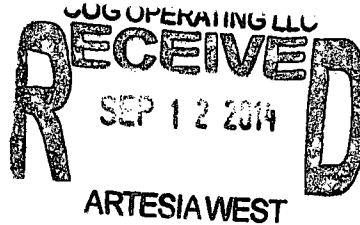




McVAY DRILLING COMPANY
P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

15-41038

Well Name and Num: Bultaco State #1H
Location: Sec 36, T22S, R31E
Operator: COG
Drilling Contractor: McVay Drilling Company



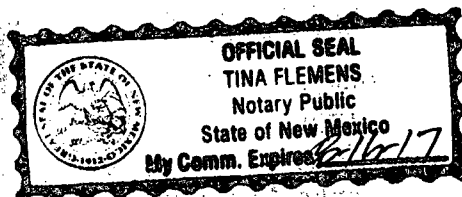
The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
1.00	318	0.40	6873	90.90	12824
0.60	681	1.00	7285	87.60	13582
0.80	987	1.50	7761	87.60	14152
0.40	1396	2.00	8207	93.50	14435
0.40	1807	1.80	8780	95.90	14720
0.30	2220	0.30	9290		
0.60	2602	0.20	9640		
0.90	3014	28.20	9956		
0.50	3394	50.10	10179		
0.50	3774	52.80	10211		
0.40	4182	73.90	10466		
0.40	4469	87.50	10714		
0.60	4877	89.50	11220		
0.70	5289	90.30	11410		
0.80	5730	90.30	11786		
0.70	6109	89.70	12069		
0.78	6494	90.70	12351		

By: Hunter Cramer

Subscribed and sworn to before me this 10th day of September, 2014

Tina Flemens
Notary Public, Lea County, New Mexico





September 12, 2014

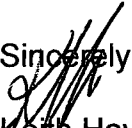
Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: **Bultaco State 1H**

Please find enclosed a copy of the survey from 0.00' to 9300.00' ran on the above referenced well.

Sincerely,

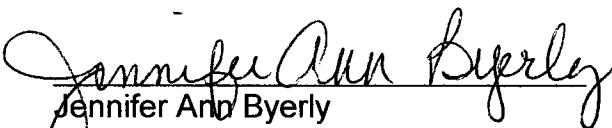

Keith Havelka
Operations

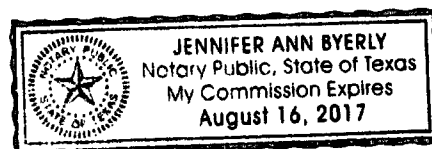
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 12 day of September A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Concho
Lease/Well: Bultaco State /1H
Location: S36 - T22/S - R31/E
Rig Name: McVay 7



State/County: New Mexico/Eddy
Latitude: 32.34, Longitude: -103.72
GRID North is 0.33 Degrees East of True North
VS-Azi: 0.00 Degrees

Depth Reference : RKB = 17FT

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 9/12/2014 / 14:43

VES Survey International
West Texas
(432) 563-5444
Surveyor: Cody Johnson
Bultaco State 1H / API 30-015-41038

