



COG Operating, LLC

Eddy County, NM (NAD 27)

Sec. 9, T26S, R28E

SRO State Com #30H

Wellbore #1

30.015-44196

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 01 2017

RECEIVED

Design: Wellbore #1

Survey Report - Geographic

18 July, 2017

Please provide signature
page for directional survey





Survey Report - Geographic



Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5002

Project Eddy 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. 9, T26S, R28E
Site Position: Northing: 382,240.80 usft Latitude: 32° 3' 2.350 N
From: Map Easting: 576,774.00 usft Longitude: 104° 5' 7.926 W
Position Uncertainty: 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.13 °

Well SRO State Com #30H
Well Position +N/-S 0.0 usft Northing: 382,240.80 usft Latitude: 32° 3' 2.350 N
+E/-W 0.0 usft Easting: 576,774.00 usft Longitude: 104° 5' 7.926 W
Position Uncertainty 0.0 usft Wellhead Elevation: 0.0 usft Ground Level: 3,037.0 usft

Wellbore Wellbore #1
Magnetics Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)
IGRF2010 6/30/2017 7.07 59.79 47,858

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 1.70

Survey Program Date 7/18/2017
From (usft) **To** (usft) **Survey (Wellbore)** **Tool Name** **Description**
100.0 7,450.0 Computed Keeper Gyro Wireline Survey (W GYRO-NS Gyrocompass Gyro
7,528.0 17,905.0 MWD Surveys (Tied into Keeper Gyro) (W MWD+IFR1+MS OWSG MWD + IFR1 + Multi-Station Correction

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	382,240.80	576,774.00	32° 3' 2.350 N	104° 5' 7.926 W
100.0	0.50	345.62	100.0	0.4	-0.1	382,241.22	576,773.89	32° 3' 2.354 N	104° 5' 7.927 W
125.0	0.55	341.22	125.0	0.6	-0.2	382,241.44	576,773.83	32° 3' 2.356 N	104° 5' 7.928 W
150.0	0.43	335.49	150.0	0.8	-0.3	382,241.64	576,773.75	32° 3' 2.358 N	104° 5' 7.929 W
175.0	0.44	329.68	175.0	1.0	-0.3	382,241.81	576,773.66	32° 3' 2.360 N	104° 5' 7.930 W
200.0	0.38	308.57	200.0	1.1	-0.5	382,241.94	576,773.55	32° 3' 2.361 N	104° 5' 7.931 W
225.0	0.34	290.05	225.0	1.2	-0.6	382,242.02	576,773.42	32° 3' 2.362 N	104° 5' 7.933 W
250.0	0.39	282.06	250.0	1.3	-0.7	382,242.06	576,773.26	32° 3' 2.362 N	104° 5' 7.935 W
275.0	0.40	283.38	275.0	1.3	-0.9	382,242.10	576,773.10	32° 3' 2.363 N	104° 5' 7.937 W
300.0	0.38	288.06	300.0	1.3	-1.1	382,242.15	576,772.93	32° 3' 2.363 N	104° 5' 7.939 W
325.0	0.41	297.72	325.0	1.4	-1.2	382,242.21	576,772.77	32° 3' 2.364 N	104° 5' 7.940 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	
350.0	0.38	303.92	350.0	1.5	-1.4	382,242.30	576,772.63	32° 3' 2.365 N	104° 5' 7.942 W	
375.0	0.29	319.99	375.0	1.6	-1.5	382,242.40	576,772.52	32° 3' 2.366 N	104° 5' 7.943 W	
400.0	0.24	304.79	400.0	1.7	-1.6	382,242.47	576,772.43	32° 3' 2.366 N	104° 5' 7.944 W	
425.0	0.17	307.86	425.0	1.7	-1.6	382,242.53	576,772.36	32° 3' 2.367 N	104° 5' 7.945 W	
450.0	0.21	294.37	450.0	1.8	-1.7	382,242.57	576,772.29	32° 3' 2.367 N	104° 5' 7.946 W	
475.0	0.19	276.61	475.0	1.8	-1.8	382,242.59	576,772.21	32° 3' 2.368 N	104° 5' 7.947 W	
500.0	0.29	268.78	500.0	1.8	-1.9	382,242.60	576,772.10	32° 3' 2.368 N	104° 5' 7.948 W	
525.0	0.28	287.24	525.0	1.8	-2.0	382,242.61	576,771.98	32° 3' 2.368 N	104° 5' 7.950 W	
550.0	0.42	314.51	550.0	1.9	-2.1	382,242.70	576,771.86	32° 3' 2.369 N	104° 5' 7.951 W	
575.0	0.63	337.95	575.0	2.1	-2.3	382,242.89	576,771.74	32° 3' 2.371 N	104° 5' 7.952 W	
600.0	0.67	339.06	600.0	2.4	-2.4	382,243.15	576,771.64	32° 3' 2.373 N	104° 5' 7.954 W	
625.0	0.63	346.66	625.0	2.6	-2.5	382,243.42	576,771.55	32° 3' 2.376 N	104° 5' 7.955 W	
650.0	0.56	353.46	650.0	2.9	-2.5	382,243.68	576,771.51	32° 3' 2.378 N	104° 5' 7.955 W	
675.0	0.56	346.49	675.0	3.1	-2.5	382,243.92	576,771.46	32° 3' 2.381 N	104° 5' 7.956 W	
700.0	0.54	338.40	700.0	3.3	-2.6	382,244.14	576,771.39	32° 3' 2.383 N	104° 5' 7.956 W	
725.0	0.60	338.78	725.0	3.6	-2.7	382,244.38	576,771.30	32° 3' 2.385 N	104° 5' 7.957 W	
750.0	0.70	334.53	750.0	3.8	-2.8	382,244.64	576,771.19	32° 3' 2.388 N	104° 5' 7.959 W	
775.0	0.96	336.60	775.0	4.2	-3.0	382,244.97	576,771.04	32° 3' 2.391 N	104° 5' 7.960 W	
800.0	0.96	346.66	800.0	4.6	-3.1	382,245.36	576,770.91	32° 3' 2.395 N	104° 5' 7.962 W	
825.0	1.00	349.94	825.0	5.0	-3.2	382,245.78	576,770.82	32° 3' 2.399 N	104° 5' 7.963 W	
850.0	0.90	350.69	850.0	5.4	-3.3	382,246.19	576,770.75	32° 3' 2.403 N	104° 5' 7.964 W	
875.0	1.03	344.46	875.0	5.8	-3.3	382,246.60	576,770.66	32° 3' 2.407 N	104° 5' 7.965 W	
900.0	1.23	341.42	900.0	6.3	-3.5	382,247.07	576,770.51	32° 3' 2.412 N	104° 5' 7.967 W	
925.0	1.44	341.18	925.0	6.8	-3.7	382,247.62	576,770.33	32° 3' 2.417 N	104° 5' 7.969 W	
950.0	1.76	344.24	949.9	7.5	-3.9	382,248.29	576,770.12	32° 3' 2.424 N	104° 5' 7.971 W	
975.0	2.01	346.84	974.9	8.3	-4.1	382,249.09	576,769.92	32° 3' 2.432 N	104° 5' 7.973 W	
1,000.0	2.31	343.71	999.9	9.2	-4.3	382,250.00	576,769.68	32° 3' 2.441 N	104° 5' 7.976 W	
1,025.0	2.68	341.70	1,024.9	10.2	-4.7	382,251.03	576,769.35	32° 3' 2.451 N	104° 5' 7.980 W	
1,050.0	3.09	340.24	1,049.9	11.4	-5.1	382,252.22	576,768.94	32° 3' 2.463 N	104° 5' 7.985 W	
1,075.0	3.59	342.41	1,074.8	12.8	-5.5	382,253.60	576,768.48	32° 3' 2.477 N	104° 5' 7.990 W	
1,100.0	3.54	340.36	1,099.8	14.3	-6.0	382,255.08	576,767.98	32° 3' 2.491 N	104° 5' 7.996 W	
1,125.0	3.38	334.14	1,124.7	15.7	-6.6	382,256.47	576,767.40	32° 3' 2.505 N	104° 5' 8.002 W	
1,150.0	2.80	324.97	1,149.7	16.8	-7.3	382,257.63	576,766.73	32° 3' 2.517 N	104° 5' 8.010 W	
1,175.0	2.05	310.55	1,174.7	17.6	-8.0	382,258.42	576,766.04	32° 3' 2.524 N	104° 5' 8.018 W	
1,200.0	1.37	284.71	1,199.6	18.0	-8.6	382,258.79	576,765.41	32° 3' 2.528 N	104° 5' 8.026 W	
1,225.0	1.21	253.95	1,224.6	18.0	-9.1	382,258.79	576,764.86	32° 3' 2.528 N	104° 5' 8.032 W	
1,250.0	1.29	252.71	1,249.6	17.8	-9.7	382,258.63	576,764.34	32° 3' 2.527 N	104° 5' 8.038 W	
1,275.0	1.13	249.94	1,274.6	17.7	-10.2	382,258.47	576,763.84	32° 3' 2.525 N	104° 5' 8.044 W	
1,300.0	1.11	248.93	1,299.6	17.5	-10.6	382,258.29	576,763.38	32° 3' 2.523 N	104° 5' 8.049 W	
1,325.0	1.08	244.36	1,324.6	17.3	-11.1	382,258.10	576,762.95	32° 3' 2.521 N	104° 5' 8.054 W	
1,350.0	1.05	249.71	1,349.6	17.1	-11.5	382,257.92	576,762.52	32° 3' 2.520 N	104° 5' 8.059 W	
1,375.0	1.11	252.82	1,374.6	17.0	-11.9	382,257.77	576,762.07	32° 3' 2.518 N	104° 5' 8.064 W	
1,400.0	0.93	258.82	1,399.6	16.9	-12.4	382,257.66	576,761.64	32° 3' 2.517 N	104° 5' 8.069 W	
1,425.0	0.76	265.54	1,424.6	16.8	-12.7	382,257.61	576,761.28	32° 3' 2.517 N	104° 5' 8.074 W	
1,450.0	0.53	272.70	1,449.6	16.8	-13.0	382,257.60	576,761.00	32° 3' 2.516 N	104° 5' 8.077 W	
1,475.0	0.41	273.13	1,474.6	16.8	-13.2	382,257.61	576,760.79	32° 3' 2.517 N	104° 5' 8.079 W	
1,500.0	0.39	252.76	1,499.6	16.8	-13.4	382,257.59	576,760.62	32° 3' 2.516 N	104° 5' 8.081 W	
1,525.0	0.42	248.95	1,524.6	16.7	-13.5	382,257.53	576,760.46	32° 3' 2.516 N	104° 5' 8.083 W	
1,550.0	0.54	255.89	1,549.6	16.7	-13.7	382,257.47	576,760.26	32° 3' 2.515 N	104° 5' 8.085 W	
1,575.0	0.56	270.97	1,574.6	16.6	-14.0	382,257.45	576,760.02	32° 3' 2.515 N	104° 5' 8.088 W	
1,600.0	0.47	278.12	1,599.6	16.7	-14.2	382,257.46	576,759.80	32° 3' 2.515 N	104° 5' 8.091 W	
1,625.0	0.42	257.83	1,624.6	16.7	-14.4	382,257.46	576,759.60	32° 3' 2.515 N	104° 5' 8.093 W	
1,650.0	0.51	258.49	1,649.6	16.6	-14.6	382,257.42	576,759.41	32° 3' 2.515 N	104° 5' 8.095 W	
1,675.0	0.65	250.48	1,674.6	16.5	-14.8	382,257.35	576,759.16	32° 3' 2.514 N	104° 5' 8.098 W	
1,700.0	0.74	257.04	1,699.6	16.5	-15.1	382,257.26	576,758.87	32° 3' 2.513 N	104° 5' 8.102 W	

