,321.94	746,838.51	32° 29' 57.848 N	103° 31' 57.748 W
11,677.0	62.90	183.60	11,553.2	-241.5	-30.6	546,294.68	746,836.51	32° 29' 57.578 N	103° 31' 57.774 W
11,709.0	65.90	183.40	11,567.0	-270.3	-32.3	546,265.88	746,834.75	32° 29' 57.293 N	103° 31' 57.797 W
11,740.0	68.80	182.50	11,579.0	-298.9	-33.8	546,237.31	746,833.28	32° 29' 57.011 N	103° 31' 57.816 W
11,772.0	71.80	181.10	11,589.8	-329.0	-34.8	546,207.21	746,832.33	32° 29' 56.713 N	103° 31' 57.830 W
11,803.0	74.70	180.90	11,598.7	-358.7	-35.3	546,177.53	746,831.82	32° 29' 56.419 N	103° 31' 57.839 W
11,835.0	77.70	180.40	11,606.3	-389.7	-35.6	546,146.46	746,831.47	32° 29' 56.112 N	103° 31' 57.845 W
11,866.0	80.20	180.40	11,612.3	-420.2	-35.8	546,116.04	746,831.25	32° 29' 55.811 N	103° 31' 57.851 W
11,898.0	82.60	181.30	11,617.0	-451.8	-36.3	546,084.40	746,830.78	32° 29' 55.498 N	103° 31' 57.859 W
11,929.0	86.30	179.90	11,620.0	-482.6	-36.6	546,053.55	746,830.46	32° 29' 55.193 N	103° 31' 57.865 W
11,961.0	88.40	179.40	11,621.5	-514.6	-36.4	546,021.59	746,830.66	32° 29' 54.877 N	103° 31' 57.866 W
11,993.0	88.80	179.90	11,622.3	-546.6	-36.2	545,989.60	746,830.85	32° 29' 54.560 N	103° 31' 57.866 W
12,087.0	89.80	180.60	11,623.5	-640.6	-36.7	545,895.61	746,830.44	32° 29' 53.630 N	103° 31' 57.879 W
12,182.0	90.60	180.80	11,623.1	-735.6	-37.8	545,800.62	746,829.28	32° 29' 52.690 N	103° 31' 57.901 W
12,276.0	91.50	180.90	11,621.4	-829.6	-39.2	545,706.65	746,827.89	32° 29' 51.760 N	103° 31' 57.926 W
12,371.0	91.90	178.30	11,618.6	-924.5	-38.5	545,611.70	746,828.55	32° 29' 50.821 N	103° 31' 57.926 W
12,465.0	90.10	178.00	11,616.9	-1,018.4	-35.5	545,517.77	746,831.58	32° 29' 49.891 N	103° 31' 57.899 W
12,559.0	89.30	176.40	11,617.4	-1,112.3	-30.9	545,423.88	746,836.18	32° 29' 48.962 N	103° 31' 57.854 W
12,654.0	88.70	177.30	11,619.1	-1,207.2	-25.7	545,329.04	746,841.39	32° 29' 48.023 N	103° 31' 57.801 W
12,749.0	87.50	176.20	11,622.2	-1,302.0	-20.3	545,234.25	746,846.78	32° 29' 47.085 N	103° 31' 57.747 W
12,844.0	88.90	177.30	11,625.2	-1,396.7	-14.9	545,139.46	746,852.16	32° 29' 46.146 N	103° 31' 57.692 W
12,939.0	90.00	178.10	11,626.1	-1,491.7	-11.1	545,044.54	746,855.97	32° 29' 45.207 N	103° 31' 57.656 W
13,033.0	90.90	178.10	11,625.4	-1,585.6	-8.0	544,950.59	746,859.09	32° 29' 44.277 N	103° 31' 57.628 W
13,127.0	91.70	176.70	11,623.3	-1,679.5	-3.7	544,856.72	746,863.35	32° 29' 43.348 N	103° 31' 57.586 W
13,223.0	90.80	178.10	11,621.2	-1,775.4	0.6	544,760.84	746,867.70	32° 29' 42.399 N	103° 31' 57.544 W
13,318.0	90.40	177.60	11,620.2	-1,870.3	4.2	544,665.92	746,871.27	32° 29' 41.459 N	103° 31' 57.510 W
13,413.0	90.90	177.80	11,619.1	-1,965.2	8.0	544,571.00	746,875.08	32° 29' 40.520 N	103° 31' 57.474 W
13,507.0	89.90	176.60	11,618.4	-2,059.1	12.6	544,477.12	746,879.67	32° 29' 39.590 N	103° 31' 57.429 W
13,602.0	90.70	177.60	11,617.9	-2,154.0	17.4	544,382.24	746,884.48	32° 29' 38.651 N	103° 31' 57.381 W
13,696.0	89.20	177.40	11,618.0	-2,247.9	21.5	544,288.33	746,888.58	32° 29' 37.722 N	103° 31' 57.341 W
13,791.0	89.70	177.40	11,618.9	-2,342.8	25.8	544,193.44	746,892.89	32° 29' 36.782 N	103° 31' 57.299 W
13,885.0	90.80	176.00	11,618.5	-2,436.6	31.2	544,099.60	746,898.30	32° 29' 35.853 N	103° 31' 57.245 W
13,979.0	89.60	177.30	11,618.2	-2,530.4	36.7	544,005.76	746,903.79	32° 29' 34.924 N	103° 31' 57.189 W
14,074.0	90.00	178.30	11,618.5	-2,625.4	40.3	543,910.83	746,907.44	32° 29' 33.985 N	103° 31' 57.154 W
14,168.0	90.10	177.40	11,618.4	-2,719.3	43.9	543,816.90	746,910.96	32° 29' 33.055 N	103° 31' 57.121 W
14,263.0	89.60	180.30	11,618.7	-2,814.3	45.8	543,721.93	746,912.87	32° 29' 32.115 N	103° 31' 57.108 W
14,358.0	89.10	180.30	11,619.8	-2,909.3	45.3	543,626.94	746,912.37	32° 29' 31.175 N	103° 31' 57.122 W
14,452.0	89.30	179.00	11,621.1	-3,003.3	45.9	543,532.95	746,912.95	32° 29' 30.245 N	103° 31' 57.123 W
14,547.0	89.70	179.20	11,621.9	-3,098.2	47.3	543,437.97	746,914.44	32° 29' 29.305 N	103° 31' 57.114 W