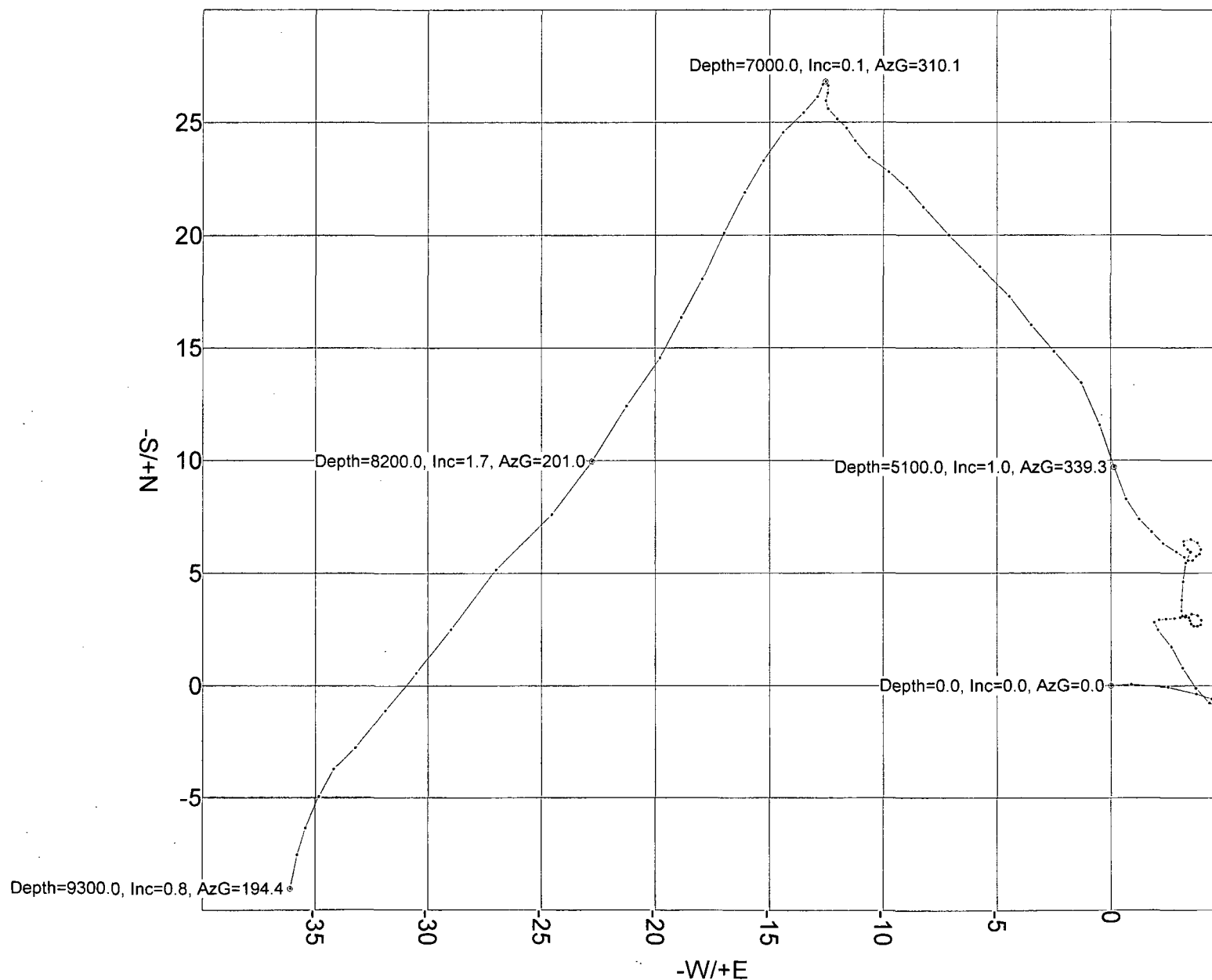
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	1.01	86.19	99.99	0.06	0.88	0.06	0.88	86.19	1.01
200.00	0.87	104.40	199.98	-0.07	2.50	-0.07	2.50	91.66	0.33
300.00	0.59	102.44	299.97	-0.37	3.74	-0.37	3.76	95.70	0.28
400.00	0.22	123.90	399.97	-0.59	4.41	-0.59	4.45	97.65	0.40
500.00	0.17	126.65	499.97	-0.79	4.69	-0.79	4.75	99.55	0.05
600.00	0.17	247.10	599.97	-0.94	4.67	-0.94	4.77	101.33	0.30
700.00	0.36	314.66	699.97	-0.77	4.31	-0.77	4.38	100.15	0.33
800.00	0.67	320.31	799.96	-0.10	3.72	-0.10	3.72	91.59	0.31
900.00	0.56	334.93	899.96	0.79	3.14	0.79	3.24	75.95	0.19
1000.00	0.65	330.72	999.95	1.72	2.65	1.72	3.16	56.98	0.11
1100.00	0.46	308.57	1099.95	2.47	2.06	2.47	3.22	39.78	0.29
1200.00	0.20	59.55	1199.95	2.81	1.89	2.81	3.39	33.96	0.56
1300.00	0.08	69.48	1299.95	2.93	2.11	2.93	3.61	35.82	0.12
1400.00	0.27	85.04	1399.95	2.97	2.41	2.97	3.83	39.08	0.19
1500.00	0.16	89.20	1499.95	2.99	2.78	2.99	4.09	42.91	0.11
1600.00	0.14	75.47	1599.95	3.03	3.04	3.03	4.29	45.11	0.04
1700.00	0.18	64.68	1699.95	3.12	3.30	3.12	4.54	46.54	0.05
1800.00	0.13	92.24	1799.95	3.18	3.55	3.18	4.77	48.08	0.09

