



May 22, 2015

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

HOBBS OCD

AUG 26 2015

RECEIVED

Attn: Kanicia Castillo

RE: **Stratosphere 36 State Com 6H**

Please find enclosed a copy of the survey from 0' to 9690' ran on the above referenced well.

Sincerely,

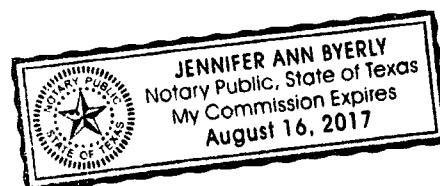

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 22 day of May,
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 09 2015

fm

Company: Cog Operating LLC
Lease/Well: Stratosphere 36 State Com/6H



Rig Name: Mcvay 7
State/County: New Mexico /Lea
VS-Azi: 0.00 Degrees
Latitude: 32.53620, Longitude: -103.52093
Grid Convergence Applied = -0.44 degs (NAD 27)
Grid North = True North -0.44 degs



Depth Reference : R.K.B = 17 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...oshphere 36 state 6h-de_01.ut

Minimum Curvature Method

Report Date/Time: 5/22/2015 / 12:48

VES Survey International

(432) 563-5444

West Texas

Surveyor: Javier Estrada

Stratosphere 36 State Com 6H / API 30-025-42037

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	0.39	112.84	100.00	-0.13	0.31	-0.13	0.34	112.84	0.39
200.00	0.27	113.28	200.00	-0.36	0.84	-0.36	0.91	112.95	0.12
300.00	0.21	142.71	300.00	-0.59	1.16	-0.59	1.30	116.95	0.13
400.00	0.27	66.64	400.00	-0.64	1.49	-0.64	1.62	113.22	0.30
500.00	0.22	258.23	500.00	-0.58	1.52	-0.58	1.63	110.96	0.49
600.00	0.33	217.76	599.99	-0.85	1.16	-0.85	1.44	126.26	0.22
700.00	0.07	227.64	699.99	-1.12	0.94	-1.12	1.46	140.14	0.26
800.00	0.24	224.41	799.99	-1.31	0.75	-1.31	1.51	150.36	0.16
900.00	0.21	238.76	899.99	-1.55	0.45	-1.55	1.62	163.97	0.06
1000.00	0.31	243.56	999.99	-1.77	0.05	-1.77	1.77	178.49	0.10
1100.00	0.63	219.21	1099.99	-2.32	-0.54	-2.32	2.38	193.22	0.37
1200.00	0.93	217.73	1199.98	-3.38	-1.39	-3.38	3.66	202.31	0.30
1300.00	0.94	211.08	1299.97	-4.73	-2.31	-4.73	5.26	206.03	0.11
1400.00	1.00	211.55	1399.95	-6.17	-3.19	-6.17	6.95	207.31	0.05
1500.00	0.91	219.95	1499.94	-7.52	-4.15	-7.52	8.59	208.89	0.17
1600.00	0.95	231.99	1599.92	-8.64	-5.31	-8.64	10.14	211.59	0.20

