

Results of Directional Survey

API number:	30-025-41833		
OGRID:		Operator:	COG OPERATING LLC
		Property:	TIGER 11 FEDERAL # 2H

surface	ULSTR:	D	11	T	20S	R	34E
				180	FNL	1270	FWL

BH Loc	ULSTR:	N	11	T	20S	R	34E
15738	MD	10881.1	TVD	339	FSL	2277	FWL
				4941	FNL		

Top Perf/OH	ULSTR:	C	11	T	20S	R	34E
11151	MD	10948.5	TVD	545	FNL	1614	FWL

Bot Perf/OH	ULSTR:	N	11	T	20S	R	34E
15570	MD	10886.1	TVD	507	FSL	2275	FWL
				4773	FNL		

	MD	N/S	E/W	VD
	11120.00	-346.60	320.80	10940.30
TOP PERFS/OH	11151.00	-365.10	344.30	10948.50
	11151.00	-365.10	344.30	10948.50
	15565.00	-4587.70	1005.40	10886.20
BOT PERFS/OH	15570.00	-4592.70	1005.47	10886.07
	15657.00	-4679.70	1006.60	10883.80

NEXT TO LAST	15685.00	-4707.60	1006.90	10882.90
LAST READING	15738.00	-4760.60	1006.90	10881.10
TD	15738.00	-4760.60	1006.90	10881.10

Surface Location	180	FN	1270	FW
Projected BHL	4941	FN	2277	FW
Location of				
Top Perfs/OH	545	FN	1614	FW
Bottom Perfs/OH	4773	FN	2275	FW

SUMMARY of Subsurface Locations

Surface Location	D-11-20S-34E	180	FN	1270	FW	Vert. Depth
Top Perfs/OH	C-11-20S-34E	545	FN	1614	FW	10948.50
Bottom Perfs/OH	N-11-20S-34E	4773	FN	2275	FW	10886.07
Projected TD	N-11-20S-34E	4941	FN	2277	FW	10881.10



September 26, 2014

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

HOBBS OCD
DEC 08 2014
RECEIVED

Attn: Kanicia Castillo

RE: **Tiger 11 Federal 2H**

Please find enclosed a copy of the survey from 0.00' to 10378.00' ran on the above referenced well.

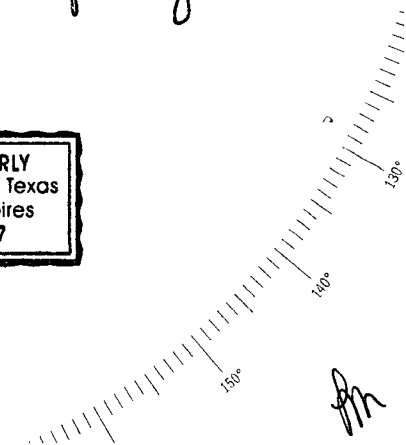
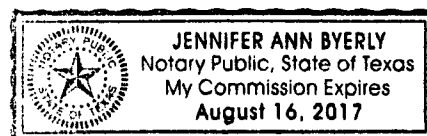
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 26 day of September A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating, LLC (Concho)
Lease/Well: Tiger 11 Federal/2H
Location: S11 T20S R34E
Rig Name: Precision 590
State/County: New Mexico/Lea
Latitude: 32.59, Longitude: -103.53
GRID North is 0.43 Degrees East of True North
VS-Azi: 0.00 Degrees



HOBBS OGD

DEC 08 2014

RECEIVED

Depth Reference : RKB = 25.8 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 9/26/2014 / 08:30

VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Tiger 11 Federal 2H / API 30-025-41833

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	0.27	117.83	100.00	-0.11	0.21	-0.11	0.23	117.83	0.27
200.00	0.46	145.12	200.00	-0.55	0.64	-0.55	0.85	130.35	0.25
300.00	0.63	145.03	299.99	-1.33	1.19	-1.33	1.78	138.15	0.18
400.00	0.64	137.42	399.99	-2.19	1.88	-2.19	2.89	139.32	0.08
500.00	0.39	144.10	499.98	-2.88	2.46	-2.88	3.79	139.47	0.26
600.00	0.46	134.85	599.98	-3.44	2.95	-3.44	4.53	139.41	0.10
700.00	0.36	101.88	699.98	-3.79	3.54	-3.79	5.19	136.94	0.25
800.00	0.49	108.23	799.97	-3.99	4.25	-3.99	5.83	133.16	0.13
900.00	0.52	117.72	899.97	-4.33	5.05	-4.33	6.65	130.59	0.09
1000.00	0.79	157.46	999.96	-5.18	5.72	-5.18	7.71	132.16	0.51
1100.00	0.97	182.17	1099.95	-6.66	5.95	-6.66	8.93	138.24	0.42
1200.00	0.75	210.51	1199.94	-8.08	5.58	-8.08	9.82	145.35	0.47
1300.00	0.26	237.28	1299.94	-8.77	5.06	-8.77	10.12	150.03	0.53
1400.00	0.45	256.35	1399.94	-8.98	4.49	-8.98	10.04	153.47	0.22
1500.00	0.41	265.09	1499.93	-9.11	3.75	-9.11	9.85	157.60	0.07
1600.00	0.30	275.45	1599.93	-9.11	3.14	-9.11	9.63	161.01	0.12
1700.00	0.09	264.11	1699.93	-9.09	2.80	-9.09	9.51	162.90	0.22
1800.00	0.06	94.17	1799.93	-9.11	2.78	-9.11	9.52	163.03	0.15

