



COG Operating, LLC

Lea County, NM

Sec 25, T25S, R33E

Dominator 25 Federal #602H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

25 October, 2018

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Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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	Sec 25, T25S, R33E		
Site Position:		Northing:	399,200.40 usft
From:	Map	Easting:	748,329.70 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 5' 41.926 N
		Longitude:	103° 31' 53.183 W
		Grid Convergence:	0.43 °

Well	Dominator 25 Federal #602H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 5' 41.667 N
		Longitude:	103° 31' 9.082 W
		Ground Level:	3,323.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	User Defined	9/14/2018	(°)
			6.77
			Dip Angle
			(°)
			59.78
			Field Strength
			(nT)
			47,848.00000000

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			356.06

Survey Program	Date 10/25/2018		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	11,723.0	Gyro Surveys (Wellbore #1)	GYRO-NS
11,796.0	17,382.0	QES MWD Surveys (C&L gyro tie) (Wellbo	MWD+IFR1+MS
			Description
			OWSG Gyrocompass Gyro
			OWSG MWD + IFR1 + Multi-Station Correction

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Map	Map		
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting	Latitude	Longitude
(usft)			(usft)			(usft)	(usft)		
0.0	0.00	0.00	0.0	0.0	0.0	399,202.60	752,123.70	32° 5' 41.667 N	103° 31' 9.082 W
100.0	0.29	27.96	100.0	0.2	0.1	399,202.82	752,123.82	32° 5' 41.669 N	103° 31' 9.081 W
125.0	0.43	19.04	125.0	0.4	0.2	399,202.97	752,123.88	32° 5' 41.670 N	103° 31' 9.080 W
150.0	0.33	16.19	150.0	0.5	0.2	399,203.12	752,123.93	32° 5' 41.672 N	103° 31' 9.079 W
175.0	0.36	11.58	175.0	0.7	0.3	399,203.27	752,123.96	32° 5' 41.673 N	103° 31' 9.079 W
200.0	0.50	4.96	200.0	0.9	0.3	399,203.46	752,123.99	32° 5' 41.675 N	103° 31' 9.078 W
225.0	0.39	14.46	225.0	1.0	0.3	399,203.65	752,124.02	32° 5' 41.677 N	103° 31' 9.078 W
250.0	0.39	19.68	250.0	1.2	0.4	399,203.81	752,124.07	32° 5' 41.679 N	103° 31' 9.078 W
275.0	0.42	15.29	275.0	1.4	0.4	399,203.98	752,124.12	32° 5' 41.680 N	103° 31' 9.077 W
300.0	0.45	9.89	300.0	1.6	0.5	399,204.16	752,124.16	32° 5' 41.682 N	103° 31' 9.076 W
325.0	0.49	6.46	325.0	1.8	0.5	399,204.37	752,124.19	32° 5' 41.684 N	103° 31' 9.076 W



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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
350.0	0.47	5.57	350.0	2.0	0.5	399,204.57	752,124.21	32° 5' 41.686 N	103° 31' 9.076 W
375.0	0.45	14.07	375.0	2.2	0.5	399,204.77	752,124.25	32° 5' 41.688 N	103° 31' 9.075 W
400.0	0.51	9.96	400.0	2.4	0.6	399,204.98	752,124.29	32° 5' 41.690 N	103° 31' 9.075 W
425.0	0.46	16.75	425.0	2.6	0.6	399,205.18	752,124.34	32° 5' 41.692 N	103° 31' 9.074 W
450.0	0.45	12.85	450.0	2.8	0.7	399,205.37	752,124.39	32° 5' 41.694 N	103° 31' 9.074 W
475.0	0.51	7.74	475.0	3.0	0.7	399,205.58	752,124.43	32° 5' 41.696 N	103° 31' 9.073 W
500.0	0.49	13.63	500.0	3.2	0.8	399,205.79	752,124.47	32° 5' 41.698 N	103° 31' 9.073 W
525.0	0.55	7.01	525.0	3.4	0.8	399,206.02	752,124.51	32° 5' 41.701 N	103° 31' 9.072 W
550.0	0.64	10.37	550.0	3.7	0.8	399,206.27	752,124.55	32° 5' 41.703 N	103° 31' 9.072 W
575.0	0.66	16.74	575.0	4.0	0.9	399,206.55	752,124.61	32° 5' 41.706 N	103° 31' 9.071 W
600.0	0.61	13.52	600.0	4.2	1.0	399,206.82	752,124.68	32° 5' 41.709 N	103° 31' 9.070 W
625.0	0.65	6.94	625.0	4.5	1.0	399,207.09	752,124.73	32° 5' 41.711 N	103° 31' 9.070 W
650.0	0.72	14.97	650.0	4.8	1.1	399,207.38	752,124.79	32° 5' 41.714 N	103° 31' 9.069 W
675.0	0.62	18.21	675.0	5.1	1.2	399,207.66	752,124.87	32° 5' 41.717 N	103° 31' 9.068 W