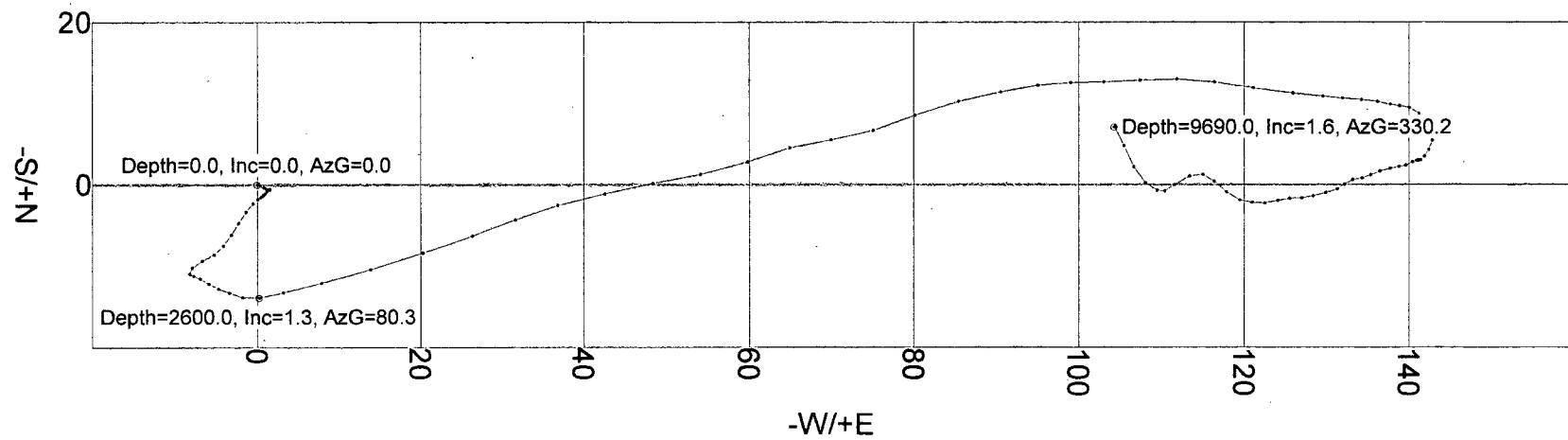
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	0.92	253.67	1699.91	-9.38	-6.74	-9.38	11.55	215.71	0.35
1800.00	0.87	216.15	1799.90	-10.22	-7.96	-10.22	12.95	217.93	0.58
1900.00	0.26	136.82	1899.90	-10.99	-8.25	-10.99	13.74	216.91	0.86
2000.00	0.37	105.60	1999.89	-11.24	-7.79	-11.24	13.68	214.73	0.20
2100.00	0.63	117.04	2099.89	-11.58	-6.99	-11.58	13.52	211.13	0.28
2200.00	0.74	124.70	2199.88	-12.19	-5.97	-12.19	13.58	206.08	0.15
2300.00	0.85	109.36	2299.87	-12.81	-4.74	-12.81	13.66	200.30	0.24
2400.00	0.77	113.83	2399.86	-13.33	-3.43	-13.33	13.76	194.42	0.10
2500.00	1.15	104.24	2499.85	-13.84	-1.84	-13.84	13.97	187.55	0.41
2600.00	1.30	80.30	2599.83	-13.90	0.25	-13.90	13.90	178.95	0.53
2700.00	2.11	76.34	2699.78	-13.28	3.16	-13.28	13.65	166.62	0.83
2800.00	3.41	75.69	2799.66	-12.10	7.83	-12.10	14.42	147.09	1.30
2900.00	3.77	73.78	2899.47	-10.45	13.87	-10.45	17.37	126.99	0.38
3000.00	3.92	71.00	2999.24	-8.42	20.26	-8.42	21.94	112.57	0.24
3100.00	3.50	71.42	3099.03	-6.34	26.38	-6.34	27.13	103.50	0.42
3200.00	2.97	66.57	3198.87	-4.33	31.66	-4.33	31.95	97.79	0.59
3300.00	3.33	75.49	3298.72	-2.57	36.85	-2.57	36.94	94.00	0.60
3400.00	3.44	76.63	3398.55	-1.15	42.57	-1.15	42.59	91.55	0.13
3500.00	3.38	78.10	3498.37	0.15	48.38	0.15	48.38	89.82	0.10
3600.00	3.31	80.52	3598.20	1.23	54.12	1.23	54.13	88.69	0.16
3700.00	3.42	69.46	3698.03	2.76	59.76	2.76	59.82	87.36	0.66
3800.00	2.80	73.13	3797.88	4.51	64.89	4.51	65.05	86.02	0.65
3900.00	3.08	84.63	3897.75	5.47	69.91	5.47	70.12	85.52	0.65
4000.00	3.02	69.65	3997.61	6.64	75.05	6.64	75.35	84.94	0.80
4100.00	3.18	69.94	4097.46	8.51	80.12	8.51	80.57	83.94	0.16
4200.00	3.24	74.52	4197.31	10.21	85.45	10.21	86.06	83.19	0.26
4300.00	2.78	79.97	4297.17	11.39	90.56	11.39	91.28	82.83	0.55
4400.00	2.42	79.47	4397.07	12.20	95.03	12.20	95.81	82.69	0.36
4500.00	2.18	91.58	4496.99	12.53	99.01	12.53	99.80	82.79	0.54
4600.00	2.44	86.72	4596.90	12.60	103.04	12.60	103.80	83.03	0.32
4700.00	2.56	87.17	4696.81	12.83	107.39	12.83	108.16	83.19	0.13
4800.00	2.56	89.90	4796.71	12.94	111.86	12.94	112.61	83.40	0.12
4900.00	2.63	99.46	4896.61	12.57	116.36	12.57	117.03	83.83	0.44
5000.00	2.84	97.68	4996.49	11.86	121.07	11.86	121.65	84.40	0.23
5100.00	2.79	97.09	5096.37	11.23	125.94	11.23	126.44	84.90	0.06
5200.00	1.40	94.73	5196.30	10.83	129.57	10.83	130.02	85.22	1.38
5300.00	1.30	96.65	5296.28	10.60	131.92	10.60	132.34	85.41	0.12
5400.00	1.34	92.11	5396.25	10.43	134.21	10.43	134.61	85.56	0.11
5500.00	0.92	104.05	5496.23	10.19	136.16	10.19	136.54	85.72	0.48

