

**McVAY DRILLING COMPANY**

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

HOBBS OCD

DEC 03 2015

RECEIVED

Well Name and Num: Stratosphere 36 State Com # 4H
Location: Sec, 36, T20S, R34E
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>	<u>Degrees @</u>	<u>Depth</u>
0.20	570	1.10	5627	11.90	5833		
1.00	719	1.50	5782	21.50	10954		
0.00	920	1.50	5893	31.60	11049		
0.50	1329	1.10	6270	33.70	11080		
0.90	1697	1.10	6647	51.60	11329		
1.50	1848	1.80	6835	75.20	11584		
1.40	2133	1.20	7182	79.30	11647		
1.90	2416	1.00	7590	85.70	11802		
2.50	2700	0.90	7968	89.90	12086		
2.20	3080	1.00	8347	86.30	12468		
2.50	3361	0.60	8750	90.10	12936		
1.90	3647	0.05	9103	88.10	13313		
1.80	3931	0.80	9408	89.30	13785		
1.30	4402	2.70	9666	88.10	14163		
2.60	4780	1.90	10047	89.10	14729		
0.80	5137	0.70	10421	87.80	15107		
0.90	5250	1.50	10766	88.80	15468		

By: Mario P. Garcia

Subscribed and sworn to before me this 2nd day of July, 2015

Tina Flemens
Notary Public, Lea County, New Mexico



DEC 07 2015

fm

June 16, 2015

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

Attn: Kanicia Castillo

RE: **Stratosphere 36 State Com 4H**

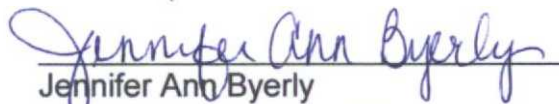
Please find enclosed a copy of the survey from 0' to 10,620' ran on the above referenced well.

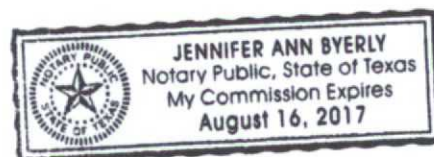
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 16 day of June,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Concho

Lease/Well: Stratosphere 36 State Com/4H

Location: S36, T20E, R34E

Rig Name: McVay 6

State/County: New Mexico/Lea

VS-Azi: 179.71 Degrees

Latitude: 32.53543, Longitude: -103.51111

Grid Convergence Applied = -0.44 degs

Grid North = True North -0.44 degs



Depth Reference : RKB = 18 Foot

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: ...re 36 state 4h_gyro survey.ut

Minimum Curvature Method

Report Date/Time: 6/16/2015 / 11:04

VES Survey International
West Texas

(432) 563-5444

Surveyor: Gene Heiss

Stratosphere 36 State Com 4H / API 30-025-42035

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	0.56	354.66	100.00	0.49	-0.05	-0.49	0.49	354.66	0.56
200.00	0.51	16.77	199.99	1.40	0.04	-1.40	1.40	1.52	0.21
300.00	0.40	13.99	299.99	2.17	0.25	-2.16	2.18	6.59	0.11
400.00	0.33	322.04	399.99	2.73	0.16	-2.73	2.74	3.28	0.33
500.00	0.28	321.02	499.99	3.15	-0.17	-3.15	3.16	356.84	0.05
600.00	0.22	298.02	599.99	3.43	-0.50	-3.43	3.47	351.76	0.11
700.00	0.25	306.80	699.99	3.65	-0.84	-3.66	3.75	347.05	0.04
800.00	0.47	288.08	799.98	3.91	-1.40	-3.91	4.15	340.29	0.25
900.00	0.20	274.76	899.98	4.05	-1.96	-4.06	4.50	334.18	0.28
1000.00	0.27	280.74	999.98	4.11	-2.36	-4.12	4.74	330.11	0.07
1100.00	0.53	309.89	1099.98	4.44	-2.94	-4.46	5.33	326.50	0.32
1200.00	0.50	236.90	1199.98	4.50	-3.66	-4.52	5.80	320.92	0.61
1300.00	0.38	283.15	1299.97	4.34	-4.35	-4.37	6.14	314.99	0.36
1400.00	0.50	219.52	1399.97	4.08	-4.95	-4.11	6.42	309.54	0.47
1500.00	0.83	246.85	1499.96	3.46	-5.89	-3.49	6.84	300.45	0.45
1600.00	1.00	252.91	1599.95	2.92	-7.40	-2.96	7.95	291.55	0.20

