

April 4, 2016

HOBBS OCD

AUG 10 2016

RECEIVED

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

Attn: Kanicia Castillo

RE: Lychee BWS State Com No 001H

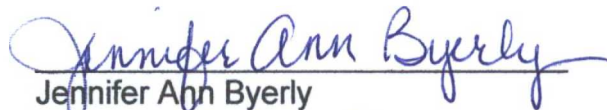
Please find enclosed a copy of the survey from 0' to 9875' ran on the above referenced well.

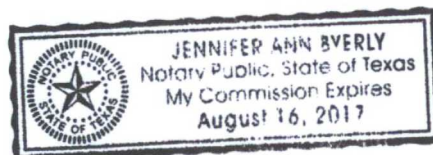
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 4th day of April,
A.D., 2016, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Concho
Lease/Well: Lychee BWS State Com No/001H

Rig Name: Scan Freedom
State/County: New Mexico/Lea
VS-Azi: 0.00 Degrees
Latitude: 32.45763, Longitude: -103.45520
Grid North = True North -0.47 degs
Grid Correction Applied = -0.47 degs



Depth Reference : RKB = 27 foot

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro_2_gyro.ut
Minimum Curvature Method
Report Date/Time: 4/4/2016 / 08:43

VES Survey International
West Texas
(432) 563-5444

Surveyor: Gene Heiss
Lychee BWS State Com No 001H / API 30-025-42445

HOBBS OCD

AUG 10 2016

RECEIVED

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	0.22	31.34	100.00	0.17	0.10	0.17	0.19	31.34	0.22
200.00	0.59	17.88	200.00	0.82	0.36	0.82	0.90	23.66	0.38
300.00	0.88	10.95	299.99	2.06	0.66	2.06	2.17	17.82	0.30
400.00	0.54	15.80	399.98	3.27	0.94	3.27	3.40	16.00	0.34
500.00	0.27	29.98	499.98	3.92	1.18	3.92	4.10	16.76	0.29
600.00	0.20	320.94	599.98	4.26	1.19	4.26	4.42	15.59	0.27
700.00	0.08	180.63	699.98	4.32	1.08	4.32	4.45	14.01	0.26
800.00	0.13	116.81	799.98	4.20	1.18	4.20	4.36	15.67	0.12
900.00	0.19	157.57	899.98	4.00	1.34	4.00	4.21	18.57	0.13
1000.00	0.17	116.59	999.98	3.77	1.54	3.77	4.08	22.22	0.13
1100.00	0.27	89.68	1099.98	3.71	1.91	3.71	4.17	27.28	0.14
1200.00	0.35	62.13	1199.97	3.85	2.41	3.85	4.54	32.07	0.16
1300.00	0.59	88.34	1299.97	4.00	3.20	4.00	5.12	38.60	0.32
1400.00	0.55	107.91	1399.97	3.87	4.17	3.87	5.69	47.13	0.20
1500.00	0.53	104.86	1499.96	3.61	5.07	3.61	6.22	54.57	0.04
1600.00	0.34	106.39	1599.96	3.41	5.80	3.41	6.73	59.59	0.18