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	0.85	101.74	5596.22	9.84	137.68	9.84	138.03	85.91	0.08
5700.00	0.46	92.24	5696.21	9.67	138.81	9.67	139.14	86.01	0.41
5800.00	0.92	103.77	5796.20	9.47	139.99	9.47	140.31	86.13	0.47
5900.00	0.77	142.29	5896.19	8.75	141.17	8.75	141.44	86.46	0.57
6000.00	0.76	130.20	5996.18	7.79	142.09	7.79	142.30	86.86	0.16
6100.00	0.78	163.77	6096.18	6.71	142.79	6.71	142.95	87.31	0.44
6200.00	0.78	196.77	6196.17	5.41	142.78	5.41	142.88	87.83	0.44
6300.00	0.63	206.59	6296.16	4.27	142.34	4.27	142.41	88.28	0.19
6400.00	0.49	220.67	6396.16	3.46	141.82	3.46	141.86	88.60	0.20
6500.00	0.27	236.39	6496.15	3.00	141.34	3.00	141.38	88.78	0.23
6600.00	0.08	304.74	6596.15	2.91	141.09	2.91	141.12	88.82	0.26
6700.00	0.01	356.90	6696.15	2.96	141.03	2.96	141.06	88.80	0.07
6800.00	0.16	262.15	6796.15	2.96	140.89	2.96	140.92	88.80	0.16
6900.00	0.45	244.03	6896.15	2.77	140.40	2.77	140.42	88.87	0.30
7000.00	0.59	242.01	6996.15	2.35	139.59	2.35	139.61	89.04	0.15
7100.00	0.44	278.61	7096.14	2.16	138.75	2.16	138.77	89.11	0.36
7200.00	0.86	248.95	7196.14	1.95	137.68	1.95	137.69	89.19	0.53
7300.00	0.61	260.86	7296.13	1.60	136.45	1.60	136.46	89.33	0.29
7400.00	0.80	239.88	7396.12	1.16	135.32	1.16	135.32	89.51	0.32
7500.00	0.49	267.05	7496.11	0.79	134.28	0.79	134.29	89.66	0.43
7600.00	0.84	254.72	7596.11	0.57	133.15	0.57	133.15	89.75	0.37
7700.00	0.55	218.63	7696.10	0.00	132.14	0.00	132.14	90.00	0.51
7800.00	0.68	250.00	7796.10	-0.58	131.28	-0.58	131.29	90.25	0.35
7900.00	0.99	254.94	7896.08	-1.00	129.90	-1.00	129.90	90.44	0.32
8000.00	0.82	254.31	7996.07	-1.42	128.38	-1.42	128.38	90.63	0.17
8100.00	0.80	266.95	8096.06	-1.65	126.99	-1.65	127.00	90.74	0.18
8200.00	0.87	268.10	8196.05	-1.71	125.53	-1.71	125.54	90.78	0.07
8300.00	0.88	250.41	8296.04	-1.99	124.05	-1.99	124.06	90.92	0.27
8400.00	0.96	268.49	8396.03	-2.27	122.49	-2.27	122.51	91.06	0.30
8500.00	0.83	276.53	8496.02	-2.21	120.92	-2.21	120.94	91.05	0.18
8600.00	0.93	284.48	8596.00	-1.93	119.42	-1.93	119.44	90.92	0.15
8700.00	1.30	314.01	8695.99	-0.94	117.82	-0.94	117.83	90.46	0.67
8800.00	0.99	307.57	8795.97	0.38	116.32	0.38	116.32	89.81	0.34
8900.00	0.87	294.64	8895.95	1.22	114.95	1.22	114.95	89.39	0.24
9000.00	1.20	240.60	8995.94	1.03	113.35	1.03	113.35	89.48	0.98
9100.00	1.16	236.53	9095.92	-0.05	111.59	-0.05	111.59	90.02	0.09
9200.00	0.49	241.35	9195.91	-0.81	110.37	-0.81	110.37	90.42	0.67
9300.00	0.71	297.46	9295.90	-0.73	109.44	-0.73	109.44	90.38	0.60
9400.00	1.20	306.83	9395.89	0.19	108.04	0.19	108.05	89.90	0.51

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
9500.00	1.65	336.10	9495.86	2.14	106.62	2.14	106.64	88.85	0.84
9600.00	1.66	336.16	9595.81	4.78	105.45	4.78	105.56	87.40	0.01
9690.00	1.58	330.20	9685.78	7.05	104.31	7.05	104.54	86.13	0.21



VES Survey International
(432) 563-5444
West Texas
Surveyor: Javier Estrada
Stratosphere 36 State Com 6H / API 30-025-42037





COG Operating LLC

Lea County, NM

Stratosphere 36 State

#6H

OH

Survey: MWD #1

Survey Report - Geographic

23 May, 2015

HOBBS OCD
AUG 26 2015
RECEIVED



Wellplanning

Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Lea County, NM	TVD Reference:	WELL @ 3740.3usft (Original Well Elev)
Site:	Stratosphere 36 State	MD Reference:	WELL @ 3740.3usft (Original Well Elev)
Well:	#6H	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		Stratosphere 36 State				
Site Position:		Northing:	559,736.10 usft	Latitude:	32° 32' 10.316 N	
From:	Map	Easting:	750,367.10 usft	Longitude:	103° 31' 15.355 W	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	#6H					
Well Position	+N/-S	0.0 usft	Northing:	559,736.10 usft	Latitude:	32° 32' 10.316 N
	+E/-W	0.0 usft	Easting:	750,367.10 usft	Longitude:	103° 31' 15.355 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,723.3 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/3/2015	7.14	60.39	48,443