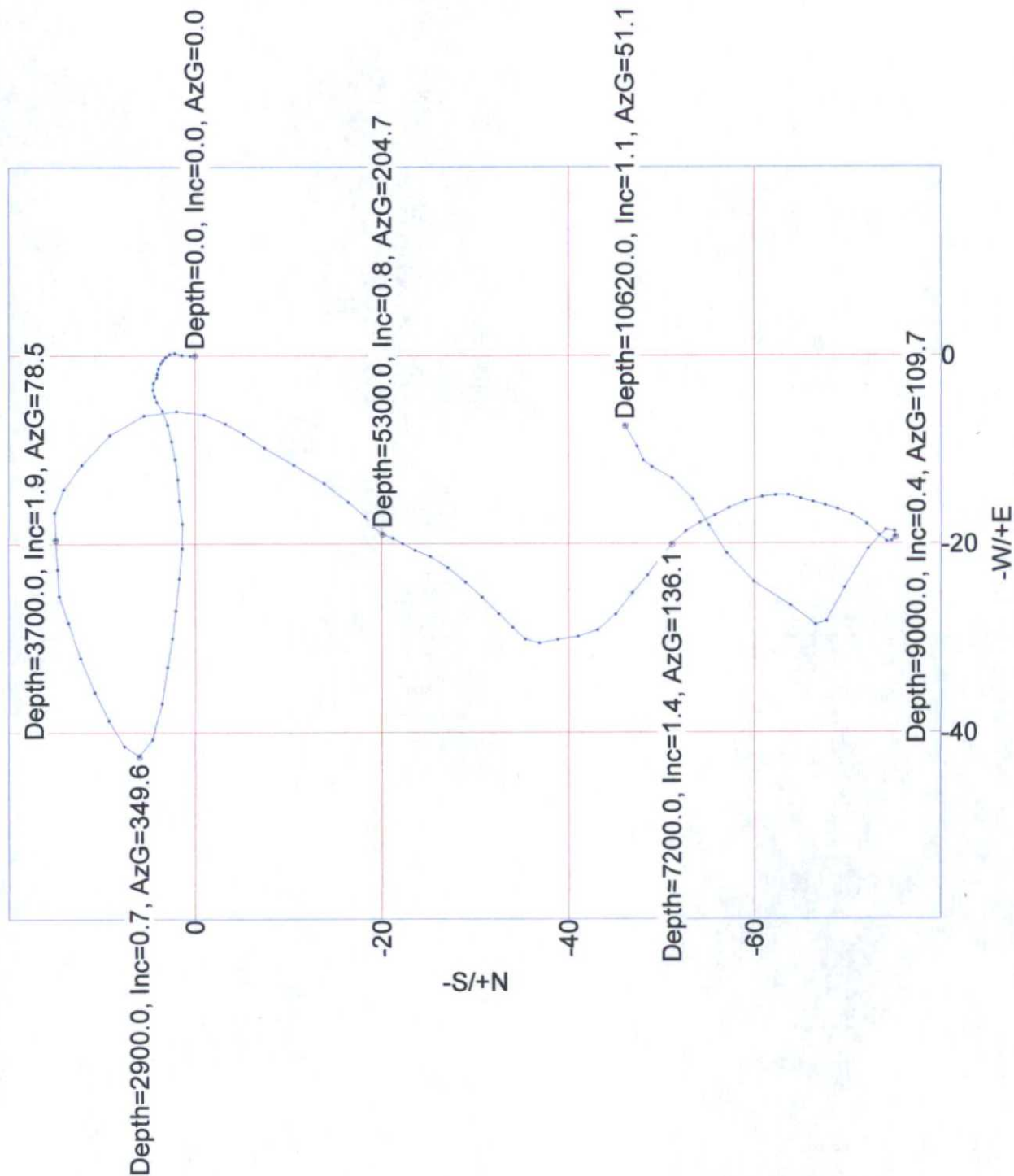
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/S FT	+E/W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	1.04	260.76	1699.94	2.52	-9.13	-2.57	9.47	285.43	0.14
1800.00	1.21	256.43	1799.92	2.13	-11.05	-2.18	11.25	280.89	0.19
1900.00	1.30	268.05	1899.89	1.84	-13.21	-1.91	13.33	277.93	0.27
2000.00	1.32	263.96	1999.87	1.68	-15.48	-1.76	15.57	276.19	0.10
2100.00	1.45	261.09	2099.84	1.36	-17.88	-1.45	17.93	274.35	0.15
2200.00	1.59	278.21	2199.80	1.36	-20.51	-1.47	20.55	273.81	0.48
2300.00	2.05	274.10	2299.75	1.69	-23.67	-1.81	23.73	274.09	0.47
2400.00	1.88	278.71	2399.69	2.07	-27.07	-2.20	27.15	274.37	0.23
2500.00	1.53	275.12	2499.65	2.43	-30.02	-2.59	30.12	274.64	0.37
2600.00	2.02	283.02	2599.60	2.95	-33.07	-3.12	33.20	275.10	0.55
2700.00	2.46	275.30	2699.52	3.55	-36.92	-3.73	37.09	275.49	0.54
2800.00	2.14	295.93	2799.44	4.56	-40.74	-4.77	41.00	276.39	0.88
2900.00	0.69	349.64	2899.41	5.97	-42.53	-6.19	42.95	277.99	1.82
3000.00	1.77	50.45	2999.39	7.55	-41.45	-7.76	42.13	280.32	1.55
3100.00	1.94	65.82	3099.34	9.22	-38.72	-9.42	39.80	283.40	0.52
3200.00	1.94	60.04	3199.28	10.76	-35.71	-10.94	37.30	286.76	0.20
3300.00	2.58	72.92	3299.21	12.26	-32.09	-12.43	34.36	290.91	0.82
3400.00	1.99	66.35	3399.13	13.62	-28.35	-13.76	31.45	295.66	0.65
3500.00	1.47	77.15	3499.08	14.60	-25.52	-14.73	29.40	299.78	0.61
3600.00	1.78	94.88	3599.04	14.75	-22.72	-14.87	27.09	303.00	0.59
3700.00	1.87	78.48	3698.99	14.95	-19.56	-15.05	24.62	307.38	0.53
3800.00	1.49	98.36	3798.95	15.08	-16.67	-15.17	22.48	312.13	0.69
3900.00	1.60	124.97	3898.91	14.09	-14.24	-14.16	20.03	314.70	0.72
4000.00	2.15	128.62	3998.86	12.12	-11.63	-12.18	16.80	316.19	0.56
4100.00	2.85	137.12	4098.76	9.13	-8.47	-9.17	12.46	317.14	0.79
4200.00	2.19	168.05	4198.67	5.45	-6.39	-5.48	8.40	310.44	1.49
4300.00	1.85	177.93	4298.61	1.97	-5.94	-2.00	6.25	288.32	0.48
4400.00	1.62	197.38	4398.57	-1.00	-6.30	0.97	6.38	260.97	0.63
4500.00	1.23	211.04	4498.53	-3.27	-7.28	3.23	7.98	245.80	0.52
4600.00	1.33	208.62	4598.51	-5.20	-8.38	5.16	9.87	238.17	0.12
4700.00	1.70	216.73	4698.47	-7.41	-9.82	7.36	12.30	232.98	0.42
4800.00	2.50	205.44	4798.41	-10.57	-11.65	10.51	15.73	227.79	0.90
4900.00	1.89	218.88	4898.33	-13.82	-13.62	13.75	19.40	224.58	0.80
5000.00	1.85	215.83	4998.28	-16.41	-15.60	16.33	22.64	223.55	0.11
5100.00	0.85	232.89	5098.25	-18.17	-17.14	18.08	24.97	223.32	1.07
5200.00	0.71	229.79	5198.24	-19.02	-18.20	18.92	26.32	223.74	0.14
5300.00	0.81	204.68	5298.23	-20.06	-18.97	19.96	27.61	223.40	0.34
5400.00	0.60	199.98	5398.23	-21.19	-19.44	21.09	28.76	222.54	0.22
5500.00	0.76	215.35	5498.22	-22.22	-20.01	22.12	29.90	221.99	0.24

