CONCHO

COG Operating, LLC

Lea County, NM
Sec 32, T24-S, R32E
Azores Federal #7H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

21 June, 2016

QES
DIRECTIONAL DRILLING

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Azores Federal #7H
Project:	Lea County, NM	**TVD Reference:**	Well @ 3517.0usft (McVay 8)
Site:	Sec 32, T24-S, R32E	**MD Reference:**	Well @ 3517.0usft (McVay 8)
Well:	Azores Federal #7H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

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	Sec 32, T24-S, R32E				
Site Position:		**Northing:**	429,960.20 usft	**Latitude:**	32° 10' 49.697 N
From:	Map	**Easting:**	697,210.20 usft	**Longitude:**	103° 41' 45.292 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.34 °

Well	Azores Federal #7H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	429,960.20 usft	**Latitude:**	32° 10' 49.697 N
	+E/-W	0.0 usft	**Easting:**	697,210.20 usft	**Longitude:**	103° 41' 45.292 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	0.0 usft	**Ground Level:**	3,491.0 usft

Wellbore	Wellbore #1			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	5/26/2016	7.12	60.02	48,007

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	355.20

Survey Program **Date** 6/21/2016

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
100.0	8,440.0	Gyro (Wellbore #1)	Good_gyro	Good Gyro
8,513.0	14,450.0	MWD Surveys (Wellbore #1)	MWD default	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	429,960.20	697,210.20	32° 10' 49.697 N	103° 41' 45.292 W
100.0	0.32	12.54	100.0	0.3	0.1	429,960.47	697,210.26	32° 10' 49.700 N	103° 41' 45.292 W
200.0	0.34	14.50	200.0	0.8	0.2	429,961.03	697,210.39	32° 10' 49.706 N	103° 41' 45.290 W
300.0	0.21	355.80	300.0	1.3	0.3	429,961.50	697,210.45	32° 10' 49.710 N	103° 41' 45.289 W
400.0	0.31	14.15	400.0	1.7	0.3	429,961.95	697,210.50	32° 10' 49.715 N	103° 41' 45.289 W
500.0	0.35	45.27	500.0	2.2	0.6	429,962.42	697,210.79	32° 10' 49.719 N	103° 41' 45.285 W
600.0	0.46	52.64	600.0	2.7	1.1	429,962.88	697,211.32	32° 10' 49.724 N	103° 41' 45.279 W
700.0	0.26	33.82	700.0	3.1	1.6	429,963.32	697,211.77	32° 10' 49.728 N	103° 41' 45.274 W
800.0	0.06	62.08	800.0	3.3	1.7	429,963.53	697,211.94	32° 10' 49.730 N	103° 41' 45.272 W
900.0	0.30	39.65	900.0	3.6	2.0	429,963.75	697,212.16	32° 10' 49.732 N	103° 41' 45.269 W
1,000.0	0.36	66.82	1,000.0	3.9	2.4	429,964.08	697,212.61	32° 10' 49.736 N	103° 41' 45.264 W

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Azores Federal #7H
Project:	Lea County, NM	**TVD Reference:**	Well @ 3517.0usft (McVay 8)
Site:	Sec 32, T24-S, R32E	**MD Reference:**	Well @ 3517.0usft (McVay 8)
Well:	Azores Federal #7H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

