



March 2, 2015

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

HOBBS OCD

AUG 17 2015

RECEIVED

Attn: Kanicia Castillo

RE: **Eata Fajita State 9H**

Please find enclosed a copy of the survey from 0' to 8955' ran on the above referenced well.

Sincerely,


Keith Havelka
Operations

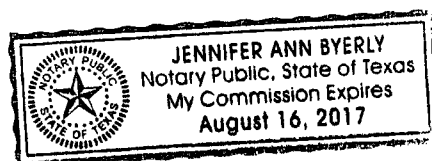
STATE OF TEXAS §

§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 2 day of March,
A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas



AUG 31 2015



Company: CONCHO
Lease/Well: EATA FAJITA STATE/9H

Rig Name: INDEPENDENCE 205
State/County: NEW MEXICO/LEA
Latitude: 32.23, Longitude: -103.59
GRID North is 0.40 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB: 26 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 3/2/2015 / 16:03

VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Eata Fajita State 9H / API 30-025-42274

HOBBS OCD

AUG 17 2015

RECEIVED

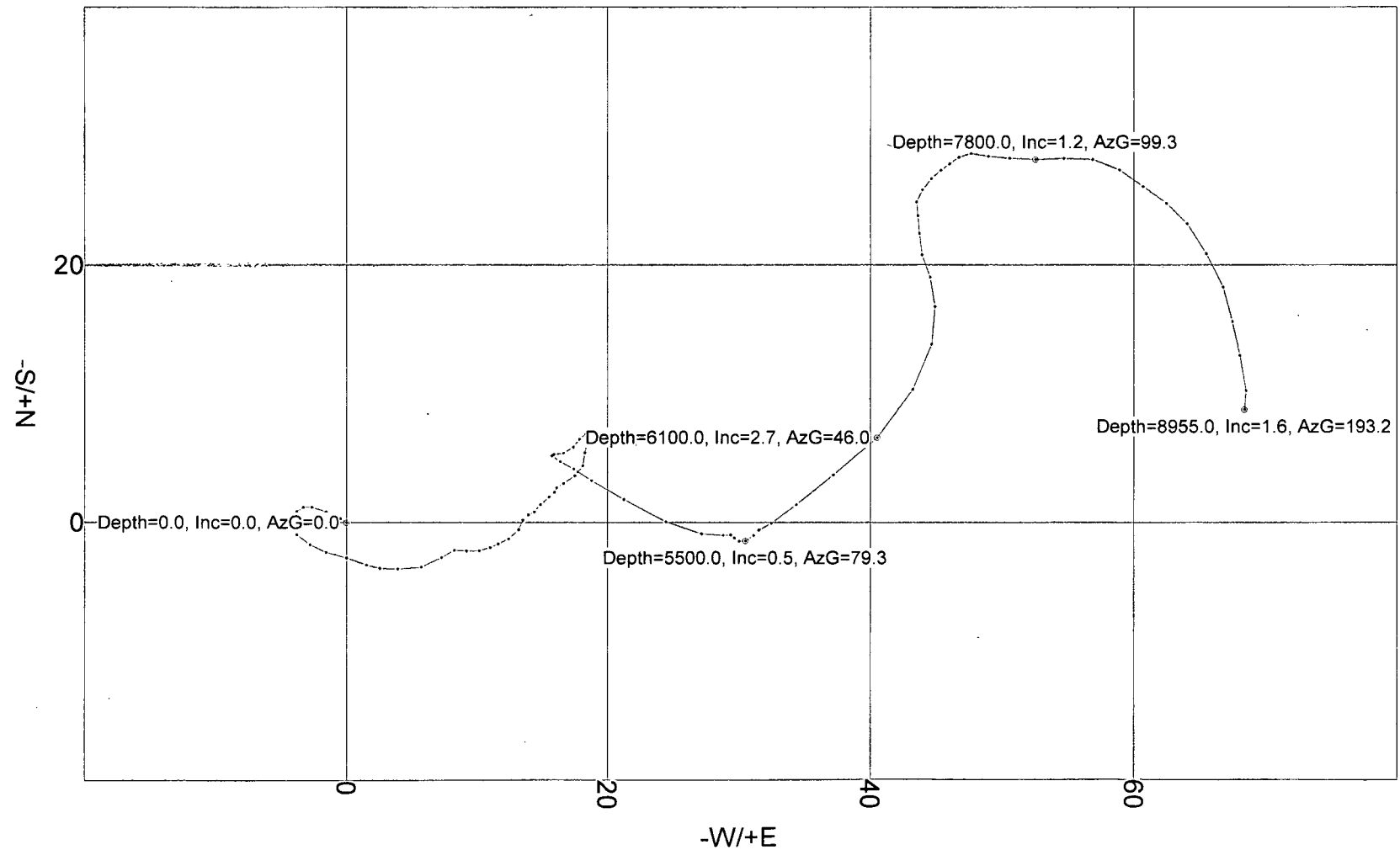
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.65	302.43	100.00	0.30	-0.48	0.30	0.56	302.43	0.65
200.00	0.72	288.92	199.99	0.81	-1.55	0.81	1.74	297.60	0.18
300.00	0.62	290.12	299.98	1.20	-2.65	1.20	2.90	294.34	0.11
400.00	0.30	220.02	399.98	1.18	-3.32	1.18	3.52	289.64	0.59
500.00	0.43	247.72	499.98	0.84	-3.83	0.84	3.92	282.38	0.22
600.00	0.53	199.42	599.98	0.26	-4.34	0.26	4.35	273.47	0.40
700.00	0.31	157.07	699.97	-0.42	-4.38	-0.42	4.40	264.47	0.36
800.00	0.61	121.67	799.97	-0.96	-3.82	-0.96	3.94	255.97	0.40
900.00	0.87	130.18	899.96	-1.73	-2.79	-1.73	3.28	238.27	0.29
1000.00	0.75	100.30	999.95	-2.33	-1.57	-2.33	2.81	213.91	0.44
1100.00	1.13	108.33	1099.94	-2.76	0.01	-2.76	2.76	179.77	0.41
1200.00	0.72	112.82	1199.93	-3.32	1.53	-3.32	3.65	155.28	0.42
1300.00	0.54	92.97	1299.92	-3.58	2.57	-3.58	4.41	144.32	0.28
1400.00	1.01	91.67	1399.91	-3.63	3.92	-3.63	5.35	132.79	0.47
1500.00	1.15	79.48	1499.89	-3.47	5.79	-3.47	6.75	120.97	0.27
1600.00	0.92	45.28	1599.88	-2.73	7.34	-2.73	7.83	110.38	0.65
1700.00	0.49	89.44	1699.87	-2.16	8.34	-2.16	8.61	104.53	0.66
1800.00	0.60	96.29	1799.87	-2.21	9.28	-2.21	9.54	103.42	0.13