700.0	0.64	20.22	700.0	5.3	1.3	399,207.92	752,124.96	32° 5' 41.719 N	103° 31' 9.067 W
725.0	0.65	18.54	725.0	5.6	1.4	399,208.18	752,125.06	32° 5' 41.722 N	103° 31' 9.066 W
750.0	0.65	13.86	750.0	5.9	1.4	399,208.46	752,125.14	32° 5' 41.725 N	103° 31' 9.065 W
775.0	0.70	17.82	775.0	6.1	1.5	399,208.74	752,125.22	32° 5' 41.728 N	103° 31' 9.064 W
800.0	0.69	17.03	800.0	6.4	1.6	399,209.03	752,125.31	32° 5' 41.730 N	103° 31' 9.063 W
825.0	0.69	17.91	825.0	6.7	1.7	399,209.32	752,125.40	32° 5' 41.733 N	103° 31' 9.062 W
850.0	0.68	18.03	850.0	7.0	1.8	399,209.60	752,125.49	32° 5' 41.736 N	103° 31' 9.060 W
875.0	0.58	31.94	875.0	7.2	1.9	399,209.85	752,125.60	32° 5' 41.738 N	103° 31' 9.059 W
900.0	0.68	14.94	900.0	7.5	2.0	399,210.10	752,125.71	32° 5' 41.741 N	103° 31' 9.058 W
925.0	0.69	21.02	925.0	7.8	2.1	399,210.38	752,125.80	32° 5' 41.744 N	103° 31' 9.057 W
950.0	0.84	20.03	950.0	8.1	2.2	399,210.70	752,125.92	32° 5' 41.747 N	103° 31' 9.055 W
975.0	0.87	24.32	975.0	8.4	2.4	399,211.04	752,126.06	32° 5' 41.750 N	103° 31' 9.054 W
1,000.0	0.92	25.20	1,000.0	8.8	2.5	399,211.40	752,126.22	32° 5' 41.754 N	103° 31' 9.052 W
1,025.0	0.83	23.22	1,024.9	9.1	2.7	399,211.74	752,126.38	32° 5' 41.757 N	103° 31' 9.050 W
1,050.0	0.84	19.34	1,049.9	9.5	2.8	399,212.08	752,126.51	32° 5' 41.760 N	103° 31' 9.048 W
1,075.0	0.85	18.16	1,074.9	9.8	2.9	399,212.43	752,126.63	32° 5' 41.764 N	103° 31' 9.047 W
1,100.0	0.91	21.17	1,099.9	10.2	3.1	399,212.79	752,126.76	32° 5' 41.768 N	103° 31' 9.045 W
1,125.0	0.87	22.89	1,124.9	10.6	3.2	399,213.15	752,126.90	32° 5' 41.771 N	103° 31' 9.044 W
1,150.0	0.89	22.13	1,149.9	10.9	3.4	399,213.51	752,127.05	32° 5' 41.775 N	103° 31' 9.042 W
1,175.0	0.84	21.43	1,174.9	11.3	3.5	399,213.86	752,127.19	32° 5' 41.778 N	103° 31' 9.040 W
1,200.0	0.87	24.18	1,199.9	11.6	3.6	399,214.20	752,127.34	32° 5' 41.781 N	103° 31' 9.039 W
1,225.0	0.92	20.54	1,224.9	12.0	3.8	399,214.56	752,127.48	32° 5' 41.785 N	103° 31' 9.037 W
1,250.0	0.83	22.29	1,249.9	12.3	3.9	399,214.92	752,127.62	32° 5' 41.788 N	103° 31' 9.035 W
1,275.0	0.67	15.60	1,274.9	12.6	4.0	399,215.23	752,127.73	32° 5' 41.792 N	103° 31' 9.034 W
1,300.0	0.29	348.54	1,299.9	12.8	4.1	399,215.43	752,127.76	32° 5' 41.794 N	103° 31' 9.034 W
1,325.0	0.49	271.47	1,324.9	12.9	3.9	399,215.49	752,127.64	32° 5' 41.794 N	103° 31' 9.035 W
1,350.0	1.01	240.29	1,349.9	12.8	3.6	399,215.39	752,127.34	32° 5' 41.793 N	103° 31' 9.038 W
1,375.0	1.37	239.40	1,374.9	12.5	3.2	399,215.13	752,126.89	32° 5' 41.791 N	103° 31' 9.044 W
1,400.0	1.43	236.01	1,399.9	12.2	2.7	399,214.80	752,126.38	32° 5' 41.787 N	103° 31' 9.050 W
1,425.0	1.39	238.72	1,424.9	11.9	2.2	399,214.47	752,125.86	32° 5' 41.784 N	103° 31' 9.056 W
1,450.0	1.39	234.72	1,449.9	11.5	1.7	399,214.14	752,125.35	32° 5' 41.781 N	103° 31' 9.062 W
1,475.0	1.55	229.46	1,474.9	11.1	1.2	399,213.74	752,124.85	32° 5' 41.777 N	103° 31' 9.068 W
1,500.0	1.65	221.95	1,499.9	10.7	0.7	399,213.25	752,124.35	32° 5' 41.772 N	103° 31' 9.073 W
1,525.0	2.06	207.13	1,524.9	10.0	0.2	399,212.59	752,123.90	32° 5' 41.766 N	103° 31' 9.079 W
1,550.0	2.12	205.50	1,549.8	9.2	-0.2	399,211.77	752,123.50	32° 5' 41.758 N	103° 31' 9.083 W
1,575.0	2.24	206.66	1,574.8	8.3	-0.6	399,210.91	752,123.08	32° 5' 41.749 N	103° 31' 9.088 W
1,600.0	2.34	204.06	1,599.8	7.4	-1.0	399,210.01	752,122.65	32° 5' 41.740 N	103° 31' 9.093 W
1,625.0	2.35	203.74	1,624.8	6.5	-1.5	399,209.08	752,122.24	32° 5' 41.731 N	103° 31' 9.098 W
1,650.0	2.33	202.95	1,649.8	5.5	-1.9	399,208.14	752,121.84	32° 5' 41.722 N	103° 31' 9.103 W
1,675.0	2.41	202.84	1,674.7	4.6	-2.3	399,207.19	752,121.43	32° 5' 41.712 N	103° 31' 9.108 W
1,700.0	2.29	204.15	1,699.7	3.6	-2.7	399,206.25	752,121.02	32° 5' 41.703 N	103° 31' 9.113 W