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	0.18	109.59	1899.94	3.13	3.81	3.13	4.93	50.62	0.07
2000.00	0.19	176.72	1999.94	2.91	3.97	2.91	4.92	53.75	0.20
2100.00	0.07	221.22	2099.94	2.70	3.94	2.70	4.78	55.54	0.15
2200.00	0.12	263.82	2199.94	2.65	3.80	2.65	4.63	55.12	0.08
2300.00	0.07	278.17	2299.94	2.65	3.63	2.65	4.49	53.93	0.05
2400.00	0.11	332.39	2399.94	2.74	3.52	2.74	4.46	52.08	0.09
2500.00	0.08	357.87	2499.94	2.90	3.47	2.90	4.52	50.17	0.06
2600.00	0.10	324.72	2599.94	3.03	3.42	3.03	4.57	48.42	0.06
2700.00	0.13	243.60	2699.94	3.06	3.27	3.06	4.47	46.93	0.15
2800.00	0.11	339.60	2799.94	3.09	3.14	3.09	4.41	45.38	0.18
2900.00	0.17	359.23	2899.94	3.33	3.10	3.33	4.55	42.96	0.08
3000.00	0.38	1.54	2999.94	3.81	3.11	3.81	4.92	39.21	0.21
3100.00	0.55	5.91	3099.94	4.62	3.17	4.62	5.60	34.44	0.17
3200.00	0.42	11.31	3199.93	5.45	3.29	5.45	6.37	31.09	0.14
3300.00	0.19	48.84	3299.93	5.92	3.48	5.92	6.87	30.47	0.29
3400.00	0.15	235.77	3399.93	5.95	3.50	5.95	6.90	30.44	0.33
3500.00	0.19	352.13	3499.93	6.05	3.37	6.05	6.92	29.13	0.29
3600.00	0.16	278.92	3599.93	6.23	3.21	6.23	7.01	27.21	0.21
3700.00	0.23	39.59	3699.93	6.41	3.19	6.41	7.16	26.48	0.34
3800.00	0.23	111.81	3799.93	6.49	3.51	6.49	7.38	28.41	0.27
3900.00	0.15	124.31	3899.93	6.34	3.81	6.34	7.40	30.99	0.09
4000.00	0.25	172.48	3999.93	6.05	3.95	6.05	7.22	33.13	0.19
4100.00	0.09	279.56	4099.93	5.84	3.89	5.84	7.02	33.69	0.29
4200.00	0.14	211.09	4199.93	5.75	3.75	5.75	6.86	33.11	0.14
4300.00	0.14	231.85	4299.93	5.57	3.59	5.57	6.63	32.81	0.05
4400.00	0.13	304.19	4399.93	5.56	3.40	5.56	6.51	31.45	0.16
4500.00	0.13	314.67	4499.93	5.70	3.22	5.70	6.55	29.46	0.02
4600.00	0.35	300.13	4599.93	5.94	2.87	5.94	6.60	25.82	0.22
4700.00	0.45	304.34	4699.93	6.31	2.29	6.31	6.72	19.91	0.10
4800.00	0.39	327.37	4799.92	6.82	1.78	6.82	7.05	14.62	0.18
4900.00	0.53	308.40	4899.92	7.40	1.23	7.40	7.50	9.47	0.20
5000.00	0.74	340.82	4999.91	8.29	0.66	8.29	8.32	4.55	0.41
5100.00	1.00	339.27	5099.90	9.71	0.14	9.71	9.71	0.83	0.26
5200.00	1.26	343.12	5199.88	11.58	-0.49	11.58	11.59	357.59	0.28
5300.00	1.09	329.25	5299.86	13.45	-1.29	13.45	13.51	354.50	0.33
5400.00	1.04	308.98	5399.85	14.84	-2.48	14.84	15.05	350.49	0.38
5500.00	0.77	333.12	5499.83	16.01	-3.49	16.01	16.39	347.69	0.46
5600.00	1.06	315.69	5599.82	17.28	-4.45	17.28	17.84	345.57	0.40
5700.00	1.06	314.97	5699.80	18.60	-5.75	18.60	19.47	342.82	0.01