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	0.53	80.93	1899.86	-2.20	10.25	-2.20	10.48	102.10	0.16
2000.00	0.47	66.40	1999.86	-1.96	11.08	-1.96	11.26	100.03	0.14
2100.00	0.31	62.00	2099.85	-1.67	11.70	-1.67	11.82	98.12	0.17
2200.00	0.71	64.90	2199.85	-1.28	12.50	-1.28	12.56	95.85	0.40
2300.00	0.56	23.20	2299.85	-0.57	13.25	-0.57	13.26	92.46	0.47
2400.00	0.37	23.24	2399.84	0.18	13.57	0.18	13.57	89.25	0.19
2500.00	0.35	67.62	2499.84	0.59	13.98	0.59	13.99	87.58	0.27
2600.00	0.23	58.18	2599.84	0.82	14.44	0.82	14.46	86.77	0.13
2700.00	0.63	31.81	2699.84	1.39	14.90	1.39	14.97	84.67	0.43
2800.00	0.46	71.58	2799.83	1.98	15.57	1.98	15.70	82.74	0.40
2900.00	0.27	6.66	2899.83	2.34	15.98	2.34	16.15	81.66	0.42
3000.00	0.19	51.93	2999.83	2.68	16.14	2.68	16.36	80.58	0.19
3100.00	0.54	58.13	3099.83	3.03	16.67	3.03	16.94	79.70	0.34
3200.00	0.67	54.16	3199.82	3.62	17.54	3.62	17.91	78.34	0.15
3300.00	0.51	16.77	3299.82	4.39	18.14	4.39	18.67	76.40	0.41
3400.00	0.67	1.68	3399.81	5.40	18.29	5.40	19.07	73.55	0.23
3500.00	0.16	81.87	3499.81	6.01	18.45	6.01	19.40	71.96	0.66
3600.00	0.23	42.93	3599.81	6.18	18.73	6.18	19.72	71.75	0.15
3700.00	0.31	5.97	3699.81	6.60	18.89	6.60	20.01	70.75	0.19
3800.00	0.15	290.07	3799.81	6.91	18.80	6.91	20.03	69.81	0.31
3900.00	0.33	254.09	3899.81	6.88	18.39	6.88	19.64	69.50	0.23
4000.00	0.48	213.90	3999.80	6.45	17.88	6.45	19.00	70.17	0.31
4100.00	0.38	222.89	4099.80	5.85	17.42	5.85	18.37	71.42	0.12
4200.00	0.65	245.35	4199.80	5.37	16.67	5.37	17.52	72.13	0.33
4300.00	0.31	299.57	4299.79	5.27	15.92	5.27	16.77	71.68	0.53
4400.00	0.29	160.85	4399.79	5.17	15.76	5.17	16.59	71.85	0.56
4500.00	0.68	110.51	4499.79	4.73	16.40	4.73	17.07	73.92	0.54
4600.00	0.72	127.06	4599.78	4.14	17.45	4.14	17.93	76.64	0.20
4700.00	1.14	121.83	4699.77	3.24	18.79	3.24	19.07	80.21	0.43
4800.00	2.13	120.23	4799.73	1.78	21.24	1.78	21.32	85.20	1.00
4900.00	2.01	116.87	4899.66	0.05	24.42	0.05	24.42	89.88	0.17
5000.00	1.30	97.02	4999.62	-0.88	27.11	-0.88	27.13	91.86	0.91
5100.00	0.61	86.39	5099.60	-0.99	28.77	-0.99	28.78	91.97	0.71
5200.00	0.05	122.39	5199.60	-0.98	29.33	-0.98	29.35	91.91	0.57
5300.00	0.37	127.69	5299.60	-1.20	29.62	-1.20	29.65	92.32	0.33
5400.00	0.12	122.55	5399.60	-1.46	29.97	-1.46	30.01	92.78	0.25
5500.00	0.48	79.26	5499.60	-1.43	30.47	-1.43	30.51	92.69	0.40
5600.00	0.44	29.46	5599.60	-1.02	31.07	-1.02	31.09	91.89	0.39
5700.00	0.27	65.97	5699.59	-0.60	31.48	-0.60	31.48	91.09	0.27