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.14	49.48	1899.93	-9.03	2.93	-9.03	9.49	162.03	0.11
2000.00	0.09	209.81	1999.93	-9.01	2.98	-9.01	9.50	161.68	0.23
2100.00	0.06	196.97	2099.93	-9.14	2.93	-9.14	9.59	162.22	0.03
2200.00	0.09	160.20	2199.93	-9.26	2.94	-9.26	9.72	162.39	0.06
2300.00	0.23	256.74	2299.93	-9.39	2.77	-9.39	9.79	163.55	0.26
2400.00	0.15	101.02	2399.93	-9.46	2.71	-9.46	9.84	164.03	0.37
2500.00	0.20	276.04	2499.93	-9.46	2.67	-9.46	9.83	164.26	0.35
2600.00	0.04	201.77	2599.93	-9.48	2.49	-9.48	9.80	165.30	0.19
2700.00	0.07	165.24	2699.93	-9.57	2.49	-9.57	9.88	165.41	0.04
2800.00	0.09	218.80	2799.93	-9.69	2.45	-9.69	9.99	165.79	0.08
2900.00	0.09	41.61	2899.93	-9.69	2.46	-9.69	10.00	165.78	0.19
3000.00	0.09	89.48	2999.93	-9.63	2.59	-9.63	9.97	164.97	0.07
3100.00	0.06	159.39	3099.93	-9.68	2.68	-9.68	10.05	164.52	0.09
3200.00	0.13	254.96	3199.93	-9.76	2.59	-9.76	10.10	165.11	0.15
3300.00	0.16	86.21	3299.93	-9.78	2.62	-9.78	10.13	164.98	0.28
3400.00	0.15	302.29	3399.93	-9.70	2.65	-9.70	10.06	164.72	0.29
3500.00	0.11	39.94	3499.93	-9.56	2.60	-9.56	9.91	164.76	0.20
3600.00	0.11	307.60	3599.93	-9.42	2.59	-9.42	9.77	164.62	0.16
3700.00	0.19	271.27	3699.93	-9.36	2.35	-9.36	9.65	165.91	0.12
3800.00	0.20	315.98	3799.93	-9.23	2.06	-9.23	9.46	167.41	0.15
3900.00	0.11	8.80	3899.93	-9.01	1.95	-9.01	9.22	167.76	0.16
4000.00	0.19	136.14	3999.93	-9.03	2.09	-9.03	9.27	167.00	0.28
4100.00	0.67	166.46	4099.92	-9.72	2.34	-9.72	9.99	166.48	0.51
4200.00	1.02	178.23	4199.91	-11.17	2.50	-11.17	11.45	167.38	0.39
4300.00	0.84	172.19	4299.90	-12.78	2.63	-12.78	13.05	168.38	0.20
4400.00	1.03	150.26	4399.89	-14.29	3.17	-14.29	14.64	167.48	0.40
4500.00	1.10	143.15	4499.87	-15.84	4.19	-15.84	16.38	165.17	0.15
4600.00	1.59	131.62	4599.84	-17.52	5.80	-17.52	18.46	161.68	0.56
4700.00	1.35	139.24	4699.81	-19.34	7.61	-19.34	20.78	158.52	0.30
4800.00	1.55	162.50	4799.78	-21.53	8.79	-21.53	23.25	157.79	0.62
4900.00	1.51	139.93	4899.74	-23.83	10.04	-23.83	25.86	157.14	0.60
5000.00	2.11	139.27	4999.69	-26.23	12.09	-26.23	28.88	155.25	0.60
5100.00	1.95	147.19	5099.63	-29.05	14.21	-29.05	32.34	153.93	0.32
5200.00	2.45	141.56	5199.56	-32.15	16.46	-32.15	36.12	152.89	0.55
5300.00	2.70	134.02	5299.46	-35.47	19.49	-35.47	40.47	151.21	0.42
5400.00	3.05	148.44	5399.33	-39.37	22.57	-39.37	45.38	150.17	0.80
5500.00	2.17	138.63	5499.23	-43.06	25.22	-43.06	49.90	149.64	0.98
5600.00	1.96	146.71	5599.16	-45.91	27.41	-45.91	53.47	149.16	0.36
5700.00	1.63	124.26	5699.11	-48.14	29.53	-48.14	56.48	148.48	0.77