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	175.08	

Survey Program	Date	5/23/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	15,751.0	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
0.0	0.00	0.00	0.0	0.0	0.0	559,736.10	750,367.10	32° 32' 10.316 N	103° 31' 15.355 W
100.0	0.39	112.84	100.0	-0.1	0.3	559,735.97	750,367.41	32° 32' 10.315 N	103° 31' 15.352 W
200.0	0.27	113.28	200.0	-0.4	0.8	559,735.75	750,367.94	32° 32' 10.312 N	103° 31' 15.345 W
300.0	0.21	142.71	300.0	-0.6	1.2	559,735.51	750,368.27	32° 32' 10.310 N	103° 31' 15.342 W
400.0	0.27	66.64	400.0	-0.6	1.5	559,735.45	750,368.60	32° 32' 10.309 N	103° 31' 15.338 W
500.0	0.22	258.23	500.0	-0.6	1.5	559,735.51	750,368.62	32° 32' 10.310 N	103° 31' 15.338 W
600.0	0.33	217.76	600.0	-0.9	1.2	559,735.24	750,368.26	32° 32' 10.307 N	103° 31' 15.342 W
700.0	0.07	227.64	700.0	-1.1	0.9	559,734.97	750,368.04	32° 32' 10.305 N	103° 31' 15.344 W
800.0	0.24	224.41	800.0	-1.3	0.7	559,734.78	750,367.85	32° 32' 10.303 N	103° 31' 15.347 W
900.0	0.21	238.76	900.0	-1.6	0.4	559,734.54	750,367.54	32° 32' 10.300 N	103° 31' 15.350 W
1,000.0	0.31	243.56	1,000.0	-1.8	0.0	559,734.32	750,367.14	32° 32' 10.298 N	103° 31' 15.355 W
1,100.0	0.63	219.21	1,100.0	-2.3	-0.5	559,733.78	750,366.55	32° 32' 10.293 N	103° 31' 15.362 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Lea County, NM	TVD Reference:	WELL @ 3740.3usft (Original Well Elev)
Site:	Stratosphere 36 State	MD Reference:	WELL @ 3740.3usft (Original Well Elev)
Well:	#6H	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
1,200.0	0.93	217.73	1,200.0	-3.4	-1.4	559,732.71	750,365.71	32° 32' 10.282 N	103° 31' 15.372 W
1,300.0	0.94	211.08	1,300.0	-4.7	-2.3	559,731.36	750,364.79	32° 32' 10.269 N	103° 31' 15.383 W
1,400.0	1.00	211.55	1,400.0	-6.2	-3.2	559,729.92	750,363.91	32° 32' 10.255 N	103° 31' 15.393 W
1,500.0	0.91	219.95	1,499.9	-7.5	-4.2	559,728.56	750,362.94	32° 32' 10.242 N	103° 31' 15.405 W
1,600.0	0.95	231.99	1,599.9	-8.7	-5.3	559,727.45	750,361.78	32° 32' 10.231 N	103° 31' 15.418 W
1,700.0	0.92	253.67	1,699.9	-9.4	-6.7	559,726.71	750,360.36	32° 32' 10.223 N	103° 31' 15.435 W
1,800.0	0.87	216.15	1,799.9	-10.2	-8.0	559,725.87	750,359.14	32° 32' 10.215 N	103° 31' 15.449 W
1,900.0	0.26	136.82	1,899.9	-11.0	-8.3	559,725.09	750,358.85	32° 32' 10.208 N	103° 31' 15.453 W
2,000.0	0.37	105.60	1,999.9	-11.3	-7.8	559,724.84	750,359.31	32° 32' 10.205 N	103° 31' 15.447 W
2,100.0	0.63	117.04	2,099.9	-11.6	-7.0	559,724.50	750,360.11	32° 32' 10.202 N	103° 31' 15.438 W
2,200.0	0.74	124.70	2,199.9	-12.2	-6.0	559,723.89	750,361.13	32° 32' 10.195 N	103° 31' 15.426 W
2,300.0	0.85	109.36	2,299.9	-12.8	-4.7	559,723.27	750,362.36	32° 32' 10.189 N	103° 31' 15.412 W
2,400.0	0.77	113.83	2,399.9	-13.3	-3.4	559,722.75	750,363.68	32° 32' 10.184 N	103° 31' 15.396 W
2,500.0	1.15	104.24	2,499.8	-13.9	-1.8	559,722.24	750,365.27	32° 32' 10.179 N	103° 31' 15.378 W
2,600.0	1.30	80.30	2,599.8	-13.9	0.3	559,722.18	750,367.36	32° 32' 10.178 N	103° 31' 15.354 W
2,700.0	2.11	76.34	2,699.8	-13.3	3.2	559,722.81	750,370.26	32° 32' 10.184 N	103° 31' 15.320 W
2,800.0	3.41	75.69	2,799.7	-12.1	7.8	559,723.98	750,374.93	32° 32' 10.195 N	103° 31' 15.265 W
2,900.0	3.77	73.78	2,899.5	-10.5	13.9	559,725.63	750,380.97	32° 32' 10.211 N	103° 31' 15.194 W
3,000.0	3.92	71.00	2,999.2	-8.4	20.3	559,727.66	750,387.36	32° 32' 10.231 N	103° 31' 15.119 W
3,100.0	3.50	71.42	3,099.0	-6.4	26.4	559,729.75	750,393.49	32° 32' 10.251 N	103° 31' 15.048 W
3,200.0	2.97	66.57	3,198.9	-4.4	31.7	559,731.75	750,398.76	32° 32' 10.270 N	103° 31' 14.986 W
3,300.0	3.33	75.49	3,298.7	-2.6	36.8	559,733.51	750,403.95	32° 32' 10.287 N	103° 31' 14.925 W
3,400.0	3.44	76.63	3,398.5	-1.2	42.6	559,734.93	750,409.68	32° 32' 10.301 N	103° 31' 14.858 W