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	0.98	59.84	5799.59	-0.07	32.43	-0.07	32.43	90.13	0.71
5900.00	1.78	48.76	5899.56	1.38	34.33	1.38	34.36	87.70	0.84
6000.00	2.39	52.50	5999.49	3.67	37.15	3.67	37.33	84.36	0.63
6100.00	2.73	45.99	6099.39	6.59	40.52	6.59	41.05	80.76	0.45
6200.00	2.63	25.22	6199.29	10.33	43.21	10.33	44.43	76.56	0.97
6300.00	1.71	17.23	6299.21	13.83	44.63	13.83	46.73	72.78	0.97
6400.00	1.73	352.76	6399.17	16.76	44.89	16.76	47.91	69.53	0.73
6500.00	0.93	346.20	6499.14	19.04	44.50	19.04	48.40	66.84	0.81
6600.00	1.18	336.50	6599.12	20.76	43.90	20.76	48.56	64.69	0.30
6700.00	0.88	15.06	6699.11	22.45	43.69	22.45	49.12	62.81	0.73
6800.00	0.80	333.56	6799.10	23.82	43.58	23.82	49.67	61.34	0.60
6900.00	0.57	25.96	6899.09	24.89	43.49	24.89	50.11	60.22	0.64
7000.00	0.60	24.23	6999.09	25.82	43.93	25.82	50.95	59.55	0.04
7100.00	0.69	50.38	7099.08	26.68	44.61	26.68	51.98	59.11	0.30
7200.00	0.42	43.06	7199.08	27.34	45.32	27.34	52.93	58.90	0.28
7300.00	0.55	61.28	7299.07	27.83	45.99	27.83	53.76	58.82	0.20
7400.00	0.45	44.54	7399.07	28.35	46.69	28.35	54.62	58.74	0.17
7500.00	0.73	90.79	7499.06	28.62	47.60	28.62	55.54	58.98	0.53
7600.00	0.84	106.18	7599.06	28.41	48.93	28.41	56.58	59.86	0.24
7700.00	1.04	85.89	7699.04	28.27	50.54	28.27	57.91	60.78	0.39
7800.00	1.22	99.33	7799.02	28.16	52.50	28.16	59.58	61.79	0.32
7900.00	1.29	77.34	7899.00	28.24	54.65	28.24	61.51	62.67	0.48
8000.00	1.30	106.70	7998.97	28.16	56.84	28.16	63.43	63.65	0.66
8100.00	1.23	116.28	8098.95	27.36	58.90	27.36	64.94	65.09	0.22
8200.00	1.32	133.44	8198.93	26.09	60.70	26.09	66.07	66.74	0.39
8300.00	1.23	118.17	8298.90	24.79	62.48	24.79	67.22	68.36	0.35
8400.00	1.44	149.92	8398.88	23.20	64.05	23.20	68.12	70.09	0.76
8500.00	1.69	147.20	8498.84	20.87	65.48	20.87	68.73	72.32	0.26
8600.00	1.67	160.62	8598.80	18.25	66.77	18.25	69.22	74.71	0.39
8700.00	1.50	170.63	8698.76	15.59	67.46	15.59	69.24	76.99	0.33
8800.00	1.61	165.29	8798.72	12.94	68.03	12.94	69.25	79.23	0.18
8900.00	1.55	175.70	8898.68	10.23	68.49	10.23	69.25	81.50	0.29
8955.00	1.55	193.21	8953.66	8.77	68.37	8.77	68.93	82.69	0.86