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.46	132.51	5799.08	-49.81	31.65	-49.81	59.01	147.57	0.28
5900.00	1.04	106.05	5899.05	-50.92	33.46	-50.92	60.93	146.69	0.71
6000.00	0.96	124.05	5999.04	-51.64	35.03	-51.64	62.40	145.85	0.32
6100.00	0.96	122.52	6099.03	-52.56	36.43	-52.56	63.95	145.28	0.03
6200.00	0.71	111.95	6199.01	-53.25	37.71	-53.25	65.25	144.69	0.29
6300.00	0.38	137.01	6299.01	-53.72	38.51	-53.72	66.10	144.36	0.40
6400.00	0.56	141.80	6399.01	-54.34	39.04	-54.34	66.91	144.31	0.18
6500.00	0.63	156.68	6499.00	-55.23	39.56	-55.23	67.93	144.39	0.17
6600.00	0.61	168.27	6599.00	-56.26	39.88	-56.26	68.96	144.66	0.13
6700.00	0.31	172.93	6698.99	-57.05	40.03	-57.05	69.69	144.95	0.30
6800.00	0.50	175.63	6798.99	-57.76	40.09	-57.76	70.31	145.23	0.19
6900.00	0.57	172.65	6898.99	-58.69	40.19	-58.69	71.13	145.60	0.07
7000.00	0.34	159.93	6998.98	-59.46	40.35	-59.46	71.86	145.84	0.25
7100.00	0.16	149.12	7098.98	-59.86	40.53	-59.86	72.29	145.90	0.18
7200.00	0.29	197.53	7198.98	-60.23	40.52	-60.23	72.59	146.07	0.22
7300.00	0.28	223.99	7298.98	-60.64	40.28	-60.64	72.80	146.41	0.13
7400.00	0.21	143.02	7398.98	-60.96	40.22	-60.96	73.03	146.58	0.32
7500.00	0.36	238.47	7498.98	-61.27	40.06	-61.27	73.20	146.82	0.43
7600.00	0.10	262.09	7598.98	-61.45	39.71	-61.45	73.16	147.13	0.28
7700.00	0.16	340.44	7698.98	-61.33	39.58	-61.33	72.99	147.17	0.17
7800.00	0.20	228.66	7798.98	-61.31	39.40	-61.31	72.88	147.27	0.30
7900.00	0.28	301.37	7898.98	-61.30	39.06	-61.30	72.69	147.49	0.29
8000.00	0.10	232.32	7998.97	-61.23	38.78	-61.23	72.48	147.65	0.26
8100.00	0.33	55.67	8098.97	-61.12	38.95	-61.12	72.48	147.49	0.44
8200.00	0.47	85.51	8198.97	-60.92	39.61	-60.92	72.66	146.97	0.25
8300.00	0.72	94.64	8298.97	-60.94	40.64	-60.94	73.25	146.30	0.26
8400.00	0.88	138.72	8398.96	-61.57	41.77	-61.57	74.40	145.84	0.62
8500.00	1.24	154.44	8498.94	-63.12	42.75	-63.12	76.24	145.89	0.46
8600.00	0.93	176.27	8598.92	-64.91	43.27	-64.91	78.01	146.31	0.51
8700.00	1.31	197.70	8698.90	-66.81	42.97	-66.81	79.44	147.25	0.56
8800.00	1.72	222.07	8798.87	-69.02	41.62	-69.02	80.60	148.91	0.75
8900.00	1.90	231.48	8898.82	-71.17	39.32	-71.17	81.31	151.08	0.35
9000.00	0.53	170.87	8998.80	-72.65	38.10	-72.65	82.03	152.33	1.70
9100.00	0.96	154.39	9098.79	-73.86	38.53	-73.86	83.31	152.45	0.48
9200.00	0.86	157.61	9198.78	-75.31	39.18	-75.31	84.89	152.51	0.11
9300.00	0.88	201.26	9298.77	-76.72	39.18	-76.72	86.15	152.94	0.65
9400.00	0.86	235.66	9398.76	-77.86	38.29	-77.86	86.76	153.82	0.52
9500.00	0.60	204.06	9498.75	-78.76	37.46	-78.76	87.21	154.57	0.47
9600.00	0.70	217.41	9598.74	-79.72	36.87	-79.72	87.84	155.18	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
9700.00	0.87	211.46	9698.73	-80.86	36.10	-80.86	88.55	155.94	0.19
9800.00	0.74	252.75	9798.72	-81.70	35.09	-81.70	88.92	156.76	0.58
9900.00	1.35	237.06	9898.71	-82.53	33.49	-82.53	89.07	157.92	0.67
10000.00	1.14	236.46	9998.68	-83.72	31.66	-83.72	89.51	159.28	0.21
10100.00	1.55	239.08	10098.65	-84.97	29.67	-84.97	90.00	160.75	0.41
10200.00	1.41	225.94	10198.62	-86.52	27.63	-86.52	90.82	162.29	0.37
10300.00	1.50	217.56	10298.59	-88.41	25.94	-88.41	92.14	163.65	0.23
10378.00	1.82	222.65	10376.56	-90.13	24.48	-90.13	93.40	164.80	0.44



VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Tiger 11 Federal 2H / API 30-025-41833



Depth=0.0, Inc=0.0, AzG=0.0

Depth=5100.0, Inc=1.9, AzG=147.2

N+/S-

Depth=8100.0, Inc=0.3, AzG=55.7

Depth=10378.0, Inc=1.8, AzG=222.6

20

40

-W/+E

V.E.S. Survey Date: 09/10/2014

COG Operating, LLC.

Lea County, N.M.

Section 11-20S-34E Tiger 11 Fed #2H

Tiger 11 FED #2H

HOBBS OCD

DEC 08 2014

Original Hole

RECEIVED

Design: Original Hole

Survey Report - Geographic

16 September, 2014

dm

Stryker Directional Survey Report - Geographic

Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Tiger 11 FED #2H
Project:	Lea County, N.M.	TVD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Site:	Section 11-20S-34E Tiger 11 Fed #2H	MD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Well:	Tiger 11 FED #2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Project	Lea County, N.M.		
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	Section 11-20S-34E Tiger 11 Fed #2H		
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Site Position:		Northing:	580,838.80 usft	Latitude:	32° 35' 39.458 N
From:	Map	Easting:	745,911.80 usft	Longitude:	103° 32' 5.546 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	Tiger 11 FED #2H				
Well Position	+N/-S	0.0 usft	Northing:	580,838.80 usft	Latitude: 32° 35' 39.458 N
	+E/-W	0.0 usft	Easting:	745,911.80 usft	Longitude: 103° 32' 5.546 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	usft	Ground Level: 3,656.2 usft

Wellbore	Original Hole				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/10/2014	7.26	60.47	48,567

Design	Original Hole				
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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	167.88

Survey Program		Date 9/16/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	10,378.0	Gyro Survey (Original Hole)	SRG-GYRO-MS	surface readout gyro multishot	
10,444.0	15,738.0	Stryker MWD Survey (Original Hole)	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	580,838.80	745,911.80	32° 35' 39.458 N	103° 32' 5.546 W
100.0	0.27	117.83	100.0	-0.1	0.2	580,838.69	745,912.01	32° 35' 39.457 N	103° 32' 5.544 W
200.0	0.46	145.12	200.0	-0.5	0.6	580,838.25	745,912.44	32° 35' 39.452 N	103° 32' 5.539 W
300.0	0.63	145.03	300.0	-1.3	1.2	580,837.47	745,912.99	32° 35' 39.444 N	103° 32' 5.532 W
400.0	0.64	137.42	400.0	-2.2	1.9	580,836.61	745,913.68	32° 35' 39.436 N	103° 32' 5.524 W
500.0	0.39	144.10	500.0	-2.9	2.5	580,835.93	745,914.26	32° 35' 39.429 N	103° 32' 5.518 W
600.0	0.46	134.85	600.0	-3.4	2.9	580,835.37	745,914.74	32° 35' 39.424 N	103° 32' 5.512 W
700.0	0.36	101.88	700.0	-3.8	3.5	580,835.02	745,915.33	32° 35' 39.420 N	103° 32' 5.505 W
800.0	0.49	108.23	800.0	-4.0	4.3	580,834.82	745,916.05	32° 35' 39.418 N	103° 32' 5.497 W
900.0	0.52	117.72	900.0	-4.3	5.1	580,834.48	745,916.86	32° 35' 39.415 N	103° 32' 5.487 W
1,000.0	0.79	157.46	1,000.0	-5.2	5.7	580,833.63	745,917.52	32° 35' 39.406 N	103° 32' 5.480 W