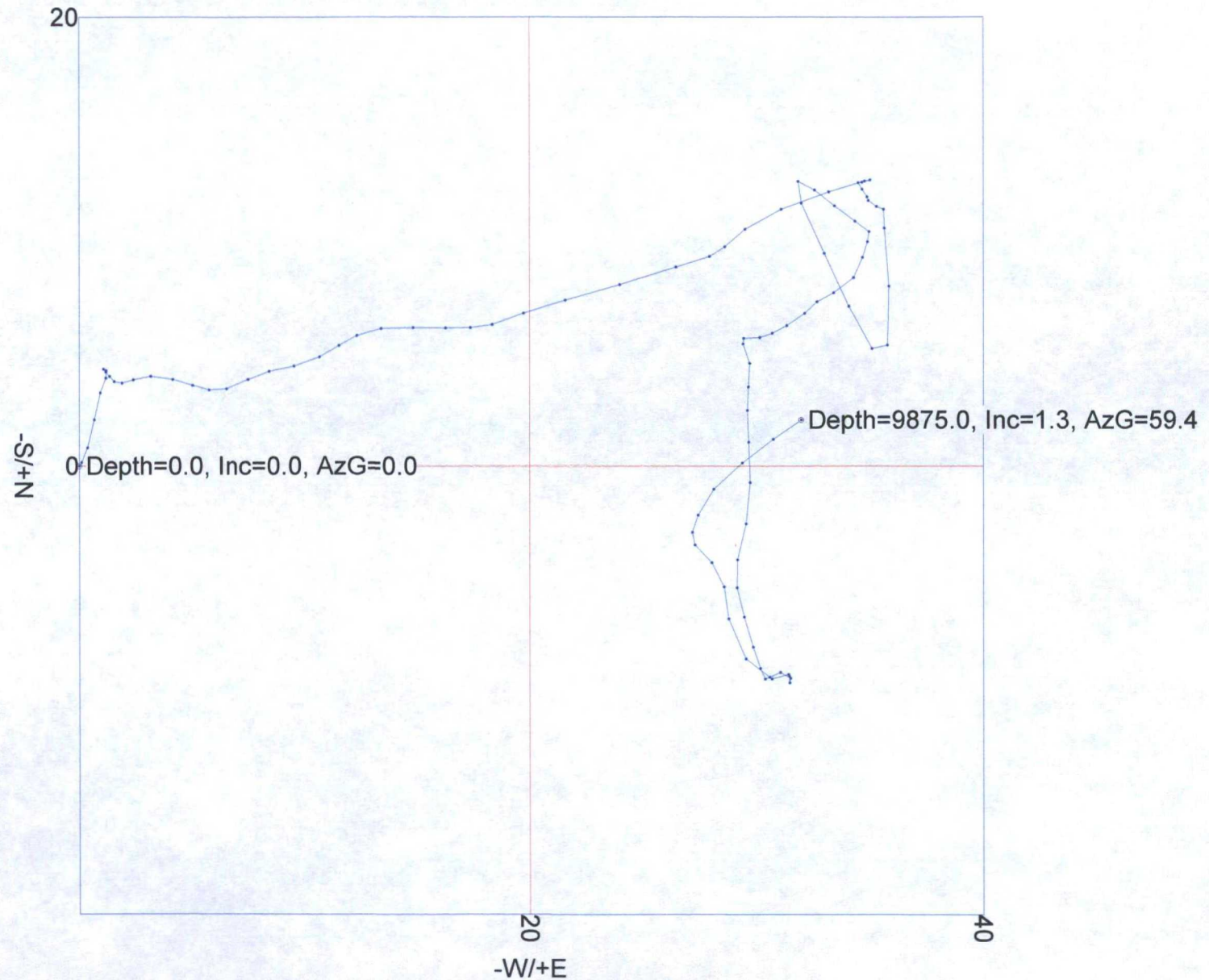
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1700.00	0.57	74.66	1699.96	3.45	6.57	3.45	7.42	62.28	0.33
1800.00	0.67	62.31	1799.95	3.86	7.57	3.86	8.50	63.01	0.16
1900.00	0.48	76.85	1899.94	4.22	8.50	4.22	9.49	63.57	0.24
2000.00	0.80	78.12	1999.94	4.46	9.60	4.46	10.58	65.05	0.32
2100.00	0.60	59.95	2099.93	4.87	10.73	4.87	11.79	65.60	0.30
2200.00	0.54	57.73	2199.93	5.38	11.58	5.38	12.77	65.08	0.06
2300.00	0.50	64.70	2299.92	5.82	12.38	5.82	13.68	64.81	0.08
2400.00	0.79	78.70	2399.92	6.14	13.45	6.14	14.79	65.45	0.33
2500.00	0.84	98.30	2499.91	6.17	14.86	6.17	16.09	67.44	0.28
2600.00	0.82	81.94	2599.90	6.17	16.29	6.17	17.42	69.27	0.24
2700.00	0.45	102.44	2699.89	6.18	17.38	6.18	18.45	70.42	0.43
2800.00	0.70	69.29	2799.88	6.32	18.34	6.32	19.40	71.00	0.41
2900.00	0.99	70.34	2899.87	6.82	19.73	6.82	20.87	70.92	0.28
3000.00	1.23	74.32	2999.85	7.40	21.56	7.40	22.80	71.06	0.25
3100.00	1.64	73.49	3099.82	8.10	23.97	8.10	25.30	71.33	0.42
3200.00	1.34	71.22	3199.79	8.88	26.44	8.88	27.89	71.44	0.31
3300.00	0.44	74.81	3299.78	9.35	27.92	9.35	29.44	71.47	0.90
3400.00	0.51	43.40	3399.77	9.78	28.59	9.78	30.21	71.12	0.27
3500.00	0.86	52.39	3499.77	10.56	29.49	10.56	31.33	70.30	0.37
3600.00	1.24	66.79	3599.75	11.45	31.08	11.45	33.12	69.78	0.46
3700.00	1.33	72.70	3699.72	12.22	33.19	12.22	35.37	69.79	0.16
3800.00	0.56	73.94	3799.71	12.70	34.77	12.70	37.01	69.93	0.77
3900.00	0.28	248.39	3899.71	12.74	35.00	12.74	37.25	70.00	0.84
4000.00	0.15	268.34	3999.71	12.65	34.64	12.65	36.88	69.94	0.15
4100.00	0.04	242.31	4099.71	12.63	34.48	12.63	36.72	69.89	0.11
4200.00	0.39	143.44	4199.71	12.34	34.65	12.34	36.78	70.40	0.40
4300.00	0.08	163.10	4299.71	12.00	34.87	12.00	36.88	71.01	0.31
4400.00	0.12	162.54	4399.71	11.84	34.92	11.84	36.88	71.28	0.04
4500.00	0.43	116.11	4499.70	11.57	35.29	11.57	37.14	71.84	0.36
4600.00	0.05	313.59	4599.70	11.44	35.60	11.44	37.39	72.18	0.48
4700.00	1.00	174.97	4699.70	10.60	35.64	10.60	37.19	73.43	1.04
4800.00	1.96	176.13	4799.66	8.02	35.83	8.02	36.72	77.38	0.96
4900.00	1.06	191.07	4899.63	5.40	35.77	5.40	36.18	81.41	0.98
5000.00	1.04	326.27	4999.62	5.24	35.09	5.24	35.48	81.50	1.94
5100.00	1.42	335.60	5099.60	7.13	34.07	7.13	34.81	78.19	0.43
5200.00	1.56	335.18	5199.56	9.49	32.99	9.49	34.33	73.95	0.14
5300.00	1.25	335.98	5299.53	11.72	31.98	11.72	34.06	69.87	0.31
5400.00	0.34	96.61	5399.53	12.68	31.83	12.68	34.26	68.28	1.45
5500.00	0.64	128.70	5499.52	12.30	32.56	12.30	34.81	69.31	0.39