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
1,725.0	0.79	269.10	1,724.6	16.4	-15.5	382,257.22	576,758.54	32° 3' 2.513 N	104° 5' 8.105 W
1,750.0	0.68	279.84	1,749.6	16.4	-15.8	382,257.25	576,758.22	32° 3' 2.513 N	104° 5' 8.109 W
1,775.0	0.73	252.58	1,774.6	16.4	-16.1	382,257.22	576,757.93	32° 3' 2.513 N	104° 5' 8.113 W
1,800.0	0.68	261.89	1,799.6	16.4	-16.4	382,257.16	576,757.63	32° 3' 2.512 N	104° 5' 8.116 W
1,825.0	0.71	266.54	1,824.6	16.3	-16.7	382,257.12	576,757.33	32° 3' 2.512 N	104° 5' 8.119 W
1,850.0	0.44	284.80	1,849.6	16.3	-16.9	382,257.14	576,757.08	32° 3' 2.512 N	104° 5' 8.122 W
1,875.0	0.19	300.67	1,874.6	16.4	-17.1	382,257.19	576,756.95	32° 3' 2.512 N	104° 5' 8.124 W
1,900.0	0.12	59.11	1,899.6	16.4	-17.1	382,257.22	576,756.94	32° 3' 2.513 N	104° 5' 8.124 W
1,925.0	0.38	55.95	1,924.6	16.5	-17.0	382,257.28	576,757.03	32° 3' 2.513 N	104° 5' 8.123 W
1,950.0	0.51	70.44	1,949.6	16.6	-16.8	382,257.36	576,757.20	32° 3' 2.514 N	104° 5' 8.121 W
1,975.0	0.52	42.06	1,974.6	16.7	-16.6	382,257.49	576,757.38	32° 3' 2.515 N	104° 5' 8.119 W
2,000.0	0.59	45.05	1,999.6	16.9	-16.5	382,257.66	576,757.55	32° 3' 2.517 N	104° 5' 8.117 W
2,025.0	0.79	37.87	2,024.6	17.1	-16.3	382,257.89	576,757.75	32° 3' 2.519 N	104° 5' 8.115 W
2,050.0	0.99	51.67	2,049.6	17.4	-16.0	382,258.16	576,758.02	32° 3' 2.522 N	104° 5' 8.111 W
2,075.0	0.92	52.79	2,074.6	17.6	-15.7	382,258.41	576,758.35	32° 3' 2.525 N	104° 5' 8.108 W
2,100.0	1.07	54.95	2,099.6	17.9	-15.3	382,258.67	576,758.70	32° 3' 2.527 N	104° 5' 8.103 W
2,125.0	1.26	52.55	2,124.6	18.2	-14.9	382,258.97	576,759.11	32° 3' 2.530 N	104° 5' 8.099 W
2,150.0	1.40	58.25	2,149.6	18.5	-14.4	382,259.30	576,759.59	32° 3' 2.533 N	104° 5' 8.093 W
2,175.0	1.56	71.06	2,174.5	18.8	-13.8	382,259.57	576,760.17	32° 3' 2.536 N	104° 5' 8.086 W
2,200.0	1.70	83.70	2,199.5	18.9	-13.1	382,259.72	576,760.86	32° 3' 2.537 N	104° 5' 8.078 W
2,225.0	1.70	94.07	2,224.5	18.9	-12.4	382,259.73	576,761.60	32° 3' 2.538 N	104° 5' 8.070 W
2,250.0	1.76	101.17	2,249.5	18.8	-11.7	382,259.63	576,762.35	32° 3' 2.537 N	104° 5' 8.061 W
2,275.0	1.89	109.60	2,274.5	18.6	-10.9	382,259.42	576,763.11	32° 3' 2.534 N	104° 5' 8.052 W
2,300.0	1.72	121.49	2,299.5	18.3	-10.2	382,259.09	576,763.82	32° 3' 2.531 N	104° 5' 8.044 W
2,325.0	1.21	132.05	2,324.5	17.9	-9.7	382,258.71	576,764.33	32° 3' 2.527 N	104° 5' 8.038 W
2,350.0	0.93	144.98	2,349.5	17.6	-9.4	382,258.37	576,764.65	32° 3' 2.524 N	104° 5' 8.034 W
2,375.0	0.80	156.68	2,374.5	17.2	-9.2	382,258.04	576,764.83	32° 3' 2.521 N	104° 5' 8.032 W
2,400.0	0.62	155.31	2,399.5	17.0	-9.0	382,257.76	576,764.96	32° 3' 2.518 N	104° 5' 8.031 W
2,425.0	0.66	154.16	2,424.5	16.7	-8.9	382,257.51	576,765.08	32° 3' 2.515 N	104° 5' 8.029 W
2,450.0	0.71	151.45	2,449.5	16.4	-8.8	382,257.24	576,765.21	32° 3' 2.513 N	104° 5' 8.028 W
2,475.0	0.87	158.73	2,474.5	16.1	-8.6	382,256.93	576,765.36	32° 3' 2.510 N	104° 5' 8.026 W
2,500.0	0.73	165.57	2,499.5	15.8	-8.5	382,256.60	576,765.47	32° 3' 2.506 N	104° 5' 8.025 W
2,525.0	0.67	162.80	2,524.5	15.5	-8.5	382,256.30	576,765.55	32° 3' 2.504 N	104° 5' 8.024 W
2,550.0	0.58	159.58	2,549.5	15.2	-8.4	382,256.05	576,765.64	32° 3' 2.501 N	104° 5' 8.023 W
2,575.0	0.53	158.78	2,574.5	15.0	-8.3	382,255.82	576,765.72	32° 3' 2.499 N	104° 5' 8.022 W
2,600.0	0.68	146.61	2,599.5	14.8	-8.2	382,255.59	576,765.85	32° 3' 2.496 N	104° 5' 8.021 W
2,625.0	0.69	163.43	2,624.5	14.5	-8.0	382,255.32	576,765.97	32° 3' 2.494 N	104° 5' 8.019 W
2,650.0	0.59	162.66	2,649.5	14.3	-8.0	382,255.05	576,766.05	32° 3' 2.491 N	104° 5' 8.018 W
2,675.0	0.65	163.75	2,674.5	14.0	-7.9	382,254.79	576,766.13	32° 3' 2.489 N	104° 5' 8.017 W
2,700.0	0.61	161.16	2,699.5	13.7	-7.8	382,254.53	576,766.21	32° 3' 2.486 N	104° 5' 8.016 W
2,725.0	0.61	157.26	2,724.5	13.5	-7.7	382,254.28	576,766.31	32° 3' 2.484 N	104° 5' 8.015 W
2,750.0	0.65	148.57	2,749.4	13.2	-7.6	382,254.04	576,766.43	32° 3' 2.481 N	104° 5' 8.014 W
2,775.0	0.75	163.15	2,774.4	13.0	-7.4	382,253.76	576,766.55	32° 3' 2.478 N	104° 5' 8.012 W
2,800.0	0.63	169.68	2,799.4	12.7	-7.4	382,253.47	576,766.63	32° 3' 2.475 N	104° 5' 8.012 W
2,825.0	0.61	158.72	2,824.4	12.4	-7.3	382,253.21	576,766.70	32° 3' 2.473 N	104° 5' 8.011 W
2,850.0	0.66	161.41	2,849.4	12.2	-7.2	382,252.95	576,766.79	32° 3' 2.470 N	104° 5' 8.010 W
2,875.0	0.65	164.01	2,874.4	11.9	-7.1	382,252.68	576,766.88	32° 3' 2.468 N	104° 5' 8.009 W
2,900.0	0.78	154.35	2,899.4	11.6	-7.0	382,252.39	576,766.99	32° 3' 2.465 N	104° 5' 8.007 W
2,925.0	0.68	163.25	2,924.4	11.3	-6.9	382,252.09	576,767.11	32° 3' 2.462 N	104° 5' 8.006 W
2,950.0	0.64	160.94	2,949.4	11.0	-6.8	382,251.82	576,767.19	32° 3' 2.459 N	104° 5' 8.005 W
2,975.0	0.61	159.64	2,974.4	10.8	-6.7	382,251.56	576,767.29	32° 3' 2.457 N	104° 5' 8.004 W
3,000.0	0.61	156.89	2,999.4	10.5	-6.6	382,251.31	576,767.39	32° 3' 2.454 N	104° 5' 8.003 W
3,025.0	0.62	156.69	3,024.4	10.3	-6.5	382,251.07	576,767.49	32° 3' 2.452 N	104° 5' 8.002 W
3,050.0	0.71	151.54	3,049.4	10.0	-6.4	382,250.81	576,767.62	32° 3' 2.449 N	104° 5' 8.000 W
3,075.0	0.75	159.78	3,074.4	9.7	-6.3	382,250.52	576,767.75	32° 3' 2.446 N	104° 5' 7.999 W