Stryker Directional Survey Report - Geographic

Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Tiger 11 FED #2H
Project:	Lea County, N.M.	TVD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Site:	Section 11-20S-34E Tiger 11 Fed #2H	MD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Well:	Tiger 11 FED #2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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	0.97	182.17	1,100.0	-6.7	6.0	580,832.14	745,917.75	32° 35' 39.391 N	103° 32' 5.477 W
1,200.0	0.75	210.51	1,199.9	-8.1	5.6	580,830.74	745,917.39	32° 35' 39.377 N	103° 32' 5.481 W
1,300.0	0.26	237.28	1,299.9	-8.8	5.1	580,830.05	745,916.87	32° 35' 39.371 N	103° 32' 5.488 W
1,400.0	0.45	256.35	1,399.9	-9.0	4.5	580,829.83	745,916.29	32° 35' 39.369 N	103° 32' 5.494 W
1,500.0	0.41	265.09	1,499.9	-9.1	3.8	580,829.71	745,915.56	32° 35' 39.367 N	103° 32' 5.503 W
1,600.0	0.30	275.45	1,599.9	-9.1	3.1	580,829.70	745,914.94	32° 35' 39.367 N	103° 32' 5.510 W
1,700.0	0.09	264.11	1,699.9	-9.1	2.8	580,829.72	745,914.60	32° 35' 39.368 N	103° 32' 5.514 W
1,800.0	0.06	94.17	1,799.9	-9.1	2.8	580,829.71	745,914.57	32° 35' 39.368 N	103° 32' 5.514 W
1,900.0	0.14	49.48	1,899.9	-9.0	2.9	580,829.78	745,914.72	32° 35' 39.368 N	103° 32' 5.513 W
2,000.0	0.09	209.81	1,999.9	-9.0	3.0	580,829.80	745,914.77	32° 35' 39.368 N	103° 32' 5.512 W
2,100.0	0.06	196.97	2,099.9	-9.1	2.9	580,829.68	745,914.72	32° 35' 39.367 N	103° 32' 5.513 W
2,200.0	0.09	160.20	2,199.9	-9.2	2.9	580,829.55	745,914.73	32° 35' 39.366 N	103° 32' 5.513 W
2,300.0	0.23	256.74	2,299.9	-9.4	2.8	580,829.43	745,914.56	32° 35' 39.365 N	103° 32' 5.515 W
2,400.0	0.15	101.02	2,399.9	-9.4	2.7	580,829.36	745,914.49	32° 35' 39.364 N	103° 32' 5.515 W
2,500.0	0.20	276.04	2,499.9	-9.4	2.7	580,829.36	745,914.45	32° 35' 39.364 N	103° 32' 5.516 W
2,600.0	0.04	201.77	2,599.9	-9.5	2.5	580,829.34	745,914.26	32° 35' 39.364 N	103° 32' 5.518 W
2,700.0	0.07	165.24	2,699.9	-9.6	2.5	580,829.25	745,914.27	32° 35' 39.363 N	103° 32' 5.518 W
2,800.0	0.09	218.80	2,799.9	-9.7	2.4	580,829.13	745,914.23	32° 35' 39.362 N	103° 32' 5.519 W
2,900.0	0.09	41.61	2,899.9	-9.7	2.4	580,829.13	745,914.23	32° 35' 39.362 N	103° 32' 5.518 W
3,000.0	0.09	89.48	2,999.9	-9.6	2.6	580,829.19	745,914.37	32° 35' 39.362 N	103° 32' 5.517 W
3,100.0	0.06	159.39	3,099.9	-9.7	2.7	580,829.14	745,914.46	32° 35' 39.362 N	103° 32' 5.516 W
3,200.0	0.13	254.96	3,199.9	-9.7	2.6	580,829.06	745,914.37	32° 35' 39.361 N	103° 32' 5.517 W
3,300.0	0.16	86.21	3,299.9	-9.8	2.6	580,829.04	745,914.40	32° 35' 39.361 N	103° 32' 5.517 W
3,400.0	0.15	302.29	3,399.9	-9.7	2.6	580,829.12	745,914.43	32° 35' 39.362 N	103° 32' 5.516 W
3,500.0	0.11	39.94	3,499.9	-9.5	2.6	580,829.26	745,914.38	32° 35' 39.363 N	103° 32' 5.517 W
3,600.0	0.11	307.60	3,599.9	-9.4	2.6	580,829.40	745,914.37	32° 35' 39.364 N	103° 32' 5.517 W
3,700.0	0.19	271.27	3,699.9	-9.3	2.3	580,829.46	745,914.12	32° 35' 39.365 N	103° 32' 5.520 W
3,800.0	0.20	315.98	3,799.9	-9.2	2.0	580,829.59	745,913.84	32° 35' 39.366 N	103° 32' 5.523 W
3,900.0	0.11	8.80	3,899.9	-9.0	1.9	580,829.81	745,913.73	32° 35' 39.369 N	103° 32' 5.524 W
4,000.0	0.19	136.14	3,999.9	-9.0	2.1	580,829.78	745,913.86	32° 35' 39.368 N	103° 32' 5.523 W
4,100.0	0.67	166.46	4,099.9	-9.7	2.3	580,829.09	745,914.11	32° 35' 39.361 N	103° 32' 5.520 W
4,200.0	1.02	178.23	4,199.9	-11.2	2.5	580,827.64	745,914.28	32° 35' 39.347 N	103° 32' 5.518 W
4,300.0	0.84	172.19	4,299.9	-12.8	2.6	580,826.02	745,914.40	32° 35' 39.331 N	103° 32' 5.517 W
4,400.0	1.03	150.26	4,399.9	-14.3	3.2	580,824.51	745,914.95	32° 35' 39.316 N	103° 32' 5.511 W
4,500.0	1.10	143.15	4,499.9	-15.8	4.2	580,822.97	745,915.97	32° 35' 39.301 N	103° 32' 5.499 W
4,600.0	1.59	131.62	4,599.8	-17.5	5.8	580,821.28	745,917.58	32° 35' 39.284 N	103° 32' 5.480 W
4,700.0	1.35	139.24	4,699.8	-19.3	7.6	580,819.46	745,919.39	32° 35' 39.266 N	103° 32' 5.459 W
4,800.0	1.55	162.50	4,799.8	-21.5	8.8	580,817.28	745,920.57	32° 35' 39.244 N	103° 32' 5.446 W
4,900.0	1.51	139.93	4,899.7	-23.8	10.0	580,814.98	745,921.82	32° 35' 39.221 N	103° 32' 5.431 W
5,000.0	2.11	139.27	4,999.7	-26.2	12.1	580,812.58	745,923.87	32° 35' 39.197 N	103° 32' 5.407 W
5,100.0	1.95	147.19	5,099.6	-29.0	14.2	580,809.75	745,925.99	32° 35' 39.169 N	103° 32' 5.383 W
5,200.0	2.45	141.56	5,199.6	-32.2	16.4	580,806.65	745,928.24	32° 35' 39.138 N	103° 32' 5.357 W
5,300.0	2.70	134.02	5,299.5	-35.5	19.5	580,803.34	745,931.27	32° 35' 39.105 N	103° 32' 5.322 W
5,400.0	3.05	148.44	5,399.3	-39.4	22.6	580,799.43	745,934.35	32° 35' 39.067 N	103° 32' 5.286 W
5,500.0	2.17	138.63	5,499.2	-43.1	25.2	580,795.75	745,937.00	32° 35' 39.030 N	103° 32' 5.255 W
5,600.0	1.96	146.71	5,599.2	-45.9	27.4	580,792.90	745,939.19	32° 35' 39.001 N	103° 32' 5.230 W
5,700.0	1.63	124.26	5,699.1	-48.1	29.5	580,790.67	745,941.30	32° 35' 38.979 N	103° 32' 5.206 W
5,800.0	1.46	132.51	5,799.1	-49.8	31.6	580,789.01	745,943.41	32° 35' 38.963 N	103° 32' 5.181 W
5,900.0	1.04	106.05	5,899.1	-50.9	33.4	580,787.89	745,945.23	32° 35' 38.952 N	103° 32' 5.160 W
6,000.0	0.96	124.05	5,999.0	-51.6	35.0	580,787.17	745,946.79	32° 35' 38.944 N	103° 32' 5.142 W
6,100.0	0.96	122.52	6,099.0	-52.5	36.4	580,786.25	745,948.19	32° 35' 38.935 N	103° 32' 5.125 W
6,200.0	0.71	111.95	6,199.0	-53.2	37.7	580,785.57	745,949.47	32° 35' 38.928 N	103° 32' 5.110 W
6,300.0	0.38	137.01	6,299.0	-53.7	38.5	580,785.10	745,950.27	32° 35' 38.923 N	103° 32' 5.101 W
6,400.0	0.56	141.80	6,399.0	-54.3	39.0	580,784.47	745,950.80	32° 35' 38.917 N	103° 32' 5.095 W
6,500.0	0.63	156.68	6,499.0	-55.2	39.5	580,783.58	745,951.32	32° 35' 38.908 N	103° 32' 5.089 W