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	0.66	127.99	5599.52	11.60	33.45	11.60	35.40	70.87	0.02
5700.00	0.64	126.23	5699.51	10.92	34.34	10.92	36.04	72.37	0.03
5800.00	0.25	129.20	5799.51	10.45	34.96	10.45	36.49	73.36	0.38
5900.00	0.45	217.85	5899.51	10.00	34.90	10.00	36.30	74.00	0.51
6000.00	0.45	178.32	5999.50	9.31	34.67	9.31	35.90	74.97	0.30
6100.00	0.75	217.36	6099.50	8.40	34.28	8.40	35.30	76.23	0.49
6200.00	0.58	252.38	6199.49	7.73	33.41	7.73	34.29	76.97	0.43
6300.00	0.41	226.21	6299.49	7.33	32.67	7.33	33.48	77.36	0.27
6400.00	0.45	226.17	6399.48	6.81	32.13	6.81	32.84	78.04	0.04
6500.00	0.66	242.42	6499.48	6.27	31.33	6.27	31.95	78.69	0.26
6600.00	0.16	239.14	6599.48	5.93	30.70	5.93	31.26	79.07	0.50
6700.00	0.52	254.65	6699.48	5.74	30.14	5.74	30.68	79.23	0.36
6800.00	0.33	285.96	6799.47	5.70	29.43	5.70	29.97	79.05	0.29
6900.00	0.47	142.34	6899.47	5.45	29.40	5.45	29.90	79.50	0.76
7000.00	0.62	174.94	6999.47	4.59	29.70	4.59	30.05	81.22	0.34
7100.00	0.60	191.28	7099.46	3.54	29.64	3.54	29.85	83.20	0.17
7200.00	0.62	174.61	7199.46	2.48	29.59	2.48	29.70	85.20	0.18
7300.00	1.01	179.64	7299.45	1.06	29.65	1.06	29.67	87.94	0.39
7400.00	1.06	176.56	7399.43	-0.74	29.71	-0.74	29.72	91.42	0.08
7500.00	1.07	194.33	7499.41	-2.56	29.53	-2.56	29.64	94.96	0.33
7600.00	0.83	192.30	7599.40	-4.17	29.15	-4.17	29.45	98.14	0.24
7700.00	0.64	166.34	7699.39	-5.42	29.13	-5.42	29.63	100.54	0.37
7800.00	0.89	166.24	7799.38	-6.72	29.45	-6.72	30.20	102.85	0.25
7900.00	0.72	160.86	7899.37	-8.06	29.84	-8.06	30.91	105.13	0.19
8000.00	0.44	162.40	7999.37	-9.02	30.16	-9.02	31.48	106.65	0.28
8100.00	0.17	141.76	8099.37	-9.50	30.36	-9.50	31.81	107.37	0.28
8200.00	0.27	28.57	8199.37	-9.41	30.57	-9.41	31.98	107.11	0.37
8300.00	0.42	90.04	8299.36	-9.21	31.04	-9.21	32.38	106.52	0.37
8400.00	0.31	162.72	8399.36	-9.47	31.49	-9.47	32.88	106.73	0.44
8500.00	0.16	296.25	8499.36	-9.67	31.45	-9.67	32.90	107.09	0.44
8600.00	0.29	25.61	8599.36	-9.38	31.43	-9.38	32.80	106.61	0.33
8700.00	0.24	225.78	8699.36	-9.29	31.40	-9.29	32.74	106.49	0.52
8800.00	0.67	264.26	8799.36	-9.49	30.67	-9.49	32.10	107.20	0.51
8900.00	1.28	329.34	8899.34	-8.59	29.52	-8.59	30.74	106.23	1.17
9000.00	0.97	347.33	8999.33	-6.80	28.76	-6.80	29.56	103.31	0.46
9100.00	0.68	357.52	9099.32	-5.38	28.55	-5.38	29.06	100.67	0.33
9200.00	0.82	313.23	9199.31	-4.30	28.01	-4.30	28.34	98.73	0.58
9300.00	0.43	324.23	9299.30	-3.51	27.27	-3.51	27.50	97.34	0.40
9400.00	0.31	20.77	9399.30	-2.95	27.15	-2.95	27.31	96.21	0.37

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	0.61	17.06	9499.30	-2.19	27.40	-2.19	27.49	94.56	0.30
9600.00	0.97	39.68	9599.29	-1.03	28.10	-1.03	28.12	92.09	0.47
9700.00	1.02	54.74	9699.27	0.14	29.37	0.14	29.37	89.73	0.26
9800.00	0.97	49.73	9799.26	1.20	30.73	1.20	30.76	87.77	0.10
9875.00	1.34	59.43	9874.24	2.05	31.98	2.05	32.04	86.33	0.56



VES Survey International
West Texas
(432) 563-5444
Surveyor: Gene Heiss
Lychee BWS State Com No 001H / API 30-025-42445



VES Survey Date: 3/26/2016



HOBBS OCD
AUG 10 2016
RECEIVED

I Gene Heiss certify that I am employed by VES Survey International. That I did on the day(s) of 03/26/16 through 03/26/16 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 9,875.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of Concho for the Lychee BWS State Com No Well # 001H API # 30-025-42445 in Lea County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.

A handwritten signature in blue ink, appearing to read "Gene Heiss", is written over a horizontal line.

Gene Heiss
Service Technician
VES Survey International

HOBBS OCD

AUG 10 2016

RECEIVED

COG Production, LLC

Lea County, NM (NAD 27)

Sec. 22, T 21 S. , R 34 E

Lychee BWS ST 1H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

06 April, 2016

Integrity Directional Services, LLC

Survey Report - Geographic

Company:	COG Production, LLC	Local Co-ordinate Reference:	Well Lychee BWS ST 1H
Project:	Lea County, NM (NAD 27)	TVD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Site:	Sec. 22, T 21 S. , R 34 E	MD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Well:	Lychee BWS ST 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi User Db

Project	Lea County, NM (NAD 27)		
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. 22, T 21 S. , R 34 E		
Site Position:		Northing:	531,373.20 usft
From:	Map	Easting:	812,058.40 usft
Position Uncertainty:	5.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 27' 24.453 N
		Longitude:	103° 19' 17.943 W
		Grid Convergence:	0.54 °

Well	Lychee BWS ST 1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	5.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 27' 27.453 N
		Longitude:	103° 27' 18.543 W
		Ground Level:	3,684.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/1/2016	7.06	60.31	48,221

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	359.51	

Survey Program	Date 4/6/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	9,875.0	Gyro (Wellbore #1)	MWD	MWD - Standard
9,939.0	17,570.0	MWD1 (Wellbore #1)	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	531,311.80	770,875.70	32° 27' 27.453 N	103° 27' 18.543 W	
100.0	0.22	31.34	100.0	0.2	0.1	531,311.97	770,875.80	32° 27' 27.454 N	103° 27' 18.542 W	
First Gyro Survey										
200.0	0.59	17.88	200.0	0.8	0.4	531,312.62	770,876.06	32° 27' 27.461 N	103° 27' 18.539 W	
300.0	0.88	10.95	300.0	2.1	0.7	531,313.86	770,876.36	32° 27' 27.473 N	103° 27' 18.535 W	
400.0	0.54	15.80	400.0	3.3	0.9	531,315.07	770,876.63	32° 27' 27.485 N	103° 27' 18.532 W	
500.0	0.27	29.98	500.0	3.9	1.2	531,315.73	770,876.88	32° 27' 27.491 N	103° 27' 18.529 W	
600.0	0.20	320.94	600.0	4.3	1.2	531,316.07	770,876.89	32° 27' 27.495 N	103° 27' 18.529 W	
700.0	0.08	180.63	700.0	4.3	1.1	531,316.13	770,876.78	32° 27' 27.495 N	103° 27' 18.530 W	
800.0	0.13	116.81	800.0	4.2	1.2	531,316.01	770,876.88	32° 27' 27.494 N	103° 27' 18.529 W	
900.0	0.19	157.57	900.0	4.0	1.3	531,315.81	770,877.04	32° 27' 27.492 N	103° 27' 18.527 W	