Survey Report - Geographic



Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
3,100.0	0.72	168.46	3,099.4	9.4	-6.2	382,250.21	576,767.84	32° 3' 2.443 N	104° 5' 7.998 W
3,125.0	0.63	160.09	3,124.4	9.1	-6.1	382,249.93	576,767.92	32° 3' 2.440 N	104° 5' 7.997 W
3,150.0	0.65	151.69	3,149.4	8.9	-6.0	382,249.67	576,768.03	32° 3' 2.438 N	104° 5' 7.995 W
3,175.0	0.76	160.03	3,174.4	8.6	-5.8	382,249.39	576,768.15	32° 3' 2.435 N	104° 5' 7.994 W
3,200.0	0.74	169.99	3,199.4	8.3	-5.8	382,249.08	576,768.24	32° 3' 2.432 N	104° 5' 7.993 W
3,225.0	0.68	168.68	3,224.4	8.0	-5.7	382,248.77	576,768.29	32° 3' 2.429 N	104° 5' 7.992 W
3,250.0	0.64	158.50	3,249.4	7.7	-5.6	382,248.50	576,768.38	32° 3' 2.426 N	104° 5' 7.991 W
3,275.0	0.68	156.27	3,274.4	7.4	-5.5	382,248.23	576,768.49	32° 3' 2.424 N	104° 5' 7.990 W
3,300.0	0.77	158.12	3,299.4	7.1	-5.4	382,247.94	576,768.61	32° 3' 2.421 N	104° 5' 7.989 W
3,325.0	0.80	169.94	3,324.4	6.8	-5.3	382,247.61	576,768.70	32° 3' 2.417 N	104° 5' 7.988 W
3,350.0	0.65	172.77	3,349.4	6.5	-5.3	382,247.30	576,768.75	32° 3' 2.414 N	104° 5' 7.987 W
3,375.0	0.60	163.40	3,374.4	6.2	-5.2	382,247.03	576,768.80	32° 3' 2.412 N	104° 5' 7.986 W
3,400.0	0.76	158.45	3,399.4	6.0	-5.1	382,246.75	576,768.90	32° 3' 2.409 N	104° 5' 7.985 W
3,425.0	0.79	173.13	3,424.4	5.6	-5.0	382,246.43	576,768.98	32° 3' 2.406 N	104° 5' 7.984 W
3,450.0	0.73	176.26	3,449.4	5.3	-5.0	382,246.10	576,769.02	32° 3' 2.402 N	104° 5' 7.984 W
3,475.0	0.71	175.13	3,474.4	5.0	-5.0	382,245.79	576,769.04	32° 3' 2.399 N	104° 5' 7.984 W
3,500.0	0.69	169.18	3,499.4	4.7	-4.9	382,245.48	576,769.08	32° 3' 2.396 N	104° 5' 7.983 W
3,525.0	0.57	169.40	3,524.4	4.4	-4.9	382,245.21	576,769.13	32° 3' 2.394 N	104° 5' 7.983 W
3,550.0	0.60	167.88	3,549.4	4.2	-4.8	382,244.96	576,769.18	32° 3' 2.391 N	104° 5' 7.982 W
3,575.0	0.63	166.34	3,574.4	3.9	-4.8	382,244.70	576,769.24	32° 3' 2.389 N	104° 5' 7.981 W
3,600.0	0.56	162.20	3,599.4	3.7	-4.7	382,244.45	576,769.31	32° 3' 2.386 N	104° 5' 7.981 W
3,625.0	0.55	160.23	3,624.4	3.4	-4.6	382,244.22	576,769.39	32° 3' 2.384 N	104° 5' 7.980 W
3,650.0	0.62	162.96	3,649.4	3.2	-4.5	382,243.98	576,769.47	32° 3' 2.381 N	104° 5' 7.979 W
3,675.0	0.67	165.26	3,674.4	2.9	-4.5	382,243.71	576,769.55	32° 3' 2.379 N	104° 5' 7.978 W
3,700.0	0.70	160.77	3,699.4	2.6	-4.4	382,243.42	576,769.63	32° 3' 2.376 N	104° 5' 7.977 W
3,725.0	1.00	167.56	3,724.4	2.3	-4.3	382,243.07	576,769.73	32° 3' 2.372 N	104° 5' 7.976 W
3,750.0	0.70	174.09	3,749.4	1.9	-4.2	382,242.70	576,769.79	32° 3' 2.369 N	104° 5' 7.975 W
3,775.0	0.67	174.68	3,774.4	1.6	-4.2	382,242.40	576,769.82	32° 3' 2.366 N	104° 5' 7.975 W
3,800.0	0.62	171.52	3,799.4	1.3	-4.1	382,242.13	576,769.86	32° 3' 2.363 N	104° 5' 7.974 W
3,825.0	0.59	165.90	3,824.4	1.1	-4.1	382,241.87	576,769.91	32° 3' 2.361 N	104° 5' 7.974 W
3,850.0	0.81	161.71	3,849.4	0.8	-4.0	382,241.57	576,770.00	32° 3' 2.358 N	104° 5' 7.973 W
3,875.0	0.69	176.02	3,874.4	0.5	-3.9	382,241.26	576,770.06	32° 3' 2.354 N	104° 5' 7.972 W
3,900.0	0.63	167.02	3,899.4	0.2	-3.9	382,240.97	576,770.10	32° 3' 2.352 N	104° 5' 7.971 W
3,925.0	0.60	173.25	3,924.4	-0.1	-3.9	382,240.71	576,770.15	32° 3' 2.349 N	104° 5' 7.971 W
3,950.0	0.63	160.03	3,949.4	-0.3	-3.8	382,240.45	576,770.21	32° 3' 2.347 N	104° 5' 7.970 W
3,975.0	0.75	169.27	3,974.4	-0.6	-3.7	382,240.16	576,770.29	32° 3' 2.344 N	104° 5' 7.969 W
4,000.0	0.71	169.98	3,999.4	-1.0	-3.7	382,239.85	576,770.35	32° 3' 2.341 N	104° 5' 7.969 W
4,025.0	0.71	175.25	4,024.4	-1.3	-3.6	382,239.54	576,770.39	32° 3' 2.337 N	104° 5' 7.968 W
4,050.0	0.69	172.41	4,049.4	-1.6	-3.6	382,239.24	576,770.42	32° 3' 2.334 N	104° 5' 7.968 W
4,075.0	0.67	172.44	4,074.4	-1.9	-3.5	382,238.94	576,770.46	32° 3' 2.332 N	104° 5' 7.967 W
4,100.0	0.65	164.06	4,099.4	-2.1	-3.5	382,238.66	576,770.52	32° 3' 2.329 N	104° 5' 7.967 W
4,125.0	0.78	157.50	4,124.4	-2.4	-3.4	382,238.37	576,770.62	32° 3' 2.326 N	104° 5' 7.966 W
4,150.0	0.76	170.72	4,149.3	-2.8	-3.3	382,238.05	576,770.71	32° 3' 2.323 N	104° 5' 7.964 W
4,175.0	0.73	170.69	4,174.3	-3.1	-3.2	382,237.72	576,770.76	32° 3' 2.320 N	104° 5' 7.964 W
4,200.0	0.64	166.90	4,199.3	-3.4	-3.2	382,237.43	576,770.82	32° 3' 2.317 N	104° 5' 7.963 W
4,225.0	0.70	164.37	4,224.3	-3.6	-3.1	382,237.15	576,770.89	32° 3' 2.314 N	104° 5' 7.962 W
4,250.0	0.72	162.54	4,249.3	-3.9	-3.0	382,236.85	576,770.98	32° 3' 2.311 N	104° 5' 7.961 W
4,275.0	0.81	159.50	4,274.3	-4.3	-2.9	382,236.54	576,771.09	32° 3' 2.308 N	104° 5' 7.960 W
4,300.0	0.90	170.16	4,299.3	-4.6	-2.8	382,236.18	576,771.19	32° 3' 2.304 N	104° 5' 7.959 W
4,325.0	0.80	168.79	4,324.3	-5.0	-2.7	382,235.81	576,771.25	32° 3' 2.301 N	104° 5' 7.958 W
4,350.0	0.79	156.44	4,349.3	-5.3	-2.6	382,235.48	576,771.36	32° 3' 2.297 N	104° 5' 7.957 W
4,375.0	0.90	162.74	4,374.3	-5.7	-2.5	382,235.14	576,771.48	32° 3' 2.294 N	104° 5' 7.956 W
4,400.0	0.87	170.41	4,399.3	-6.0	-2.4	382,234.76	576,771.57	32° 3' 2.290 N	104° 5' 7.955 W
4,425.0	0.80	167.29	4,424.3	-6.4	-2.4	382,234.41	576,771.64	32° 3' 2.287 N	104° 5' 7.954 W
4,450.0	0.72	169.28	4,449.3	-6.7	-2.3	382,234.08	576,771.71	32° 3' 2.283 N	104° 5' 7.953 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