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	1.03	201.41	5598.21	-23.60	-20.72	23.49	31.40	221.28	0.35
5700.00	0.95	202.20	5698.19	-25.20	-21.36	25.10	33.04	220.28	0.08
5800.00	1.62	218.00	5798.17	-27.09	-22.54	26.97	35.24	219.77	0.75
5900.00	1.16	219.58	5898.14	-28.98	-24.06	28.86	37.66	219.70	0.46
6000.00	1.59	223.37	5998.11	-30.77	-25.65	30.64	40.06	219.82	0.44
6100.00	1.27	226.19	6098.08	-32.54	-27.40	32.40	42.54	220.10	0.33
6200.00	1.10	222.05	6198.06	-34.01	-28.84	33.87	44.60	220.29	0.19
6300.00	1.02	223.90	6298.04	-35.37	-30.10	35.21	46.44	220.40	0.08
6400.00	1.01	167.65	6398.03	-36.87	-30.53	36.72	47.87	219.62	0.96
6500.00	1.30	170.68	6498.00	-38.85	-30.16	38.70	49.18	217.82	0.29
6600.00	1.21	170.71	6597.98	-41.02	-29.80	40.87	50.70	216.00	0.09
6700.00	1.34	155.03	6697.96	-43.12	-29.14	42.97	52.04	214.05	0.37
6800.00	1.68	125.91	6797.92	-45.04	-27.46	44.90	52.75	211.36	0.83
6900.00	1.64	131.13	6897.88	-46.84	-25.19	46.72	53.19	208.27	0.16
7000.00	1.17	132.10	6997.85	-48.47	-23.35	48.35	53.80	205.72	0.48
7100.00	1.16	122.53	7097.83	-49.70	-21.74	49.59	54.25	203.63	0.19
7200.00	1.36	136.05	7197.81	-51.10	-20.07	50.99	54.89	201.44	0.35
7300.00	0.97	138.24	7297.79	-52.58	-18.68	52.48	55.80	199.56	0.39
7400.00	1.09	158.56	7397.77	-54.09	-17.77	54.00	56.93	198.19	0.38
7500.00	0.93	149.04	7497.75	-55.67	-17.01	55.58	58.21	196.99	0.23
7600.00	1.03	155.20	7597.74	-57.19	-16.21	57.11	59.44	195.83	0.15
7700.00	1.24	159.43	7697.72	-59.02	-15.45	58.94	61.01	194.67	0.22
7800.00	0.90	178.56	7797.70	-60.82	-15.05	60.74	62.65	193.90	0.49
7900.00	0.78	166.69	7897.69	-62.26	-14.88	62.19	64.02	193.44	0.21
8000.00	0.80	191.12	7997.68	-63.61	-14.85	63.53	65.32	193.15	0.33
8100.00	0.78	199.61	8097.67	-64.93	-15.22	64.85	66.69	193.19	0.12
8200.00	0.81	189.72	8197.66	-66.26	-15.56	66.18	68.07	193.22	0.14
8300.00	0.76	202.98	8297.65	-67.56	-15.94	67.48	69.42	193.28	0.19
8400.00	0.84	192.33	8397.64	-68.89	-16.36	68.81	70.80	193.36	0.17
8500.00	1.05	206.60	8497.63	-70.43	-16.92	70.34	72.43	193.51	0.32
8600.00	1.10	217.11	8597.61	-72.01	-17.91	71.92	74.21	193.97	0.20
8700.00	0.95	226.65	8697.60	-73.34	-19.09	73.25	75.79	194.59	0.22
8800.00	0.30	198.88	8797.59	-74.16	-19.78	74.06	76.75	194.93	0.70
8900.00	0.36	155.30	8897.59	-74.70	-19.73	74.60	77.26	194.80	0.25
9000.00	0.38	109.71	8997.59	-75.10	-19.29	75.00	77.53	194.40	0.29
9100.00	0.41	52.85	9097.59	-74.99	-18.69	74.90	77.29	193.99	0.38
9200.00	0.87	349.96	9197.58	-74.03	-18.54	73.94	76.32	194.06	0.78
9300.00	2.47	299.40	9297.54	-72.22	-20.55	72.12	75.09	195.88	2.03
9400.00	3.03	302.95	9397.42	-69.72	-24.65	69.60	73.95	199.47	0.59

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	1.62	292.10	9497.34	-67.75	-28.18	67.61	73.38	202.58	1.47
9600.00	1.33	55.28	9597.32	-66.56	-28.54	66.41	72.42	203.21	2.60
9700.00	2.61	27.49	9697.26	-63.88	-26.53	63.74	69.17	202.56	1.56
9800.00	2.78	36.52	9797.15	-59.91	-24.04	59.79	64.55	201.86	0.46
9900.00	2.12	57.81	9897.06	-56.98	-21.03	56.87	60.73	200.26	1.12
10000.00	1.95	55.79	9997.00	-55.04	-18.06	54.94	57.92	198.17	0.19
10100.00	1.80	61.46	10096.95	-53.33	-15.28	53.25	55.48	195.98	0.24
10200.00	1.95	29.98	10196.90	-51.11	-13.05	51.04	52.75	194.32	1.03
10300.00	0.88	25.03	10296.86	-48.94	-11.87	48.88	50.36	193.64	1.07
10400.00	0.51	60.44	10396.86	-48.02	-11.16	47.96	49.30	193.08	0.55
10500.00	1.35	67.24	10496.84	-47.35	-9.69	47.30	48.33	191.56	0.84
10620.00	1.12	51.10	10616.82	-46.06	-7.47	46.03	46.67	189.22	0.34



VES Survey International
West Texas
(432) 563-5444
Surveyor: Gene Heiss
Stratosphere 36 State Com 4H / API 30-025-42035



VES Survey Date: 6/9/2015



COG Operating LLC

Lea County, NM

Stratosphere 36 State

#4H

OH

Design: OH

Survey Report - Geographic

17 June, 2015





TDS
Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM	TVD Reference:	KB @ 3767.6usft (McVay 6)
Site:	Stratosphere 36 State	MD Reference:	KB @ 3767.6usft (McVay 6)
Well:	#4H	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:	559,480.50 usft	Latitude:	32° 32' 7.557 N
From:	Map	Easting:	753,397.20 usft	Longitude:	103° 30' 39.986 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °

Well	#4H					
Well Position	+N/-S	0.0 usft	Northing:	559,480.50 usft	Latitude:	32° 32' 7.557 N
	+E/-W	0.0 usft	Easting:	753,397.20 usft	Longitude:	103° 30' 39.986 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,749.6 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/18/2015	7.10	60.38	48,414