VES Survey International
West Texas
(432) 563-5444
Surveyor: Jordan Shelleby
Eata Fajita State 9H / API 30-025-42274



V.E.S. Survey Date: 2/16/2015



COG Operating LLC

Lea County, NM
Eata Fajita State
#9H

OH

Survey: MWD #1

Survey Report - Geographic

07 March, 2015

HOBBS OCD

AUG 17 2015

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Wellplanning

Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #9H
Project:	Lea County, NM	TVD Reference:	WELL @ 3630.1usft (Original Well Elev)
Site:	Eata Fajita State	MD Reference:	WELL @ 3630.1usft (Original Well Elev)
Well:	#9H	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	Eata Fajita State				
Site Position:		Northing:	446,468.40 usft	Latitude:	32° 13' 31.198 N
From:	Map	Easting:	726,689.60 usft	Longitude:	103° 36' 0.988 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	#9H					
Well Position	+N/-S	0.0 usft	Northing:	446,499.10 usft	Latitude:	32° 13' 31.248 N
	+E/-W	0.0 usft	Easting:	730,416.80 usft	Longitude:	103° 35' 17.598 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,604.1 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/16/2015	7.14	60.09	48,246

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	357.01	

Survey Program	Date	3/7/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,955.0	GYRO (OH)	NS-GYRO-SS	NS Gyro single shots
9,111.0	19,404.0	MWD #1 (OH)	MWD	MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,955.0	1.55	193.21	8,953.7	8.8	68.4	446,507.86	730,485.18	32° 13' 31.330 N	103° 35' 16.801 W
9,111.0	4.30	338.00	9,109.5	12.1	65.7	446,511.24	730,482.51	32° 13' 31.364 N	103° 35' 16.832 W
9,143.0	9.00	340.40	9,141.3	15.6	64.4	446,514.71	730,481.22	32° 13' 31.398 N	103° 35' 16.847 W
9,174.0	13.60	340.40	9,171.7	21.3	62.4	446,520.43	730,479.18	32° 13' 31.455 N	103° 35' 16.870 W
9,205.0	17.60	340.80	9,201.6	29.2	59.6	446,528.29	730,476.41	32° 13' 31.533 N	103° 35' 16.902 W
9,237.0	20.90	342.00	9,231.8	39.2	56.3	446,538.29	730,473.06	32° 13' 31.632 N	103° 35' 16.940 W
9,268.0	24.50	341.10	9,260.4	50.5	52.5	446,549.64	730,469.27	32° 13' 31.745 N	103° 35' 16.983 W
9,300.0	26.90	334.30	9,289.2	63.3	47.2	446,562.44	730,463.98	32° 13' 31.872 N	103° 35' 17.044 W
9,331.0	30.30	332.20	9,316.4	76.6	40.5	446,575.68	730,457.28	32° 13' 32.003 N	103° 35' 17.120 W
9,378.0	34.90	331.30	9,356.0	98.9	28.5	446,597.97	730,445.29	32° 13' 32.225 N	103° 35' 17.258 W
9,425.0	39.60	331.60	9,393.4	123.9	14.9	446,622.96	730,431.70	32° 13' 32.473 N	103° 35' 17.414 W