Integrity Directional Services, LLC

Survey Report - Geographic

Company:	COG Production, LLC	Local Co-ordinate Reference:	Well Lychee BWS ST 1H
Project:	Lea County, NM (NAD 27)	TVD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Site:	Sec. 22, T 21 S., R 34 E	MD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Well:	Lychee BWS ST 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi 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	
1,000.0	0.17	116.59	1,000.0	3.8	1.5	531,315.59	770,877.24	32° 27' 27.490 N	103° 27' 18.525 W	
1,100.0	0.27	89.68	1,100.0	3.7	1.9	531,315.52	770,877.61	32° 27' 27.489 N	103° 27' 18.520 W	
1,200.0	0.35	62.13	1,200.0	3.9	2.4	531,315.67	770,878.11	32° 27' 27.491 N	103° 27' 18.515 W	
1,300.0	0.59	88.34	1,300.0	4.0	3.2	531,315.83	770,878.90	32° 27' 27.492 N	103° 27' 18.505 W	
1,400.0	0.55	107.91	1,400.0	3.9	4.2	531,315.69	770,879.87	32° 27' 27.491 N	103° 27' 18.494 W	
1,500.0	0.53	104.86	1,500.0	3.6	5.1	531,315.43	770,880.77	32° 27' 27.488 N	103° 27' 18.484 W	
1,600.0	0.34	106.39	1,600.0	3.4	5.8	531,315.22	770,881.50	32° 27' 27.486 N	103° 27' 18.475 W	
1,700.0	0.57	74.66	1,700.0	3.5	6.6	531,315.27	770,882.27	32° 27' 27.486 N	103° 27' 18.466 W	
1,800.0	0.67	62.31	1,799.9	3.9	7.6	531,315.68	770,883.26	32° 27' 27.490 N	103° 27' 18.454 W	
1,900.0	0.48	76.85	1,899.9	4.2	8.5	531,316.04	770,884.19	32° 27' 27.494 N	103° 27' 18.444 W	
2,000.0	0.80	78.12	1,999.9	4.5	9.6	531,316.28	770,885.28	32° 27' 27.496 N	103° 27' 18.431 W	
2,100.0	0.60	59.95	2,099.9	4.9	10.7	531,316.69	770,886.42	32° 27' 27.500 N	103° 27' 18.418 W	
2,200.0	0.54	57.73	2,199.9	5.4	11.6	531,317.20	770,887.27	32° 27' 27.505 N	103° 27' 18.408 W	
2,300.0	0.50	64.70	2,299.9	5.8	12.4	531,317.64	770,888.06	32° 27' 27.509 N	103° 27' 18.398 W	
2,400.0	0.79	78.70	2,399.9	6.2	13.4	531,317.96	770,889.13	32° 27' 27.512 N	103° 27' 18.386 W	
2,500.0	0.84	98.30	2,499.9	6.2	14.8	531,317.99	770,890.53	32° 27' 27.513 N	103° 27' 18.369 W	
2,600.0	0.82	81.94	2,599.9	6.2	16.3	531,317.98	770,891.97	32° 27' 27.512 N	103° 27' 18.353 W	
2,700.0	0.45	102.44	2,699.9	6.2	17.4	531,318.00	770,893.06	32° 27' 27.513 N	103° 27' 18.340 W	
2,800.0	0.70	69.29	2,799.9	6.3	18.3	531,318.13	770,894.01	32° 27' 27.514 N	103° 27' 18.329 W	
2,900.0	0.99	70.34	2,899.9	6.8	19.7	531,318.64	770,895.40	32° 27' 27.519 N	103° 27' 18.313 W	
3,000.0	1.23	74.32	2,999.9	7.4	21.5	531,319.22	770,897.25	32° 27' 27.524 N	103° 27' 18.291 W	
3,100.0	1.64	73.49	3,099.8	8.1	24.0	531,319.92	770,899.65	32° 27' 27.531 N	103° 27' 18.263 W	
3,200.0	1.34	71.22	3,199.8	8.9	26.4	531,320.70	770,902.13	32° 27' 27.538 N	103° 27' 18.234 W	
3,300.0	0.44	74.81	3,299.8	9.4	27.9	531,321.18	770,903.61	32° 27' 27.543 N	103° 27' 18.216 W	
3,400.0	0.51	43.40	3,399.8	9.8	28.6	531,321.60	770,904.28	32° 27' 27.547 N	103° 27' 18.209 W	
3,500.0	0.86	52.39	3,499.8	10.6	29.5	531,322.38	770,905.18	32° 27' 27.555 N	103° 27' 18.198 W	
3,600.0	1.24	66.79	3,599.7	11.5	31.1	531,323.27	770,906.77	32° 27' 27.563 N	103° 27' 18.179 W	
3,700.0	1.33	72.70	3,699.7	12.2	33.2	531,324.04	770,908.88	32° 27' 27.571 N	103° 27' 18.155 W	
3,800.0	0.56	73.94	3,799.7	12.7	34.8	531,324.52	770,910.45	32° 27' 27.576 N	103° 27' 18.136 W	
3,900.0	0.28	248.39	3,899.7	12.8	35.0	531,324.56	770,910.70	32° 27' 27.576 N	103° 27' 18.133 W	
4,000.0	0.15	268.34	3,999.7	12.7	34.6	531,324.47	770,910.34	32° 27' 27.575 N	103° 27' 18.138 W	
4,100.0	0.04	242.31	4,099.7	12.6	34.5	531,324.45	770,910.18	32° 27' 27.575 N	103° 27' 18.140 W	
4,200.0	0.39	143.44	4,199.7	12.4	34.7	531,324.16	770,910.35	32° 27' 27.572 N	103° 27' 18.138 W	
4,300.0	0.08	163.10	4,299.7	12.0	34.9	531,323.82	770,910.57	32° 27' 27.569 N	103° 27' 18.135 W	
4,400.0	0.12	162.54	4,399.7	11.9	34.9	531,323.65	770,910.62	32° 27' 27.567 N	103° 27' 18.134 W	
4,500.0	0.43	116.11	4,499.7	11.6	35.3	531,323.39	770,910.99	32° 27' 27.564 N	103° 27' 18.130 W	
4,600.0	0.05	313.59	4,599.7	11.5	35.6	531,323.25	770,911.30	32° 27' 27.563 N	103° 27' 18.127 W	
4,700.0	1.00	174.97	4,699.7	10.6	35.6	531,322.41	770,911.34	32° 27' 27.555 N	103° 27' 18.126 W	
4,800.0	1.96	176.13	4,799.7	8.0	35.8	531,319.84	770,911.53	32° 27' 27.529 N	103° 27' 18.124 W	
4,900.0	1.06	191.07	4,899.6	5.4	35.8	531,317.22	770,911.47	32° 27' 27.503 N	103° 27' 18.125 W	
5,000.0	1.04	326.27	4,999.6	5.3	35.1	531,317.07	770,910.79	32° 27' 27.502 N	103° 27' 18.133 W	
5,100.0	1.42	335.60	5,099.6	7.2	34.1	531,318.95	770,909.77	32° 27' 27.521 N	103° 27' 18.145 W	
5,200.0	1.56	335.18	5,199.6	9.5	33.0	531,321.32	770,908.69	32° 27' 27.544 N	103° 27' 18.157 W	
5,300.0	1.25	335.98	5,299.5	11.7	32.0	531,323.55	770,907.68	32° 27' 27.566 N	103° 27' 18.169 W	
5,400.0	0.34	96.61	5,399.5	12.7	31.8	531,324.51	770,907.53	32° 27' 27.576 N	103° 27' 18.170 W	
5,500.0	0.64	128.70	5,499.5	12.3	32.6	531,324.13	770,908.26	32° 27' 27.572 N	103° 27' 18.162 W	
5,600.0	0.66	127.99	5,599.5	11.6	33.4	531,323.42	770,909.15	32° 27' 27.565 N	103° 27' 18.152 W	
5,700.0	0.64	126.23	5,699.5	10.9	34.4	531,322.74	770,910.05	32° 27' 27.558 N	103° 27' 18.141 W	
5,800.0	0.25	129.20	5,799.5	10.5	35.0	531,322.27	770,910.67	32° 27' 27.553 N	103° 27' 18.134 W	
5,900.0	0.45	217.85	5,899.5	10.0	34.9	531,321.82	770,910.60	32° 27' 27.549 N	103° 27' 18.135 W	
6,000.0	0.45	178.32	5,999.5	9.3	34.7	531,321.12	770,910.37	32° 27' 27.542 N	103° 27' 18.138 W	
6,100.0	0.75	217.36	6,099.5	8.4	34.3	531,320.21	770,909.98	32° 27' 27.533 N	103° 27' 18.142 W	
6,200.0	0.58	252.38	6,199.5	7.7	33.4	531,319.54	770,909.10	32° 27' 27.526 N	103° 27' 18.152 W	
6,300.0	0.41	226.21	6,299.5	7.3	32.7	531,319.13	770,908.36	32° 27' 27.522 N	103° 27' 18.161 W	
6,400.0	0.45	226.17	6,399.5	6.8	32.1	531,318.61	770,907.82	32° 27' 27.517 N	103° 27' 18.168 W	