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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	2.39	203.56	1,724.7	2.7	-3.1	399,205.31	752,120.61	32° 5' 41.694 N	103° 31' 9.118 W
1,750.0	2.30	203.79	1,749.7	1.8	-3.5	399,204.38	752,120.20	32° 5' 41.685 N	103° 31' 9.122 W
1,775.0	2.07	204.32	1,774.7	0.9	-3.9	399,203.51	752,119.81	32° 5' 41.676 N	103° 31' 9.127 W
1,800.0	1.75	208.66	1,799.6	0.2	-4.3	399,202.76	752,119.44	32° 5' 41.669 N	103° 31' 9.131 W
1,825.0	1.45	211.59	1,824.6	-0.4	-4.6	399,202.16	752,119.10	32° 5' 41.663 N	103° 31' 9.135 W
1,850.0	1.34	214.52	1,849.6	-1.0	-4.9	399,201.65	752,118.76	32° 5' 41.658 N	103° 31' 9.139 W
1,875.0	1.21	215.80	1,874.6	-1.4	-5.3	399,201.19	752,118.44	32° 5' 41.653 N	103° 31' 9.143 W
1,900.0	1.26	213.75	1,899.6	-1.9	-5.6	399,200.75	752,118.14	32° 5' 41.649 N	103° 31' 9.147 W
1,925.0	1.32	217.76	1,924.6	-2.3	-5.9	399,200.29	752,117.81	32° 5' 41.644 N	103° 31' 9.151 W
1,950.0	1.28	218.66	1,949.6	-2.8	-6.2	399,199.85	752,117.46	32° 5' 41.640 N	103° 31' 9.155 W
1,975.0	1.36	219.66	1,974.6	-3.2	-6.6	399,199.40	752,117.09	32° 5' 41.636 N	103° 31' 9.159 W
2,000.0	1.24	221.30	1,999.6	-3.6	-7.0	399,198.97	752,116.73	32° 5' 41.631 N	103° 31' 9.163 W
2,025.0	1.34	221.51	2,024.6	-4.1	-7.3	399,198.55	752,116.35	32° 5' 41.627 N	103° 31' 9.168 W
2,050.0	1.34	220.44	2,049.6	-4.5	-7.7	399,198.10	752,115.97	32° 5' 41.623 N	103° 31' 9.172 W
2,075.0	1.29	222.59	2,074.6	-4.9	-8.1	399,197.67	752,115.59	32° 5' 41.619 N	103° 31' 9.177 W
2,100.0	1.29	221.16	2,099.6	-5.3	-8.5	399,197.26	752,115.21	32° 5' 41.615 N	103° 31' 9.181 W
2,125.0	1.29	222.31	2,124.6	-5.8	-8.9	399,196.84	752,114.84	32° 5' 41.610 N	103° 31' 9.185 W
2,150.0	1.28	221.33	2,149.6	-6.2	-9.2	399,196.42	752,114.47	32° 5' 41.606 N	103° 31' 9.190 W
2,175.0	1.36	218.61	2,174.5	-6.6	-9.6	399,195.98	752,114.10	32° 5' 41.602 N	103° 31' 9.194 W
2,200.0	1.27	217.63	2,199.5	-7.1	-10.0	399,195.53	752,113.74	32° 5' 41.598 N	103° 31' 9.198 W
2,225.0	1.21	214.46	2,224.5	-7.5	-10.3	399,195.09	752,113.42	32° 5' 41.593 N	103° 31' 9.202 W
2,250.0	1.26	217.10	2,249.5	-7.9	-10.6	399,194.65	752,113.11	32° 5' 41.589 N	103° 31' 9.206 W
2,275.0	1.20	218.26	2,274.5	-8.4	-10.9	399,194.23	752,112.78	32° 5' 41.585 N	103° 31' 9.210 W
2,300.0	1.26	214.97	2,299.5	-8.8	-11.2	399,193.80	752,112.46	32° 5' 41.581 N	103° 31' 9.213 W
2,325.0	1.21	214.14	2,324.5	-9.2	-11.5	399,193.35	752,112.15	32° 5' 41.576 N	103° 31' 9.217 W
2,350.0	1.17	215.81	2,349.5	-9.7	-11.8	399,192.93	752,111.86	32° 5' 41.572 N	103° 31' 9.220 W
2,375.0	1.19	214.87	2,374.5	-10.1	-12.1	399,192.51	752,111.56	32° 5' 41.568 N	103° 31' 9.224 W
2,400.0	1.15	213.54	2,399.5	-10.5	-12.4	399,192.08	752,111.27	32° 5' 41.564 N	103° 31' 9.227 W
2,425.0	1.17	211.00	2,424.5	-10.9	-12.7	399,191.66	752,111.00	32° 5' 41.560 N	103° 31' 9.230 W
2,450.0	1.09	207.44	2,449.5	-11.4	-12.9	399,191.23	752,110.76	32° 5' 41.555 N	103° 31' 9.233 W
2,475.0	1.00	205.54	2,474.5	-11.8	-13.1	399,190.82	752,110.56	32° 5' 41.551 N	103° 31' 9.236 W
2,500.0	1.01	195.54	2,499.5	-12.2	-13.3	399,190.41	752,110.40	32° 5' 41.547 N	103° 31' 9.238 W
2,525.0	1.05	193.12	2,524.5	-12.6	-13.4	399,189.97	752,110.29	32° 5' 41.543 N	103° 31' 9.239 W
2,550.0	0.97	190.05	2,549.5	-13.1	-13.5	399,189.54	752,110.20	32° 5' 41.539 N	103° 31' 9.240 W
2,575.0	1.01	194.40	2,574.5	-13.5	-13.6	399,189.12	752,110.11	32° 5' 41.535 N	103° 31' 9.241 W
2,600.0	1.00	195.24	2,599.5	-13.9	-13.7	399,188.70	752,110.00	32° 5' 41.530 N	103° 31' 9.242 W
2,625.0	1.04	199.63	2,624.5	-14.3	-13.8	399,188.27	752,109.87	32° 5' 41.526 N	103° 31' 9.244 W
2,650.0	1.13	205.58	2,649.5	-14.8	-14.0	399,187.84	752,109.68	32° 5' 41.522 N	103° 31' 9.246 W
2,675.0	1.20	208.97	2,674.4	-15.2	-14.2	399,187.39	752,109.45	32° 5' 41.517 N	103° 31' 9.249 W
2,700.0	1.25	210.60	2,699.4	-15.7	-14.5	399,186.92	752,109.19	32° 5' 41.513 N	103° 31' 9.252 W
2,725.0	1.19	211.86	2,724.4	-16.1	-14.8	399,186.47	752,108.91	32° 5' 41.508 N	103° 31' 9.255 W
2,750.0	1.20	209.29	2,749.4	-16.6	-15.1	399,186.02	752,108.64	32° 5' 41.504 N	103° 31' 9.258 W
2,775.0	1.27	211.41	2,774.4	-17.0	-15.3	399,185.55	752,108.37	32° 5' 41.499 N	103° 31' 9.262 W
2,800.0	1.27	209.87	2,799.4	-17.5	-15.6	399,185.08	752,108.09	32° 5' 41.495 N	103° 31' 9.265 W
2,825.0	1.32	216.14	2,824.4	-18.0	-15.9	399,184.60	752,107.78	32° 5' 41.490 N	103° 31' 9.269 W
2,850.0	1.46	225.35	2,849.4	-18.5	-16.3	399,184.15	752,107.39	32° 5' 41.485 N	103° 31' 9.273 W
2,875.0	1.61	234.07	2,874.4	-18.9	-16.8	399,183.72	752,106.87	32° 5' 41.481 N	103° 31' 9.279 W
2,900.0	1.60	231.06	2,899.4	-19.3	-17.4	399,183.29	752,106.32	32° 5' 41.477 N	103° 31' 9.286 W
2,925.0	1.66	230.30	2,924.4	-19.8	-17.9	399,182.84	752,105.77	32° 5' 41.473 N	103° 31' 9.292 W
2,950.0	1.65	232.52	2,949.4	-20.2	-18.5	399,182.39	752,105.20	32° 5' 41.468 N	103° 31' 9.299 W
2,975.0	1.51	230.06	2,974.4	-20.6	-19.0	399,181.96	752,104.67	32° 5' 41.464 N	103° 31' 9.305 W
3,000.0	1.37	223.96	2,999.3	-21.1	-19.5	399,181.53	752,104.21	32° 5' 41.460 N	103° 31' 9.310 W
3,025.0	1.19	223.10	3,024.3	-21.5	-19.9	399,181.13	752,103.82	32° 5' 41.456 N	103° 31' 9.315 W
3,050.0	1.04	219.73	3,049.3	-21.8	-20.2	399,180.77	752,103.50	32° 5' 41.452 N	103° 31' 9.319 W
3,075.0	0.88	216.65	3,074.3	-22.2	-20.5	399,180.44	752,103.24	32° 5' 41.449 N	103° 31' 9.322 W



Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
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
3,100.0	0.74	201.87	3,099.3	-22.5	-20.6	399,180.13	752,103.06	32° 5' 41.446 N	103° 31' 9.324 W
3,125.0	0.51	183.73	3,124.3	-22.7	-20.7	399,179.87	752,103.00	32° 5' 41.444 N	103° 31' 9.325 W
3,150.0	0.61	183.86	3,149.3	-23.0	-20.7	399,179.63	752,102.98	32° 5' 41.441 N	103° 31' 9.325 W
3,175.0	0.53	182.87	3,174.3	-23.2	-20.7	399,179.38	752,102.97	32° 5' 41.439 N	103° 31' 9.325 W
3,200.0	0.56	186.58	3,199.3	-23.5	-20.7	399,179.14	752,102.95	32° 5' 41.436 N	103° 31' 9.325 W
3,225.0	0.68	197.17	3,224.3	-23.7	-20.8	399,178.88	752,102.89	32° 5' 41.434 N	103° 31' 9.326 W
3,250.0	0.81	212.40	3,249.3	-24.0	-20.9	399,178.59	752,102.75	32° 5' 41.431 N	103° 31' 9.328 W
3,275.0	0.81	218.03	3,274.3	-24.3	-21.1	399,178.30	752,102.55	32° 5' 41.428 N	103° 31' 9.330 W
3,300.0	1.01	225.09	3,299.3	-24.6	-21.4	399,178.01	752,102.28	32° 5' 41.425 N	103° 31' 9.333 W
3,325.0	1.27	239.63	3,324.3	-24.9	-21.8	399,177.71	752,101.89	32° 5' 41.422 N	103° 31' 9.338 W
3,350.0	1.41	245.51	3,349.3	-25.2	-22.3	399,177.44	752,101.37	32° 5' 41.420 N	103° 31' 9.344 W
3,375.0	1.43	246.50	3,374.3	-25.4	-22.9	399,177.19	752,100.80	32° 5' 41.417 N	103° 31' 9.350 W
3,400.0	1.13	244.53	3,399.3	-25.6	-23.4	399,176.96	752,100.29	32° 5' 41.415 N	103° 31' 9.356 W
3,425.0	0.99	251.52	3,424.3	-25.8	-23.8	399,176.79	752,099.87	32° 5' 41.413 N	103° 31' 9.361 W
3,450.0	0.92	250.11	3,449.3	-25.9	-24.2	399,176.65	752,099.47	32° 5' 41.412 N	103° 31' 9.366 W
3,475.0	0.93	249.14	3,474.3	-26.1	-24.6	399,176.51	752,099.09	32° 5' 41.411 N	103° 31' 9.370 W
3,500.0	0.99	251.49	3,499.3	-26.2	-25.0	399,176.37	752,098.70	32° 5' 41.409 N	103° 31' 9.375 W
3,525.0	1.35	262.95	3,524.3	-26.3	-25.5	399,176.26	752,098.20	32° 5' 41.408 N	103° 31' 9.381 W
3,550.0	1.37	265.75	3,549.3	-26.4	-26.1	399,176.20	752,097.61	32° 5' 41.408 N	103° 31' 9.387 W
3,575.0	1.36	268.06	3,574.3	-26.4	-26.7	399,176.17	752,097.02	32° 5' 41.407 N	103° 31' 9.394 W
3,600.0	1.30	273.29	3,599.3	-26.4	-27.3	399,176.18	752,096.44	32° 5' 41.407 N	103° 31' 9.401 W
3,625.0	1.31	276.98	3,624.2	-26.4	-27.8	399,176.23	752,095.87	32° 5' 41.408 N	103° 31' 9.408 W
3,650.0	1.30	273.70	3,649.2	-26.3	-28.4	399,176.28	752,095.30	32° 5' 41.409 N	103° 31' 9.414 W
3,675.0	1.42	269.66	3,674.2	-26.3	-29.0	399,176.30	752,094.71	32° 5' 41.409 N	103° 31' 9.421 W
3,700.0	1.54	256.48	3,699.2	-26.4	-29.6	399,176.22	752,094.08	32° 5' 41.408 N	103° 31' 9.429 W
3,725.0	1.76	246.99	3,724.2	-26.6	-30.3	399,175.99	752,093.40	32° 5' 41.406 N	103° 31' 9.436 W
3,750.0	2.07	237.64	3,749.2	-27.0	-31.0	399,175.60	752,092.66	32° 5' 41.402 N	103° 31' 9.445 W
3,775.0	2.13	236.74	3,774.2	-27.5	-31.8	399,175.10	752,091.89	32° 5' 41.397 N	103° 31' 9.454 W
3,800.0	2.17	234.58	3,799.2	-28.0	-32.6	399,174.57	752,091.12	32° 5' 41.392 N	103° 31' 9.463 W
3,825.0	2.10	234.86	3,824.1	-28.6	-33.3	399,174.04	752,090.36	32° 5' 41.387 N	103° 31' 9.472 W
3,850.0	2.05	231.25	3,849.1	-29.1	-34.1	399,173.49	752,089.63	32° 5' 41.381 N	103° 31' 9.480 W
3,875.0	1.99	230.64	3,874.1	-29.7	-34.7	399,172.94	752,088.95	32° 5' 41.376 N	103° 31' 9.488 W
3,900.0	1.87	229.05	3,899.1	-30.2	-35.4	399,172.39	752,088.31	32° 5' 41.371 N	103° 31' 9.496 W
3,925.0	1.56	220.66	3,924.1	-30.7	-35.9	399,171.87	752,087.78	32° 5' 41.365 N	103° 31' 9.502 W
3,950.0	1.21	209.10	3,949.1	-31.2	-36.3	399,171.38	752,087.43	32° 5' 41.361 N	103° 31' 9.506 W
3,975.0	0.95	187.29	3,974.1	-31.7	-36.4	399,170.94	752,087.27	32° 5' 41.356 N	103° 31' 9.508 W
4,000.0	1.02	148.18	3,999.1	-32.1	-36.3	399,170.55	752,087.36	32° 5' 41.352 N	103° 31' 9.507 W
4,025.0	1.14	132.34	4,024.1	-32.4	-36.0	399,170.19	752,087.66	32° 5' 41.349 N	103° 31' 9.504 W
4,050.0	1.22	135.93	4,049.1	-32.8	-35.7	399,169.83	752,088.03	32° 5' 41.345 N	103° 31' 9.499 W
4,075.0	1.43	139.42	4,074.1	-33.2	-35.3	399,169.41	752,088.42	32° 5' 41.341 N	103° 31' 9.495 W
4,100.0	1.86	158.74	4,099.0	-33.8	-34.9	399,168.79	752,088.77	32° 5' 41.335 N	103° 31' 9.491 W
4,125.0	1.98	167.95	4,124.0	-34.6	-34.7	399,167.99	752,089.01	32° 5' 41.327 N	103° 31' 9.488 W
4,150.0	1.97	176.02	4,149.0	-35.5	-34.6	399,167.14	752,089.13	32° 5' 41.319 N	103° 31' 9.487 W
4,175.0	1.80	195.64	4,174.0	-36.3	-34.6	399,166.33	752,089.05	32° 5' 41.311 N	103° 31' 9.488 W
4,200.0	2.14	212.66	4,199.0	-37.0	-35.0	399,165.56	752,088.69	32° 5' 41.303 N	103° 31' 9.492 W
4,225.0	2.13	209.43	4,224.0	-37.8	-35.5	399,164.76	752,088.21	32° 5' 41.295 N	103° 31' 9.498 W
4,250.0	2.03	213.94	4,249.0	-38.6	-36.0	399,163.99	752,087.74	32° 5' 41.287 N	103° 31' 9.503 W
4,275.0	1.95	209.47	4,273.9	-39.3	-36.4	399,163.25	752,087.28	32° 5' 41.280 N	103° 31' 9.509 W
4,300.0	1.86	204.01	4,298.9	-40.1	-36.8	399,162.51	752,086.91	32° 5' 41.273 N	103° 31' 9.513 W
4,325.0	1.94	196.27	4,323.9	-40.9	-37.1	399,161.74	752,086.62	32° 5' 41.265 N	103° 31' 9.516 W
4,350.0	1.80	197.14	4,348.9	-41.6	-37.3	399,160.95	752,086.39	32° 5' 41.258 N	103° 31' 9.519 W
4,375.0	1.86	195.37	4,373.9	-42.4	-37.5	399,160.19	752,086.17	32° 5' 41.250 N	103° 31' 9.522 W
4,400.0	1.77	193.27	4,398.9	-43.2	-37.7	399,159.42	752,085.97	32° 5' 41.242 N	103° 31' 9.524 W
4,425.0	1.70	194.45	4,423.9	-43.9	-37.9	399,158.69	752,085.79	32° 5' 41.235 N	103° 31' 9.526 W
4,450.0	1.89	193.84	4,448.9	-44.7	-38.1	399,157.93	752,085.60	32° 5' 41.228 N	103° 31' 9.529 W