4,475.0	0.89	166.85	4,474.3	-7.1	-2.2	382,233.74	576,771.79	32° 3' 2.280 N	104° 5' 7.952 W
4,500.0	0.78	163.06	4,499.3	-7.4	-2.1	382,233.39	576,771.88	32° 3' 2.277 N	104° 5' 7.951 W
4,525.0	0.81	158.60	4,524.3	-7.7	-2.0	382,233.06	576,771.99	32° 3' 2.273 N	104° 5' 7.950 W
4,550.0	0.99	161.67	4,549.3	-8.1	-1.9	382,232.69	576,772.13	32° 3' 2.270 N	104° 5' 7.948 W
4,575.0	0.89	168.84	4,574.3	-8.5	-1.8	382,232.29	576,772.23	32° 3' 2.266 N	104° 5' 7.947 W
4,600.0	0.83	168.28	4,599.3	-8.9	-1.7	382,231.93	576,772.31	32° 3' 2.262 N	104° 5' 7.946 W
4,625.0	0.86	166.77	4,624.3	-9.2	-1.6	382,231.57	576,772.39	32° 3' 2.259 N	104° 5' 7.945 W
4,650.0	0.86	164.36	4,649.3	-9.6	-1.5	382,231.20	576,772.48	32° 3' 2.255 N	104° 5' 7.944 W
4,675.0	0.91	149.37	4,674.3	-9.9	-1.4	382,230.85	576,772.63	32° 3' 2.251 N	104° 5' 7.942 W
4,700.0	1.00	158.99	4,699.3	-10.3	-1.2	382,230.48	576,772.81	32° 3' 2.248 N	104° 5' 7.940 W
4,725.0	0.92	156.36	4,724.3	-10.7	-1.0	382,230.09	576,772.97	32° 3' 2.244 N	104° 5' 7.938 W
4,750.0	0.97	157.89	4,749.3	-11.1	-0.9	382,229.71	576,773.13	32° 3' 2.240 N	104° 5' 7.937 W
4,775.0	0.96	155.73	4,774.3	-11.5	-0.7	382,229.32	576,773.29	32° 3' 2.236 N	104° 5' 7.935 W
4,800.0	0.96	156.54	4,799.3	-11.9	-0.5	382,228.94	576,773.46	32° 3' 2.233 N	104° 5' 7.933 W
4,825.0	0.98	158.34	4,824.3	-12.2	-0.4	382,228.55	576,773.63	32° 3' 2.229 N	104° 5' 7.931 W
4,850.0	0.95	155.57	4,849.3	-12.6	-0.2	382,228.16	576,773.79	32° 3' 2.225 N	104° 5' 7.929 W
4,875.0	1.04	151.66	4,874.3	-13.0	0.0	382,227.77	576,773.98	32° 3' 2.221 N	104° 5' 7.927 W
4,900.0	1.06	156.52	4,899.3	-13.4	0.2	382,227.36	576,774.18	32° 3' 2.217 N	104° 5' 7.924 W
4,925.0	1.01	148.86	4,924.3	-13.8	0.4	382,226.96	576,774.39	32° 3' 2.213 N	104° 5' 7.922 W
4,950.0	1.19	139.28	4,949.3	-14.2	0.7	382,226.58	576,774.67	32° 3' 2.209 N	104° 5' 7.919 W
4,975.0	1.85	121.83	4,974.2	-14.6	1.2	382,226.17	576,775.19	32° 3' 2.205 N	104° 5' 7.913 W
5,000.0	2.40	117.69	4,999.2	-15.1	2.0	382,225.71	576,775.99	32° 3' 2.200 N	104° 5' 7.903 W
5,025.0	2.43	119.22	5,024.2	-15.6	2.9	382,225.21	576,776.92	32° 3' 2.196 N	104° 5' 7.893 W
5,050.0	2.65	113.49	5,049.2	-16.1	3.9	382,224.72	576,777.91	32° 3' 2.191 N	104° 5' 7.881 W
5,075.0	2.84	109.88	5,074.2	-16.5	5.0	382,224.28	576,779.02	32° 3' 2.186 N	104° 5' 7.868 W
5,100.0	2.96	106.95	5,099.1	-16.9	6.2	382,223.88	576,780.22	32° 3' 2.182 N	104° 5' 7.854 W
5,125.0	3.04	107.92	5,124.1	-17.3	7.5	382,223.49	576,781.47	32° 3' 2.178 N	104° 5' 7.840 W
5,150.0	3.49	107.62	5,149.0	-17.7	8.8	382,223.05	576,782.83	32° 3' 2.174 N	104° 5' 7.824 W
5,175.0	3.73	105.75	5,174.0	-18.2	10.3	382,222.60	576,784.33	32° 3' 2.170 N	104° 5' 7.807 W
5,200.0	4.07	104.90	5,198.9	-18.6	12.0	382,222.15	576,785.97	32° 3' 2.165 N	104° 5' 7.788 W
5,225.0	4.08	104.99	5,223.9	-19.1	13.7	382,221.69	576,787.69	32° 3' 2.160 N	104° 5' 7.768 W
5,250.0	4.47	101.56	5,248.8	-19.5	15.5	382,221.27	576,789.51	32° 3' 2.156 N	104° 5' 7.747 W
5,275.0	4.73	98.38	5,273.7	-19.9	17.5	382,220.92	576,791.48	32° 3' 2.153 N	104° 5' 7.724 W
5,300.0	4.88	99.56	5,298.6	-20.2	19.5	382,220.60	576,793.55	32° 3' 2.149 N	104° 5' 7.700 W
5,325.0	4.99	95.22	5,323.5	-20.5	21.7	382,220.32	576,795.68	32° 3' 2.147 N	104° 5' 7.675 W
5,350.0	5.44	91.16	5,348.4	-20.6	23.9	382,220.20	576,797.95	32° 3' 2.145 N	104° 5' 7.648 W
5,375.0	5.62	88.92	5,373.3	-20.6	26.4	382,220.20	576,800.36	32° 3' 2.145 N	104° 5' 7.620 W
5,400.0	5.53	89.81	5,398.2	-20.6	28.8	382,220.22	576,802.78	32° 3' 2.146 N	104° 5' 7.592 W
5,425.0	5.73	90.21	5,423.1	-20.6	31.2	382,220.22	576,805.24	32° 3' 2.146 N	104° 5' 7.564 W
5,450.0	6.01	91.22	5,448.0	-20.6	33.8	382,220.19	576,807.79	32° 3' 2.145 N	104° 5' 7.534 W
5,475.0	6.05	92.47	5,472.8	-20.7	36.4	382,220.11	576,810.42	32° 3' 2.144 N	104° 5' 7.504 W
5,500.0	6.15	92.78	5,497.7	-20.8	39.1	382,219.98	576,813.07	32° 3' 2.143 N	104° 5' 7.473 W
5,525.0	6.14	92.54	5,522.5	-20.9	41.7	382,219.86	576,815.74	32° 3' 2.142 N	104° 5' 7.442 W
5,550.0	6.23	93.44	5,547.4	-21.1	44.4	382,219.72	576,818.43	32° 3' 2.140 N	104° 5' 7.410 W
5,575.0	6.23	93.00	5,572.2	-21.2	47.1	382,219.57	576,821.14	32° 3' 2.139 N	104° 5' 7.379 W
5,600.0	6.40	92.31	5,597.1	-21.4	49.9	382,219.44	576,823.89	32° 3' 2.137 N	104° 5' 7.347 W
5,625.0	6.60	90.72	5,621.9	-21.4	52.7	382,219.37	576,826.72	32° 3' 2.137 N	104° 5' 7.314 W
5,650.0	6.96	88.64	5,646.8	-21.4	55.7	382,219.38	576,829.67	32° 3' 2.137 N	104° 5' 7.280 W
5,675.0	6.89	88.97	5,671.6	-21.4	58.7	382,219.45	576,832.68	32° 3' 2.137 N	104° 5' 7.245 W
5,700.0	6.91	88.55	5,696.4	-21.3	61.7	382,219.51	576,835.69	32° 3' 2.138 N	104° 5' 7.210 W
5,725.0	6.98	89.11	5,721.2	-21.2	64.7	382,219.57	576,838.71	32° 3' 2.138 N	104° 5' 7.175 W
5,750.0	6.81	89.27	5,746.0	-21.2	67.7	382,219.62	576,841.71	32° 3' 2.139 N	104° 5' 7.140 W
5,775.0	6.72	89.75	5,770.8	-21.2	70.7	382,219.64	576,844.65	32° 3' 2.139 N	104° 5' 7.106 W
5,800.0	6.70	90.17	5,795.7	-21.2	73.6	382,219.64	576,847.57	32° 3' 2.139 N	104° 5' 7.072 W
5,825.0	6.53	91.46	5,820.5	-21.2	76.5	382,219.60	576,850.45	32° 3' 2.138 N	104° 5' 7.038 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
5,850.0	6.32	90.95	5,845.4	-21.3	79.2	382,219.54	576,853.25	32° 3' 2.138 N	104° 5' 7.006 W