Integrity Directional Services, LLC

Survey Report - Geographic

Company:	COG Production, LLC	Local Co-ordinate Reference:	Well Lychee BWS ST 1H
Project:	Lea County, NM (NAD 27)	TVD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Site:	Sec. 22, T 21 S., R 34 E	MD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Well:	Lychee BWS ST 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi 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
6,500.0	0.66	242.42	6,499.5	6.3	31.3	531,318.08	770,907.03	32° 27' 27.512 N	103° 27' 18.177 W
6,600.0	0.16	239.14	6,599.5	5.9	30.7	531,317.74	770,906.40	32° 27' 27.509 N	103° 27' 18.184 W
6,700.0	0.52	254.65	6,699.5	5.7	30.1	531,317.55	770,905.84	32° 27' 27.507 N	103° 27' 18.191 W
6,800.0	0.33	285.96	6,799.5	5.7	29.4	531,317.51	770,905.13	32° 27' 27.507 N	103° 27' 18.199 W
6,900.0	0.47	142.34	6,899.5	5.5	29.4	531,317.26	770,905.10	32° 27' 27.504 N	103° 27' 18.199 W
7,000.0	0.62	174.94	6,999.5	4.6	29.7	531,316.40	770,905.40	32° 27' 27.496 N	103° 27' 18.196 W
7,100.0	0.60	191.28	7,099.5	3.5	29.6	531,315.34	770,905.34	32° 27' 27.485 N	103° 27' 18.197 W
7,200.0	0.62	174.61	7,199.5	2.5	29.6	531,314.29	770,905.29	32° 27' 27.475 N	103° 27' 18.197 W
7,300.0	1.01	179.64	7,299.4	1.1	29.7	531,312.87	770,905.35	32° 27' 27.461 N	103° 27' 18.197 W
7,400.0	1.06	176.56	7,399.4	-0.7	29.7	531,311.07	770,905.41	32° 27' 27.443 N	103° 27' 18.196 W
7,500.0	1.07	194.33	7,499.4	-2.6	29.5	531,309.24	770,905.23	32° 27' 27.425 N	103° 27' 18.199 W
7,600.0	0.83	192.30	7,599.4	-4.2	29.2	531,307.63	770,904.85	32° 27' 27.409 N	103° 27' 18.203 W
7,700.0	0.64	166.34	7,699.4	-5.4	29.1	531,306.38	770,904.83	32° 27' 27.397 N	103° 27' 18.204 W
7,800.0	0.89	166.24	7,799.4	-6.7	29.4	531,305.08	770,905.14	32° 27' 27.384 N	103° 27' 18.200 W
7,900.0	0.72	160.86	7,899.4	-8.1	29.8	531,303.73	770,905.53	32° 27' 27.370 N	103° 27' 18.196 W
8,000.0	0.44	162.40	7,999.4	-9.0	30.2	531,302.77	770,905.85	32° 27' 27.361 N	103° 27' 18.192 W
8,100.0	0.17	141.76	8,099.4	-9.5	30.4	531,302.29	770,906.06	32° 27' 27.356 N	103° 27' 18.190 W
8,200.0	0.27	28.57	8,199.4	-9.4	30.6	531,302.38	770,906.27	32° 27' 27.357 N	103° 27' 18.187 W
8,300.0	0.42	90.04	8,299.4	-9.2	31.0	531,302.59	770,906.75	32° 27' 27.359 N	103° 27' 18.182 W
8,400.0	0.31	162.72	8,399.4	-9.5	31.5	531,302.33	770,907.19	32° 27' 27.356 N	103° 27' 18.176 W
8,500.0	0.16	296.25	8,499.4	-9.7	31.5	531,302.13	770,907.15	32° 27' 27.354 N	103° 27' 18.177 W
8,600.0	0.29	25.61	8,599.4	-9.4	31.4	531,302.42	770,907.13	32° 27' 27.357 N	103° 27' 18.177 W
8,700.0	0.24	225.78	8,699.4	-9.3	31.4	531,302.50	770,907.09	32° 27' 27.358 N	103° 27' 18.178 W
8,800.0	0.67	264.26	8,799.4	-9.5	30.7	531,302.30	770,906.36	32° 27' 27.356 N	103° 27' 18.186 W
8,900.0	1.28	329.34	8,899.3	-8.6	29.5	531,303.20	770,905.21	32° 27' 27.365 N	103° 27' 18.200 W
9,000.0	0.97	347.33	8,999.3	-6.8	28.8	531,304.99	770,904.45	32° 27' 27.383 N	103° 27' 18.208 W
9,100.0	0.68	357.52	9,099.3	-5.4	28.5	531,306.41	770,904.24	32° 27' 27.397 N	103° 27' 18.210 W
9,200.0	0.82	313.23	9,199.3	-4.3	28.0	531,307.49	770,903.70	32° 27' 27.408 N	103° 27' 18.217 W
9,300.0	0.43	324.23	9,299.3	-3.5	27.3	531,308.28	770,902.95	32° 27' 27.416 N	103° 27' 18.225 W
9,400.0	0.31	20.77	9,399.3	-3.0	27.1	531,308.84	770,902.83	32° 27' 27.421 N	103° 27' 18.227 W
9,500.0	0.61	17.06	9,499.3	-2.2	27.4	531,309.60	770,903.08	32° 27' 27.429 N	103° 27' 18.224 W
9,600.0	0.97	39.68	9,599.3	-1.0	28.1	531,310.76	770,903.78	32° 27' 27.440 N	103° 27' 18.215 W
9,700.0	1.02	54.74	9,699.3	0.1	29.3	531,311.93	770,905.05	32° 27' 27.451 N	103° 27' 18.201 W
9,800.0	0.97	49.73	9,799.3	1.2	30.7	531,312.99	770,906.42	32° 27' 27.462 N	103° 27' 18.184 W
9,875.0	1.34	59.43	9,874.2	2.0	32.0	531,313.85	770,907.66	32° 27' 27.470 N	103° 27' 18.170 W
Final Gyro Survey									
9,939.0	1.30	76.70	9,938.2	2.6	33.3	531,314.39	770,909.01	32° 27' 27.476 N	103° 27' 18.154 W
First MWD Survey									
10,002.0	3.40	24.00	10,001.2	4.5	34.8	531,316.27	770,910.47	32° 27' 27.494 N	103° 27' 18.137 W
10,034.0	6.60	15.50	10,033.0	7.1	35.6	531,318.91	770,911.34	32° 27' 27.520 N	103° 27' 18.126 W
10,081.0	11.20	16.00	10,079.5	14.1	37.6	531,325.90	770,913.32	32° 27' 27.589 N	103° 27' 18.103 W
10,128.0	16.50	16.70	10,125.1	24.9	40.8	531,336.69	770,916.50	32° 27' 27.696 N	103° 27' 18.065 W
10,175.0	22.40	11.20	10,169.4	40.1	44.5	531,351.88	770,920.16	32° 27' 27.846 N	103° 27' 18.020 W
10,223.0	27.00	7.50	10,213.0	59.9	47.7	531,371.67	770,923.36	32° 27' 28.041 N	103° 27' 17.981 W
10,271.0	32.50	4.30	10,254.6	83.5	50.1	531,395.35	770,925.76	32° 27' 28.275 N	103° 27' 17.951 W
10,318.0	37.10	1.00	10,293.2	110.3	51.3	531,422.13	770,926.95	32° 27' 28.540 N	103° 27' 17.934 W
10,365.0	42.80	357.10	10,329.3	140.5	50.7	531,452.28	770,926.39	32° 27' 28.838 N	103° 27' 17.938 W
10,413.0	49.30	356.90	10,362.6	175.0	48.9	531,486.77	770,924.58	32° 27' 29.180 N	103° 27' 17.956 W
10,461.0	54.70	359.10	10,392.1	212.8	47.6	531,524.55	770,923.29	32° 27' 29.554 N	103° 27' 17.967 W
10,506.0	59.40	3.40	10,416.6	250.5	48.4	531,562.28	770,924.15	32° 27' 29.927 N	103° 27' 17.954 W
10,553.0	64.50	8.80	10,438.7	291.7	52.9	531,603.48	770,928.60	32° 27' 30.334 N	103° 27' 17.898 W
10,600.0	70.20	5.70	10,456.8	334.7	58.3	531,646.49	770,934.04	32° 27' 30.760 N	103° 27' 17.830 W
10,695.0	86.40	1.30	10,476.0	427.2	63.9	531,739.02	770,939.60	32° 27' 31.675 N	103° 27' 17.756 W
10,728.0	92.00	359.80	10,476.4	460.2	64.2	531,772.00	770,939.91	32° 27' 32.001 N	103° 27' 17.749 W
10,822.0	86.00	356.60	10,478.1	554.1	61.3	531,865.88	770,936.97	32° 27' 32.930 N	103° 27' 17.775 W