Survey Report - Geographic



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Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
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
4,475.0	1.82	193.59	4,473.8	-45.5	-38.3	399,157.14	752,085.41	32° 5' 41.220 N	103° 31' 9.531 W
4,500.0	1.75	194.26	4,498.8	-46.2	-38.5	399,156.38	752,085.22	32° 5' 41.212 N	103° 31' 9.533 W
4,525.0	1.79	195.16	4,523.8	-47.0	-38.7	399,155.64	752,085.02	32° 5' 41.205 N	103° 31' 9.536 W
4,550.0	1.76	194.41	4,548.8	-47.7	-38.9	399,154.89	752,084.82	32° 5' 41.198 N	103° 31' 9.538 W
4,575.0	1.88	203.32	4,573.8	-48.5	-39.1	399,154.14	752,084.57	32° 5' 41.190 N	103° 31' 9.541 W
4,600.0	1.89	206.27	4,598.8	-49.2	-39.5	399,153.39	752,084.22	32° 5' 41.183 N	103° 31' 9.545 W
4,625.0	1.77	208.30	4,623.8	-49.9	-39.8	399,152.68	752,083.86	32° 5' 41.176 N	103° 31' 9.549 W
4,650.0	1.81	207.90	4,648.8	-50.6	-40.2	399,152.00	752,083.49	32° 5' 41.169 N	103° 31' 9.554 W
4,675.0	1.73	210.67	4,673.7	-51.3	-40.6	399,151.32	752,083.11	32° 5' 41.162 N	103° 31' 9.558 W
4,700.0	1.41	220.69	4,698.7	-51.8	-41.0	399,150.76	752,082.72	32° 5' 41.157 N	103° 31' 9.563 W
4,725.0	1.76	207.17	4,723.7	-52.4	-41.4	399,150.19	752,082.34	32° 5' 41.151 N	103° 31' 9.567 W
4,750.0	1.66	212.83	4,748.7	-53.1	-41.7	399,149.54	752,081.97	32° 5' 41.145 N	103° 31' 9.572 W
4,775.0	1.66	214.44	4,773.7	-53.7	-42.1	399,148.94	752,081.57	32° 5' 41.139 N	103° 31' 9.576 W
4,800.0	1.68	209.76	4,798.7	-54.3	-42.5	399,148.32	752,081.18	32° 5' 41.133 N	103° 31' 9.581 W
4,825.0	1.75	198.04	4,823.7	-55.0	-42.8	399,147.64	752,080.88	32° 5' 41.126 N	103° 31' 9.584 W
4,850.0	1.93	195.29	4,848.7	-55.7	-43.0	399,146.87	752,080.65	32° 5' 41.119 N	103° 31' 9.587 W
4,875.0	1.95	194.53	4,873.7	-56.5	-43.3	399,146.06	752,080.44	32° 5' 41.111 N	103° 31' 9.590 W
4,900.0	1.93	194.16	4,898.6	-57.4	-43.5	399,145.24	752,080.23	32° 5' 41.102 N	103° 31' 9.592 W
4,925.0	1.91	217.27	4,923.6	-58.1	-43.8	399,144.50	752,079.87	32° 5' 41.095 N	103° 31' 9.596 W
4,950.0	2.14	236.38	4,948.6	-58.7	-44.5	399,143.91	752,079.23	32° 5' 41.089 N	103° 31' 9.604 W
4,975.0	2.35	242.99	4,973.6	-59.2	-45.3	399,143.42	752,078.38	32° 5' 41.085 N	103° 31' 9.614 W
5,000.0	2.46	243.32	4,998.6	-59.7	-46.2	399,142.94	752,077.45	32° 5' 41.080 N	103° 31' 9.625 W
5,025.0	2.30	242.32	5,023.5	-60.1	-47.2	399,142.47	752,076.52	32° 5' 41.075 N	103° 31' 9.636 W
5,050.0	2.23	241.81	5,048.5	-60.6	-48.0	399,142.01	752,075.65	32° 5' 41.071 N	103° 31' 9.646 W
5,075.0	2.11	239.94	5,073.5	-61.1	-48.9	399,141.54	752,074.82	32° 5' 41.066 N	103° 31' 9.655 W
5,100.0	1.99	234.92	5,098.5	-61.5	-49.6	399,141.06	752,074.07	32° 5' 41.062 N	103° 31' 9.664 W
5,125.0	1.94	230.19	5,123.5	-62.1	-50.3	399,140.54	752,073.39	32° 5' 41.057 N	103° 31' 9.672 W
5,150.0	1.74	228.26	5,148.5	-62.6	-50.9	399,140.02	752,072.78	32° 5' 41.051 N	103° 31' 9.679 W
5,175.0	1.72	224.75	5,173.5	-63.1	-51.5	399,139.50	752,072.24	32° 5' 41.046 N	103° 31' 9.686 W
5,200.0	1.64	222.89	5,198.4	-63.6	-52.0	399,138.97	752,071.73	32° 5' 41.041 N	103° 31' 9.692 W
5,225.0	1.57	220.05	5,223.4	-64.1	-52.4	399,138.45	752,071.26	32° 5' 41.036 N	103° 31' 9.697 W
5,250.0	1.61	218.91	5,248.4	-64.7	-52.9	399,137.91	752,070.82	32° 5' 41.031 N	103° 31' 9.702 W
5,275.0	1.63	220.64	5,273.4	-65.2	-53.3	399,137.37	752,070.37	32° 5' 41.025 N	103° 31' 9.708 W
5,300.0	1.65	220.26	5,298.4	-65.8	-53.8	399,136.83	752,069.91	32° 5' 41.020 N	103° 31' 9.713 W
5,325.0	1.54	218.94	5,323.4	-66.3	-54.2	399,136.29	752,069.46	32° 5' 41.015 N	103° 31' 9.718 W
5,350.0	1.60	221.94	5,348.4	-66.8	-54.7	399,135.77	752,069.02	32° 5' 41.010 N	103° 31' 9.723 W
5,375.0	1.61	219.88	5,373.4	-67.4	-55.1	399,135.24	752,068.56	32° 5' 41.004 N	103° 31' 9.729 W
5,400.0	1.57	221.61	5,398.4	-67.9	-55.6	399,134.71	752,068.11	32° 5' 40.999 N	103° 31' 9.734 W
5,425.0	1.38	222.08	5,423.4	-68.4	-56.0	399,134.23	752,067.68	32° 5' 40.995 N	103° 31' 9.739 W
5,450.0	1.39	225.19	5,448.3	-68.8	-56.4	399,133.80	752,067.26	32° 5' 40.990 N	103° 31' 9.744 W
5,475.0	1.40	221.35	5,473.3	-69.2	-56.9	399,133.35	752,066.84	32° 5' 40.986 N	103° 31' 9.749 W
5,500.0	1.39	222.73	5,498.3	-69.7	-57.3	399,132.90	752,066.44	32° 5' 40.981 N	103° 31' 9.754 W
5,525.0	1.40	223.14	5,523.3	-70.1	-57.7	399,132.46	752,066.02	32° 5' 40.977 N	103° 31' 9.758 W
5,550.0	1.35	222.79	5,548.3	-70.6	-58.1	399,132.02	752,065.61	32° 5' 40.973 N	103° 31' 9.763 W
5,575.0	1.36	222.40	5,573.3	-71.0	-58.5	399,131.58	752,065.21	32° 5' 40.968 N	103° 31' 9.768 W
5,600.0	1.31	221.78	5,598.3	-71.4	-58.9	399,131.15	752,064.82	32° 5' 40.964 N	103° 31' 9.773 W
5,625.0	1.32	222.52	5,623.3	-71.9	-59.3	399,130.73	752,064.44	32° 5' 40.960 N	103° 31' 9.777 W
5,650.0	1.29	221.74	5,648.3	-72.3	-59.6	399,130.30	752,064.06	32° 5' 40.956 N	103° 31' 9.782 W
5,675.0	1.32	223.30	5,673.3	-72.7	-60.0	399,129.88	752,063.67	32° 5' 40.952 N	103° 31' 9.786 W
5,700.0	1.32	222.95	5,698.3	-73.1	-60.4	399,129.46	752,063.28	32° 5' 40.948 N	103° 31' 9.791 W
5,725.0	1.30	223.23	5,723.3	-73.6	-60.8	399,129.05	752,062.89	32° 5' 40.944 N	103° 31' 9.795 W
5,750.0	1.27	222.53	5,748.3	-74.0	-61.2	399,128.64	752,062.51	32° 5' 40.940 N	103° 31' 9.800 W
5,775.0	1.28	223.38	5,773.3	-74.4	-61.6	399,128.23	752,062.13	32° 5' 40.936 N	103° 31' 9.804 W
5,800.0	1.25	224.57	5,798.3	-74.8	-62.0	399,127.83	752,061.74	32° 5' 40.932 N	103° 31' 9.809 W
5,825.0	1.20	226.35	5,823.2	-75.1	-62.3	399,127.46	752,061.36	32° 5' 40.928 N	103° 31' 9.813 W