5,875.0	6.18	91.79	5,870.2	-21.3	82.0	382,219.48	576,855.97	32° 3' 2.137 N	104° 5' 6.974 W
5,900.0	6.22	91.69	5,895.1	-21.4	84.7	382,219.40	576,858.67	32° 3' 2.136 N	104° 5' 6.943 W
5,925.0	6.43	90.10	5,919.9	-21.4	87.4	382,219.35	576,861.42	32° 3' 2.136 N	104° 5' 6.911 W
5,950.0	6.55	87.65	5,944.7	-21.4	90.2	382,219.41	576,864.25	32° 3' 2.136 N	104° 5' 6.878 W
5,975.0	6.60	88.54	5,969.6	-21.3	93.1	382,219.51	576,867.11	32° 3' 2.137 N	104° 5' 6.845 W
6,000.0	6.43	87.95	5,994.4	-21.2	95.9	382,219.59	576,869.95	32° 3' 2.138 N	104° 5' 6.812 W
6,025.0	6.24	88.49	6,019.3	-21.1	98.7	382,219.68	576,872.70	32° 3' 2.139 N	104° 5' 6.780 W
6,050.0	6.13	89.27	6,044.1	-21.1	101.4	382,219.73	576,875.40	32° 3' 2.139 N	104° 5' 6.749 W
6,075.0	6.21	90.71	6,069.0	-21.1	104.1	382,219.73	576,878.08	32° 3' 2.139 N	104° 5' 6.717 W
6,100.0	6.40	92.55	6,093.8	-21.1	106.8	382,219.65	576,880.83	32° 3' 2.138 N	104° 5' 6.685 W
6,125.0	6.55	94.85	6,118.7	-21.3	109.6	382,219.47	576,883.64	32° 3' 2.136 N	104° 5' 6.653 W
6,150.0	6.77	95.07	6,143.5	-21.6	112.5	382,219.22	576,886.53	32° 3' 2.134 N	104° 5' 6.619 W
6,175.0	6.79	95.33	6,168.3	-21.8	115.5	382,218.95	576,889.47	32° 3' 2.131 N	104° 5' 6.585 W
6,200.0	6.57	96.04	6,193.2	-22.1	118.4	382,218.66	576,892.36	32° 3' 2.128 N	104° 5' 6.551 W
6,225.0	6.45	97.10	6,218.0	-22.5	121.2	382,218.34	576,895.18	32° 3' 2.125 N	104° 5' 6.519 W
6,250.0	5.95	97.77	6,242.8	-22.8	123.9	382,217.99	576,897.85	32° 3' 2.121 N	104° 5' 6.488 W
6,275.0	5.85	98.22	6,267.7	-23.2	126.4	382,217.63	576,900.40	32° 3' 2.118 N	104° 5' 6.458 W
6,300.0	5.87	96.75	6,292.6	-23.5	128.9	382,217.30	576,902.93	32° 3' 2.114 N	104° 5' 6.429 W
6,325.0	5.90	99.05	6,317.5	-23.8	131.5	382,216.95	576,905.47	32° 3' 2.111 N	104° 5' 6.399 W
6,350.0	5.64	98.52	6,342.3	-24.2	133.9	382,216.57	576,907.95	32° 3' 2.107 N	104° 5' 6.370 W
6,375.0	5.37	93.82	6,367.2	-24.5	136.3	382,216.31	576,910.33	32° 3' 2.104 N	104° 5' 6.343 W
6,400.0	5.49	84.90	6,392.1	-24.5	138.7	382,216.33	576,912.69	32° 3' 2.105 N	104° 5' 6.315 W
6,425.0	5.49	79.01	6,417.0	-24.1	141.1	382,216.67	576,915.06	32° 3' 2.108 N	104° 5' 6.288 W
6,450.0	5.43	77.20	6,441.9	-23.6	143.4	382,217.16	576,917.38	32° 3' 2.113 N	104° 5' 6.261 W
6,475.0	5.34	76.11	6,466.8	-23.1	145.7	382,217.70	576,919.67	32° 3' 2.118 N	104° 5' 6.234 W
6,500.0	5.43	76.57	6,491.7	-22.5	147.9	382,218.25	576,921.95	32° 3' 2.123 N	104° 5' 6.208 W
6,525.0	5.39	76.64	6,516.5	-22.0	150.2	382,218.80	576,924.24	32° 3' 2.129 N	104° 5' 6.181 W
6,550.0	5.14	75.31	6,541.4	-21.4	152.5	382,219.35	576,926.47	32° 3' 2.134 N	104° 5' 6.155 W
6,575.0	4.95	76.68	6,566.3	-20.9	154.6	382,219.89	576,928.60	32° 3' 2.139 N	104° 5' 6.130 W
6,600.0	4.84	75.92	6,591.2	-20.4	156.7	382,220.39	576,930.67	32° 3' 2.144 N	104° 5' 6.106 W
6,625.0	4.61	74.63	6,616.2	-19.9	158.7	382,220.92	576,932.66	32° 3' 2.149 N	104° 5' 6.083 W
6,650.0	4.46	72.18	6,641.1	-19.3	160.6	382,221.48	576,934.56	32° 3' 2.155 N	104° 5' 6.061 W
6,675.0	4.99	68.08	6,666.0	-18.6	162.5	382,222.18	576,936.49	32° 3' 2.162 N	104° 5' 6.039 W
6,700.0	5.11	66.91	6,690.9	-17.8	164.5	382,223.02	576,938.52	32° 3' 2.170 N	104° 5' 6.015 W
6,725.0	4.77	66.40	6,715.8	-16.9	166.5	382,223.88	576,940.50	32° 3' 2.179 N	104° 5' 5.992 W
6,750.0	4.46	65.79	6,740.7	-16.1	168.3	382,224.69	576,942.34	32° 3' 2.187 N	104° 5' 5.971 W
6,775.0	4.19	65.35	6,765.7	-15.3	170.1	382,225.47	576,944.06	32° 3' 2.194 N	104° 5' 5.951 W
6,800.0	3.84	63.70	6,790.6	-14.6	171.6	382,226.22	576,945.64	32° 3' 2.202 N	104° 5' 5.932 W
6,825.0	3.55	62.78	6,815.5	-13.9	173.1	382,226.95	576,947.08	32° 3' 2.209 N	104° 5' 5.916 W
6,850.0	3.43	59.20	6,840.5	-13.1	174.4	382,227.69	576,948.41	32° 3' 2.216 N	104° 5' 5.900 W
6,875.0	3.48	54.26	6,865.5	-12.3	175.7	382,228.51	576,949.66	32° 3' 2.224 N	104° 5' 5.885 W
6,900.0	3.41	48.05	6,890.4	-11.3	176.8	382,229.45	576,950.83	32° 3' 2.234 N	104° 5' 5.872 W
6,925.0	3.32	38.69	6,915.4	-10.3	177.8	382,230.51	576,951.84	32° 3' 2.244 N	104° 5' 5.860 W
6,950.0	3.17	30.18	6,940.3	-9.1	178.6	382,231.68	576,952.64	32° 3' 2.256 N	104° 5' 5.851 W
6,975.0	2.96	22.66	6,965.3	-7.9	179.2	382,232.87	576,953.23	32° 3' 2.267 N	104° 5' 5.844 W
7,000.0	2.92	21.10	6,990.3	-6.7	179.7	382,234.06	576,953.71	32° 3' 2.279 N	104° 5' 5.838 W
7,025.0	2.97	19.66	7,015.2	-5.5	180.2	382,235.26	576,954.16	32° 3' 2.291 N	104° 5' 5.833 W
7,050.0	3.35	30.37	7,040.2	-4.3	180.7	382,236.50	576,954.75	32° 3' 2.303 N	104° 5' 5.826 W
7,075.0	4.21	43.52	7,065.1	-3.0	181.7	382,237.80	576,955.75	32° 3' 2.316 N	104° 5' 5.814 W
7,100.0	4.52	46.32	7,090.1	-1.7	183.1	382,239.14	576,957.09	32° 3' 2.329 N	104° 5' 5.799 W
7,125.0	4.48	45.59	7,115.0	-0.3	184.5	382,240.51	576,958.50	32° 3' 2.343 N	104° 5' 5.782 W
7,150.0	4.20	44.51	7,139.9	1.0	185.8	382,241.84	576,959.84	32° 3' 2.356 N	104° 5' 5.767 W
7,175.0	4.00	42.68	7,164.8	2.3	187.1	382,243.14	576,961.07	32° 3' 2.369 N	104° 5' 5.752 W
7,200.0	3.79	42.70	7,189.8	3.6	188.2	382,244.39	576,962.23	32° 3' 2.381 N	104° 5' 5.739 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well SRO State Com #30H
 RKB @ 3061.0usft (Ensign #156)
 RKB @ 3061.0usft (Ensign #156)
 Grid
 Minimum Curvature
 EDM5002