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	179.71	

Survey Program	Date 6/17/2015				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,620.0	Gyro #1 (OH)	NS-GYRO-SS	NS Gyro single shots	
10,734.0	15,520.0	MWD #2 (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	559,480.50	753,397.20	32° 32' 7.557 N	103° 30' 39.986 W
100.0	0.56	354.66	100.0	0.5	0.0	559,480.99	753,397.15	32° 32' 7.562 N	103° 30' 39.986 W
200.0	0.51	16.77	200.0	1.4	0.0	559,481.90	753,397.23	32° 32' 7.571 N	103° 30' 39.985 W
300.0	0.40	13.99	300.0	2.2	0.3	559,482.67	753,397.45	32° 32' 7.578 N	103° 30' 39.982 W
400.0	0.33	322.04	400.0	2.7	0.2	559,483.23	753,397.35	32° 32' 7.584 N	103° 30' 39.984 W
500.0	0.28	321.02	500.0	3.1	-0.2	559,483.65	753,397.02	32° 32' 7.588 N	103° 30' 39.987 W
600.0	0.22	298.02	600.0	3.4	-0.5	559,483.93	753,396.70	32° 32' 7.591 N	103° 30' 39.991 W
700.0	0.25	306.80	700.0	3.6	-0.8	559,484.15	753,396.36	32° 32' 7.593 N	103° 30' 39.995 W
800.0	0.47	288.08	800.0	3.9	-1.4	559,484.41	753,395.79	32° 32' 7.595 N	103° 30' 40.002 W
900.0	0.20	274.76	900.0	4.0	-2.0	559,484.55	753,395.23	32° 32' 7.597 N	103° 30' 40.008 W
1,000.0	0.27	280.74	1,000.0	4.1	-2.4	559,484.61	753,394.82	32° 32' 7.598 N	103° 30' 40.013 W