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	0.46	93.09	1,100.0	4.0	3.1	429,964.18	697,213.30	32° 10' 49.737 N	103° 41' 45.256 W
1,200.0	0.61	74.43	1,200.0	4.1	4.0	429,964.30	697,214.21	32° 10' 49.738 N	103° 41' 45.245 W
1,300.0	0.54	92.89	1,300.0	4.2	5.0	429,964.42	697,215.20	32° 10' 49.739 N	103° 41' 45.234 W
1,400.0	0.27	111.83	1,400.0	4.1	5.7	429,964.31	697,215.89	32° 10' 49.738 N	103° 41' 45.226 W
1,500.0	0.60	100.17	1,500.0	3.9	6.4	429,964.13	697,216.62	32° 10' 49.736 N	103° 41' 45.217 W
1,600.0	0.27	103.38	1,600.0	3.8	7.2	429,963.98	697,217.37	32° 10' 49.734 N	103° 41' 45.209 W
1,700.0	0.18	112.77	1,700.0	3.7	7.5	429,963.87	697,217.74	32° 10' 49.733 N	103° 41' 45.204 W
1,800.0	0.30	115.74	1,800.0	3.5	7.9	429,963.69	697,218.12	32° 10' 49.731 N	103° 41' 45.200 W
1,900.0	0.42	123.15	1,900.0	3.2	8.5	429,963.38	697,218.66	32° 10' 49.728 N	103° 41' 45.194 W
2,000.0	0.26	138.37	2,000.0	2.8	8.9	429,963.01	697,219.12	32° 10' 49.725 N	103° 41' 45.188 W
2,100.0	0.30	135.50	2,100.0	2.5	9.3	429,962.65	697,219.45	32° 10' 49.721 N	103° 41' 45.185 W
2,200.0	0.34	121.49	2,200.0	2.1	9.7	429,962.31	697,219.89	32° 10' 49.718 N	103° 41' 45.179 W
2,300.0	0.33	119.01	2,300.0	1.8	10.2	429,962.02	697,220.40	32° 10' 49.715 N	103° 41' 45.174 W
2,400.0	0.57	111.21	2,400.0	1.5	10.9	429,961.70	697,221.11	32° 10' 49.711 N	103° 41' 45.165 W
2,500.0	0.67	104.29	2,499.9	1.2	11.9	429,961.37	697,222.14	32° 10' 49.708 N	103° 41' 45.153 W
2,600.0	0.51	105.13	2,599.9	0.9	12.9	429,961.11	697,223.14	32° 10' 49.706 N	103° 41' 45.142 W
2,700.0	0.79	120.51	2,699.9	0.4	14.0	429,960.65	697,224.16	32° 10' 49.701 N	103° 41' 45.130 W
2,800.0	1.03	124.73	2,799.9	-0.4	15.3	429,959.78	697,225.49	32° 10' 49.692 N	103° 41' 45.114 W
2,900.0	1.11	117.16	2,899.9	-1.4	16.9	429,958.83	697,227.09	32° 10' 49.683 N	103° 41' 45.096 W
3,000.0	0.89	124.46	2,999.9	-2.3	18.4	429,957.95	697,228.60	32° 10' 49.674 N	103° 41' 45.079 W
3,100.0	0.75	154.33	3,099.9	-3.3	19.3	429,956.92	697,229.52	32° 10' 49.664 N	103° 41' 45.068 W
3,200.0	0.55	199.76	3,199.9	-4.3	19.4	429,955.88	697,229.64	32° 10' 49.653 N	103° 41' 45.066 W
3,300.0	0.71	203.63	3,299.9	-5.3	19.0	429,954.86	697,229.23	32° 10' 49.643 N	103° 41' 45.071 W
3,400.0	0.45	236.90	3,399.9	-6.1	18.5	429,954.08	697,228.65	32° 10' 49.636 N	103° 41' 45.078 W
3,500.0	0.86	234.73	3,499.9	-6.8	17.5	429,953.43	697,227.71	32° 10' 49.629 N	103° 41' 45.089 W
3,600.0	0.71	241.99	3,599.8	-7.5	16.4	429,952.70	697,226.55	32° 10' 49.622 N	103° 41' 45.103 W
3,700.0	1.02	246.58	3,699.8	-8.1	15.0	429,952.06	697,225.19	32° 10' 49.616 N	103° 41' 45.119 W
3,800.0	1.47	267.49	3,799.8	-8.6	12.9	429,951.65	697,223.09	32° 10' 49.612 N	103° 41' 45.143 W