Stryker Directional Survey Report - Geographic

Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Tiger 11 FED #2H
Project:	Lea County, N.M.	TVD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Site:	Section 11-20S-34E Tiger 11 Fed #2H	MD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Well:	Tiger 11 FED #2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

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	0.61	168.27	6,599.0	-56.2	39.9	580,782.56	745,951.65	32° 35' 38.898 N	103° 32' 5.085 W
6,700.0	0.31	172.93	6,699.0	-57.0	40.0	580,781.77	745,951.79	32° 35' 38.890 N	103° 32' 5.084 W
6,800.0	0.50	175.63	6,799.0	-57.7	40.1	580,781.06	745,951.86	32° 35' 38.883 N	103° 32' 5.083 W
6,900.0	0.57	172.65	6,899.0	-58.7	40.2	580,780.13	745,951.95	32° 35' 38.874 N	103° 32' 5.082 W
7,000.0	0.34	159.93	6,999.0	-59.4	40.3	580,779.36	745,952.12	32° 35' 38.867 N	103° 32' 5.080 W
7,100.0	0.16	149.12	7,099.0	-59.8	40.5	580,778.96	745,952.29	32° 35' 38.863 N	103° 32' 5.078 W
7,200.0	0.29	197.53	7,199.0	-60.2	40.5	580,778.60	745,952.29	32° 35' 38.859 N	103° 32' 5.078 W
7,300.0	0.28	223.99	7,299.0	-60.6	40.2	580,778.19	745,952.04	32° 35' 38.855 N	103° 32' 5.081 W
7,400.0	0.21	143.02	7,399.0	-60.9	40.2	580,777.86	745,951.98	32° 35' 38.852 N	103° 32' 5.082 W
7,500.0	0.36	238.47	7,499.0	-61.2	40.0	580,777.55	745,951.82	32° 35' 38.849 N	103° 32' 5.084 W
7,600.0	0.10	262.09	7,599.0	-61.4	39.7	580,777.38	745,951.47	32° 35' 38.847 N	103° 32' 5.088 W
7,700.0	0.16	340.44	7,699.0	-61.3	39.5	580,777.50	745,951.34	32° 35' 38.848 N	103° 32' 5.089 W
7,800.0	0.20	228.66	7,799.0	-61.3	39.4	580,777.51	745,951.16	32° 35' 38.848 N	103° 32' 5.091 W
7,900.0	0.28	301.37	7,899.0	-61.3	39.0	580,777.52	745,950.82	32° 35' 38.848 N	103° 32' 5.095 W
8,000.0	0.10	232.32	7,999.0	-61.2	38.7	580,777.60	745,950.54	32° 35' 38.849 N	103° 32' 5.099 W
8,100.0	0.33	55.67	8,099.0	-61.1	38.9	580,777.71	745,950.71	32° 35' 38.850 N	103° 32' 5.097 W
8,200.0	0.47	85.51	8,199.0	-60.9	39.6	580,777.90	745,951.36	32° 35' 38.852 N	103° 32' 5.089 W
8,300.0	0.72	94.64	8,299.0	-60.9	40.6	580,777.88	745,952.39	32° 35' 38.852 N	103° 32' 5.077 W
8,400.0	0.88	138.72	8,399.0	-61.5	41.7	580,777.26	745,953.53	32° 35' 38.846 N	103° 32' 5.064 W
8,500.0	1.24	154.44	8,498.9	-63.1	42.7	580,775.70	745,954.50	32° 35' 38.830 N	103° 32' 5.053 W
8,600.0	0.93	176.27	8,598.9	-64.9	43.2	580,773.92	745,955.02	32° 35' 38.812 N	103° 32' 5.047 W
8,700.0	1.31	197.70	8,698.9	-66.8	42.9	580,772.02	745,954.72	32° 35' 38.794 N	103° 32' 5.050 W
8,800.0	1.72	222.07	8,798.9	-69.0	41.6	580,769.81	745,953.37	32° 35' 38.772 N	103° 32' 5.066 W
8,900.0	1.90	231.48	8,898.8	-71.1	39.3	580,767.67	745,951.07	32° 35' 38.751 N	103° 32' 5.093 W
9,000.0	0.53	170.87	8,998.8	-72.6	38.0	580,766.18	745,949.84	32° 35' 38.736 N	103° 32' 5.108 W
9,100.0	0.96	154.39	9,098.8	-73.8	38.5	580,764.97	745,950.28	32° 35' 38.724 N	103° 32' 5.103 W
9,200.0	0.86	157.61	9,198.8	-75.3	39.1	580,763.52	745,950.93	32° 35' 38.710 N	103° 32' 5.095 W
9,300.0	0.88	201.26	9,298.8	-76.7	39.1	580,762.11	745,950.94	32° 35' 38.696 N	103° 32' 5.095 W
9,400.0	0.86	235.66	9,398.8	-77.8	38.2	580,760.97	745,950.04	32° 35' 38.685 N	103° 32' 5.106 W
9,500.0	0.60	204.06	9,498.7	-78.7	37.4	580,760.07	745,949.20	32° 35' 38.676 N	103° 32' 5.116 W
9,600.0	0.70	217.41	9,598.7	-79.7	36.8	580,759.10	745,948.62	32° 35' 38.666 N	103° 32' 5.123 W
9,700.0	0.87	211.46	9,698.7	-80.8	36.1	580,757.97	745,947.85	32° 35' 38.655 N	103° 32' 5.132 W
9,800.0	0.74	252.75	9,798.7	-81.7	35.0	580,757.13	745,946.84	32° 35' 38.647 N	103° 32' 5.144 W
9,900.0	1.35	237.06	9,898.7	-82.5	33.4	580,756.30	745,945.23	32° 35' 38.639 N	103° 32' 5.163 W
10,000.0	1.14	236.46	9,998.7	-83.7	31.6	580,755.11	745,943.42	32° 35' 38.627 N	103° 32' 5.184 W
10,100.0	1.55	239.08	10,098.7	-84.9	29.6	580,753.87	745,941.43	32° 35' 38.615 N	103° 32' 5.207 W
10,200.0	1.41	225.94	10,198.6	-86.5	27.6	580,752.31	745,939.38	32° 35' 38.600 N	103° 32' 5.231 W
10,300.0	1.50	217.56	10,298.6	-88.4	25.9	580,750.42	745,937.70	32° 35' 38.581 N	103° 32' 5.251 W
10,378.0	1.82	222.65	10,376.6	-90.1	24.4	580,748.70	745,936.24	32° 35' 38.564 N	103° 32' 5.268 W
10378' VES Gyro Survey									
10,444.0	2.40	193.90	10,442.5	-92.2	23.4	580,746.59	745,935.20	32° 35' 38.544 N	103° 32' 5.281 W
10,475.0	4.40	151.20	10,473.5	-93.9	23.8	580,744.92	745,935.61	32° 35' 38.527 N	103° 32' 5.276 W
10,536.0	11.90	129.70	10,533.8	-100.0	29.8	580,738.84	745,941.59	32° 35' 38.466 N	103° 32' 5.207 W
10,567.0	14.90	127.90	10,564.0	-104.5	35.4	580,734.35	745,947.19	32° 35' 38.422 N	103° 32' 5.142 W
10,598.0	18.40	125.70	10,593.7	-109.8	42.5	580,729.04	745,954.32	32° 35' 38.369 N	103° 32' 5.059 W
10,629.0	22.20	122.20	10,622.7	-115.7	51.5	580,723.06	745,963.25	32° 35' 38.309 N	103° 32' 4.955 W
10,659.0	26.30	122.00	10,650.1	-122.3	61.9	580,716.52	745,973.68	32° 35' 38.243 N	103° 32' 4.834 W
10,690.0	30.50	122.80	10,677.3	-130.2	74.3	580,708.62	745,986.13	32° 35' 38.164 N	103° 32' 4.689 W
10,721.0	33.20	125.00	10,703.7	-139.3	87.9	580,699.48	745,999.69	32° 35' 38.073 N	103° 32' 4.531 W
10,751.0	35.80	128.00	10,728.4	-149.4	101.5	580,689.37	746,013.34	32° 35' 37.972 N	103° 32' 4.372 W
10,782.0	39.70	130.40	10,752.9	-161.4	116.2	580,677.36	746,028.03	32° 35' 37.852 N	103° 32' 4.202 W
10,813.0	43.60	131.50	10,776.1	-174.9	131.8	580,663.86	746,043.58	32° 35' 37.717 N	103° 32' 4.021 W
10,844.0	46.50	132.20	10,798.0	-189.6	148.1	580,649.22	746,059.92	32° 35' 37.571 N	103° 32' 3.831 W
10,874.0	49.10	132.70	10,818.1	-204.6	164.5	580,634.22	746,076.32	32° 35' 37.421 N	103° 32' 3.641 W
10,905.0	50.50	134.20	10,838.1	-220.9	181.7	580,617.94	746,093.50	32° 35' 37.259 N	103° 32' 3.442 W