3,500.0	3.38	78.10	3,498.4	0.1	48.4	559,736.23	750,415.48	32° 32' 10.313 N	103° 31' 14.790 W
3,600.0	3.31	80.52	3,598.2	1.2	54.1	559,737.31	750,421.21	32° 32' 10.324 N	103° 31' 14.723 W
3,700.0	3.42	69.46	3,698.0	2.7	59.8	559,738.83	750,426.85	32° 32' 10.338 N	103° 31' 14.657 W
3,800.0	2.80	73.13	3,797.9	4.5	64.9	559,740.59	750,431.98	32° 32' 10.355 N	103° 31' 14.597 W
3,900.0	3.08	84.63	3,897.8	5.4	69.9	559,741.55	750,437.00	32° 32' 10.365 N	103° 31' 14.538 W
4,000.0	3.02	69.65	3,997.6	6.6	75.0	559,742.72	750,442.14	32° 32' 10.376 N	103° 31' 14.478 W
4,100.0	3.18	69.94	4,097.5	8.5	80.1	559,744.59	750,447.22	32° 32' 10.394 N	103° 31' 14.419 W
4,200.0	3.24	74.52	4,197.3	10.2	85.4	559,746.29	750,452.54	32° 32' 10.410 N	103° 31' 14.356 W
4,300.0	2.78	79.97	4,297.2	11.4	90.6	559,747.47	750,457.66	32° 32' 10.422 N	103° 31' 14.297 W
4,400.0	2.42	79.47	4,397.1	12.2	95.0	559,748.28	750,462.12	32° 32' 10.429 N	103° 31' 14.244 W
4,500.0	2.18	91.58	4,497.0	12.5	99.0	559,748.61	750,466.10	32° 32' 10.432 N	103° 31' 14.198 W
4,600.0	2.44	86.72	4,596.9	12.6	103.0	559,748.68	750,470.12	32° 32' 10.433 N	103° 31' 14.151 W
4,700.0	2.56	87.17	4,696.8	12.8	107.4	559,748.91	750,474.48	32° 32' 10.435 N	103° 31' 14.100 W
4,800.0	2.56	89.90	4,796.7	12.9	111.8	559,749.02	750,478.94	32° 32' 10.435 N	103° 31' 14.048 W
4,900.0	2.63	99.46	4,896.6	12.5	116.3	559,748.65	750,483.44	32° 32' 10.431 N	103° 31' 13.995 W
5,000.0	2.84	97.68	4,996.5	11.8	121.1	559,747.94	750,488.16	32° 32' 10.424 N	103° 31' 13.940 W
5,100.0	2.79	97.09	5,096.4	11.2	125.9	559,747.31	750,493.03	32° 32' 10.417 N	103° 31' 13.883 W
5,200.0	1.40	94.73	5,196.3	10.8	129.6	559,746.91	750,496.66	32° 32' 10.413 N	103° 31' 13.841 W
5,300.0	1.30	96.65	5,296.3	10.6	131.9	559,746.68	750,499.00	32° 32' 10.411 N	103° 31' 13.814 W
5,400.0	1.34	92.11	5,396.3	10.4	134.2	559,746.50	750,501.30	32° 32' 10.409 N	103° 31' 13.787 W
5,500.0	0.92	104.05	5,496.2	10.2	136.1	559,746.27	750,503.25	32° 32' 10.406 N	103° 31' 13.764 W
5,600.0	0.85	101.74	5,596.2	9.8	137.7	559,745.92	750,504.75	32° 32' 10.403 N	103° 31' 13.747 W
5,700.0	0.46	92.24	5,696.2	9.7	138.8	559,745.75	750,505.88	32° 32' 10.401 N	103° 31' 13.733 W
5,800.0	0.92	103.77	5,796.2	9.4	140.0	559,745.55	750,507.06	32° 32' 10.399 N	103° 31' 13.720 W
5,900.0	0.77	142.29	5,896.2	8.7	141.2	559,744.82	750,508.25	32° 32' 10.392 N	103° 31' 13.706 W
6,000.0	0.76	130.20	5,996.2	7.8	142.1	559,743.86	750,509.17	32° 32' 10.382 N	103° 31' 13.695 W
6,100.0	0.78	163.77	6,096.2	6.7	142.8	559,742.78	750,509.86	32° 32' 10.371 N	103° 31' 13.687 W
6,200.0	0.78	196.77	6,196.2	5.4	142.8	559,741.48	750,509.86	32° 32' 10.358 N	103° 31' 13.687 W
6,300.0	0.63	206.59	6,296.2	4.2	142.3	559,740.33	750,509.42	32° 32' 10.347 N	103° 31' 13.693 W
6,400.0	0.49	220.67	6,396.2	3.4	141.8	559,739.52	750,508.89	32° 32' 10.339 N	103° 31' 13.699 W
6,500.0	0.27	236.39	6,496.2	3.0	141.3	559,739.06	750,508.42	32° 32' 10.335 N	103° 31' 13.704 W
6,600.0	0.08	304.74	6,596.2	2.9	141.1	559,738.97	750,508.16	32° 32' 10.334 N	103° 31' 13.707 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Lea County, NM	TVD Reference:	WELL @ 3740.3usft (Original Well Elev)
Site:	Stratosphere 36 State	MD Reference:	WELL @ 3740.3usft (Original Well Elev)
Well:	#6H	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
6,700.0	0.01	356.90	6,696.2	2.9	141.0	559,739.02	750,508.11	32° 32' 10.334 N	103° 31' 13.708 W
6,800.0	0.16	262.15	6,796.2	2.9	140.9	559,739.01	750,507.97	32° 32' 10.334 N	103° 31' 13.710 W
6,900.0	0.45	244.03	6,896.2	2.7	140.4	559,738.82	750,507.48	32° 32' 10.332 N	103° 31' 13.715 W
7,000.0	0.59	242.01	6,996.1	2.3	139.6	559,738.41	750,506.67	32° 32' 10.328 N	103° 31' 13.725 W
7,100.0	0.44	278.61	7,096.1	2.1	138.7	559,738.22	750,505.83	32° 32' 10.326 N	103° 31' 13.735 W