3,900.0	1.71	268.96	3,899.8	-8.6	10.1	429,951.57	697,220.32	32° 10' 49.611 N	103° 41' 45.175 W
4,000.0	0.94	263.05	3,999.7	-8.8	7.8	429,951.44	697,218.01	32° 10' 49.610 N	103° 41' 45.202 W
4,100.0	0.88	241.49	4,099.7	-9.2	6.3	429,950.97	697,216.52	32° 10' 49.606 N	103° 41' 45.219 W
4,200.0	0.80	222.87	4,199.7	-10.1	5.2	429,950.10	697,215.37	32° 10' 49.597 N	103° 41' 45.233 W
4,300.0	1.23	200.60	4,299.7	-11.6	4.3	429,948.58	697,214.52	32° 10' 49.582 N	103° 41' 45.243 W
4,400.0	1.38	185.49	4,399.7	-13.8	3.8	429,946.38	697,214.03	32° 10' 49.560 N	103° 41' 45.249 W
4,500.0	1.47	198.38	4,499.7	-16.2	3.3	429,943.96	697,213.51	32° 10' 49.536 N	103° 41' 45.255 W
4,600.0	1.30	197.98	4,599.6	-18.5	2.6	429,941.66	697,212.75	32° 10' 49.514 N	103° 41' 45.264 W
4,700.0	1.36	206.71	4,699.6	-20.7	1.7	429,939.52	697,211.87	32° 10' 49.493 N	103° 41' 45.274 W
4,800.0	1.36	204.36	4,799.6	-22.8	0.7	429,937.38	697,210.85	32° 10' 49.471 N	103° 41' 45.286 W
4,900.0	1.25	221.41	4,899.5	-24.7	-0.6	429,935.48	697,209.64	32° 10' 49.453 N	103° 41' 45.301 W
5,000.0	1.41	205.98	4,999.5	-26.6	-1.8	429,933.56	697,208.38	32° 10' 49.434 N	103° 41' 45.315 W
5,100.0	1.35	223.24	5,099.5	-28.6	-3.2	429,931.60	697,207.03	32° 10' 49.414 N	103° 41' 45.331 W
5,200.0	1.55	223.70	5,199.5	-30.4	-4.9	429,929.76	697,205.29	32° 10' 49.396 N	103° 41' 45.352 W
5,300.0	1.44	217.62	5,299.4	-32.4	-6.6	429,927.79	697,203.59	32° 10' 49.377 N	103° 41' 45.372 W
5,400.0	1.51	216.71	5,399.4	-34.5	-8.2	429,925.74	697,202.03	32° 10' 49.357 N	103° 41' 45.390 W
5,500.0	1.65	191.97	5,499.4	-36.9	-9.2	429,923.27	697,200.95	32° 10' 49.332 N	103° 41' 45.403 W
5,600.0	1.37	205.47	5,599.3	-39.4	-10.1	429,920.78	697,200.13	32° 10' 49.308 N	103° 41' 45.412 W
5,700.0	1.37	206.13	5,699.3	-41.6	-11.1	429,918.63	697,199.09	32° 10' 49.287 N	103° 41' 45.425 W
5,800.0	1.24	201.35	5,799.3	-43.6	-12.0	429,916.55	697,198.17	32° 10' 49.266 N	103° 41' 45.435 W
5,900.0	1.07	202.43	5,899.2	-45.5	-12.8	429,914.68	697,197.42	32° 10' 49.248 N	103° 41' 45.444 W
6,000.0	1.08	199.00	5,999.2	-47.3	-13.4	429,912.93	697,196.76	32° 10' 49.230 N	103° 41' 45.452 W
6,100.0	1.14	206.53	6,099.2	-49.1	-14.2	429,911.14	697,196.01	32° 10' 49.213 N	103° 41' 45.461 W
6,200.0	1.18	207.49	6,199.2	-50.9	-15.1	429,909.34	697,195.09	32° 10' 49.195 N	103° 41' 45.472 W
6,300.0	1.14	211.70	6,299.2	-52.6	-16.1	429,907.58	697,194.09	32° 10' 49.178 N	103° 41' 45.483 W
6,400.0	1.01	202.12	6,399.1	-54.3	-17.0	429,905.92	697,193.24	32° 10' 49.161 N	103° 41' 45.494 W
6,500.0	0.84	208.65	6,499.1	-55.7	-17.6	429,904.46	697,192.55	32° 10' 49.147 N	103° 41' 45.502 W