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
5800.00	1.17	316.56	5799.78	20.00	-7.11	20.00	21.22	340.43	0.11
5900.00	0.74	320.44	5899.77	21.24	-8.23	21.24	22.78	338.83	0.43
6000.00	0.56	319.64	5999.76	22.11	-8.96	22.11	23.86	337.95	0.19
6100.00	0.67	302.69	6099.76	22.80	-9.76	22.80	24.80	336.82	0.21
6200.00	0.58	311.45	6199.75	23.45	-10.63	23.45	25.75	335.61	0.13
6300.00	0.53	330.39	6299.75	24.18	-11.24	24.18	26.67	335.07	0.19
6400.00	0.25	317.29	6399.74	24.74	-11.62	24.74	27.33	334.85	0.29
6500.00	0.41	312.92	6499.74	25.15	-12.02	25.15	27.87	334.44	0.16
6600.00	0.30	326.38	6599.74	25.60	-12.43	25.60	28.46	334.11	0.14
6700.00	0.16	18.64	6699.74	25.95	-12.53	25.95	28.82	334.24	0.24
6800.00	0.24	10.82	6799.74	26.29	-12.44	26.29	29.09	334.68	0.08
6900.00	0.14	351.51	6899.74	26.62	-12.42	26.62	29.37	334.98	0.11
7000.00	0.12	310.09	6999.74	26.81	-12.52	26.81	29.59	334.96	0.10
7100.00	0.24	194.51	7099.74	26.67	-12.66	26.67	29.52	334.61	0.32
7200.00	0.44	208.20	7199.74	26.12	-12.89	26.12	29.13	333.73	0.21
7300.00	0.64	230.09	7299.73	25.42	-13.51	25.42	28.79	332.02	0.28
7400.00	0.81	222.66	7399.72	24.55	-14.41	24.55	28.47	329.58	0.19
7500.00	0.94	207.94	7499.71	23.30	-15.27	23.30	27.86	326.76	0.26
7600.00	0.94	212.42	7599.70	21.88	-16.10	21.88	27.17	323.65	0.07
7700.00	1.35	202.85	7699.68	20.10	-17.00	20.10	26.32	319.77	0.45
7800.00	1.22	206.41	7799.65	18.06	-17.93	18.06	25.45	315.20	0.16
7900.00	1.01	210.82	7899.64	16.35	-18.86	16.35	24.96	310.93	0.22
8000.00	1.30	204.99	7999.61	14.57	-19.79	14.57	24.57	306.35	0.31
8100.00	1.70	221.84	8099.58	12.43	-21.26	12.43	24.63	300.32	0.59
8200.00	1.66	200.97	8199.54	9.97	-22.77	9.97	24.85	293.66	0.61
8300.00	1.85	231.35	8299.49	7.62	-24.54	7.62	25.70	287.24	0.94
8400.00	2.16	219.83	8399.43	5.16	-27.01	5.16	27.50	280.82	0.51
8500.00	1.65	212.58	8499.38	2.50	-28.99	2.50	29.10	274.93	0.57
8600.00	1.20	225.64	8599.35	0.56	-30.52	0.56	30.52	271.05	0.55
8700.00	1.30	215.10	8699.32	-1.11	-31.92	-1.11	31.94	268.02	0.25
8800.00	1.12	222.04	8799.30	-2.76	-33.23	-2.76	33.34	265.25	0.23
8900.00	0.44	234.11	8899.29	-3.71	-34.19	-3.71	34.39	263.80	0.70
9000.00	1.22	199.15	8999.28	-4.94	-34.85	-4.94	35.20	261.93	0.90
9100.00	0.54	210.46	9099.27	-6.35	-35.44	-6.35	36.00	259.84	0.70
9200.00	0.92	189.30	9199.26	-7.54	-35.80	-7.54	36.59	258.10	0.46
9300.00	0.83	194.36	9299.25	-9.03	-36.11	-9.03	37.22	255.96	0.12