7,200.0	0.86	248.95	7,196.1	1.9	137.7	559,738.01	750,504.75	32° 32' 10.324 N	103° 31' 13.747 W
7,300.0	0.61	260.86	7,296.1	1.6	136.4	559,737.66	750,503.53	32° 32' 10.321 N	103° 31' 13.762 W
7,400.0	0.80	239.88	7,396.1	1.1	135.3	559,737.22	750,502.40	32° 32' 10.317 N	103° 31' 13.775 W
7,500.0	0.49	267.05	7,496.1	0.7	134.3	559,736.85	750,501.37	32° 32' 10.313 N	103° 31' 13.787 W
7,600.0	0.84	254.72	7,596.1	0.5	133.1	559,736.63	750,500.23	32° 32' 10.311 N	103° 31' 13.800 W
7,700.0	0.55	218.63	7,696.1	0.0	132.1	559,736.07	750,499.23	32° 32' 10.306 N	103° 31' 13.812 W
7,800.0	0.68	250.00	7,796.1	-0.6	131.3	559,735.49	750,498.37	32° 32' 10.300 N	103° 31' 13.822 W
7,900.0	0.99	254.94	7,896.1	-1.0	129.9	559,735.06	750,496.98	32° 32' 10.296 N	103° 31' 13.838 W
8,000.0	0.82	254.31	7,996.1	-1.5	128.4	559,734.64	750,495.45	32° 32' 10.292 N	103° 31' 13.856 W
8,100.0	0.80	266.95	8,096.1	-1.7	127.0	559,734.41	750,494.07	32° 32' 10.290 N	103° 31' 13.872 W
8,200.0	0.87	268.10	8,196.1	-1.8	125.5	559,734.35	750,492.61	32° 32' 10.289 N	103° 31' 13.889 W
8,300.0	0.88	250.41	8,296.0	-2.0	124.0	559,734.07	750,491.13	32° 32' 10.286 N	103° 31' 13.907 W
8,400.0	0.96	268.49	8,396.0	-2.3	122.5	559,733.79	750,489.57	32° 32' 10.284 N	103° 31' 13.925 W
8,500.0	0.83	276.53	8,496.0	-2.3	120.9	559,733.85	750,488.01	32° 32' 10.284 N	103° 31' 13.943 W
8,600.0	0.93	284.48	8,596.0	-2.0	119.4	559,734.13	750,486.51	32° 32' 10.287 N	103° 31' 13.961 W
8,700.0	1.30	314.01	8,696.0	-1.0	117.8	559,735.12	750,484.90	32° 32' 10.297 N	103° 31' 13.979 W
8,800.0	0.99	307.57	8,796.0	0.3	116.3	559,736.44	750,483.40	32° 32' 10.310 N	103° 31' 13.997 W
8,900.0	0.87	294.64	8,896.0	1.2	114.9	559,737.28	750,482.03	32° 32' 10.319 N	103° 31' 14.013 W
9,000.0	1.20	240.60	8,995.9	1.0	113.3	559,737.08	750,480.43	32° 32' 10.317 N	103° 31' 14.031 W
9,100.0	1.16	236.53	9,095.9	-0.1	111.6	559,736.01	750,478.67	32° 32' 10.307 N	103° 31' 14.052 W
9,200.0	0.49	241.35	9,195.9	-0.9	110.4	559,735.25	750,477.45	32° 32' 10.299 N	103° 31' 14.066 W
9,300.0	0.71	297.46	9,295.9	-0.8	109.4	559,735.33	750,476.53	32° 32' 10.300 N	103° 31' 14.077 W
9,400.0	1.20	306.83	9,395.9	0.1	108.0	559,736.24	750,475.14	32° 32' 10.309 N	103° 31' 14.093 W
9,500.0	1.65	336.10	9,495.9	2.1	106.6	559,738.19	750,473.72	32° 32' 10.328 N	103° 31' 14.110 W
9,600.0	1.66	336.16	9,595.8	4.7	105.5	559,740.83	750,472.55	32° 32' 10.355 N	103° 31' 14.123 W
9,690.0	1.58	330.20	9,685.8	7.0	104.3	559,743.10	750,471.40	32° 32' 10.377 N	103° 31' 14.136 W
9,817.0	1.70	330.00	9,812.7	10.1	102.5	559,746.25	750,469.59	32° 32' 10.409 N	103° 31' 14.157 W
9,913.0	1.60	330.00	9,908.7	12.5	101.1	559,748.64	750,468.21	32° 32' 10.432 N	103° 31' 14.173 W
10,008.0	1.80	325.20	10,003.6	14.9	99.6	559,751.02	750,466.70	32° 32' 10.456 N	103° 31' 14.191 W
10,104.0	2.70	319.10	10,099.6	17.9	97.3	559,753.96	750,464.35	32° 32' 10.485 N	103° 31' 14.218 W
10,200.0	2.20	313.90	10,195.5	20.8	94.4	559,756.95	750,461.55	32° 32' 10.515 N	103° 31' 14.250 W
10,295.0	2.50	314.60	10,290.4	23.6	91.7	559,759.67	750,458.76	32° 32' 10.542 N	103° 31' 14.283 W
10,391.0	2.70	247.20	10,386.3	24.2	88.1	559,760.26	750,455.18	32° 32' 10.548 N	103° 31' 14.324 W
10,488.0	5.40	209.00	10,483.1	19.3	83.8	559,755.38	750,450.86	32° 32' 10.500 N	103° 31' 14.375 W
10,584.0	3.70	207.60	10,578.8	12.6	80.1	559,748.69	750,447.24	32° 32' 10.434 N	103° 31' 14.418 W
10,664.0	3.40	200.90	10,658.6	8.1	78.1	559,744.18	750,445.19	32° 32' 10.390 N	103° 31' 14.442 W
10,679.0	3.40	197.60	10,673.6	7.2	77.8	559,743.34	750,444.90	32° 32' 10.382 N	103° 31' 14.446 W
10,711.0	4.00	188.50	10,705.5	5.2	77.4	559,741.34	750,444.45	32° 32' 10.362 N	103° 31' 14.451 W
10,743.0	6.50	185.00	10,737.4	2.3	77.0	559,738.43	750,444.13	32° 32' 10.333 N	103° 31' 14.455 W