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Azores Federal #7H
Project:	Lea County, NM	**TVD Reference:**	Well @ 3517.0usft (McVay 8)
Site:	Sec 32, T24-S, R32E	**MD Reference:**	Well @ 3517.0usft (McVay 8)
Well:	Azores Federal #7H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

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	0.69	191.30	6,599.1	-57.0	-18.1	429,903.22	697,192.08	32° 10' 49.135 N	103° 41' 45.507 W
6,700.0	0.91	195.67	6,699.1	-58.3	-18.4	429,901.87	697,191.75	32° 10' 49.121 N	103° 41' 45.511 W
6,800.0	0.91	194.67	6,799.1	-59.9	-18.9	429,900.34	697,191.33	32° 10' 49.106 N	103° 41' 45.516 W
6,900.0	0.78	178.09	6,899.1	-61.3	-19.0	429,898.89	697,191.16	32° 10' 49.092 N	103° 41' 45.518 W
7,000.0	0.83	202.24	6,999.1	-62.7	-19.3	429,897.54	697,190.90	32° 10' 49.078 N	103° 41' 45.521 W
7,100.0	0.63	195.07	7,099.1	-63.9	-19.7	429,896.34	697,190.49	32° 10' 49.066 N	103° 41' 45.526 W
7,200.0	0.70	197.71	7,199.1	-65.0	-20.0	429,895.22	697,190.16	32° 10' 49.055 N	103° 41' 45.530 W
7,300.0	0.83	184.87	7,299.1	-66.3	-20.3	429,893.92	697,189.91	32° 10' 49.043 N	103° 41' 45.533 W
7,400.0	0.70	195.13	7,399.0	-67.6	-20.5	429,892.61	697,189.69	32° 10' 49.030 N	103° 41' 45.536 W
7,500.0	0.81	201.49	7,499.0	-68.8	-20.9	429,891.36	697,189.27	32° 10' 49.017 N	103° 41' 45.541 W
7,600.0	0.75	206.83	7,599.0	-70.1	-21.5	429,890.12	697,188.72	32° 10' 49.005 N	103° 41' 45.547 W
7,700.0	0.55	204.78	7,699.0	-71.1	-22.0	429,889.10	697,188.22	32° 10' 48.995 N	103° 41' 45.553 W
7,800.0	0.39	192.02	7,799.0	-71.9	-22.2	429,888.33	697,187.95	32° 10' 48.987 N	103° 41' 45.556 W
7,900.0	0.36	193.12	7,899.0	-72.5	-22.4	429,887.69	697,187.81	32° 10' 48.981 N	103° 41' 45.558 W
8,000.0	0.46	178.24	7,999.0	-73.2	-22.4	429,886.98	697,187.75	32° 10' 48.974 N	103° 41' 45.559 W
8,100.0	0.44	176.23	8,099.0	-74.0	-22.4	429,886.20	697,187.79	32° 10' 48.966 N	103° 41' 45.558 W
8,200.0	0.20	188.87	8,199.0	-74.6	-22.4	429,885.65	697,187.78	32° 10' 48.961 N	103° 41' 45.558 W
8,300.0	0.37	194.25	8,299.0	-75.0	-22.5	429,885.16	697,187.68	32° 10' 48.956 N	103° 41' 45.560 W
8,440.0	1.62	202.76	8,439.0	-77.3	-23.4	429,882.90	697,186.80	32° 10' 48.934 N	103° 41' 45.570 W
VES Gyro Tie-in @ 8440' MD / 8439' TVD									
8,513.0	1.10	225.60	8,512.0	-78.7	-24.3	429,881.45	697,185.90	32° 10' 48.919 N	103° 41' 45.581 W
8,608.0	2.80	276.80	8,606.9	-79.1	-27.3	429,881.09	697,182.95	32° 10' 48.916 N	103° 41' 45.615 W
8,655.0	9.60	295.80	8,653.6	-77.3	-31.9	429,882.94	697,178.27	32° 10' 48.935 N	103° 41' 45.669 W
8,702.0	15.60	305.30	8,699.5	-71.9	-40.6	429,888.30	697,169.58	32° 10' 48.988 N	103° 41' 45.770 W
8,749.0	22.30	306.80	8,743.9	-62.9	-52.9	429,897.30	697,157.26	32° 10' 49.078 N	103° 41' 45.913 W
8,797.0	27.40	313.70	8,787.4	-49.8	-68.2	429,910.40	697,141.97	32° 10' 49.209 N	103° 41' 46.090 W