VES Survey International
West Texas
(432) 563-5444
Surveyor: Cody Johnson
Bultaco State 1H / API 30-015-41038



VES Survey Date: 08/30/2014



COG Operating LLC

Eddy County, NM

Bultaco State

#1

OH

Survey: MWD#1

Survey Report - Geographic

09 September, 2014



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Eddy County, NM	TVD Reference:	WELL @ 3505.2usft (Original Well Elev)
Site:	Bultaco State	MD Reference:	WELL @ 3505.2usft (Original Well Elev)
Well:	#1	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Eddy 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	Bultaco State		
Site Position:		Northing:	488,348.20 usft
From:	Map	Easting:	688,332.10 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 20' 28.000 N
		Longitude:	103° 43' 24.732 W
		Grid Convergence:	0.33 °

Well	#1		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 20' 28.000 N
		Longitude:	103° 43' 24.732 W
		Ground Level:	3,488.2 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	8/4/2014	7.28
			Dip Angle
			(°)
			60.19
			Field Strength
			(nT)
			48,356

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			359.16

Survey Program	Date 9/9/2014		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	9,300.0	GYRO (OH)	MWD
9,480.0	14,764.0	MWD#1 (OH)	MWD
			Description
			MWD - Standard
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
9,300.0	0.83	194.36	9,299.2	-9.0	-36.1	488,339.17	688,296.00	32° 20' 27.913 N	103° 43' 25.153 W
9,480.0	2.00	203.50	9,479.2	-13.2	-37.7	488,335.03	688,294.42	32° 20' 27.872 N	103° 43' 25.172 W
9,576.0	2.20	207.60	9,575.1	-16.3	-39.2	488,331.86	688,292.90	32° 20' 27.841 N	103° 43' 25.190 W
9,640.0	2.20	209.90	9,639.1	-18.5	-40.4	488,329.71	688,291.72	32° 20' 27.819 N	103° 43' 25.204 W
9,672.0	1.70	214.60	9,671.1	-19.4	-41.0	488,328.78	688,291.14	32° 20' 27.810 N	103° 43' 25.211 W
9,703.0	0.70	303.80	9,702.1	-19.7	-41.4	488,328.51	688,290.72	32° 20' 27.807 N	103° 43' 25.216 W
9,735.0	3.20	355.20	9,734.0	-18.7	-41.6	488,329.51	688,290.49	32° 20' 27.817 N	103° 43' 25.218 W
9,767.0	6.80	356.80	9,765.9	-15.9	-41.8	488,332.29	688,290.30	32° 20' 27.845 N	103° 43' 25.220 W
9,798.0	10.90	1.50	9,796.5	-11.1	-41.8	488,337.06	688,290.28	32° 20' 27.892 N	103° 43' 25.220 W
9,828.0	13.60	357.50	9,825.8	-4.8	-41.9	488,343.42	688,290.20	32° 20' 27.955 N	103° 43' 25.221 W