Wellplanning
Survey Report - Geographic

Company: COG Operating LLC
Project: Lea County, NM
Site: Eata Fajita State
Well: #9H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #9H
TVD Reference: WELL @ 3630.1usft (Original Well Elev)
MD Reference: WELL @ 3630.1usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,472.0	45.60	328.30	9,428.0	151.3	-1.1	446,650.45	730,415.74	32° 13' 32.746 N	103° 35' 17.598 W
9,519.0	52.10	326.90	9,458.9	181.2	-20.0	446,680.30	730,396.77	32° 13' 33.043 N	103° 35' 17.816 W
9,566.0	59.10	329.50	9,485.4	214.2	-40.4	446,713.26	730,376.38	32° 13' 33.370 N	103° 35' 18.051 W
9,613.0	65.20	331.30	9,507.4	250.3	-60.9	446,749.38	730,355.88	32° 13' 33.729 N	103° 35' 18.287 W
9,660.0	67.40	330.60	9,526.3	287.9	-81.8	446,787.00	730,334.98	32° 13' 34.103 N	103° 35' 18.527 W
9,707.0	70.30	328.80	9,543.2	325.7	-103.9	446,824.83	730,312.87	32° 13' 34.479 N	103° 35' 18.781 W
9,754.0	75.40	327.00	9,557.1	363.8	-127.8	446,862.86	730,289.00	32° 13' 34.857 N	103° 35' 19.056 W
9,786.0	77.40	328.20	9,564.6	390.0	-144.5	446,889.12	730,272.34	32° 13' 35.118 N	103° 35' 19.248 W
9,817.0	79.80	330.20	9,570.7	416.1	-160.0	446,915.22	730,256.78	32° 13' 35.377 N	103° 35' 19.427 W
9,848.0	82.00	332.80	9,575.6	443.0	-174.6	446,942.12	730,242.18	32° 13' 35.644 N	103° 35' 19.595 W
9,880.0	84.90	335.10	9,579.3	471.6	-188.6	446,970.67	730,228.22	32° 13' 35.928 N	103° 35' 19.755 W
9,911.0	87.70	336.30	9,581.3	499.8	-201.3	446,998.86	730,215.49	32° 13' 36.208 N	103° 35' 19.901 W
10,005.0	92.20	334.90	9,581.4	585.3	-240.1	447,084.44	730,176.67	32° 13' 37.057 N	103° 35' 20.346 W
10,099.0	91.80	332.50	9,578.1	669.6	-281.7	447,168.66	730,135.05	32° 13' 37.893 N	103° 35' 20.824 W
10,193.0	91.50	330.90	9,575.4	752.3	-326.3	447,251.38	730,090.51	32° 13' 38.715 N	103° 35' 21.335 W
10,287.0	88.90	329.30	9,575.1	833.8	-373.1	447,332.86	730,043.66	32° 13' 39.524 N	103° 35' 21.874 W
10,381.0	84.20	330.90	9,580.7	915.1	-419.9	447,414.18	729,996.90	32° 13' 40.332 N	103° 35' 22.412 W
10,475.0	83.40	336.00	9,590.9	998.6	-461.7	447,497.74	729,955.14	32° 13' 41.162 N	103° 35' 22.891 W
10,569.0	84.80	341.40	9,600.5	1,085.7	-495.6	447,584.82	729,921.19	32° 13' 42.026 N	103° 35' 23.280 W
10,663.0	87.00	345.80	9,607.3	1,175.6	-522.1	447,674.74	729,894.73	32° 13' 42.918 N	103° 35' 23.580 W
10,757.0	88.60	349.00	9,610.9	1,267.3	-542.6	447,766.39	729,874.25	32° 13' 43.826 N	103° 35' 23.811 W
10,851.0	89.60	351.30	9,612.4	1,359.9	-558.6	447,858.99	729,858.17	32° 13' 44.743 N	103° 35' 23.991 W
10,945.0	89.80	352.70	9,612.8	1,453.0	-571.7	447,952.07	729,845.09	32° 13' 45.665 N	103° 35' 24.136 W
11,040.0	90.60	358.10	9,612.5	1,547.6	-579.3	448,046.73	729,837.47	32° 13' 46.603 N	103° 35' 24.217 W
11,134.0	90.70	1.30	9,611.4	1,641.6	-579.8	448,140.71	729,836.98	32° 13' 47.533 N	103° 35' 24.215 W
11,228.0	87.60	1.50	9,612.8	1,735.6	-577.5	448,234.66	729,839.27	32° 13' 48.462 N	103° 35' 24.181 W