Stryker Directional Survey Report - Geographic

Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Tiger 11 FED #2H
Project:	Lea County, N.M.	TVD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Site:	Section 11-20S-34E Tiger 11 Fed #2H	MD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Well:	Tiger 11 FED #2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,936.0	52.90	134.40	10,857.3	-237.9	199.1	580,600.94	746,110.91	32° 35' 37.089 N	103° 32' 3.240 W
10,967.0	56.80	134.10	10,875.2	-255.5	217.3	580,583.26	746,129.07	32° 35' 36.913 N	103° 32' 3.029 W
10,997.0	60.90	134.40	10,890.7	-273.5	235.7	580,565.35	746,147.45	32° 35' 36.734 N	103° 32' 2.816 W
11,028.0	63.80	133.00	10,905.1	-292.4	255.5	580,546.38	746,167.30	32° 35' 36.545 N	103° 32' 2.585 W
11,059.0	66.00	130.10	10,918.2	-311.0	276.5	580,527.77	746,188.31	32° 35' 36.360 N	103° 32' 2.342 W
11,090.0	68.40	128.50	10,930.2	-329.1	298.6	580,509.68	746,210.43	32° 35' 36.179 N	103° 32' 2.085 W
11,120.0	72.30	128.00	10,940.3	-346.6	320.8	580,492.19	746,232.61	32° 35' 36.004 N	103° 32' 1.827 W
11,151.0	77.20	128.20	10,948.5	-365.1	344.3	580,473.74	746,256.14	32° 35' 35.820 N	103° 32' 1.554 W
11,182.0	80.10	128.20	10,954.6	-383.9	368.2	580,454.95	746,280.02	32° 35' 35.632 N	103° 32' 1.276 W
11,213.0	82.70	128.50	10,959.2	-402.9	392.3	580,435.93	746,304.06	32° 35' 35.442 N	103° 32' 0.997 W
11,243.0	84.50	128.70	10,962.6	-421.5	415.6	580,417.33	746,327.36	32° 35' 35.256 N	103° 32' 0.726 W
11,274.0	85.80	129.70	10,965.2	-441.0	439.5	580,397.81	746,351.29	32° 35' 35.061 N	103° 32' 0.448 W
11,305.0	87.60	131.40	10,967.0	-461.1	463.0	580,377.69	746,374.81	32° 35' 34.861 N	103° 32' 0.175 W
11,422.0	92.70	133.00	10,966.7	-539.7	549.7	580,299.13	746,461.45	32° 35' 34.077 N	103° 31' 59.169 W
11,514.0	91.50	138.20	10,963.3	-605.3	614.0	580,233.46	746,525.75	32° 35' 33.422 N	103° 31' 58.423 W
11,606.0	90.10	144.60	10,962.0	-677.2	671.3	580,161.61	746,583.11	32° 35' 32.707 N	103° 31' 57.759 W
11,698.0	91.00	151.00	10,961.1	-755.0	720.3	580,083.80	746,632.11	32° 35' 31.934 N	103° 31' 57.194 W
11,790.0	89.70	154.50	10,960.6	-836.8	762.4	580,002.03	746,674.22	32° 35' 31.121 N	103° 31' 56.709 W
11,882.0	90.90	157.90	10,960.1	-920.9	799.5	579,917.87	746,711.34	32° 35' 30.286 N	103° 31' 56.282 W
11,974.0	91.70	161.70	10,958.0	-1,007.2	831.3	579,831.57	746,743.10	32° 35' 29.429 N	103° 31' 55.919 W
12,066.0	91.90	166.00	10,955.1	-1,095.5	856.9	579,743.26	746,768.67	32° 35' 28.554 N	103° 31' 55.627 W
12,158.0	91.50	170.10	10,952.4	-1,185.5	875.9	579,653.32	746,787.70	32° 35' 27.662 N	103° 31' 55.413 W
12,250.0	90.30	173.20	10,950.9	-1,276.5	889.3	579,562.31	746,801.06	32° 35' 26.761 N	103° 31' 55.265 W
12,342.0	89.60	176.50	10,951.0	-1,368.1	897.5	579,470.70	746,809.32	32° 35' 25.854 N	103° 31' 55.176 W
12,435.0	89.80	176.10	10,951.5	-1,460.9	903.5	579,377.89	746,815.32	32° 35' 24.935 N	103° 31' 55.114 W
12,527.0	91.70	178.40	10,950.3	-1,552.8	907.9	579,286.02	746,819.73	32° 35' 24.026 N	103° 31' 55.071 W