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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	1.18	223.00	5,848.2	-75.5	-62.7	399,127.09	752,061.00	32° 5' 40.924 N	103° 31' 9.817 W
5,875.0	1.17	225.05	5,873.2	-75.9	-63.1	399,126.72	752,060.64	32° 5' 40.921 N	103° 31' 9.822 W
5,900.0	1.11	225.09	5,898.2	-76.2	-63.4	399,126.37	752,060.29	32° 5' 40.917 N	103° 31' 9.826 W
5,925.0	1.13	225.43	5,923.2	-76.6	-63.8	399,126.02	752,059.94	32° 5' 40.914 N	103° 31' 9.830 W
5,950.0	1.08	227.26	5,948.2	-76.9	-64.1	399,125.69	752,059.59	32° 5' 40.911 N	103° 31' 9.834 W
5,975.0	1.08	226.19	5,973.2	-77.2	-64.4	399,125.37	752,059.25	32° 5' 40.907 N	103° 31' 9.838 W
6,000.0	1.03	225.43	5,998.2	-77.6	-64.8	399,125.05	752,058.92	32° 5' 40.904 N	103° 31' 9.842 W
6,025.0	1.00	229.33	6,023.2	-77.9	-65.1	399,124.75	752,058.59	32° 5' 40.901 N	103° 31' 9.846 W
6,050.0	0.94	234.63	6,048.2	-78.1	-65.4	399,124.49	752,058.26	32° 5' 40.899 N	103° 31' 9.849 W
6,075.0	0.95	234.85	6,073.2	-78.4	-65.8	399,124.25	752,057.93	32° 5' 40.896 N	103° 31' 9.853 W
6,100.0	0.90	237.08	6,098.2	-78.6	-66.1	399,124.02	752,057.59	32° 5' 40.894 N	103° 31' 9.857 W
6,125.0	0.85	239.83	6,123.2	-78.8	-66.4	399,123.82	752,057.27	32° 5' 40.892 N	103° 31' 9.861 W
6,150.0	0.80	241.66	6,148.2	-79.0	-66.7	399,123.65	752,056.95	32° 5' 40.891 N	103° 31' 9.865 W
6,175.0	0.82	240.73	6,173.2	-79.1	-67.1	399,123.48	752,056.64	32° 5' 40.889 N	103° 31' 9.868 W
6,200.0	0.85	243.76	6,198.2	-79.3	-67.4	399,123.31	752,056.32	32° 5' 40.887 N	103° 31' 9.872 W
6,225.0	0.80	249.45	6,223.2	-79.4	-67.7	399,123.16	752,055.99	32° 5' 40.886 N	103° 31' 9.876 W
6,250.0	0.76	251.03	6,248.2	-79.6	-68.0	399,123.05	752,055.67	32° 5' 40.885 N	103° 31' 9.880 W
6,275.0	0.79	247.48	6,273.2	-79.7	-68.3	399,122.93	752,055.35	32° 5' 40.884 N	103° 31' 9.883 W
6,300.0	0.77	247.95	6,298.2	-79.8	-68.7	399,122.80	752,055.04	32° 5' 40.882 N	103° 31' 9.887 W
6,325.0	0.99	250.96	6,323.2	-79.9	-69.0	399,122.67	752,054.68	32° 5' 40.881 N	103° 31' 9.891 W
6,350.0	1.35	249.87	6,348.2	-80.1	-69.5	399,122.49	752,054.20	32° 5' 40.879 N	103° 31' 9.897 W
6,375.0	1.73	250.59	6,373.2	-80.3	-70.1	399,122.27	752,053.57	32° 5' 40.877 N	103° 31' 9.904 W
6,400.0	1.89	248.01	6,398.1	-80.6	-70.9	399,121.99	752,052.83	32° 5' 40.874 N	103° 31' 9.913 W
6,425.0	1.99	250.76	6,423.1	-80.9	-71.7	399,121.69	752,052.04	32° 5' 40.872 N	103° 31' 9.922 W
6,450.0	1.87	250.23	6,448.1	-81.2	-72.5	399,121.41	752,051.24	32° 5' 40.869 N	103° 31' 9.931 W
6,475.0	1.87	250.84	6,473.1	-81.5	-73.2	399,121.14	752,050.47	32° 5' 40.866 N	103° 31' 9.940 W
6,500.0	1.92	248.58	6,498.1	-81.7	-74.0	399,120.85	752,049.70	32° 5' 40.863 N	103° 31' 9.949 W
6,525.0	1.97	240.62	6,523.1	-82.1	-74.8	399,120.49	752,048.93	32° 5' 40.860 N	103° 31' 9.958 W
6,550.0	2.59	219.03	6,548.1	-82.8	-75.5	399,119.84	752,048.20	32° 5' 40.854 N	103° 31' 9.967 W
6,575.0	2.64	216.30	6,573.0	-83.7	-76.2	399,118.93	752,047.51	32° 5' 40.845 N	103° 31' 9.975 W
6,600.0	2.67	217.32	6,598.0	-84.6	-76.9	399,118.01	752,046.81	32° 5' 40.836 N	103° 31' 9.983 W
6,625.0	2.77	215.80	6,623.0	-85.5	-77.6	399,117.05	752,046.11	32° 5' 40.826 N	103° 31' 9.991 W
6,650.0	2.64	216.63	6,648.0	-86.5	-78.3	399,116.10	752,045.41	32° 5' 40.817 N	103° 31' 10.000 W
6,675.0	2.58	214.72	6,672.9	-87.4	-79.0	399,115.18	752,044.75	32° 5' 40.808 N	103° 31' 10.007 W
6,700.0	2.61	213.85	6,697.9	-88.4	-79.6	399,114.24	752,044.11	32° 5' 40.798 N	103° 31' 10.015 W
6,725.0	2.58	213.84	6,722.9	-89.3	-80.2	399,113.30	752,043.48	32° 5' 40.789 N	103° 31' 10.022 W
6,750.0	2.63	214.44	6,747.8	-90.2	-80.9	399,112.36	752,042.84	32° 5' 40.780 N	103° 31' 10.030 W
6,775.0	2.58	212.02	6,772.8	-91.2	-81.5	399,111.41	752,042.22	32° 5' 40.771 N	103° 31' 10.037 W
6,800.0	2.56	214.54	6,797.8	-92.1	-82.1	399,110.47	752,041.60	32° 5' 40.761 N	103° 31' 10.044 W
6,825.0	2.44	212.38	6,822.8	-93.0	-82.7	399,109.56	752,041.00	32° 5' 40.752 N	103° 31' 10.051 W
6,850.0	2.35	212.07	6,847.8	-93.9	-83.3	399,108.68	752,040.44	32° 5' 40.744 N	103° 31' 10.058 W
6,875.0	2.38	212.59	6,872.7	-94.8	-83.8	399,107.81	752,039.89	32° 5' 40.735 N	103° 31' 10.064 W
6,900.0	2.29	212.49	6,897.7	-95.6	-84.4	399,106.95	752,039.34	32° 5' 40.727 N	103° 31' 10.071 W
6,925.0	2.25	212.09	6,922.7	-96.5	-84.9	399,106.11	752,038.82	32° 5' 40.718 N	103° 31' 10.077 W
6,950.0	2.23	211.95	6,947.7	-97.3	-85.4	399,105.29	752,038.30	32° 5' 40.710 N	103° 31' 10.083 W
6,975.0	2.20	211.52	6,972.7	-98.1	-85.9	399,104.46	752,037.79	32° 5' 40.702 N	103° 31' 10.089 W
7,000.0	2.20	210.39	6,997.6	-99.0	-86.4	399,103.64	752,037.30	32° 5' 40.694 N	103° 31' 10.095 W
7,025.0	2.14	210.52	7,022.6	-99.8	-86.9	399,102.82	752,036.82	32° 5' 40.686 N	103° 31' 10.101 W
7,050.0	2.06	209.72	7,047.6	-100.6	-87.3	399,102.03	752,036.36	32° 5' 40.678 N	103° 31' 10.106 W
7,075.0	2.13	209.93	7,072.6	-101.4	-87.8	399,101.24	752,035.90	32° 5' 40.670 N	103° 31' 10.111 W
7,100.0	2.01	207.81	7,097.6	-102.2	-88.2	399,100.45	752,035.46	32° 5' 40.663 N	103° 31' 10.117 W
7,125.0	1.95	208.35	7,122.6	-102.9	-88.6	399,099.69	752,035.06	32° 5' 40.655 N	103° 31' 10.121 W
7,150.0	2.02	206.31	7,147.5	-103.7	-89.0	399,098.92	752,034.66	32° 5' 40.648 N	103° 31' 10.126 W
7,175.0	1.89	207.89	7,172.5	-104.4	-89.4	399,098.16	752,034.27	32° 5' 40.640 N	103° 31' 10.131 W
7,200.0	1.93	200.53	7,197.5	-105.2	-89.8	399,097.40	752,033.93	32° 5' 40.633 N	103° 31' 10.135 W