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,225.0	3.61	41.36	7,214.7	4.8	189.3	382,245.58	576,963.31	32° 3' 2.393 N	104° 5' 5.726 W
7,250.0	3.55	39.68	7,239.7	6.0	190.3	382,246.77	576,964.32	32° 3' 2.405 N	104° 5' 5.715 W
7,275.0	3.56	39.79	7,264.6	7.2	191.3	382,247.96	576,965.31	32° 3' 2.416 N	104° 5' 5.703 W
7,300.0	3.53	39.61	7,289.6	8.4	192.3	382,249.15	576,966.30	32° 3' 2.428 N	104° 5' 5.692 W
7,325.0	3.35	40.31	7,314.5	9.5	193.3	382,250.30	576,967.26	32° 3' 2.440 N	104° 5' 5.680 W
7,350.0	3.21	37.77	7,339.5	10.6	194.2	382,251.41	576,968.16	32° 3' 2.451 N	104° 5' 5.670 W
7,375.0	3.08	36.27	7,364.5	11.7	195.0	382,252.51	576,968.99	32° 3' 2.461 N	104° 5' 5.660 W
7,400.0	2.99	33.58	7,389.4	12.8	195.7	382,253.59	576,969.75	32° 3' 2.472 N	104° 5' 5.651 W
7,425.0	3.07	28.11	7,414.4	13.9	196.4	382,254.73	576,970.42	32° 3' 2.483 N	104° 5' 5.643 W
7,450.0	2.75	26.86	7,439.4	15.1	197.0	382,255.85	576,971.01	32° 3' 2.494 N	104° 5' 5.637 W
Gyro Tie In @ 7450.0 'MD / 7439.4 'TVD									
7,528.0	2.80	11.20	7,517.3	18.6	198.2	382,259.39	576,972.23	32° 3' 2.529 N	104° 5' 5.622 W
7,574.0	3.44	10.11	7,563.2	21.1	198.7	382,261.85	576,972.69	32° 3' 2.554 N	104° 5' 5.617 W
7,605.0	5.95	34.66	7,594.1	23.3	199.8	382,264.09	576,973.76	32° 3' 2.576 N	104° 5' 5.604 W
7,636.0	8.80	46.69	7,624.8	26.2	202.4	382,267.04	576,976.40	32° 3' 2.605 N	104° 5' 5.574 W
7,668.0	11.65	47.74	7,656.3	30.1	206.6	382,270.89	576,980.58	32° 3' 2.643 N	104° 5' 5.525 W
7,699.0	15.99	46.54	7,686.4	35.1	212.0	382,275.93	576,985.99	32° 3' 2.693 N	104° 5' 5.462 W
7,731.0	19.97	45.97	7,716.9	42.0	219.1	382,282.77	576,993.13	32° 3' 2.760 N	104° 5' 5.379 W
7,762.0	23.39	44.98	7,745.7	50.0	227.3	382,290.80	577,001.28	32° 3' 2.840 N	104° 5' 5.284 W
7,794.0	27.18	40.27	7,774.6	60.1	236.5	382,300.88	577,010.50	32° 3' 2.939 N	104° 5' 5.177 W
7,825.0	30.45	36.80	7,801.8	71.8	245.8	382,312.57	577,019.79	32° 3' 3.055 N	104° 5' 5.068 W
7,857.0	33.05	33.43	7,829.0	85.6	255.5	382,326.35	577,029.45	32° 3' 3.191 N	104° 5' 4.956 W
7,889.0	36.39	29.35	7,855.3	101.1	264.9	382,341.91	577,038.92	32° 3' 3.345 N	104° 5' 4.845 W
7,920.0	39.56	26.20	7,879.7	118.0	273.8	382,358.79	577,047.79	32° 3' 3.511 N	104° 5' 4.742 W
7,951.0	42.31	24.02	7,903.1	136.4	282.4	382,377.18	577,056.39	32° 3' 3.693 N	104° 5' 4.641 W
7,983.0	46.01	21.18	7,926.1	157.0	290.9	382,397.76	577,064.94	32° 3' 3.897 N	104° 5' 4.541 W
8,014.0	48.73	18.13	7,947.1	178.4	298.6	382,419.24	577,072.60	32° 3' 4.109 N	104° 5' 4.452 W
8,046.0	50.93	15.01	7,967.7	201.9	305.6	382,442.67	577,079.56	32° 3' 4.341 N	104° 5' 4.370 W
8,077.0	54.34	11.64	7,986.5	225.8	311.2	382,466.64	577,085.22	32° 3' 4.578 N	104° 5' 4.304 W
8,109.0	57.84	9.78	8,004.4	251.9	316.1	382,492.73	577,090.14	32° 3' 4.836 N	104° 5' 4.246 W
8,140.0	61.19	8.69	8,020.1	278.3	320.4	382,519.10	577,094.43	32° 3' 5.097 N	104° 5' 4.196 W
8,171.0	65.73	6.56	8,034.0	305.8	324.1	382,546.58	577,098.10	32° 3' 5.369 N	104° 5' 4.152 W
8,203.0	69.54	6.26	8,046.1	335.2	327.4	382,575.98	577,101.40	32° 3' 5.660 N	104° 5' 4.113 W
8,234.0	72.94	5.00	8,056.1	364.4	330.3	382,605.19	577,104.27	32° 3' 5.949 N	104° 5' 4.079 W
8,265.0	77.51	3.13	8,064.0	394.3	332.4	382,635.08	577,106.39	32° 3' 6.244 N	104° 5' 4.053 W
8,296.0	81.69	1.67	8,069.6	424.7	333.7	382,665.53	577,107.67	32° 3' 6.546 N	104° 5' 4.038 W
8,328.0	85.58	1.65	8,073.1	456.5	334.6	382,697.32	577,108.59	32° 3' 6.860 N	104° 5' 4.026 W
8,359.0	87.40	2.03	8,075.0	487.4	335.6	382,728.24	577,109.58	32° 3' 7.166 N	104° 5' 4.014 W
8,422.0	88.88	3.43	8,077.1	550.3	338.6	382,791.13	577,112.58	32° 3' 7.789 N	104° 5' 3.977 W
8,454.0	90.14	2.48	8,077.4	582.3	340.2	382,823.09	577,114.23	32° 3' 8.105 N	104° 5' 3.957 W
8,485.0	90.56	1.52	8,077.2	613.3	341.3	382,854.07	577,115.31	32° 3' 8.411 N	104° 5' 3.944 W
8,548.0	91.37	1.03	8,076.1	676.2	342.7	382,917.04	577,116.71	32° 3' 9.035 N	104° 5' 3.926 W
8,642.0	92.19	1.03	8,073.2	770.2	344.4	383,010.98	577,118.40	32° 3' 9.964 N	104° 5' 3.904 W
8,737.0	90.59	359.62	8,070.9	865.1	344.9	383,105.95	577,118.94	32° 3' 10.904 N	104° 5' 3.895 W
8,831.0	89.91	359.02	8,070.5	959.1	343.8	383,199.94	577,117.83	32° 3' 11.834 N	104° 5' 3.905 W
8,929.0	88.71	358.05	8,071.7	1,057.1	341.3	383,297.90	577,115.32	32° 3' 12.804 N	104° 5' 3.932 W
9,019.0	88.91	358.28	8,073.5	1,147.0	338.4	383,387.83	577,112.44	32° 3' 13.694 N	104° 5' 3.963 W
9,114.0	88.93	358.22	8,075.3	1,242.0	335.5	383,482.77	577,109.54	32° 3' 14.633 N	104° 5' 3.994 W
9,208.0	89.41	358.46	8,076.7	1,335.9	332.8	383,576.72	577,106.82	32° 3' 15.563 N	104° 5' 4.023 W
9,302.0	89.58	358.43	8,077.5	1,429.9	330.3	383,670.68	577,104.26	32° 3' 16.493 N	104° 5' 4.050 W
9,396.0	89.80	358.45	8,078.0	1,523.8	327.7	383,764.65	577,101.71	32° 3' 17.423 N	104° 5' 4.078 W
9,491.0	90.53	358.97	8,077.7	1,618.8	325.6	383,859.62	577,099.57	32° 3' 18.363 N	104° 5' 4.100 W
9,585.0	91.20	359.39	8,076.3	1,712.8	324.2	383,953.60	577,098.22	32° 3' 19.293 N	104° 5' 4.113 W
9,679.0	89.66	359.16	8,075.6	1,806.8	323.0	384,047.59	577,097.03	32° 3' 20.224 N	104° 5' 4.124 W
9,773.0	89.69	359.06	8,076.1	1,900.8	321.6	384,141.57	577,095.57	32° 3' 21.154 N	104° 5' 4.139 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
9,867.0	88.10	359.06	8,078.0	1,994.7	320.0	384,235.54	577,094.03	32° 3' 22.084 N	104° 5' 4.154 W