12,619.0	93.00	179.30	10,946.5	-1,644.7	909.8	579,194.12	746,821.58	32° 35' 23.116 N	103° 31' 55.057 W
12,711.0	92.20	180.00	10,942.3	-1,736.6	910.3	579,102.22	746,822.14	32° 35' 22.207 N	103° 31' 55.059 W
12,803.0	90.70	179.60	10,940.0	-1,828.6	910.7	579,010.25	746,822.46	32° 35' 21.297 N	103° 31' 55.063 W
12,895.0	92.20	178.00	10,937.7	-1,920.5	912.6	578,918.30	746,824.39	32° 35' 20.387 N	103° 31' 55.049 W
12,987.0	90.30	177.70	10,935.7	-2,012.4	916.0	578,826.39	746,827.84	32° 35' 19.477 N	103° 31' 55.017 W
13,079.0	90.60	177.40	10,934.9	-2,104.3	920.0	578,734.48	746,831.77	32° 35' 18.567 N	103° 31' 54.979 W
13,171.0	91.30	177.70	10,933.4	-2,196.2	923.9	578,642.58	746,835.70	32° 35' 17.658 N	103° 31' 54.941 W
13,263.0	91.60	176.90	10,931.1	-2,288.1	928.2	578,550.71	746,840.03	32° 35' 16.748 N	103° 31' 54.898 W
13,355.0	91.70	176.30	10,928.4	-2,379.9	933.7	578,458.91	746,845.49	32° 35' 15.840 N	103° 31' 54.843 W
13,447.0	92.10	175.50	10,925.4	-2,471.6	940.3	578,367.20	746,852.06	32° 35' 14.932 N	103° 31' 54.774 W
13,539.0	91.30	178.20	10,922.7	-2,563.4	945.3	578,275.39	746,857.11	32° 35' 14.023 N	103° 31' 54.723 W
13,631.0	89.60	179.40	10,921.9	-2,655.4	947.2	578,183.42	746,859.04	32° 35' 13.113 N	103° 31' 54.709 W
13,723.0	89.60	178.30	10,922.6	-2,747.4	949.1	578,091.44	746,860.89	32° 35' 12.202 N	103° 31' 54.695 W
13,815.0	90.10	178.40	10,922.8	-2,839.3	951.7	577,999.48	746,863.54	32° 35' 11.292 N	103° 31' 54.672 W
13,907.0	90.90	178.40	10,922.0	-2,931.3	954.3	577,907.52	746,866.10	32° 35' 10.382 N	103° 31' 54.650 W
13,999.0	91.80	177.20	10,919.9	-3,023.2	957.8	577,815.61	746,869.63	32° 35' 9.472 N	103° 31' 54.617 W
14,091.0	92.70	178.10	10,916.2	-3,115.0	961.6	577,723.76	746,873.40	32° 35' 8.563 N	103° 31' 54.581 W
14,183.0	91.20	176.10	10,913.1	-3,206.9	966.3	577,631.94	746,878.06	32° 35' 7.654 N	103° 31' 54.535 W
14,267.0	91.40	176.90	10,911.2	-3,290.7	971.4	577,548.12	746,883.18	32° 35' 6.825 N	103° 31' 54.482 W
14,368.0	91.70	176.40	10,908.5	-3,391.5	977.3	577,447.33	746,889.08	32° 35' 5.827 N	103° 31' 54.422 W
14,460.0	90.90	177.00	10,906.4	-3,483.3	982.6	577,355.51	746,894.38	32° 35' 4.918 N	103° 31' 54.369 W
14,552.0	89.60	178.80	10,906.0	-3,575.2	986.0	577,263.58	746,897.75	32° 35' 4.008 N	103° 31' 54.337 W
14,644.0	90.40	179.60	10,906.0	-3,667.2	987.2	577,171.59	746,899.03	32° 35' 3.098 N	103° 31' 54.330 W
14,737.0	90.90	178.10	10,904.9	-3,760.2	989.1	577,078.61	746,900.90	32° 35' 2.178 N	103° 31' 54.317 W
14,829.0	91.60	178.60	10,902.9	-3,852.1	991.8	576,986.67	746,903.55	32° 35' 1.268 N	103° 31' 54.294 W
14,921.0	92.10	177.70	10,900.0	-3,944.0	994.7	576,894.77	746,906.52	32° 35' 0.358 N	103° 31' 54.267 W
15,013.0	91.40	178.70	10,897.1	-4,035.9	997.6	576,802.86	746,909.40	32° 34' 59.449 N	103° 31' 54.242 W
15,105.0	89.30	180.20	10,896.6	-4,127.9	998.5	576,710.88	746,910.29	32° 34' 58.538 N	103° 31' 54.239 W
15,197.0	90.50	179.20	10,896.7	-4,219.9	999.0	576,618.88	746,910.77	32° 34' 57.628 N	103° 31' 54.242 W