TDS
Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM	TVD Reference:	KB @ 3767.6usft (McVay 6)
Site:	Stratosphere 36 State	MD Reference:	KB @ 3767.6usft (McVay 6)
Well:	#4H	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
1,100.0	0.53	309.89	1,100.0	4.4	-3.0	559,484.95	753,394.24	32° 32' 7.601 N	103° 30' 40.020 W
1,200.0	0.50	236.90	1,200.0	4.5	-3.7	559,485.01	753,393.52	32° 32' 7.602 N	103° 30' 40.028 W
1,300.0	0.38	283.15	1,300.0	4.3	-4.4	559,484.84	753,392.83	32° 32' 7.600 N	103° 30' 40.036 W
1,400.0	0.50	219.52	1,400.0	4.1	-5.0	559,484.58	753,392.23	32° 32' 7.597 N	103° 30' 40.043 W
1,500.0	0.83	246.85	1,500.0	3.5	-5.9	559,483.96	753,391.28	32° 32' 7.591 N	103° 30' 40.054 W
1,600.0	1.00	252.91	1,600.0	2.9	-7.4	559,483.42	753,389.78	32° 32' 7.586 N	103° 30' 40.072 W
1,700.0	1.04	260.76	1,699.9	2.5	-9.1	559,483.02	753,388.05	32° 32' 7.582 N	103° 30' 40.092 W
1,800.0	1.21	256.43	1,799.9	2.1	-11.1	559,482.63	753,386.13	32° 32' 7.579 N	103° 30' 40.115 W
1,900.0	1.30	268.05	1,899.9	1.8	-13.2	559,482.34	753,383.97	32° 32' 7.576 N	103° 30' 40.140 W
2,000.0	1.32	263.96	1,999.9	1.7	-15.5	559,482.18	753,381.69	32° 32' 7.574 N	103° 30' 40.167 W
2,100.0	1.45	261.09	2,099.8	1.4	-17.9	559,481.86	753,379.30	32° 32' 7.572 N	103° 30' 40.195 W
2,200.0	1.59	278.21	2,199.8	1.4	-20.5	559,481.86	753,376.67	32° 32' 7.572 N	103° 30' 40.225 W
2,300.0	2.05	274.10	2,299.8	1.7	-23.7	559,482.19	753,373.52	32° 32' 7.575 N	103° 30' 40.262 W
2,400.0	1.88	278.71	2,399.7	2.1	-27.1	559,482.57	753,370.11	32° 32' 7.579 N	103° 30' 40.302 W
2,500.0	1.53	275.12	2,499.6	2.4	-30.0	559,482.93	753,367.16	32° 32' 7.583 N	103° 30' 40.336 W
2,600.0	2.02	283.02	2,599.6	2.9	-33.1	559,483.45	753,364.11	32° 32' 7.588 N	103° 30' 40.372 W
2,700.0	2.46	275.30	2,699.5	3.5	-36.9	559,484.05	753,360.26	32° 32' 7.595 N	103° 30' 40.417 W
2,800.0	2.14	295.93	2,799.4	4.6	-40.8	559,485.06	753,356.44	32° 32' 7.605 N	103° 30' 40.461 W
2,900.0	0.69	349.64	2,899.4	6.0	-42.5	559,486.47	753,354.65	32° 32' 7.619 N	103° 30' 40.482 W
3,000.0	1.77	50.45	2,999.4	7.5	-41.5	559,488.04	753,355.74	32° 32' 7.635 N	103° 30' 40.469 W
3,100.0	1.94	65.82	3,099.3	9.2	-38.7	559,489.72	753,358.47	32° 32' 7.651 N	103° 30' 40.437 W
3,200.0	1.94	60.04	3,199.3	10.8	-35.7	559,491.26	753,361.48	32° 32' 7.666 N	103° 30' 40.402 W
3,300.0	2.58	72.92	3,299.2	12.3	-32.1	559,492.77	753,365.10	32° 32' 7.681 N	103° 30' 40.359 W
3,400.0	1.99	66.35	3,399.1	13.6	-28.4	559,494.12	753,368.84	32° 32' 7.694 N	103° 30' 40.316 W
3,500.0	1.47	77.15	3,499.1	14.6	-25.5	559,495.11	753,371.68	32° 32' 7.703 N	103° 30' 40.282 W
3,600.0	1.78	94.88	3,599.0	14.8	-22.7	559,495.26	753,374.48	32° 32' 7.704 N	103° 30' 40.250 W
3,700.0	1.87	78.48	3,699.0	15.0	-19.6	559,495.45	753,377.63	32° 32' 7.706 N	103° 30' 40.213 W
3,800.0	1.49	98.36	3,798.9	15.1	-16.7	559,495.59	753,380.51	32° 32' 7.707 N	103° 30' 40.179 W
3,900.0	1.60	124.97	3,898.9	14.1	-14.3	559,494.60	753,382.94	32° 32' 7.697 N	103° 30' 40.151 W
4,000.0	2.15	128.62	3,998.9	12.1	-11.6	559,492.63	753,385.55	32° 32' 7.678 N	103° 30' 40.121 W
4,100.0	2.85	137.12	4,098.8	9.1	-8.5	559,489.64	753,388.71	32° 32' 7.648 N	103° 30' 40.084 W
4,200.0	2.19	168.05	4,198.7	5.4	-6.4	559,485.95	753,390.80	32° 32' 7.611 N	103° 30' 40.060 W
4,300.0	1.85	177.93	4,298.6	2.0	-5.9	559,482.46	753,391.25	32° 32' 7.577 N	103° 30' 40.055 W
4,400.0	1.62	197.38	4,398.6	-1.0	-6.3	559,479.50	753,390.89	32° 32' 7.547 N	103° 30' 40.059 W
4,500.0	1.23	211.04	4,498.5	-3.3	-7.3	559,477.23	753,389.91	32° 32' 7.525 N	103° 30' 40.071 W
4,600.0	1.33	208.62	4,598.5	-5.2	-8.4	559,475.29	753,388.80	32° 32' 7.506 N	103° 30' 40.084 W
4,700.0	1.70	216.73	4,698.5	-7.4	-9.8	559,473.09	753,387.36	32° 32' 7.484 N	103° 30' 40.101 W
4,800.0	2.50	205.44	4,798.4	-10.6	-11.7	559,469.93	753,385.54	32° 32' 7.453 N	103° 30' 40.123 W
4,900.0	1.89	218.88	4,898.3	-13.8	-13.6	559,466.67	753,383.56	32° 32' 7.421 N	103° 30' 40.146 W
5,000.0	1.85	215.83	4,998.3	-16.4	-15.6	559,464.08	753,381.58	32° 32' 7.395 N	103° 30' 40.169 W
5,100.0	0.85	232.89	5,098.3	-18.2	-17.1	559,462.33	753,380.05	32° 32' 7.378 N	103° 30' 40.188 W
5,200.0	0.71	229.79	5,198.2	-19.0	-18.2	559,461.48	753,378.98	32° 32' 7.370 N	103° 30' 40.200 W
5,300.0	0.81	204.68	5,298.2	-20.1	-19.0	559,460.44	753,378.21	32° 32' 7.360 N	103° 30' 40.209 W
5,400.0	0.60	199.98	5,398.2	-21.2	-19.5	559,459.30	753,377.74	32° 32' 7.348 N	103° 30' 40.215 W
5,500.0	0.76	215.35	5,498.2	-22.2	-20.0	559,458.27	753,377.18	32° 32' 7.338 N	103° 30' 40.221 W
5,600.0	1.03	201.41	5,598.2	-23.6	-20.7	559,456.89	753,376.47	32° 32' 7.325 N	103° 30' 40.230 W
5,700.0	0.95	202.20	5,698.2	-25.2	-21.4	559,455.29	753,375.82	32° 32' 7.309 N	103° 30' 40.238 W
5,800.0	1.62	218.00	5,798.2	-27.1	-22.6	559,453.41	753,374.64	32° 32' 7.290 N	103° 30' 40.251 W
5,900.0	1.16	219.58	5,898.1	-29.0	-24.1	559,451.51	753,373.13	32° 32' 7.272 N	103° 30' 40.269 W
6,000.0	1.59	223.37	5,998.1	-30.8	-25.7	559,449.72	753,371.53	32° 32' 7.254 N	103° 30' 40.288 W
6,100.0	1.27	226.19	6,098.1	-32.6	-27.4	559,447.95	753,369.78	32° 32' 7.237 N	103° 30' 40.309 W
6,200.0	1.10	222.05	6,198.1	-34.0	-28.9	559,446.47	753,368.33	32° 32' 7.222 N	103° 30' 40.326 W
6,300.0	1.02	223.90	6,298.0	-35.4	-30.1	559,445.11	753,367.07	32° 32' 7.209 N	103° 30' 40.341 W
6,400.0	1.01	167.65	6,398.0	-36.9	-30.6	559,443.61	753,366.64	32° 32' 7.194 N	103° 30' 40.346 W
6,500.0	1.30	170.68	6,498.0	-38.9	-30.2	559,441.63	753,367.02	32° 32' 7.174 N	103° 30' 40.342 W