9,860.0	17.10	355.50	9,856.7	3.7	-42.4	488,351.87	688,289.67	32° 20' 28.039 N	103° 43' 25.226 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Eddy County, NM	TVD Reference:	WELL @ 3505.2usft (Original Well Elev)
Site:	Bultaco State	MD Reference:	WELL @ 3505.2usft (Original Well Elev)
Well:	#1	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
9,892.0	20.70	355.90	9,887.0	14.0	-43.2	488,362.20	688,288.89	32° 20' 28.141 N	103° 43' 25.235 W
9,924.0	24.20	358.40	9,916.5	26.2	-43.8	488,374.40	688,288.30	32° 20' 28.262 N	103° 43' 25.241 W
9,956.0	28.20	0.10	9,945.2	40.3	-44.0	488,388.53	688,288.13	32° 20' 28.402 N	103° 43' 25.242 W
9,988.0	32.30	0.60	9,972.9	56.4	-43.9	488,404.64	688,288.24	32° 20' 28.561 N	103° 43' 25.239 W
10,020.0	36.40	0.10	9,999.3	74.5	-43.8	488,422.70	688,288.34	32° 20' 28.740 N	103° 43' 25.237 W
10,052.0	40.30	358.30	10,024.4	94.3	-44.0	488,442.54	688,288.05	32° 20' 28.936 N	103° 43' 25.239 W
10,083.0	43.50	357.30	10,047.5	115.0	-44.8	488,463.23	688,287.25	32° 20' 29.141 N	103° 43' 25.247 W
10,115.0	45.50	357.70	10,070.3	137.4	-45.8	488,485.63	688,286.28	32° 20' 29.363 N	103° 43' 25.257 W
10,147.0	48.00	358.00	10,092.2	160.7	-46.7	488,508.92	688,285.40	32° 20' 29.593 N	103° 43' 25.266 W
10,179.0	50.10	359.40	10,113.2	184.9	-47.2	488,533.08	688,284.86	32° 20' 29.832 N	103° 43' 25.270 W
10,211.0	52.80	0.90	10,133.1	209.9	-47.2	488,558.11	688,284.93	32° 20' 30.080 N	103° 43' 25.268 W
10,243.0	56.90	1.20	10,151.5	236.1	-46.7	488,584.26	688,285.41	32° 20' 30.339 N	103° 43' 25.260 W
10,275.0	60.20	2.20	10,168.2	263.3	-45.9	488,611.54	688,286.23	32° 20' 30.609 N	103° 43' 25.249 W
10,307.0	62.70	2.50	10,183.5	291.4	-44.7	488,639.63	688,287.38	32° 20' 30.886 N	103° 43' 25.234 W
10,339.0	64.90	3.00	10,197.7	320.1	-43.3	488,668.30	688,288.76	32° 20' 31.170 N	103° 43' 25.216 W
10,371.0	67.30	3.10	10,210.6	349.3	-41.8	488,697.52	688,290.31	32° 20' 31.459 N	103° 43' 25.196 W
10,403.0	69.80	1.70	10,222.3	379.1	-40.5	488,727.27	688,291.56	32° 20' 31.753 N	103° 43' 25.179 W
10,434.0	71.30	359.60	10,232.6	408.3	-40.2	488,756.50	688,291.89	32° 20' 32.043 N	103° 43' 25.174 W
10,466.0	73.90	358.10	10,242.2	438.8	-40.8	488,787.02	688,291.27	32° 20' 32.345 N	103° 43' 25.179 W
10,498.0	77.70	357.70	10,250.1	469.8	-42.0	488,818.02	688,290.13	32° 20' 32.652 N	103° 43' 25.190 W
10,530.0	80.80	358.20	10,256.0	501.2	-43.1	488,849.43	688,289.01	32° 20' 32.962 N	103° 43' 25.201 W
10,562.0	82.90	358.70	10,260.6	532.9	-43.9	488,881.10	688,288.15	32° 20' 33.276 N	103° 43' 25.209 W