Stryker Directional Survey Report - Geographic

Company:	COG Operating, LLC.	Local Co-ordinate Reference:	Well Tiger 11 FED #2H
Project:	Lea County, N.M.	TVD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Site:	Section 11-20S-34E Tiger 11 Fed #2H	MD Reference:	GL 3656.2 + 26 @ 3682.2usft (Precision 590)
Well:	Tiger 11 FED #2H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Stryker_EDM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,289.0	91.20	178.70	10,895.4	-4,311.9	1,000.7	576,526.91	746,912.45	32° 34' 56.718 N	103° 31' 54.230 W
15,381.0	92.00	178.50	10,892.8	-4,403.8	1,002.9	576,434.97	746,914.70	32° 34' 55.808 N	103° 31' 54.212 W
15,473.0	92.40	179.30	10,889.3	-4,495.7	1,004.7	576,343.06	746,916.47	32° 34' 54.898 N	103° 31' 54.200 W
15,565.0	91.40	179.80	10,886.2	-4,587.7	1,005.4	576,251.11	746,917.19	32° 34' 53.988 N	103° 31' 54.199 W
15,657.0	91.60	178.70	10,883.8	-4,679.7	1,006.6	576,159.15	746,918.39	32° 34' 53.078 N	103° 31' 54.193 W
15,685.0	92.00	180.00	10,882.9	-4,707.6	1,006.9	576,131.17	746,918.71	32° 34' 52.802 N	103° 31' 54.192 W
15,738.0	92.00	180.00	10,881.1	-4,760.6	1,006.9	576,078.20	746,918.71	32° 34' 52.277 N	103° 31' 54.197 W

15738' MD Projected to Bit

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,378.0	10,376.6	-90.1	24.4	10378' VES Gyro Survey
15,738.0	10,881.1	-4,760.6	1,006.9	15738' MD Projected to Bit