10,775.0	9.90	187.60	10,769.1	-2.2	76.5	559,733.89	750,443.60	32° 32' 10.288 N	103° 31' 14.462 W
10,807.0	13.40	191.50	10,800.4	-8.6	75.4	559,727.53	750,442.50	32° 32' 10.225 N	103° 31' 14.475 W
10,839.0	16.70	191.90	10,831.3	-16.7	73.7	559,719.40	750,440.81	32° 32' 10.145 N	103° 31' 14.496 W
10,871.0	20.40	191.70	10,861.6	-26.7	71.6	559,709.43	750,438.73	32° 32' 10.047 N	103° 31' 14.521 W
10,903.0	24.70	192.40	10,891.2	-38.7	69.1	559,697.44	750,436.16	32° 32' 9.928 N	103° 31' 14.552 W
10,934.0	28.80	192.90	10,918.9	-52.3	66.0	559,683.83	750,433.11	32° 32' 9.794 N	103° 31' 14.589 W
10,966.0	32.40	192.00	10,946.4	-68.2	62.5	559,667.92	750,429.60	32° 32' 9.637 N	103° 31' 14.631 W
10,998.0	34.90	192.90	10,973.0	-85.5	58.7	559,650.61	750,425.77	32° 32' 9.466 N	103° 31' 14.678 W
11,030.0	38.10	191.40	10,998.8	-104.1	54.7	559,632.00	750,421.78	32° 32' 9.282 N	103° 31' 14.726 W
11,062.0	41.50	188.90	11,023.3	-124.3	51.1	559,611.84	750,418.18	32° 32' 9.083 N	103° 31' 14.770 W
11,094.0	44.80	185.50	11,046.7	-146.0	48.4	559,590.14	750,415.46	32° 32' 8.868 N	103° 31' 14.803 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Lea County, NM	TVD Reference:	WELL @ 3740.3usft (Original Well Elev)
Site:	Stratosphere 36 State	MD Reference:	WELL @ 3740.3usft (Original Well Elev)
Well:	#6H	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	
11,125.0	48.20	183.20	11,068.0	-168.4	46.7	559,567.72	750,413.77	32° 32' 8.646 N	103° 31' 14.825 W	
11,157.0	52.40	181.10	11,088.5	-193.0	45.8	559,543.13	750,412.86	32° 32' 8.403 N	103° 31' 14.838 W	
11,189.0	57.20	179.30	11,106.9	-219.1	45.7	559,516.99	750,412.78	32° 32' 8.144 N	103° 31' 14.841 W	
11,221.0	61.30	178.00	11,123.3	-246.6	46.3	559,489.50	750,413.44	32° 32' 7.872 N	103° 31' 14.836 W	
11,253.0	65.80	176.40	11,137.5	-275.2	47.7	559,460.89	750,414.84	32° 32' 7.589 N	103° 31' 14.822 W	
11,285.0	69.70	174.80	11,149.6	-304.7	50.0	559,431.37	750,417.12	32° 32' 7.297 N	103° 31' 14.798 W	
11,317.0	73.30	174.80	11,159.8	-334.9	52.8	559,401.15	750,419.87	32° 32' 6.998 N	103° 31' 14.769 W	
11,349.0	75.90	173.80	11,168.3	-365.6	55.8	559,370.46	750,422.94	32° 32' 6.694 N	103° 31' 14.736 W	
11,381.0	78.60	172.80	11,175.3	-396.6	59.5	559,339.47	750,426.58	32° 32' 6.387 N	103° 31' 14.696 W	
11,412.0	80.80	172.10	11,180.9	-426.9	63.5	559,309.23	750,430.59	32° 32' 6.087 N	103° 31' 14.652 W	
11,444.0	83.10	171.60	11,185.4	-458.2	68.0	559,277.87	750,435.08	32° 32' 5.777 N	103° 31' 14.602 W	
11,547.0	85.60	171.10	11,195.5	-559.6	83.4	559,176.54	750,450.49	32° 32' 4.773 N	103° 31' 14.431 W	
11,674.0	86.10	171.70	11,204.7	-684.8	102.3	559,051.30	750,469.43	32° 32' 3.532 N	103° 31' 14.221 W	
11,769.0	86.90	171.80	11,210.5	-778.6	115.9	558,957.46	750,483.04	32° 32' 2.603 N	103° 31' 14.070 W	
11,864.0	87.90	172.20	11,214.8	-872.6	129.2	558,863.48	750,496.25	32° 32' 1.672 N	103° 31' 13.925 W	
11,959.0	86.90	172.50	11,219.1	-966.7	141.8	558,769.43	750,508.88	32° 32' 0.740 N	103° 31' 13.785 W	
12,054.0	86.90	173.50	11,224.2	-1,060.8	153.3	558,675.27	750,520.44	32° 31' 59.808 N	103° 31' 13.659 W	
12,149.0	87.20	176.20	11,229.1	-1,155.3	161.9	558,580.79	750,528.96	32° 31' 58.872 N	103° 31' 13.568 W	
12,244.0	88.00	176.50	11,233.1	-1,250.0	167.9	558,486.07	750,535.00	32° 31' 57.934 N	103° 31' 13.506 W	
12,338.0	88.70	176.60	11,235.8	-1,343.8	173.6	558,392.28	750,540.65	32° 31' 57.006 N	103° 31' 13.448 W	
12,433.0	87.30	175.40	11,239.1	-1,438.5	180.2	558,297.57	750,547.28	32° 31' 56.068 N	103° 31' 13.379 W	
12,528.0	88.00	175.20	11,243.0	-1,533.1	188.0	558,202.97	750,555.05	32° 31' 55.132 N	103° 31' 13.297 W	
12,623.0	87.10	175.80	11,247.1	-1,627.7	195.4	558,108.35	750,562.50	32° 31' 54.195 N	103° 31' 13.218 W	