11,322.0	89.90	2.20	9,614.9	1,829.5	-574.5	448,328.58	729,842.31	32° 13' 49.391 N	103° 35' 24.138 W
11,416.0	88.90	2.20	9,615.9	1,923.4	-570.9	448,422.51	729,845.92	32° 13' 50.321 N	103° 35' 24.088 W
11,510.0	88.60	1.60	9,617.9	2,017.3	-567.8	448,516.43	729,849.03	32° 13' 51.250 N	103° 35' 24.045 W
11,604.0	90.90	1.60	9,618.3	2,111.3	-565.1	448,610.39	729,851.66	32° 13' 52.179 N	103° 35' 24.006 W
11,699.0	90.80	0.60	9,616.9	2,206.3	-563.3	448,705.36	729,853.48	32° 13' 53.119 N	103° 35' 23.978 W
11,793.0	88.60	2.20	9,617.4	2,300.2	-561.0	448,799.32	729,855.78	32° 13' 54.049 N	103° 35' 23.943 W
11,887.0	88.80	2.50	9,619.6	2,394.1	-557.2	448,893.22	729,859.63	32° 13' 54.978 N	103° 35' 23.891 W
11,981.0	89.30	2.30	9,621.1	2,488.0	-553.2	448,987.12	729,863.57	32° 13' 55.907 N	103° 35' 23.837 W
12,075.0	89.70	2.30	9,621.9	2,581.9	-549.5	449,081.04	729,867.34	32° 13' 56.836 N	103° 35' 23.786 W
12,168.0	89.60	0.90	9,622.5	2,674.9	-546.9	449,174.00	729,869.93	32° 13' 57.755 N	103° 35' 23.748 W
12,263.0	90.90	0.80	9,622.1	2,769.9	-545.5	449,268.99	729,871.34	32° 13' 58.695 N	103° 35' 23.724 W
12,357.0	92.70	0.60	9,619.1	2,863.8	-544.3	449,362.93	729,872.49	32° 13' 59.625 N	103° 35' 23.703 W
12,452.0	91.30	359.90	9,615.8	2,958.8	-543.9	449,457.87	729,872.91	32° 14' 0.564 N	103° 35' 23.691 W
12,546.0	88.70	359.40	9,615.8	3,052.8	-544.5	449,551.86	729,872.33	32° 14' 1.494 N	103° 35' 23.690 W
12,640.0	89.70	359.20	9,617.1	3,146.7	-545.6	449,645.84	729,871.18	32° 14' 2.424 N	103° 35' 23.696 W
12,734.0	90.00	359.70	9,617.4	3,240.7	-546.5	449,739.84	729,870.28	32° 14' 3.355 N	103° 35' 23.699 W
12,828.0	88.60	0.40	9,618.5	3,334.7	-546.4	449,833.83	729,870.36	32° 14' 4.285 N	103° 35' 23.690 W
12,922.0	86.30	359.00	9,622.7	3,428.6	-546.9	449,927.72	729,869.87	32° 14' 5.214 N	103° 35' 23.688 W
13,016.0	86.70	358.00	9,628.4	3,522.4	-549.4	450,021.51	729,867.42	32° 14' 6.142 N	103° 35' 23.709 W
13,110.0	87.50	359.70	9,633.2	3,616.3	-551.3	450,115.37	729,865.53	32° 14' 7.071 N	103° 35' 23.724 W
13,204.0	88.60	1.50	9,636.4	3,710.2	-550.3	450,209.31	729,866.52	32° 14' 8.001 N	103° 35' 23.705 W
13,299.0	90.00	1.30	9,637.6	3,805.2	-548.0	450,304.27	729,868.84	32° 14' 8.940 N	103° 35' 23.670 W
13,393.0	91.60	1.30	9,636.2	3,899.1	-545.8	450,398.23	729,870.97	32° 14' 9.870 N	103° 35' 23.638 W
13,487.0	91.70	1.50	9,633.5	3,993.1	-543.5	450,492.16	729,873.27	32° 14' 10.799 N	103° 35' 23.603 W
13,581.0	90.20	0.10	9,632.0	4,087.0	-542.2	450,586.14	729,874.58	32° 14' 11.729 N	103° 35' 23.580 W
13,675.0	87.10	359.90	9,634.2	4,181.0	-542.2	450,680.10	729,874.58	32° 14' 12.659 N	103° 35' 23.573 W
13,769.0	87.80	359.00	9,638.4	4,274.9	-543.1	450,774.00	729,873.68	32° 14' 13.588 N	103° 35' 23.576 W
13,863.0	88.40	0.10	9,641.5	4,368.8	-543.9	450,867.94	729,872.94	32° 14' 14.518 N	103° 35' 23.577 W
13,957.0	90.80	0.40	9,642.2	4,462.8	-543.4	450,961.93	729,873.35	32° 14' 15.448 N	103° 35' 23.564 W