Integrity Directional Services, LLC

Survey Report - Geographic

Company:	COG Production, LLC	Local Co-ordinate Reference:	Well Lychee BWS ST 1H
Project:	Lea County, NM (NAD 27)	TVD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Site:	Sec. 22, T 21 S., R 34 E	MD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Well:	Lychee BWS ST 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi 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	
10,854.0	86.30	356.20	10,480.2	585.9	59.3	531,897.75	770,934.96	32° 27' 33.246 N	103° 27' 17.795 W	
10,916.0	88.60	357.30	10,483.0	647.8	55.8	531,959.58	770,931.45	32° 27' 33.858 N	103° 27' 17.830 W	
11,009.0	91.90	358.10	10,482.6	740.7	52.0	532,052.49	770,927.72	32° 27' 34.777 N	103° 27' 17.865 W	
11,103.0	92.00	356.80	10,479.4	834.5	47.8	532,146.34	770,923.54	32° 27' 35.706 N	103° 27' 17.905 W	
11,196.0	91.40	354.20	10,476.6	927.2	40.5	532,239.01	770,916.25	32° 27' 36.624 N	103° 27' 17.981 W	
11,289.0	90.80	356.50	10,474.8	1,019.9	33.0	532,331.68	770,908.71	32° 27' 37.541 N	103° 27' 18.060 W	
11,383.0	89.70	357.50	10,474.4	1,113.7	28.1	532,425.54	770,903.79	32° 27' 38.471 N	103° 27' 18.108 W	
11,476.0	91.90	357.80	10,473.1	1,206.6	24.3	532,518.45	770,899.98	32° 27' 39.390 N	103° 27' 18.144 W	
11,569.0	89.40	358.10	10,472.1	1,299.6	21.0	532,611.38	770,896.65	32° 27' 40.310 N	103° 27' 18.174 W	
11,662.0	91.20	358.10	10,471.6	1,392.5	17.9	532,704.32	770,893.57	32° 27' 41.230 N	103° 27' 18.201 W	
11,756.0	89.60	357.80	10,470.9	1,486.5	14.5	532,798.26	770,890.20	32° 27' 42.160 N	103° 27' 18.231 W	
11,851.0	87.10	358.80	10,473.7	1,581.4	11.7	532,893.17	770,887.39	32° 27' 43.099 N	103° 27' 18.255 W	
11,944.0	88.50	359.50	10,477.2	1,674.3	10.3	532,986.08	770,886.01	32° 27' 44.019 N	103° 27' 18.262 W	
12,037.0	89.60	359.70	10,478.8	1,767.3	9.7	533,079.07	770,885.36	32° 27' 44.939 N	103° 27' 18.261 W	
12,130.0	88.10	359.00	10,480.6	1,860.2	8.6	533,172.04	770,884.30	32° 27' 45.859 N	103° 27' 18.264 W	
12,224.0	89.00	359.40	10,483.0	1,954.2	7.3	533,266.00	770,882.99	32° 27' 46.788 N	103° 27' 18.270 W	
12,317.0	90.10	0.00	10,483.8	2,047.2	6.8	533,358.99	770,882.51	32° 27' 47.709 N	103° 27' 18.267 W	
12,410.0	86.60	0.00	10,486.4	2,140.1	6.8	533,451.94	770,882.51	32° 27' 48.628 N	103° 27' 18.258 W	
12,503.0	87.20	0.80	10,491.5	2,233.0	7.5	533,544.80	770,883.15	32° 27' 49.547 N	103° 27' 18.242 W	
12,597.0	87.90	1.20	10,495.5	2,326.9	9.1	533,638.70	770,884.79	32° 27' 50.476 N	103° 27' 18.214 W	
12,690.0	89.00	1.60	10,498.0	2,419.8	11.4	533,731.64	770,887.06	32° 27' 51.396 N	103° 27' 18.178 W	
12,783.0	90.40	2.40	10,498.5	2,512.8	14.6	533,824.57	770,890.31	32° 27' 52.315 N	103° 27' 18.131 W	
12,877.0	89.80	0.90	10,498.3	2,606.7	17.3	533,918.53	770,893.02	32° 27' 53.244 N	103° 27' 18.091 W	
12,970.0	88.10	358.60	10,500.0	2,699.7	16.9	534,011.51	770,892.61	32° 27' 54.164 N	103° 27' 18.086 W	
13,063.0	88.90	358.60	10,502.5	2,792.6	14.6	534,104.45	770,890.34	32° 27' 55.084 N	103° 27' 18.104 W	