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM	TVD Reference:	KB @ 3767.6usft (McVay 6)
Site:	Stratosphere 36 State	MD Reference:	KB @ 3767.6usft (McVay 6)
Well:	#4H	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
6,600.0	1.21	170.71	6,598.0	-41.0	-29.8	559,439.47	753,367.37	32° 32' 7.153 N	103° 30' 40.338 W
6,700.0	1.34	155.03	6,698.0	-43.1	-29.2	559,437.37	753,368.04	32° 32' 7.132 N	103° 30' 40.330 W
6,800.0	1.68	125.91	6,797.9	-45.1	-27.5	559,435.45	753,369.72	32° 32' 7.113 N	103° 30' 40.311 W
6,900.0	1.64	131.13	6,897.9	-46.9	-25.2	559,433.65	753,371.98	32° 32' 7.095 N	103° 30' 40.284 W
7,000.0	1.17	132.10	6,997.9	-48.5	-23.4	559,432.02	753,373.82	32° 32' 7.079 N	103° 30' 40.263 W
7,100.0	1.16	122.53	7,097.8	-49.7	-21.8	559,430.79	753,375.43	32° 32' 7.066 N	103° 30' 40.244 W
7,200.0	1.36	136.05	7,197.8	-51.1	-20.1	559,429.39	753,377.10	32° 32' 7.053 N	103° 30' 40.225 W
7,300.0	0.97	138.24	7,297.8	-52.6	-18.7	559,427.91	753,378.49	32° 32' 7.038 N	103° 30' 40.209 W
7,400.0	1.09	158.56	7,397.8	-54.1	-17.8	559,426.39	753,379.40	32° 32' 7.023 N	103° 30' 40.198 W
7,500.0	0.93	149.04	7,497.8	-55.7	-17.0	559,424.81	753,380.17	32° 32' 7.007 N	103° 30' 40.190 W
7,600.0	1.03	155.20	7,597.7	-57.2	-16.2	559,423.30	753,380.96	32° 32' 6.992 N	103° 30' 40.180 W
7,700.0	1.24	159.43	7,697.7	-59.0	-15.5	559,421.47	753,381.72	32° 32' 6.974 N	103° 30' 40.172 W
7,800.0	0.90	178.56	7,797.7	-60.8	-15.1	559,419.67	753,382.12	32° 32' 6.956 N	103° 30' 40.167 W
7,900.0	0.78	166.69	7,897.7	-62.3	-14.9	559,418.22	753,382.30	32° 32' 6.942 N	103° 30' 40.165 W
8,000.0	0.80	191.12	7,997.7	-63.6	-14.9	559,416.88	753,382.32	32° 32' 6.928 N	103° 30' 40.165 W
8,100.0	0.78	199.61	8,097.7	-65.0	-15.2	559,415.55	753,381.96	32° 32' 6.915 N	103° 30' 40.169 W
8,200.0	0.81	189.72	8,197.7	-66.3	-15.6	559,414.21	753,381.61	32° 32' 6.902 N	103° 30' 40.174 W
8,300.0	0.76	202.98	8,297.7	-67.6	-16.0	559,412.90	753,381.23	32° 32' 6.889 N	103° 30' 40.178 W
8,400.0	0.84	192.33	8,397.6	-68.9	-16.4	559,411.58	753,380.81	32° 32' 6.876 N	103° 30' 40.183 W
8,500.0	1.05	206.60	8,497.6	-70.5	-16.9	559,410.04	753,380.25	32° 32' 6.861 N	103° 30' 40.190 W
8,600.0	1.10	217.11	8,597.6	-72.0	-17.9	559,408.46	753,379.26	32° 32' 6.845 N	103° 30' 40.202 W
8,700.0	0.95	226.65	8,697.6	-73.4	-19.1	559,407.12	753,378.08	32° 32' 6.832 N	103° 30' 40.216 W
8,800.0	0.30	198.88	8,797.6	-74.2	-19.8	559,406.31	753,377.39	32° 32' 6.824 N	103° 30' 40.224 W
8,900.0	0.36	155.30	8,897.6	-74.7	-19.8	559,405.77	753,377.43	32° 32' 6.819 N	103° 30' 40.223 W
9,000.0	0.38	109.71	8,997.6	-75.1	-19.3	559,405.38	753,377.88	32° 32' 6.815 N	103° 30' 40.218 W
9,100.0	0.41	52.85	9,097.6	-75.0	-18.7	559,405.48	753,378.48	32° 32' 6.816 N	103° 30' 40.211 W
9,200.0	0.87	349.96	9,197.6	-74.1	-18.6	559,406.44	753,378.63	32° 32' 6.825 N	103° 30' 40.209 W
9,300.0	2.47	299.40	9,297.5	-72.3	-20.6	559,408.25	753,376.62	32° 32' 6.843 N	103° 30' 40.232 W
9,400.0	3.03	302.95	9,397.4	-69.8	-24.7	559,410.74	753,372.52	32° 32' 6.868 N	103° 30' 40.280 W
9,500.0	1.62	292.10	9,497.3	-67.8	-28.2	559,412.71	753,369.00	32° 32' 6.888 N	103° 30' 40.321 W
9,600.0	1.33	55.28	9,597.3	-66.6	-28.6	559,413.91	753,368.64	32° 32' 6.900 N	103° 30' 40.325 W
9,700.0	2.61	27.49	9,697.3	-63.9	-26.6	559,416.59	753,370.64	32° 32' 6.926 N	103° 30' 40.301 W
9,800.0	2.78	36.52	9,797.2	-59.9	-24.1	559,420.56	753,373.14	32° 32' 6.965 N	103° 30' 40.272 W
9,900.0	2.12	57.81	9,897.1	-57.0	-21.0	559,423.49	753,376.15	32° 32' 6.994 N	103° 30' 40.237 W
10,000.0	1.95	55.79	9,997.0	-55.1	-18.1	559,425.43	753,379.12	32° 32' 7.013 N	103° 30' 40.202 W
10,100.0	1.80	61.46	10,096.9	-53.4	-15.3	559,427.14	753,381.91	32° 32' 7.030 N	103° 30' 40.169 W
10,200.0	1.95	29.98	10,196.9	-51.1	-13.1	559,429.36	753,384.14	32° 32' 7.052 N	103° 30' 40.143 W
10,300.0	0.88	25.03	10,296.9	-49.0	-11.9	559,431.53	753,385.31	32° 32' 7.073 N	103° 30' 40.129 W
10,400.0	0.51	60.44	10,396.9	-48.1	-11.2	559,432.45	753,386.02	32° 32' 7.082 N	103° 30' 40.120 W
10,500.0	1.35	67.24	10,496.8	-47.4	-9.7	559,433.12	753,387.50	32° 32' 7.089 N	103° 30' 40.103 W
10,620.0	1.12	51.10	10,616.8	-46.1	-7.5	559,434.41	753,389.71	32° 32' 7.101 N	103° 30' 40.077 W
TIE-IN to VES GYRO									
10,734.0	1.30	51.40	10,730.8	-44.6	-5.6	559,435.91	753,391.59	32° 32' 7.116 N	103° 30' 40.055 W
10,766.0	1.50	55.80	10,762.8	-44.1	-5.0	559,436.38	753,392.22	32° 32' 7.120 N	103° 30' 40.048 W
10,797.0	2.50	143.30	10,793.8	-44.4	-4.2	559,436.06	753,392.96	32° 32' 7.117 N	103° 30' 40.039 W
10,829.0	6.60	166.30	10,825.7	-46.8	-3.4	559,433.71	753,393.81	32° 32' 7.094 N	103° 30' 40.029 W
10,860.0	11.90	160.00	10,856.2	-51.5	-1.9	559,428.98	753,395.33	32° 32' 7.047 N	103° 30' 40.012 W
10,891.0	17.00	159.10	10,886.3	-58.8	0.8	559,421.73	753,398.04	32° 32' 6.975 N	103° 30' 39.981 W
10,923.0	19.80	161.80	10,916.6	-68.3	4.2	559,412.21	753,401.40	32° 32' 6.881 N	103° 30' 39.943 W
10,954.0	21.50	164.30	10,945.6	-78.7	7.4	559,401.76	753,404.58	32° 32' 6.777 N	103° 30' 39.906 W
10,986.0	24.70	165.40	10,975.1	-90.9	10.7	559,389.64	753,407.85	32° 32' 6.657 N	103° 30' 39.869 W
11,017.0	28.60	167.80	11,002.8	-104.4	13.9	559,376.11	753,411.06	32° 32' 6.523 N	103° 30' 39.833 W
11,049.0	31.60	168.70	11,030.4	-120.1	17.1	559,360.40	753,414.32	32° 32' 6.367 N	103° 30' 39.796 W
11,080.0	33.70	170.20	11,056.5	-136.5	20.2	559,343.96	753,417.37	32° 32' 6.204 N	103° 30' 39.762 W
11,112.0	35.50	171.10	11,082.9	-154.5	23.1	559,326.03	753,420.32	32° 32' 6.026 N	103° 30' 39.729 W