10,618.0	85.60	358.20	10,266.2	588.6	-45.4	488,936.79	688,286.65	32° 20' 33.827 N	103° 43' 25.223 W
10,714.0	87.50	359.40	10,272.0	684.4	-47.5	489,032.59	688,284.64	32° 20' 34.775 N	103° 43' 25.240 W
10,841.0	90.20	1.60	10,274.5	811.3	-46.3	489,159.54	688,285.75	32° 20' 36.031 N	103° 43' 25.218 W
10,936.0	91.60	1.90	10,273.0	906.3	-43.4	489,254.48	688,288.65	32° 20' 36.971 N	103° 43' 25.178 W
11,031.0	90.50	359.80	10,271.3	1,001.2	-42.0	489,349.45	688,290.06	32° 20' 37.910 N	103° 43' 25.155 W
11,126.0	89.10	358.60	10,271.6	1,096.2	-43.4	489,444.43	688,288.73	32° 20' 38.850 N	103° 43' 25.165 W
11,220.0	89.50	358.60	10,272.7	1,190.2	-45.7	489,538.40	688,286.44	32° 20' 39.780 N	103° 43' 25.185 W
11,315.0	90.00	358.50	10,273.2	1,285.2	-48.1	489,633.36	688,284.03	32° 20' 40.720 N	103° 43' 25.207 W
11,410.0	90.30	358.40	10,272.9	1,380.1	-50.6	489,728.33	688,281.46	32° 20' 41.660 N	103° 43' 25.231 W
11,504.0	89.40	358.60	10,273.2	1,474.1	-53.1	489,822.30	688,279.00	32° 20' 42.590 N	103° 43' 25.253 W
11,599.0	88.80	358.50	10,274.7	1,569.1	-55.5	489,917.25	688,276.60	32° 20' 43.530 N	103° 43' 25.275 W
11,692.0	89.40	358.70	10,276.1	1,662.0	-57.8	490,010.21	688,274.33	32° 20' 44.450 N	103° 43' 25.295 W
11,786.0	90.30	358.80	10,276.4	1,756.0	-59.8	490,104.19	688,272.28	32° 20' 45.380 N	103° 43' 25.313 W
11,881.0	91.00	359.10	10,275.3	1,851.0	-61.6	490,199.17	688,270.54	32° 20' 46.320 N	103° 43' 25.327 W
11,975.0	89.70	358.80	10,274.7	1,944.9	-63.3	490,293.15	688,268.81	32° 20' 47.250 N	103° 43' 25.341 W
12,069.0	89.70	359.10	10,275.2	2,038.9	-65.0	490,387.13	688,267.09	32° 20' 48.180 N	103° 43' 25.354 W
12,164.0	90.20	359.40	10,275.3	2,133.9	-66.2	490,482.12	688,265.85	32° 20' 49.120 N	103° 43' 25.363 W
12,257.0	90.20	359.40	10,275.0	2,226.9	-67.2	490,575.12	688,264.87	32° 20' 50.041 N	103° 43' 25.368 W
12,351.0	90.70	359.50	10,274.2	2,320.9	-68.1	490,669.11	688,263.97	32° 20' 50.971 N	103° 43' 25.372 W
12,446.0	90.80	359.20	10,273.0	2,415.9	-69.2	490,764.09	688,262.89	32° 20' 51.911 N	103° 43' 25.378 W
12,539.0	90.90	359.30	10,271.6	2,508.9	-70.4	490,857.08	688,261.68	32° 20' 52.831 N	103° 43' 25.386 W
12,635.0	90.00	359.10	10,270.8	2,604.9	-71.8	490,953.06	688,260.34	32° 20' 53.781 N	103° 43' 25.396 W
12,729.0	90.70	359.30	10,270.3	2,698.8	-73.1	491,047.05	688,259.02	32° 20' 54.711 N	103° 43' 25.405 W
12,824.0	90.90	0.20	10,268.9	2,793.8	-73.5	491,142.04	688,258.61	32° 20' 55.651 N	103° 43' 25.403 W