13,157.0	89.70	358.70	10,503.6	2,886.6	12.4	534,198.41	770,888.13	32° 27' 56.014 N	103° 27' 18.121 W	
13,251.0	86.70	357.50	10,506.6	2,980.5	9.3	534,292.30	770,885.01	32° 27' 56.943 N	103° 27' 18.148 W	
13,344.0	87.50	358.10	10,511.3	3,073.3	5.7	534,385.11	770,881.45	32° 27' 57.862 N	103° 27' 18.181 W	
13,439.0	88.60	358.90	10,514.5	3,168.2	3.3	534,480.02	770,878.96	32° 27' 58.801 N	103° 27' 18.201 W	
13,533.0	90.10	359.80	10,515.6	3,262.2	2.2	534,574.01	770,877.90	32° 27' 59.731 N	103° 27' 18.204 W	
13,626.0	91.60	0.30	10,514.2	3,355.2	2.3	534,666.99	770,877.98	32° 28' 0.651 N	103° 27' 18.194 W	
13,720.0	90.30	358.80	10,512.6	3,449.2	1.5	534,760.97	770,877.24	32° 28' 1.581 N	103° 27' 18.194 W	
13,813.0	90.70	359.20	10,511.8	3,542.2	-0.1	534,853.96	770,875.61	32° 28' 2.502 N	103° 27' 18.204 W	
13,907.0	91.90	359.70	10,509.7	3,636.1	-1.0	534,947.93	770,874.71	32° 28' 3.432 N	103° 27' 18.205 W	
14,000.0	89.90	358.50	10,508.2	3,729.1	-2.4	535,040.90	770,873.25	32° 28' 4.352 N	103° 27' 18.214 W	
14,095.0	90.30	358.30	10,508.1	3,824.1	-5.1	535,135.86	770,870.60	32° 28' 5.291 N	103° 27' 18.235 W	
14,190.0	90.40	358.10	10,507.5	3,919.0	-8.1	535,230.81	770,867.62	32° 28' 6.231 N	103° 27' 18.261 W	
14,284.0	88.10	357.90	10,508.7	4,012.9	-11.4	535,324.74	770,864.34	32° 28' 7.161 N	103° 27' 18.290 W	
14,379.0	89.20	358.20	10,510.9	4,107.9	-14.6	535,419.65	770,861.10	32° 28' 8.100 N	103° 27' 18.319 W	
14,474.0	90.00	358.20	10,511.6	4,202.8	-17.6	535,514.60	770,858.12	32° 28' 9.040 N	103° 27' 18.345 W	
14,568.0	91.00	358.60	10,510.8	4,296.8	-20.2	535,608.56	770,855.50	32° 28' 9.970 N	103° 27' 18.366 W	
14,663.0	89.10	357.90	10,510.7	4,391.7	-23.1	535,703.51	770,852.59	32° 28' 10.910 N	103° 27' 18.391 W	
14,758.0	89.20	357.90	10,512.1	4,486.6	-26.6	535,798.44	770,849.11	32° 28' 11.849 N	103° 27' 18.423 W	
14,853.0	89.60	357.80	10,513.1	4,581.6	-30.1	535,893.37	770,845.55	32° 28' 12.789 N	103° 27' 18.455 W	
14,947.0	90.50	357.70	10,513.0	4,675.5	-33.8	535,987.29	770,841.86	32° 28' 13.719 N	103° 27' 18.489 W	
15,042.0	90.90	357.50	10,511.9	4,770.4	-37.8	536,082.20	770,837.88	32° 28' 14.658 N	103° 27' 18.526 W	
15,137.0	91.20	357.10	10,510.1	4,865.3	-42.3	536,177.08	770,833.41	32° 28' 15.597 N	103° 27' 18.569 W	
15,232.0	90.50	357.50	10,508.7	4,960.2	-46.8	536,271.97	770,828.93	32° 28' 16.536 N	103° 27' 18.613 W	
15,325.0	91.40	359.30	10,507.2	5,053.1	-49.4	536,364.91	770,826.34	32° 28' 17.456 N	103° 27' 18.634 W	
15,419.0	92.20	359.30	10,504.2	5,147.1	-50.5	536,458.86	770,825.19	32° 28' 18.386 N	103° 27' 18.638 W	
15,506.0	90.90	0.80	10,501.9	5,234.0	-50.4	536,545.82	770,825.26	32° 28' 19.246 N	103° 27' 18.629 W	
15,600.0	91.50	1.00	10,499.9	5,328.0	-49.0	536,639.79	770,826.74	32° 28' 20.176 N	103° 27' 18.603 W	
15,694.0	92.50	0.80	10,496.6	5,421.9	-47.5	536,733.72	770,828.22	32° 28' 21.105 N	103° 27' 18.577 W	
15,787.0	91.30	1.60	10,493.5	5,514.8	-45.5	536,826.64	770,830.16	32° 28' 22.025 N	103° 27' 18.545 W	
15,880.0	92.80	1.70	10,490.2	5,607.7	-42.9	536,919.54	770,832.84	32° 28' 22.944 N	103° 27' 18.505 W	