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM	TVD Reference:	KB @ 3767.6usft (McVay 6)
Site:	Stratosphere 36 State	MD Reference:	KB @ 3767.6usft (McVay 6)
Well:	#4H	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
11,143.0	36.80	171.60	11,107.9	-172.5	25.9	559,307.95	753,423.07	32° 32' 5.847 N	103° 30' 39.699 W
11,175.0	39.70	171.70	11,133.0	-192.1	28.8	559,288.35	753,425.95	32° 32' 5.653 N	103° 30' 39.667 W
11,206.0	42.80	171.90	11,156.3	-212.4	31.7	559,268.13	753,428.86	32° 32' 5.453 N	103° 30' 39.635 W
11,238.0	45.10	172.20	11,179.4	-234.4	34.7	559,246.13	753,431.93	32° 32' 5.235 N	103° 30' 39.601 W
11,269.0	46.40	172.40	11,201.0	-256.4	37.7	559,224.13	753,434.91	32° 32' 5.017 N	103° 30' 39.568 W
11,301.0	48.80	173.60	11,222.6	-279.8	40.6	559,200.67	753,437.78	32° 32' 4.785 N	103° 30' 39.537 W
11,332.0	51.60	174.50	11,242.4	-303.5	43.0	559,176.99	753,440.25	32° 32' 4.550 N	103° 30' 39.510 W
11,364.0	54.30	174.60	11,261.7	-328.9	45.5	559,151.57	753,442.67	32° 32' 4.298 N	103° 30' 39.484 W
11,395.0	57.10	175.00	11,279.2	-354.4	47.8	559,126.07	753,444.99	32° 32' 4.046 N	103° 30' 39.459 W
11,427.0	60.60	175.10	11,295.7	-381.7	50.2	559,098.79	753,447.35	32° 32' 3.776 N	103° 30' 39.434 W
11,458.0	64.70	175.50	11,310.0	-409.2	52.4	559,071.35	753,449.61	32° 32' 3.504 N	103° 30' 39.410 W
11,490.0	68.20	175.50	11,322.7	-438.4	54.7	559,042.11	753,451.91	32° 32' 3.215 N	103° 30' 39.386 W
11,521.0	70.90	175.20	11,333.6	-467.3	57.1	559,013.16	753,454.26	32° 32' 2.928 N	103° 30' 39.361 W
11,553.0	73.00	175.60	11,343.5	-497.7	59.5	558,982.84	753,456.70	32° 32' 2.628 N	103° 30' 39.335 W
11,584.0	75.20	175.70	11,352.0	-527.4	61.8	558,953.11	753,458.96	32° 32' 2.334 N	103° 30' 39.312 W
11,616.0	77.30	175.30	11,359.6	-558.4	64.2	558,922.12	753,461.40	32° 32' 2.027 N	103° 30' 39.286 W
11,647.0	79.30	174.60	11,365.9	-588.6	66.9	558,891.89	753,464.08	32° 32' 1.727 N	103° 30' 39.258 W
11,677.0	82.20	174.30	11,370.7	-618.1	69.7	558,862.42	753,466.94	32° 32' 1.436 N	103° 30' 39.227 W
11,708.0	84.30	173.80	11,374.3	-648.7	72.9	558,831.80	753,470.13	32° 32' 1.132 N	103° 30' 39.192 W
11,739.0	84.60	173.70	11,377.3	-679.4	76.3	558,801.13	753,473.49	32° 32' 0.829 N	103° 30' 39.156 W
11,771.0	85.50	173.70	11,380.1	-711.1	79.8	558,769.44	753,476.99	32° 32' 0.515 N	103° 30' 39.118 W
11,802.0	85.70	173.90	11,382.5	-741.8	83.1	558,738.72	753,480.33	32° 32' 0.210 N	103° 30' 39.082 W
11,834.0	86.20	174.10	11,384.7	-773.5	86.5	558,706.97	753,483.66	32° 31' 59.896 N	103° 30' 39.045 W
11,865.0	87.10	174.40	11,386.6	-804.3	89.6	558,676.18	753,486.76	32° 31' 59.591 N	103° 30' 39.012 W
11,897.0	87.80	174.30	11,388.0	-836.1	92.7	558,644.37	753,489.91	32° 31' 59.276 N	103° 30' 38.978 W
11,928.0	89.10	174.70	11,388.8	-867.0	95.7	558,613.52	753,492.88	32° 31' 58.971 N	103° 30' 38.946 W
11,960.0	89.50	175.30	11,389.2	-898.9	98.5	558,581.65	753,495.67	32° 31' 58.655 N	103° 30' 38.916 W
11,991.0	89.50	175.50	11,389.5	-929.8	101.0	558,550.75	753,498.16	32° 31' 58.349 N	103° 30' 38.890 W
12,086.0	89.90	176.80	11,390.0	-1,024.5	107.3	558,455.96	753,504.53	32° 31' 57.411 N	103° 30' 38.824 W
12,180.0	88.50	179.30	11,391.3	-1,118.5	110.5	558,362.04	753,507.73	32° 31' 56.481 N	103° 30' 38.795 W
12,275.0	88.50	181.60	11,393.8	-1,213.4	109.8	558,267.08	753,506.99	32° 31' 55.542 N	103° 30' 38.813 W
12,369.0	87.60	181.10	11,397.0	-1,307.3	107.6	558,173.16	753,504.77	32° 31' 54.613 N	103° 30' 38.847 W
12,463.0	86.30	180.40	11,402.0	-1,401.2	106.3	558,079.31	753,503.54	32° 31' 53.684 N	103° 30' 38.870 W
12,558.0	86.30	181.60	11,408.1	-1,496.0	104.7	557,984.52	753,501.89	32° 31' 52.746 N	103° 30' 38.898 W
12,652.0	88.20	182.50	11,412.6	-1,589.8	101.3	557,890.69	753,498.53	32° 31' 51.818 N	103° 30' 38.945 W
12,747.0	88.70	182.80	11,415.2	-1,684.7	96.9	557,795.83	753,494.14	32° 31' 50.880 N	103° 30' 39.005 W
12,841.0	89.50	183.70	11,416.7	-1,778.5	91.6	557,701.99	753,488.81	32° 31' 49.952 N	103° 30' 39.076 W
12,936.0	90.10	184.30	11,417.0	-1,873.3	85.0	557,607.23	753,482.18	32° 31' 49.014 N	103° 30' 39.162 W
13,030.0	89.10	182.30	11,417.6	-1,967.1	79.6	557,513.39	753,476.77	32° 31' 48.086 N	103° 30' 39.233 W
13,125.0	88.40	182.60	11,419.7	-2,062.0	75.5	557,418.50	753,472.71	32° 31' 47.148 N	103° 30' 39.289 W
13,219.0	88.00	182.20	11,422.7	-2,155.9	71.6	557,324.63	753,468.78	32° 31' 46.219 N	103° 30' 39.344 W
13,313.0	88.10	181.20	11,425.9	-2,249.8	68.8	557,230.73	753,465.99	32° 31' 45.290 N	103° 30' 39.385 W
13,408.0	89.60	181.10	11,427.8	-2,344.7	66.9	557,135.77	753,464.09	32° 31' 44.351 N	103° 30' 39.416 W
13,502.0	90.50	181.60	11,427.7	-2,438.7	64.7	557,041.80	753,461.87	32° 31' 43.421 N	103° 30' 39.450 W
13,597.0	91.30	183.20	11,426.2	-2,533.6	60.7	556,946.90	753,457.89	32° 31' 42.482 N	103° 30' 39.505 W
13,691.0	90.20	182.60	11,425.0	-2,627.5	55.9	556,853.03	753,453.14	32° 31' 41.554 N	103° 30' 39.569 W
13,785.0	89.30	181.60	11,425.4	-2,721.4	52.5	556,759.09	753,449.69	32° 31' 40.625 N	103° 30' 39.618 W
13,880.0	88.40	180.50	11,427.3	-2,816.4	50.8	556,664.13	753,447.95	32° 31' 39.685 N	103° 30' 39.647 W
13,974.0	87.30	179.10	11,430.8	-2,910.3	51.1	556,570.20	753,448.28	32° 31' 38.756 N	103° 30' 39.651 W
14,069.0	86.90	179.00	11,435.6	-3,005.2	52.7	556,475.33	753,449.85	32° 31' 37.817 N	103° 30' 39.641 W
14,163.0	88.10	179.30	11,439.7	-3,099.1	54.1	556,381.44	753,451.25	32° 31' 36.888 N	103° 30' 39.634 W
14,257.0	84.90	179.10	11,445.5	-3,192.9	55.4	556,287.63	753,452.56	32° 31' 35.959 N	103° 30' 39.627 W
14,352.0	86.20	179.40	11,452.8	-3,287.6	56.6	556,192.93	753,453.80	32° 31' 35.022 N	103° 30' 39.621 W
14,446.0	87.30	180.80	11,458.2	-3,381.4	56.4	556,099.08	753,453.63	32° 31' 34.094 N	103° 30' 39.631 W
14,540.0	89.30	181.90	11,460.9	-3,475.3	54.2	556,005.16	753,451.42	32° 31' 33.164 N	103° 30' 39.666 W