12,918.0	91.00	0.20	10,267.4	2,887.8	-73.2	491,236.03	688,258.94	32° 20' 56.581 N	103° 43' 25.393 W
13,013.0	90.70	0.90	10,266.0	2,982.8	-72.2	491,331.01	688,259.85	32° 20' 57.521 N	103° 43' 25.376 W
13,108.0	90.80	1.00	10,264.7	3,077.8	-70.7	491,425.99	688,261.42	32° 20' 58.461 N	103° 43' 25.351 W
13,203.0	88.90	0.70	10,265.0	3,172.8	-69.3	491,520.97	688,262.83	32° 20' 59.401 N	103° 43' 25.329 W
13,298.0	88.80	1.40	10,266.9	3,267.7	-67.5	491,615.94	688,264.57	32° 21' 0.340 N	103° 43' 25.302 W
13,392.0	88.40	1.30	10,269.2	3,361.7	-65.3	491,709.88	688,266.79	32° 21' 1.270 N	103° 43' 25.270 W
13,487.0	87.90	1.60	10,272.2	3,456.6	-62.9	491,804.80	688,269.19	32° 21' 2.209 N	103° 43' 25.236 W
13,582.0	87.60	1.40	10,276.0	3,551.5	-60.4	491,899.70	688,271.68	32° 21' 3.148 N	103° 43' 25.201 W
13,677.0	88.60	1.60	10,279.1	3,646.4	-57.9	491,994.61	688,274.16	32° 21' 4.087 N	103° 43' 25.165 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1
Project:	Eddy County, NM	TVD Reference:	WELL @ 3505.2usft (Original Well Elev)
Site:	Builtaco State	MD Reference:	WELL @ 3505.2usft (Original Well Elev)
Well:	#1	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
13,772.0	88.40	1.60	10,281.6	3,741.3	-55.3	492,089.54	688,276.81	32° 21' 5.026 N	103° 43' 25.128 W
13,867.0	88.70	1.80	10,284.0	3,836.3	-52.5	492,184.47	688,279.63	32° 21' 5.965 N	103° 43' 25.089 W
13,962.0	89.00	1.50	10,285.9	3,931.2	-49.7	492,279.41	688,282.36	32° 21' 6.905 N	103° 43' 25.051 W
14,057.0	87.40	0.70	10,288.9	4,026.1	-47.9	492,374.34	688,284.19	32° 21' 7.844 N	103° 43' 25.023 W
14,152.0	87.60	359.70	10,293.1	4,121.0	-47.6	492,469.25	688,284.52	32° 21' 8.783 N	103° 43' 25.013 W
14,246.0	88.70	359.70	10,296.1	4,215.0	-48.1	492,563.20	688,284.03	32° 21' 9.713 N	103° 43' 25.013 W
14,341.0	92.00	0.30	10,295.5	4,310.0	-48.1	492,658.18	688,284.03	32° 21' 10.653 N	103° 43' 25.006 W
14,435.0	93.50	358.70	10,291.0	4,403.9	-48.9	492,752.07	688,283.21	32° 21' 11.582 N	103° 43' 25.010 W
14,530.0	91.40	356.90	10,286.9	4,498.7	-52.5	492,846.90	688,279.56	32° 21' 12.520 N	103° 43' 25.046 W
14,625.0	93.80	356.30	10,282.6	4,593.4	-58.2	492,941.63	688,273.94	32° 21' 13.458 N	103° 43' 25.105 W
14,720.0	95.90	355.60	10,274.6	4,687.8	-64.8	493,036.05	688,267.25	32° 21' 14.393 N	103° 43' 25.177 W
14,764.0	95.90	355.60	10,270.1	4,731.5	-68.2	493,079.68	688,263.89	32° 21' 14.825 N	103° 43' 25.213 W
PBHL(BS#1)									

Checked By: _____ Approved By: _____ Date: _____