9,961.0	88.29	359.16	8,080.9	2,088.7	318.6	384,329.48	577,092.57	32° 3' 23.013 N	104° 5' 4.169 W
10,055.0	88.74	359.48	8,083.4	2,182.6	317.5	384,423.44	577,091.46	32° 3' 23.943 N	104° 5' 4.179 W
10,150.0	90.22	0.13	8,084.2	2,277.6	317.1	384,518.44	577,091.13	32° 3' 24.883 N	104° 5' 4.180 W
10,244.0	90.89	0.47	8,083.3	2,371.6	317.6	384,612.43	577,091.63	32° 3' 25.814 N	104° 5' 4.172 W
10,337.0	89.55	0.53	8,083.0	2,464.6	318.4	384,705.42	577,092.44	32° 3' 26.734 N	104° 5' 4.160 W
10,430.0	89.80	0.78	8,083.5	2,557.6	319.5	384,798.42	577,093.50	32° 3' 27.654 N	104° 5' 4.145 W
10,524.0	90.34	0.96	8,083.4	2,651.6	320.9	384,892.41	577,094.93	32° 3' 28.584 N	104° 5' 4.126 W
10,618.0	89.05	0.98	8,083.9	2,745.6	322.5	384,986.39	577,096.52	32° 3' 29.514 N	104° 5' 4.105 W
10,712.0	88.93	0.66	8,085.5	2,839.6	323.9	385,080.36	577,097.86	32° 3' 30.444 N	104° 5' 4.087 W
10,806.0	89.44	0.93	8,086.9	2,933.5	325.2	385,174.35	577,099.17	32° 3' 31.374 N	104° 5' 4.069 W
10,900.0	90.17	0.91	8,087.2	3,027.5	326.7	385,268.33	577,100.68	32° 3' 32.305 N	104° 5' 4.049 W
10,994.0	89.41	0.94	8,087.5	3,121.5	328.2	385,362.32	577,102.19	32° 3' 33.235 N	104° 5' 4.029 W
11,088.0	90.28	1.38	8,087.8	3,215.5	330.1	385,456.30	577,104.10	32° 3' 34.165 N	104° 5' 4.005 W
11,183.0	88.96	0.04	8,088.4	3,310.5	331.3	385,551.28	577,105.27	32° 3' 35.105 N	104° 5' 3.988 W
11,277.0	88.91	359.84	8,090.2	3,404.5	331.2	385,645.27	577,105.18	32° 3' 36.035 N	104° 5' 3.987 W
11,371.0	89.36	0.45	8,091.6	3,498.5	331.4	385,739.26	577,105.41	32° 3' 36.965 N	104° 5' 3.982 W
11,465.0	89.75	0.82	8,092.3	3,592.4	332.5	385,833.25	577,106.46	32° 3' 37.895 N	104° 5' 3.967 W
11,559.0	88.74	358.88	8,093.5	3,686.4	332.2	385,927.23	577,106.21	32° 3' 38.825 N	104° 5' 3.967 W
11,653.0	89.08	358.72	8,095.3	3,780.4	330.2	386,021.20	577,104.24	32° 3' 39.755 N	104° 5' 3.988 W
11,747.0	90.03	359.18	8,096.1	3,874.4	328.5	386,115.18	577,102.52	32° 3' 40.685 N	104° 5' 4.005 W
11,841.0	89.24	358.30	8,096.7	3,968.4	326.4	386,209.15	577,100.45	32° 3' 41.615 N	104° 5' 4.027 W
11,935.0	89.52	358.51	8,097.7	4,062.3	323.8	386,303.11	577,097.84	32° 3' 42.545 N	104° 5' 4.055 W
12,029.0	90.50	358.81	8,097.7	4,156.3	321.6	386,397.08	577,095.64	32° 3' 43.475 N	104° 5' 4.078 W
12,123.0	91.15	358.68	8,096.3	4,250.2	319.6	386,491.05	577,093.58	32° 3' 44.405 N	104° 5' 4.099 W
12,218.0	89.64	358.46	8,095.7	4,345.2	317.2	386,586.01	577,091.21	32° 3' 45.345 N	104° 5' 4.124 W
12,311.0	89.86	358.45	8,096.1	4,438.2	314.7	386,678.98	577,088.70	32° 3' 46.265 N	104° 5' 4.151 W
12,405.0	90.22	358.34	8,096.0	4,532.1	312.1	386,772.94	577,086.07	32° 3' 47.195 N	104° 5' 4.179 W
12,499.0	90.64	358.44	8,095.3	4,626.1	309.4	386,866.90	577,083.43	32° 3' 48.125 N	104° 5' 4.207 W
12,594.0	91.18	358.77	8,093.8	4,721.1	307.1	386,961.86	577,081.11	32° 3' 49.065 N	104° 5' 4.231 W
12,688.0	91.37	358.09	8,091.7	4,815.0	304.5	387,055.80	577,078.54	32° 3' 49.995 N	104° 5' 4.259 W
12,782.0	89.33	357.86	8,091.1	4,908.9	301.2	387,149.74	577,075.22	32° 3' 50.925 N	104° 5' 4.295 W
12,877.0	89.36	358.11	8,092.2	5,003.9	297.9	387,244.67	577,071.88	32° 3' 51.864 N	104° 5' 4.331 W
12,971.0	87.37	358.78	8,094.9	5,097.8	295.3	387,338.59	577,069.33	32° 3' 52.794 N	104° 5' 4.358 W
13,065.0	87.14	358.76	8,099.4	5,191.7	293.3	387,432.46	577,067.31	32° 3' 53.723 N	104° 5' 4.379 W
13,159.0	87.96	359.20	8,103.4	5,285.6	291.6	387,526.36	577,065.64	32° 3' 54.652 N	104° 5' 4.396 W
13,254.0	88.32	358.91	8,106.5	5,380.5	290.1	387,621.30	577,064.08	32° 3' 55.592 N	104° 5' 4.412 W
13,348.0	88.74	359.02	8,108.9	5,474.5	288.4	387,715.25	577,062.38	32° 3' 56.522 N	104° 5' 4.429 W
13,442.0	89.86	359.71	8,110.0	5,568.4	287.3	387,809.24	577,061.34	32° 3' 57.452 N	104° 5' 4.438 W
13,536.0	90.45	0.44	8,109.8	5,662.4	287.5	387,903.23	577,061.46	32° 3' 58.382 N	104° 5' 4.434 W
13,630.0	90.42	1.35	8,109.1	5,756.4	288.9	387,997.22	577,062.93	32° 3' 59.312 N	104° 5' 4.415 W
13,724.0	90.11	0.38	8,108.6	5,850.4	290.3	388,091.21	577,064.35	32° 4' 0.242 N	104° 5' 4.396 W
13,818.0	90.98	0.69	8,107.7	5,944.4	291.2	388,185.20	577,065.22	32° 4' 1.172 N	104° 5' 4.383 W
13,912.0	90.89	0.58	8,106.2	6,038.4	292.3	388,279.18	577,066.27	32° 4' 2.102 N	104° 5' 4.369 W
14,006.0	91.09	0.70	8,104.6	6,132.4	293.3	388,373.16	577,067.32	32° 4' 3.032 N	104° 5' 4.354 W
14,100.0	88.38	0.87	8,105.0	6,226.3	294.6	388,467.14	577,068.60	32° 4' 3.962 N	104° 5' 4.336 W
14,194.0	88.51	0.93	8,107.6	6,320.3	296.1	388,561.09	577,070.08	32° 4' 4.892 N	104° 5' 4.317 W
14,289.0	88.74	0.68	8,109.9	6,415.3	297.4	388,656.06	577,071.41	32° 4' 5.832 N	104° 5' 4.299 W
14,383.0	90.17	1.66	8,110.7	6,509.2	299.3	388,750.03	577,073.33	32° 4' 6.762 N	104° 5' 4.274 W
14,478.0	91.07	1.93	8,109.7	6,604.2	302.3	388,844.98	577,076.31	32° 4' 7.702 N	104° 5' 4.237 W
14,572.0	91.12	1.21	8,107.9	6,698.1	304.9	388,938.92	577,078.88	32° 4' 8.631 N	104° 5' 4.204 W
14,666.0	90.22	0.63	8,106.8	6,792.1	306.4	389,032.90	577,080.39	32° 4' 9.561 N	104° 5' 4.184 W
14,760.0	88.51	359.96	8,107.9	6,886.1	306.9	389,126.89	577,080.88	32° 4' 10.491 N	104° 5' 4.176 W
14,854.0	88.35	359.98	8,110.4	6,980.1	306.8	389,220.86	577,080.83	32° 4' 11.421 N	104° 5' 4.174 W
14,949.0	88.38	359.79	8,113.2	7,075.0	306.6	389,315.82	577,080.64	32° 4' 12.361 N	104° 5' 4.174 W