Wellplanning Survey Report - Geographic

Company: COG Operating LLC
Project: Lea County, NM
Site: Eata Fajita State
Well: #9H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #9H
TVD Reference: WELL @ 3630.1usft (Original Well Elev)
MD Reference: WELL @ 3630.1usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
14,051.0	89.10	358.50	9,642.2	4,556.8	-544.3	451,055.92	729,872.45	32° 14' 16.378 N	103° 35' 23.567 W
14,145.0	90.00	1.80	9,643.0	4,650.8	-544.1	451,149.91	729,872.69	32° 14' 17.308 N	103° 35' 23.557 W
14,239.0	92.70	2.30	9,640.8	4,744.7	-540.7	451,243.81	729,876.05	32° 14' 18.237 N	103° 35' 23.510 W
14,344.0	93.00	2.30	9,635.5	4,849.5	-536.5	451,348.60	729,880.26	32° 14' 19.273 N	103° 35' 23.453 W
14,438.0	94.80	2.20	9,629.1	4,943.2	-532.9	451,442.30	729,883.94	32° 14' 20.200 N	103° 35' 23.402 W
14,532.0	99.50	1.50	9,617.4	5,036.4	-529.8	451,535.50	729,886.96	32° 14' 21.122 N	103° 35' 23.360 W
14,626.0	97.60	0.60	9,603.5	5,129.3	-528.1	451,628.43	729,888.66	32° 14' 22.042 N	103° 35' 23.332 W
14,720.0	94.20	1.10	9,593.8	5,222.8	-526.7	451,721.91	729,890.05	32° 14' 22.967 N	103° 35' 23.309 W
14,814.0	90.90	0.10	9,589.6	5,316.7	-525.8	451,815.80	729,891.03	32° 14' 23.896 N	103° 35' 23.290 W
14,909.0	88.40	0.90	9,590.2	5,411.7	-524.9	451,910.78	729,891.86	32° 14' 24.836 N	103° 35' 23.272 W
15,003.0	88.10	0.20	9,593.1	5,505.6	-524.0	452,004.73	729,892.76	32° 14' 25.765 N	103° 35' 23.254 W
15,096.0	88.70	1.10	9,595.7	5,598.6	-523.0	452,097.69	729,893.81	32° 14' 26.685 N	103° 35' 23.235 W
15,190.0	87.90	1.30	9,598.5	5,692.5	-521.0	452,191.63	729,895.78	32° 14' 27.615 N	103° 35' 23.204 W
15,284.0	87.50	0.60	9,602.2	5,786.4	-519.5	452,285.54	729,897.34	32° 14' 28.544 N	103° 35' 23.178 W
15,378.0	87.80	0.60	9,606.1	5,880.4	-518.5	452,379.45	729,898.32	32° 14' 29.473 N	103° 35' 23.159 W
15,473.0	88.40	0.80	9,609.2	5,975.3	-517.3	452,474.39	729,899.48	32° 14' 30.412 N	103° 35' 23.138 W
15,567.0	88.80	0.40	9,611.5	6,069.3	-516.3	452,568.36	729,900.47	32° 14' 31.342 N	103° 35' 23.119 W
15,661.0	89.10	0.40	9,613.3	6,163.2	-515.7	452,662.34	729,901.12	32° 14' 32.272 N	103° 35' 23.104 W
15,755.0	89.60	0.90	9,614.3	6,257.2	-514.6	452,756.33	729,902.19	32° 14' 33.202 N	103° 35' 23.084 W
15,849.0	90.10	0.90	9,614.6	6,351.2	-513.1	452,850.32	729,903.67	32° 14' 34.132 N	103° 35' 23.059 W
15,943.0	90.50	0.90	9,614.1	6,445.2	-511.7	452,944.30	729,905.14	32° 14' 35.062 N	103° 35' 23.034 W
16,037.0	90.70	0.90	9,613.1	6,539.2	-510.2	453,038.29	729,906.62	32° 14' 35.992 N	103° 35' 23.010 W
16,131.0	91.50	1.10	9,611.3	6,633.2	-508.5	453,132.25	729,908.26	32° 14' 36.922 N	103° 35' 22.983 W
16,225.0	91.50	359.90	9,608.8	6,727.1	-507.7	453,226.22	729,909.08	32° 14' 37.851 N	103° 35' 22.966 W
16,319.0	92.30	0.10	9,605.7	6,821.1	-507.7	453,320.16	729,909.08	32° 14' 38.781 N	103° 35' 22.958 W
16,413.0	90.80	359.00	9,603.2	6,915.0	-508.5	453,414.12	729,908.34	32° 14' 39.711 N	103° 35' 22.959 W
16,507.0	91.30	358.70	9,601.5	7,009.0	-510.3	453,508.09	729,906.45	32° 14' 40.641 N	103° 35' 22.974 W
16,601.0	90.10	357.40	9,600.3	7,102.9	-513.5	453,602.02	729,903.26	32° 14' 41.571 N	103° 35' 23.003 W
16,696.0	90.90	357.10	9,599.5	7,197.8	-518.1	453,696.91	729,898.70	32° 14' 42.510 N	103° 35' 23.049 W