8,844.0	31.90	322.50	8,828.3	-32.5	-83.6	429,927.74	697,126.58	32° 10' 49.381 N	103° 41' 46.268 W
8,891.0	37.20	330.00	8,867.0	-10.3	-98.3	429,949.92	697,111.90	32° 10' 49.601 N	103° 41' 46.437 W
8,938.0	42.30	334.30	8,903.1	16.3	-112.3	429,976.50	697,097.92	32° 10' 49.865 N	103° 41' 46.598 W
8,986.0	46.80	333.20	8,937.3	46.5	-127.2	430,006.69	697,083.02	32° 10' 50.165 N	103° 41' 46.769 W
9,033.0	51.40	333.70	8,968.1	78.3	-143.0	430,038.46	697,067.15	32° 10' 50.480 N	103° 41' 46.951 W
9,080.0	55.30	335.30	8,996.2	112.3	-159.3	430,072.49	697,050.94	32° 10' 50.818 N	103° 41' 47.138 W
9,127.0	60.70	336.00	9,021.1	148.6	-175.7	430,108.79	697,034.51	32° 10' 51.178 N	103° 41' 47.326 W
9,174.0	66.00	335.50	9,042.1	186.9	-192.9	430,147.08	697,017.26	32° 10' 51.558 N	103° 41' 47.524 W
9,202.6	69.10	334.51	9,053.1	210.8	-204.1	430,171.03	697,006.10	32° 10' 51.796 N	103° 41' 47.653 W
Crossed Lease Line @ 9203' MD / 9053' TVD									
9,221.0	71.10	333.90	9,059.3	226.4	-211.6	430,186.61	696,998.57	32° 10' 51.950 N	103° 41' 47.739 W
9,266.0	76.80	335.50	9,071.8	265.5	-230.1	430,225.69	696,980.10	32° 10' 52.338 N	103° 41' 47.951 W
9,297.0	77.60	335.70	9,078.6	293.0	-242.6	430,253.22	696,967.61	32° 10' 52.611 N	103° 41' 48.095 W
9,344.0	80.80	335.80	9,087.4	335.1	-261.5	430,295.31	696,948.65	32° 10' 53.029 N	103° 41' 48.312 W
9,392.0	85.50	335.70	9,093.1	378.6	-281.1	430,338.75	696,929.09	32° 10' 53.460 N	103° 41' 48.537 W
9,486.0	91.30	340.10	9,095.8	465.6	-316.4	430,425.75	696,893.76	32° 10' 54.323 N	103° 41' 48.942 W
9,580.0	91.70	343.90	9,093.3	554.9	-345.5	430,515.11	696,864.73	32° 10' 55.209 N	103° 41' 49.274 W
9,675.0	89.10	345.50	9,092.6	646.5	-370.5	430,606.73	696,839.67	32° 10' 56.117 N	103° 41' 49.559 W
9,769.0	88.60	349.00	9,094.5	738.2	-391.3	430,698.37	696,818.93	32° 10' 57.025 N	103° 41' 49.794 W
9,863.0	90.60	353.10	9,095.2	831.0	-405.9	430,791.20	696,804.31	32° 10' 57.945 N	103° 41' 49.958 W
9,958.0	90.40	355.90	9,094.4	925.6	-415.0	430,885.75	696,795.20	32° 10' 58.881 N	103° 41' 50.057 W
10,052.0	89.30	359.20	9,094.6	1,019.5	-419.0	430,979.65	696,791.19	32° 10' 59.810 N	103° 41' 50.098 W
10,147.0	89.70	359.40	9,095.4	1,114.4	-420.2	431,074.64	696,790.03	32° 11' 0.750 N	103° 41' 50.105 W
10,241.0	90.30	359.80	9,095.4	1,208.4	-420.8	431,168.64	696,789.37	32° 11' 1.680 N	103° 41' 50.106 W
10,336.0	90.90	359.40	9,094.4	1,303.4	-421.5	431,263.63	696,788.71	32° 11' 2.621 N	103° 41' 50.107 W
10,430.0	90.90	359.80	9,093.0	1,397.4	-422.1	431,357.62	696,788.05	32° 11' 3.551 N	103° 41' 50.108 W
10,525.0	89.50	0.10	9,092.6	1,492.4	-422.2	431,452.61	696,787.97	32° 11' 4.491 N	103° 41' 50.102 W
10,619.0	91.40	359.90	9,091.9	1,586.4	-422.2	431,546.61	696,787.97	32° 11' 5.421 N	103° 41' 50.096 W
10,713.0	89.30	0.40	9,091.3	1,680.4	-422.0	431,640.60	696,788.21	32° 11' 6.351 N	103° 41' 50.087 W