Company: COG Operating, LLC
Project: Eddy County, NM (NAD 27)
Site: Sec. 9, T26S, R28E
Well: SRO State Com #30H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well SRO State Com #30H
TVD Reference: RKB @ 3061.0usft (Ensign #156)
MD Reference: RKB @ 3061.0usft (Ensign #156)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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
15,043.0	88.66	359.70	8,115.6	7,169.0	306.2	389,409.79	577,080.22	32° 4' 13.291 N	104° 5' 4.176 W
15,137.0	89.89	0.41	8,116.8	7,263.0	306.3	389,503.78	577,080.31	32° 4' 14.221 N	104° 5' 4.172 W
15,231.0	90.61	1.99	8,116.4	7,357.0	308.3	389,597.75	577,082.28	32° 4' 15.151 N	104° 5' 4.147 W
15,326.0	89.33	1.14	8,116.4	7,451.9	310.9	389,692.71	577,084.87	32° 4' 16.091 N	104° 5' 4.114 W
15,420.0	87.48	0.94	8,119.0	7,545.9	312.6	389,786.66	577,086.58	32° 4' 17.021 N	104° 5' 4.092 W
15,514.0	87.68	0.76	8,123.0	7,639.8	314.0	389,880.56	577,087.97	32° 4' 17.950 N	104° 5' 4.073 W
15,608.0	88.12	0.82	8,126.4	7,733.7	315.3	389,974.49	577,089.27	32° 4' 18.880 N	104° 5' 4.056 W
15,702.0	88.54	0.52	8,129.2	7,827.6	316.4	390,068.44	577,090.36	32° 4' 19.809 N	104° 5' 4.040 W
15,796.0	88.88	1.20	8,131.3	7,921.6	317.8	390,162.41	577,091.78	32° 4' 20.739 N	104° 5' 4.022 W
15,891.0	90.61	1.83	8,131.7	8,016.6	320.3	390,257.37	577,094.29	32° 4' 21.679 N	104° 5' 3.990 W
15,984.0	91.40	2.13	8,130.1	8,109.5	323.5	390,350.30	577,097.50	32° 4' 22.599 N	104° 5' 3.950 W
16,079.0	91.90	2.02	8,127.4	8,204.4	326.9	390,445.20	577,100.94	32° 4' 23.538 N	104° 5' 3.908 W
16,173.0	91.77	0.52	8,124.3	8,298.3	329.0	390,539.12	577,103.02	32° 4' 24.467 N	104° 5' 3.881 W
16,267.0	93.02	359.95	8,120.4	8,392.2	329.4	390,633.04	577,103.41	32° 4' 25.397 N	104° 5' 3.874 W
16,361.0	94.18	359.20	8,114.5	8,486.0	328.7	390,726.85	577,102.71	32° 4' 26.325 N	104° 5' 3.879 W
16,455.0	95.69	358.42	8,106.4	8,579.7	326.8	390,820.48	577,100.77	32° 4' 27.252 N	104° 5' 3.899 W
16,549.0	92.92	359.07	8,099.4	8,673.4	324.7	390,914.18	577,098.71	32° 4' 28.179 N	104° 5' 3.921 W
16,643.0	88.46	358.47	8,098.2	8,767.3	322.7	391,008.13	577,096.70	32° 4' 29.109 N	104° 5' 3.942 W
16,737.0	88.80	358.60	8,100.5	8,861.3	320.3	391,102.07	577,094.29	32° 4' 30.039 N	104° 5' 3.967 W
16,831.0	88.77	359.02	8,102.5	8,955.2	318.3	391,196.03	577,092.34	32° 4' 30.968 N	104° 5' 3.987 W
16,925.0	88.99	359.18	8,104.3	9,049.2	316.9	391,290.00	577,090.87	32° 4' 31.898 N	104° 5' 4.002 W
17,019.0	88.15	359.10	8,106.7	9,143.2	315.5	391,383.96	577,089.46	32° 4' 32.828 N	104° 5' 4.016 W
17,113.0	88.77	359.49	8,109.2	9,237.1	314.3	391,477.91	577,088.30	32° 4' 33.758 N	104° 5' 4.027 W
17,207.0	89.44	0.57	8,110.7	9,331.1	314.3	391,571.90	577,088.35	32° 4' 34.688 N	104° 5' 4.024 W
17,301.0	89.64	0.37	8,111.4	9,425.1	315.1	391,665.89	577,089.12	32° 4' 35.619 N	104° 5' 4.012 W
17,395.0	88.38	359.39	8,113.0	9,519.1	314.9	391,759.88	577,088.92	32° 4' 36.549 N	104° 5' 4.012 W
17,490.0	88.12	359.51	8,115.9	9,614.0	314.0	391,854.83	577,088.01	32° 4' 37.488 N	104° 5' 4.020 W
17,584.0	89.16	0.43	8,118.2	9,708.0	314.0	391,948.80	577,087.96	32° 4' 38.418 N	104° 5' 4.018 W
17,678.0	87.73	0.19	8,120.7	9,802.0	314.5	392,042.76	577,088.47	32° 4' 39.348 N	104° 5' 4.010 W
17,772.0	87.79	0.69	8,124.4	9,895.9	315.2	392,136.69	577,089.19	32° 4' 40.278 N	104° 5' 3.999 W
17,845.0	88.07	0.53	8,127.0	9,968.8	316.0	392,209.63	577,089.97	32° 4' 41.000 N	104° 5' 3.988 W
17,905.0	88.07	0.53	8,129.0	10,028.8	316.5	392,269.60	577,090.52	32° 4' 41.593 N	104° 5' 3.980 W

TD @ 17905.0' MD / 8129.0' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
7,450.0	7,439.4	15.1	197.0	Gyro Tie In @ 7450.0 'MD / 7439.4 'TVD
17,905.0	8,129.0	10,028.8	316.5	TD @ 17905.0' MD / 8129.0' TVD