16,790.0	90.60	357.20	9,598.2	7,291.7	-522.8	453,790.78	729,894.03	32° 14' 43.439 N	103° 35' 23.096 W
16,884.0	91.10	358.80	9,596.8	7,385.6	-526.1	453,884.71	729,890.74	32° 14' 44.369 N	103° 35' 23.126 W
16,978.0	90.20	359.20	9,595.8	7,479.6	-527.7	453,978.69	729,889.10	32° 14' 45.299 N	103° 35' 23.138 W
17,072.0	90.90	359.50	9,594.9	7,573.6	-528.8	454,072.68	729,888.04	32° 14' 46.229 N	103° 35' 23.143 W
17,165.0	90.70	359.50	9,593.6	7,666.6	-529.6	454,165.67	729,887.23	32° 14' 47.149 N	103° 35' 23.145 W
17,259.0	89.30	359.90	9,593.6	7,760.6	-530.1	454,259.66	729,886.73	32° 14' 48.080 N	103° 35' 23.143 W
17,354.0	89.70	359.70	9,594.4	7,855.6	-530.4	454,354.66	729,886.40	32° 14' 49.020 N	103° 35' 23.139 W
17,448.0	90.10	359.40	9,594.6	7,949.6	-531.1	454,448.66	729,885.66	32° 14' 49.950 N	103° 35' 23.140 W
17,542.0	89.30	0.60	9,595.1	8,043.6	-531.1	454,542.65	729,885.66	32° 14' 50.880 N	103° 35' 23.132 W
17,636.0	90.90	0.40	9,594.9	8,137.5	-530.3	454,636.65	729,886.48	32° 14' 51.810 N	103° 35' 23.115 W
17,730.0	89.70	0.80	9,594.4	8,231.5	-529.3	454,730.64	729,887.47	32° 14' 52.740 N	103° 35' 23.096 W
17,824.0	90.50	359.90	9,594.2	8,325.5	-528.8	454,824.63	729,888.04	32° 14' 53.670 N	103° 35' 23.082 W
17,918.0	89.70	0.20	9,594.1	8,419.5	-528.7	454,918.63	729,888.13	32° 14' 54.600 N	103° 35' 23.073 W
18,012.0	90.20	0.20	9,594.2	8,513.5	-528.3	455,012.63	729,888.45	32° 14' 55.530 N	103° 35' 23.062 W
18,106.0	89.20	359.90	9,594.7	8,607.5	-528.3	455,106.63	729,888.54	32° 14' 56.461 N	103° 35' 23.054 W
18,200.0	89.90	359.50	9,595.4	8,701.5	-528.8	455,200.62	729,888.04	32° 14' 57.391 N	103° 35' 23.052 W
18,294.0	90.20	358.80	9,595.3	8,795.5	-530.1	455,294.61	729,886.65	32° 14' 58.321 N	103° 35' 23.060 W
18,388.0	90.90	358.80	9,594.4	8,889.5	-532.1	455,388.59	729,884.68	32° 14' 59.251 N	103° 35' 23.076 W
18,483.0	89.70	358.80	9,593.9	8,984.5	-534.1	455,483.56	729,882.69	32° 15' 0.191 N	103° 35' 23.091 W
18,577.0	90.40	359.40	9,593.8	9,078.5	-535.6	455,577.55	729,881.21	32° 15' 1.121 N	103° 35' 23.101 W
18,671.0	88.50	359.90	9,594.7	9,172.4	-536.2	455,671.54	729,880.64	32° 15' 2.051 N	103° 35' 23.100 W
18,765.0	88.40	359.70	9,597.3	9,266.4	-536.5	455,765.50	729,880.31	32° 15' 2.981 N	103° 35' 23.096 W
18,859.0	90.20	359.50	9,598.4	9,360.4	-537.1	455,859.49	729,879.66	32° 15' 3.911 N	103° 35' 23.096 W
18,953.0	92.20	359.90	9,596.5	9,454.4	-537.6	455,953.46	729,879.16	32° 15' 4.841 N	103° 35' 23.094 W
19,047.0	92.00	359.90	9,593.0	9,548.3	-537.8	456,047.40	729,879.00	32° 15' 5.771 N	103° 35' 23.089 W
19,141.0	91.30	359.90	9,590.3	9,642.3	-538.0	456,141.36	729,878.84	32° 15' 6.700 N	103° 35' 23.083 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #9H
Project:	Lea County, NM	TVD Reference:	WELL @ 3630.1usft (Original Well Elev)
Site:	Eata Fajita State	MD Reference:	WELL @ 3630.1usft (Original Well Elev)
Well:	#9H	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
19,235.0	92.80	359.70	9,586.9	9,736.2	-538.3	456,235.30	729,878.51	32° 15' 7.630 N	103° 35' 23.079 W
19,330.0	93.00	359.70	9,582.1	9,831.1	-538.8	456,330.18	729,878.01	32° 15' 8.569 N	103° 35' 23.077 W
19,404.0	93.00	359.70	9,578.3	9,905.0	-539.2	456,404.07	729,877.62	32° 15' 9.300 N	103° 35' 23.076 W

PBHL(EF#9)

Checked By: _____	Approved By: _____	Date: _____
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