TDS
Survey Report - Geographic



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #4H
Project:	Lea County, NM	TVD Reference:	KB @ 3767.6usft (McVay 6)
Site:	Stratosphere 36 State	MD Reference:	KB @ 3767.6usft (McVay 6)
Well:	#4H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,635.0	89.30	181.90	11,462.1	-3,570.3	51.1	555,910.22	753,448.27	32° 31' 32.225 N	103° 30' 39.711 W
14,729.0	89.10	182.80	11,463.4	-3,664.2	47.2	555,816.31	753,444.41	32° 31' 31.296 N	103° 30' 39.764 W
14,824.0	88.10	183.50	11,465.7	-3,759.0	42.0	555,721.48	753,439.20	32° 31' 30.358 N	103° 30' 39.834 W
14,918.0	88.30	182.00	11,468.7	-3,852.9	37.5	555,627.64	753,434.69	32° 31' 29.430 N	103° 30' 39.895 W
15,012.0	87.90	181.00	11,471.8	-3,946.8	35.0	555,533.72	753,432.23	32° 31' 28.501 N	103° 30' 39.932 W
15,107.0	87.80	180.20	11,475.4	-4,041.7	34.0	555,438.80	753,431.24	32° 31' 27.562 N	103° 30' 39.952 W
15,201.0	89.20	179.80	11,477.8	-4,135.7	34.0	555,344.83	753,431.24	32° 31' 26.632 N	103° 30' 39.961 W
15,295.0	89.10	179.10	11,479.2	-4,229.7	34.9	555,250.85	753,432.14	32° 31' 25.702 N	103° 30' 39.959 W
15,390.0	88.80	180.30	11,481.0	-4,324.6	35.4	555,155.87	753,432.63	32° 31' 24.762 N	103° 30' 39.962 W
15,468.0	88.80	181.70	11,482.6	-4,402.6	34.1	555,077.90	753,431.27	32° 31' 23.991 N	103° 30' 39.984 W
Final MWD Survey									
15,520.0	88.80	181.70	11,483.7	-4,454.6	32.5	555,025.93	753,429.73	32° 31' 23.477 N	103° 30' 40.007 W
Projection to Bit/TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,620.0	10,616.8	-46.1	-7.5	TIE-IN to VES Gyro
15,468.0	11,482.6	-4,402.6	34.1	Final MWD Survey
15,520.0	11,483.7	-4,454.6	32.5	Projection to Bit/TD

Checked By: _____	Approved By: _____	Date: _____
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