12,718.0	87.80	175.60	11,251.3	-1,722.4	202.5	558,013.71	750,569.62	32° 31' 53.258 N	103° 31' 13.143 W	
12,813.0	88.70	175.50	11,254.2	-1,817.1	209.9	557,919.05	750,576.98	32° 31' 52.320 N	103° 31' 13.066 W	
12,906.0	89.20	175.50	11,255.9	-1,909.8	217.2	557,826.35	750,584.28	32° 31' 51.403 N	103° 31' 12.989 W	
13,001.0	88.50	175.60	11,257.8	-2,004.4	224.6	557,731.66	750,591.65	32° 31' 50.465 N	103° 31' 12.911 W	
13,096.0	87.50	177.10	11,261.1	-2,099.2	230.6	557,636.91	750,597.69	32° 31' 49.527 N	103° 31' 12.849 W	
13,191.0	86.50	177.40	11,266.1	-2,194.0	235.1	557,542.15	750,602.24	32° 31' 48.589 N	103° 31' 12.804 W	
13,286.0	87.00	176.90	11,271.5	-2,288.7	239.9	557,447.42	750,606.96	32° 31' 47.652 N	103° 31' 12.758 W	
13,381.0	87.60	176.40	11,276.0	-2,383.4	245.4	557,352.69	750,612.51	32° 31' 46.714 N	103° 31' 12.701 W	
13,477.0	88.30	177.20	11,279.4	-2,479.2	250.8	557,256.90	750,617.86	32° 31' 45.766 N	103° 31' 12.647 W	
13,572.0	88.00	177.90	11,282.5	-2,574.1	254.8	557,162.04	750,621.92	32° 31' 44.827 N	103° 31' 12.608 W	
13,665.0	85.40	177.00	11,287.8	-2,666.8	259.0	557,069.29	750,626.05	32° 31' 43.909 N	103° 31' 12.568 W	
13,761.0	85.50	176.70	11,295.4	-2,762.4	264.2	556,973.74	750,631.31	32° 31' 42.963 N	103° 31' 12.516 W	
13,855.0	87.00	176.40	11,301.6	-2,856.0	269.9	556,880.12	750,636.95	32° 31' 42.036 N	103° 31' 12.458 W	
13,950.0	87.00	175.00	11,306.6	-2,950.6	277.0	556,785.51	750,644.07	32° 31' 41.099 N	103° 31' 12.383 W	
14,044.0	88.60	174.60	11,310.2	-3,044.1	285.5	556,691.97	750,652.58	32° 31' 40.173 N	103° 31' 12.292 W	
14,139.0	90.50	174.40	11,310.9	-3,138.7	294.6	556,597.42	750,661.68	32° 31' 39.237 N	103° 31' 12.194 W	
14,234.0	88.40	173.10	11,311.8	-3,233.1	304.9	556,502.99	750,672.02	32° 31' 38.302 N	103° 31' 12.082 W	
14,329.0	85.50	174.30	11,316.9	-3,327.4	315.3	556,408.71	750,682.43	32° 31' 37.368 N	103° 31' 11.969 W	
14,424.0	86.20	175.30	11,323.8	-3,421.7	323.9	556,314.35	750,691.02	32° 31' 36.434 N	103° 31' 11.877 W	
14,519.0	88.10	175.70	11,328.5	-3,516.3	331.4	556,219.77	750,698.47	32° 31' 35.497 N	103° 31' 11.798 W	
14,614.0	86.70	176.90	11,332.8	-3,611.0	337.5	556,125.07	750,704.59	32° 31' 34.560 N	103° 31' 11.735 W	
14,709.0	87.30	177.60	11,337.8	-3,705.8	342.0	556,030.31	750,709.14	32° 31' 33.622 N	103° 31' 11.691 W	
14,806.0	89.80	177.80	11,340.2	-3,802.7	345.9	555,933.43	750,713.03	32° 31' 32.663 N	103° 31' 11.654 W	
14,895.0	88.70	176.80	11,341.4	-3,891.6	350.1	555,844.54	750,717.22	32° 31' 31.783 N	103° 31' 11.613 W	
14,990.0	87.80	175.90	11,344.3	-3,986.3	356.2	555,749.77	750,723.27	32° 31' 30.845 N	103° 31' 11.551 W	
15,085.0	87.80	175.40	11,347.9	-4,081.0	363.4	555,655.12	750,730.47	32° 31' 29.908 N	103° 31' 11.475 W	
15,180.0	86.90	174.30	11,352.3	-4,175.5	371.9	555,560.61	750,738.99	32° 31' 28.972 N	103° 31' 11.384 W	
15,275.0	87.60	174.40	11,356.9	-4,269.9	381.2	555,466.18	750,748.33	32° 31' 28.037 N	103° 31' 11.283 W	
15,370.0	86.50	173.90	11,361.8	-4,364.3	390.9	555,371.80	750,758.00	32° 31' 27.102 N	103° 31' 11.179 W	
15,465.0	85.90	175.10	11,368.1	-4,458.7	400.0	555,277.45	750,767.08	32° 31' 26.168 N	103° 31' 11.081 W	
15,558.0	84.70	176.00	11,375.7	-4,551.1	407.2	555,185.04	750,774.28	32° 31' 25.253 N	103° 31' 11.005 W	
15,699.0	85.20	176.20	11,388.1	-4,691.2	416.7	555,044.91	750,783.83	32° 31' 23.866 N	103° 31' 10.906 W	



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Lea County, NM	TVD Reference:	WELL @ 3740.3usft (Original Well Elev)
Site:	Stratosphere 36 State	MD Reference:	WELL @ 3740.3usft (Original Well Elev)
Well:	#6H	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
15,751.0	85.20	176.20	11,392.5	-4,742.9	420.2	554,993.21	750,787.26	32° 31' 23.354 N	103° 31' 10.871 W
PBHL(STRAT#6H)									

Checked By: _____ Approved By: _____ Date: _____