Company:	COG Operating, LLC	**Local Co-ordinate Reference:**	Well Azores Federal #7H
Project:	Lea County, NM	**TVD Reference:**	Well @ 3517.0usft (McVay 8)
Site:	Sec 32, T24-S, R32E	**MD Reference:**	Well @ 3517.0usft (McVay 8)
Well:	Azores Federal #7H	**North Reference:**	Grid
Wellbore:	Wellbore #1	**Survey Calculation Method:**	Minimum Curvature
Design:	Wellbore #1	**Database:**	EDM5002

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,808.0	88.60	1.00	9,093.1	1,775.4	-420.8	431,735.57	696,789.37	32° 11' 7.291 N	103° 41' 50.067 W
10,902.0	91.90	0.80	9,092.7	1,869.3	-419.3	431,829.55	696,790.85	32° 11' 8.221 N	103° 41' 50.043 W
10,997.0	90.00	1.70	9,091.1	1,964.3	-417.3	431,924.51	696,792.92	32° 11' 9.160 N	103° 41' 50.012 W
11,091.0	90.10	0.30	9,091.0	2,058.3	-415.6	432,018.49	696,794.56	32° 11' 10.090 N	103° 41' 49.987 W
11,185.0	88.80	358.50	9,091.9	2,152.3	-416.6	432,112.48	696,793.58	32° 11' 11.020 N	103° 41' 49.992 W
11,280.0	90.80	359.00	9,092.2	2,247.2	-418.7	432,207.45	696,791.51	32° 11' 11.960 N	103° 41' 50.009 W
11,374.0	90.20	359.40	9,091.4	2,341.2	-420.0	432,301.43	696,790.19	32° 11' 12.890 N	103° 41' 50.018 W
11,469.0	87.00	358.70	9,093.7	2,436.2	-421.6	432,396.38	696,788.62	32° 11' 13.830 N	103° 41' 50.030 W
11,563.0	87.80	358.30	9,098.0	2,530.0	-424.0	432,490.25	696,786.16	32° 11' 14.759 N	103° 41' 50.052 W
11,658.0	89.30	358.30	9,100.4	2,625.0	-426.9	432,585.17	696,783.35	32° 11' 15.699 N	103° 41' 50.078 W
11,752.0	88.30	359.40	9,102.4	2,718.9	-428.7	432,679.13	696,781.46	32° 11' 16.629 N	103° 41' 50.094 W
11,846.0	89.80	359.40	9,103.9	2,812.9	-429.7	432,773.11	696,780.48	32° 11' 17.559 N	103° 41' 50.099 W
11,941.0	89.30	359.80	9,104.7	2,907.9	-430.4	432,868.11	696,779.81	32° 11' 18.499 N	103° 41' 50.100 W
12,035.0	88.90	359.20	9,106.1	3,001.9	-431.2	432,962.09	696,778.99	32° 11' 19.429 N	103° 41' 50.103 W
12,129.0	88.70	359.40	9,108.1	3,095.9	-432.4	433,056.06	696,777.84	32° 11' 20.359 N	103° 41' 50.110 W
12,224.0	90.50	359.00	9,108.8	3,190.8	-433.7	433,151.05	696,776.52	32° 11' 21.299 N	103° 41' 50.119 W
12,318.0	89.80	358.70	9,108.5	3,284.8	-435.6	433,245.03	696,774.63	32° 11' 22.229 N	103° 41' 50.134 W
12,413.0	92.00	359.60	9,107.0	3,379.8	-437.0	433,340.00	696,773.22	32° 11' 23.169 N	103° 41' 50.144 W
12,507.0	90.40	0.40	9,105.1	3,473.8	-437.0	433,433.97	696,773.22	32° 11' 24.099 N	103° 41' 50.138 W