Integrity Directional Services, LLC

Survey Report - Geographic

Company:	COG Production, LLC	Local Co-ordinate Reference:	Well Lychee BWS ST 1H
Project:	Lea County, NM (NAD 27)	TVD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Site:	Sec. 22, T 21 S. , R 34 E	MD Reference:	KB=26' @ 3710.0usft (Scan Freedom)
Well:	Lychee BWS ST 1H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Multi 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
15,974.0	91.10	1.10	10,487.0	5,701.7	-40.6	537,013.46	770,835.13	32° 28' 23.873 N	103° 27' 18.469 W
16,067.0	92.20	1.30	10,484.3	5,794.6	-38.6	537,106.40	770,837.08	32° 28' 24.792 N	103° 27' 18.437 W
16,161.0	90.70	359.60	10,482.0	5,888.6	-37.9	537,200.36	770,837.82	32° 28' 25.722 N	103° 27' 18.420 W
16,254.0	91.40	359.80	10,480.2	5,981.5	-38.4	537,293.34	770,837.33	32° 28' 26.642 N	103° 27' 18.416 W
16,347.0	92.50	0.00	10,477.1	6,074.5	-38.5	537,386.28	770,837.17	32° 28' 27.562 N	103° 27' 18.409 W
16,441.0	90.30	359.80	10,474.8	6,168.4	-38.7	537,480.25	770,837.01	32° 28' 28.492 N	103° 27' 18.402 W
16,536.0	89.60	359.60	10,474.9	6,263.4	-39.2	537,575.25	770,836.51	32° 28' 29.432 N	103° 27' 18.399 W
16,630.0	90.00	359.30	10,475.2	6,357.4	-40.1	537,669.24	770,835.61	32° 28' 30.362 N	103° 27' 18.400 W
16,723.0	90.30	359.10	10,475.0	6,450.4	-41.4	537,762.23	770,834.31	32° 28' 31.282 N	103° 27' 18.407 W
16,817.0	91.10	359.10	10,473.8	6,544.4	-42.9	537,856.21	770,832.83	32° 28' 32.212 N	103° 27' 18.415 W
16,910.0	90.70	358.80	10,472.3	6,637.4	-44.6	537,949.19	770,831.13	32° 28' 33.132 N	103° 27' 18.426 W
17,004.0	89.00	359.90	10,472.6	6,731.4	-45.6	538,043.18	770,830.06	32° 28' 34.062 N	103° 27' 18.429 W
17,098.0	89.50	359.70	10,473.8	6,825.4	-46.0	538,137.17	770,829.73	32° 28' 34.992 N	103° 27' 18.424 W
17,191.0	90.40	359.30	10,473.9	6,918.4	-46.8	538,230.16	770,828.92	32° 28' 35.912 N	103° 27' 18.425 W
17,285.0	89.80	358.70	10,473.7	7,012.3	-48.4	538,324.15	770,827.28	32° 28' 36.842 N	103° 27' 18.435 W
17,378.0	91.40	358.30	10,472.8	7,105.3	-50.9	538,417.11	770,824.85	32° 28' 37.763 N	103° 27' 18.454 W
17,471.0	91.00	358.90	10,470.8	7,198.3	-53.1	538,510.06	770,822.57	32° 28' 38.682 N	103° 27' 18.472 W
Final MWD Survey									
17,570.0	90.40	358.90	10,469.6	7,297.2	-55.0	538,609.03	770,820.67	32° 28' 39.662 N	103° 27' 18.484 W
Projection to TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
100.0	100.0	0.2	0.1	First Gyro Survey
9,875.0	9,874.2	2.0	32.0	Final Gyro Survey
9,939.0	9,938.2	2.6	33.3	First MWD Survey
17,471.0	10,470.8	7,198.3	-53.1	Final MWD Survey
17,570.0	10,469.6	7,297.2	-55.0	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------