HP
Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Bobwhite 12 State Com #4H
Project:	Lea County, NM	TVD Reference:	Well @ 3814.0usft (Ensign #772)
Site:	Sec 12, T21S, R33E	MD Reference:	Well @ 3814.0usft (Ensign #772)
Well:	Bobwhite 12 State Com #4H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,642.0	90.00	178.10	11,622.2	-3,193.2	49.6	543,342.99	746,916.68	32° 29' 28.365 N	103° 31' 57.096 W
14,736.0	90.30	177.10	11,621.9	-3,287.1	53.5	543,249.08	746,920.61	32° 29' 27.436 N	103° 31' 57.059 W
14,830.0	90.00	179.00	11,621.7	-3,381.1	56.7	543,155.14	746,923.81	32° 29' 26.506 N	103° 31' 57.029 W
14,924.0	90.30	177.30	11,621.4	-3,475.0	59.8	543,061.19	746,926.85	32° 29' 25.576 N	103° 31' 57.002 W
15,019.0	90.20	178.30	11,621.0	-3,569.9	63.4	542,966.26	746,930.49	32° 29' 24.637 N	103° 31' 56.968 W
15,112.0	90.70	177.60	11,620.3	-3,662.9	66.7	542,873.33	746,933.82	32° 29' 23.717 N	103° 31' 56.937 W
15,206.0	90.50	179.00	11,619.3	-3,756.8	69.5	542,779.37	746,936.61	32° 29' 22.787 N	103° 31' 56.913 W
15,301.0	89.80	178.50	11,619.0	-3,851.8	71.6	542,684.40	746,938.68	32° 29' 21.847 N	103° 31' 56.897 W
15,396.0	89.90	179.70	11,619.3	-3,946.8	73.1	542,589.41	746,940.17	32° 29' 20.907 N	103° 31' 56.888 W
15,490.0	88.80	179.50	11,620.4	-4,040.8	73.7	542,495.42	746,940.83	32° 29' 19.977 N	103° 31' 56.889 W
15,584.0	88.60	179.90	11,622.5	-4,134.8	74.2	542,401.45	746,941.32	32° 29' 19.047 N	103° 31' 56.891 W
15,679.0	89.70	179.90	11,623.9	-4,229.7	74.4	542,306.46	746,941.49	32° 29' 18.107 N	103° 31' 56.898 W
15,753.0	88.20	178.70	11,625.3	-4,303.7	75.3	542,232.48	746,942.39	32° 29' 17.375 N	103° 31' 56.893 W
15,773.0	88.20	178.50	11,625.9	-4,323.7	75.8	542,212.50	746,942.88	32° 29' 17.177 N	103° 31' 56.889 W
15,867.0	89.00	178.70	11,628.2	-4,417.6	78.1	542,118.55	746,945.18	32° 29' 16.247 N	103° 31' 56.871 W
15,962.0	87.50	178.80	11,631.1	-4,512.6	80.2	542,023.62	746,947.25	32° 29' 15.308 N	103° 31' 56.855 W
16,056.0	88.20	179.40	11,634.6	-4,606.5	81.6	541,929.70	746,948.72	32° 29' 14.379 N	103° 31' 56.846 W
16,150.0	88.90	178.10	11,637.0	-4,700.4	83.7	541,835.76	746,950.77	32° 29' 13.449 N	103° 31' 56.830 W
16,226.0	88.90	178.10	11,638.5	-4,776.4	86.2	541,759.81	746,953.29	32° 29' 12.697 N	103° 31' 56.808 W

TD @ 16226' MD / 11639' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,555.0	9,553.3	51.8	43.8	Tie In @ 9555' MD / 9553' TVD
11,593.9	11,511.1	-170.2	-24.0	Crossed 330' Hard Line @ 11594' MD / 11511' TVD
16,226.0	11,638.5	-4,776.4	86.2	TD @ 16226' MD / 11639' TVD

Checked By: _____ Approved By: _____ Date: _____