12,601.0	89.10	0.40	9,105.5	3,567.8	-436.3	433,527.97	696,773.88	32° 11' 25.029 N	103° 41' 50.124 W
12,696.0	89.90	0.40	9,106.3	3,662.8	-435.7	433,622.96	696,774.54	32° 11' 25.969 N	103° 41' 50.109 W
12,790.0	91.70	0.60	9,105.0	3,756.7	-434.8	433,716.94	696,775.36	32° 11' 26.899 N	103° 41' 50.093 W
12,884.0	89.10	0.60	9,104.3	3,850.7	-433.9	433,810.93	696,776.35	32° 11' 27.829 N	103° 41' 50.075 W
12,979.0	89.90	0.80	9,105.2	3,945.7	-432.7	433,905.92	696,777.51	32° 11' 28.769 N	103° 41' 50.055 W
13,073.0	88.60	359.90	9,106.4	4,039.7	-432.1	433,999.90	696,778.08	32° 11' 29.699 N	103° 41' 50.042 W
13,168.0	89.80	359.60	9,107.7	4,134.7	-432.5	434,094.89	696,777.67	32° 11' 30.639 N	103° 41' 50.041 W
13,262.0	89.40	359.60	9,108.4	4,228.7	-433.2	434,188.89	696,777.01	32° 11' 31.569 N	103° 41' 50.042 W
13,357.0	89.40	359.00	9,109.4	4,323.7	-434.3	434,283.88	696,775.85	32° 11' 32.509 N	103° 41' 50.049 W
13,451.0	88.10	357.30	9,111.4	4,417.6	-437.4	434,377.80	696,772.82	32° 11' 33.439 N	103° 41' 50.077 W
13,545.0	87.40	356.80	9,115.1	4,511.4	-442.2	434,471.60	696,767.98	32° 11' 34.367 N	103° 41' 50.127 W
13,640.0	89.20	357.10	9,117.9	4,606.2	-447.3	434,566.42	696,762.93	32° 11' 35.306 N	103° 41' 50.180 W
13,734.0	88.90	356.10	9,119.5	4,700.0	-452.8	434,660.24	696,757.36	32° 11' 36.235 N	103° 41' 50.238 W
13,828.0	89.80	356.20	9,120.6	4,793.8	-459.2	434,754.02	696,751.04	32° 11' 37.163 N	103° 41' 50.305 W
13,923.0	90.80	356.20	9,120.1	4,888.6	-465.4	434,848.81	696,744.75	32° 11' 38.101 N	103° 41' 50.372 W
14,017.0	91.60	356.20	9,118.1	4,982.4	-471.7	434,942.58	696,738.52	32° 11' 39.030 N	103° 41' 50.438 W
14,111.0	90.40	357.10	9,116.5	5,076.2	-477.2	435,036.40	696,733.03	32° 11' 39.959 N	103° 41' 50.495 W
14,206.0	91.40	357.50	9,115.0	5,171.1	-481.6	435,131.29	696,728.55	32° 11' 40.898 N	103° 41' 50.541 W
14,269.0	92.30	356.90	9,112.9	5,234.0	-484.7	435,194.18	696,725.48	32° 11' 41.520 N	103° 41' 50.572 W
14,450.0	92.30	356.90	9,105.7	5,414.6	-494.5	435,374.77	696,715.70	32° 11' 43.308 N	103° 41' 50.674 W
TD 14450' MD / 9106' TVD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,440.0	8,439.0	-77.3	-23.4	VES Gyro Tie-in @ 8440' MD / 8439' TVD
9,202.6	9,053.1	210.8	-204.1	Crossed Lease Line @ 9203' MD / 9053' TVD
14,450.0	9,105.7	5,414.6	-494.5	TD 14450' MD / 9106' TVD

Checked By: _____ Approved By: _____ Date: _____