Company: COG Operating, LLC
 Project: Lea County, NM
 Site: Sec 25, T25S, R33E
 Well: Dominator 25 Federal #602H
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
 TVD Reference: RKB @ 3352.0usft (Noram #21)
 MD Reference: RKB @ 3352.0usft (Noram #21)
 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
7,225.0	1.89	211.32	7,222.5	-105.9	-90.1	399,096.65	752,033.57	32° 5' 40.625 N	103° 31' 10.139 W
7,250.0	1.86	220.98	7,247.5	-106.6	-90.6	399,095.99	752,033.09	32° 5' 40.619 N	103° 31' 10.144 W
7,275.0	1.86	210.32	7,272.5	-107.3	-91.1	399,095.34	752,032.62	32° 5' 40.612 N	103° 31' 10.150 W
7,300.0	2.02	207.73	7,297.5	-108.0	-91.5	399,094.60	752,032.21	32° 5' 40.605 N	103° 31' 10.155 W
7,325.0	1.97	208.58	7,322.4	-108.8	-91.9	399,093.83	752,031.80	32° 5' 40.597 N	103° 31' 10.160 W
7,350.0	1.93	211.48	7,347.4	-109.5	-92.3	399,093.09	752,031.37	32° 5' 40.590 N	103° 31' 10.165 W
7,375.0	1.87	210.92	7,372.4	-110.2	-92.8	399,092.39	752,030.94	32° 5' 40.583 N	103° 31' 10.170 W
7,400.0	1.85	211.98	7,397.4	-110.9	-93.2	399,091.69	752,030.52	32° 5' 40.576 N	103° 31' 10.175 W
7,425.0	1.86	211.78	7,422.4	-111.6	-93.6	399,091.01	752,030.09	32° 5' 40.570 N	103° 31' 10.180 W
7,450.0	1.80	213.69	7,447.4	-112.3	-94.0	399,090.33	752,029.66	32° 5' 40.563 N	103° 31' 10.185 W
7,475.0	1.82	212.58	7,472.4	-112.9	-94.5	399,089.67	752,029.23	32° 5' 40.556 N	103° 31' 10.190 W
7,500.0	1.84	211.97	7,497.3	-113.6	-94.9	399,089.00	752,028.80	32° 5' 40.550 N	103° 31' 10.195 W
7,525.0	1.90	211.66	7,522.3	-114.3	-95.3	399,088.30	752,028.37	32° 5' 40.543 N	103° 31' 10.200 W
7,550.0	1.86	213.37	7,547.3	-115.0	-95.8	399,087.61	752,027.93	32° 5' 40.536 N	103° 31' 10.205 W
7,575.0	1.86	213.01	7,572.3	-115.7	-96.2	399,086.93	752,027.49	32° 5' 40.529 N	103° 31' 10.210 W
7,600.0	1.84	213.00	7,597.3	-116.3	-96.6	399,086.26	752,027.05	32° 5' 40.523 N	103° 31' 10.216 W
7,625.0	1.78	214.46	7,622.3	-117.0	-97.1	399,085.60	752,026.61	32° 5' 40.516 N	103° 31' 10.221 W
7,650.0	1.84	212.26	7,647.3	-117.7	-97.5	399,084.94	752,026.18	32° 5' 40.510 N	103° 31' 10.226 W
7,675.0	1.79	216.04	7,672.3	-118.3	-98.0	399,084.29	752,025.73	32° 5' 40.503 N	103° 31' 10.231 W
7,700.0	1.78	215.99	7,697.2	-118.9	-98.4	399,083.66	752,025.28	32° 5' 40.497 N	103° 31' 10.236 W
7,725.0	1.76	215.54	7,722.2	-119.6	-98.9	399,083.03	752,024.82	32° 5' 40.491 N	103° 31' 10.242 W
7,750.0	1.78	214.21	7,747.2	-120.2	-99.3	399,082.40	752,024.38	32° 5' 40.485 N	103° 31' 10.247 W
7,775.0	1.77	213.59	7,772.2	-120.8	-99.7	399,081.75	752,023.95	32° 5' 40.478 N	103° 31' 10.252 W
7,800.0	1.76	213.99	7,797.2	-121.5	-100.2	399,081.11	752,023.52	32° 5' 40.472 N	103° 31' 10.257 W
7,825.0	1.81	213.60	7,822.2	-122.1	-100.6	399,080.47	752,023.09	32° 5' 40.466 N	103° 31' 10.262 W
7,850.0	1.84	215.87	7,847.2	-122.8	-101.1	399,079.81	752,022.64	32° 5' 40.459 N	103° 31' 10.267 W
7,875.0	1.79	215.04	7,872.2	-123.4	-101.5	399,079.17	752,022.18	32° 5' 40.453 N	103° 31' 10.273 W
7,900.0	1.79	219.80	7,897.1	-124.1	-102.0	399,078.55	752,021.70	32° 5' 40.447 N	103° 31' 10.278 W
7,925.0	1.90	222.81	7,922.1	-124.7	-102.5	399,077.94	752,021.17	32° 5' 40.441 N	103° 31' 10.285 W
7,950.0	1.90	224.34	7,947.1	-125.3	-103.1	399,077.34	752,020.60	32° 5' 40.435 N	103° 31' 10.291 W
7,975.0	1.87	227.04	7,972.1	-125.8	-103.7	399,076.77	752,020.01	32° 5' 40.429 N	103° 31' 10.298 W
8,000.0	1.87	224.14	7,997.1	-126.4	-104.3	399,076.20	752,019.43	32° 5' 40.424 N	103° 31' 10.305 W
8,025.0	2.08	227.59	8,022.1	-127.0	-104.9	399,075.60	752,018.81	32° 5' 40.418 N	103° 31' 10.312 W
8,050.0	2.03	224.02	8,047.1	-127.6	-105.5	399,074.97	752,018.17	32° 5' 40.412 N	103° 31' 10.320 W
8,075.0	1.97	226.75	8,072.0	-128.2	-106.2	399,074.36	752,017.55	32° 5' 40.406 N	103° 31' 10.327 W
8,100.0	1.93	226.55	8,097.0	-128.8	-106.8	399,073.78	752,016.93	32° 5' 40.400 N	103° 31' 10.334 W
8,125.0	1.98	226.36	8,122.0	-129.4	-107.4	399,073.19	752,016.31	32° 5' 40.394 N	103° 31' 10.342 W
8,150.0	2.01	226.64	8,147.0	-130.0	-108.0	399,072.59	752,015.68	32° 5' 40.388 N	103° 31' 10.349 W
8,175.0	1.98	226.29	8,172.0	-130.6	-108.6	399,071.99	752,015.05	32° 5' 40.383 N	103° 31' 10.356 W
8,200.0	1.88	228.15	8,197.0	-131.2	-109.3	399,071.42	752,014.43	32° 5' 40.377 N	103° 31' 10.364 W
8,225.0	1.79	229.34	8,222.0	-131.7	-109.9	399,070.89	752,013.83	32° 5' 40.372 N	103° 31' 10.371 W
8,250.0	1.76	228.78	8,246.9	-132.2	-110.5	399,070.38	752,013.24	32° 5' 40.367 N	103° 31' 10.377 W
8,275.0	1.60	228.95	8,271.9	-132.7	-111.0	399,069.90	752,012.69	32° 5' 40.362 N	103° 31' 10.384 W
8,300.0	1.65	231.84	8,296.9	-133.1	-111.6	399,069.45	752,012.14	32° 5' 40.358 N	103° 31' 10.390 W
8,325.0	1.58	234.69	8,321.9	-133.6	-112.1	399,069.03	752,011.58	32° 5' 40.353 N	103° 31' 10.397 W
8,350.0	1.64	232.97	8,346.9	-134.0	-112.7	399,068.61	752,011.01	32° 5' 40.349 N	103° 31' 10.404 W
8,375.0	1.60	233.74	8,371.9	-134.4	-113.3	399,068.19	752,010.45	32° 5' 40.345 N	103° 31' 10.410 W
8,400.0	1.62	236.54	8,396.9	-134.8	-113.8	399,067.79	752,009.87	32° 5' 40.341 N	103° 31' 10.417 W
8,425.0	1.55	235.92	8,421.9	-135.2	-114.4	399,067.41	752,009.30	32° 5' 40.338 N	103° 31' 10.424 W
8,450.0	1.47	237.07	8,446.9	-135.6	-115.0	399,067.04	752,008.75	32° 5' 40.334 N	103° 31' 10.430 W
8,475.0	1.37	236.48	8,471.9	-135.9	-115.5	399,066.70	752,008.23	32° 5' 40.331 N	103° 31' 10.436 W
8,500.0	1.41	236.93	8,496.9	-136.2	-116.0	399,066.37	752,007.72	32° 5' 40.327 N	103° 31' 10.442 W
8,525.0	1.39	238.27	8,521.8	-136.6	-116.5	399,066.04	752,007.21	32° 5' 40.324 N	103° 31' 10.448 W
8,550.0	1.29	234.80	8,546.8	-136.9	-117.0	399,065.72	752,006.72	32° 5' 40.321 N	103° 31' 10.454 W
8,575.0	1.32	238.19	8,571.8	-137.2	-117.5	399,065.41	752,006.24	32° 5' 40.318 N	103° 31' 10.459 W



Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
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
8,600.0	1.35	237.96	8,596.8	-137.5	-117.9	399,065.10	752,005.75	32° 5' 40.315 N	103° 31' 10.465 W
8,625.0	1.30	237.57	8,621.8	-137.8	-118.4	399,064.79	752,005.26	32° 5' 40.312 N	103° 31' 10.471 W
8,650.0	1.32	236.53	8,646.8	-138.1	-118.9	399,064.48	752,004.78	32° 5' 40.309 N	103° 31' 10.476 W
8,675.0	1.38	238.04	8,671.8	-138.4	-119.4	399,064.16	752,004.28	32° 5' 40.306 N	103° 31' 10.482 W
8,700.0	1.37	236.97	8,696.8	-138.8	-119.9	399,063.84	752,003.78	32° 5' 40.303 N	103° 31' 10.488 W
8,725.0	1.33	240.07	8,721.8	-139.1	-120.4	399,063.53	752,003.28	32° 5' 40.300 N	103° 31' 10.494 W
8,750.0	1.35	237.22	8,746.8	-139.4	-120.9	399,063.23	752,002.78	32° 5' 40.297 N	103° 31' 10.500 W
8,775.0	1.37	237.55	8,771.8	-139.7	-121.4	399,062.91	752,002.28	32° 5' 40.294 N	103° 31' 10.506 W
8,800.0	1.43	235.88	8,796.8	-140.0	-121.9	399,062.57	752,001.77	32° 5' 40.290 N	103° 31' 10.512 W
8,825.0	2.28	226.66	8,821.8	-140.5	-122.5	399,062.06	752,001.15	32° 5' 40.285 N	103° 31' 10.519 W
8,850.0	2.89	222.17	8,846.7	-141.4	-123.3	399,061.25	752,000.36	32° 5' 40.277 N	103° 31' 10.528 W
8,875.0	2.80	224.21	8,871.7	-142.3	-124.2	399,060.34	751,999.51	32° 5' 40.268 N	103° 31' 10.538 W
8,900.0	2.90	223.48	8,896.7	-143.2	-125.0	399,059.45	751,998.65	32° 5' 40.260 N	103° 31' 10.548 W
8,925.0	2.92	224.01	8,921.6	-144.1	-125.9	399,058.53	751,997.77	32° 5' 40.251 N	103° 31' 10.558 W
8,950.0	2.94	225.30	8,946.6	-145.0	-126.8	399,057.62	751,996.88	32° 5' 40.242 N	103° 31' 10.569 W
8,975.0	2.74	222.91	8,971.6	-145.9	-127.7	399,056.73	751,996.01	32° 5' 40.233 N	103° 31' 10.579 W
9,000.0	2.84	225.63	8,996.5	-146.7	-128.5	399,055.86	751,995.16	32° 5' 40.224 N	103° 31' 10.589 W
9,025.0	2.63	224.15	9,021.5	-147.6	-129.4	399,055.02	751,994.32	32° 5' 40.216 N	103° 31' 10.599 W
9,050.0	2.60	224.89	9,046.5	-148.4	-130.2	399,054.20	751,993.52	32° 5' 40.208 N	103° 31' 10.608 W
9,075.0	2.56	226.19	9,071.5	-149.2	-131.0	399,053.42	751,992.72	32° 5' 40.200 N	103° 31' 10.617 W
9,100.0	2.65	224.43	9,096.4	-150.0	-131.8	399,052.62	751,991.91	32° 5' 40.193 N	103° 31' 10.627 W
9,125.0	2.55	226.24	9,121.4	-150.8	-132.6	399,051.82	751,991.11	32° 5' 40.185 N	103° 31' 10.636 W
9,150.0	2.57	226.51	9,146.4	-151.5	-133.4	399,051.05	751,990.30	32° 5' 40.177 N	103° 31' 10.646 W
9,175.0	2.52	225.45	9,171.4	-152.3	-134.2	399,050.28	751,989.50	32° 5' 40.170 N	103° 31' 10.655 W
9,200.0	2.47	224.66	9,196.3	-153.1	-135.0	399,049.51	751,988.73	32° 5' 40.162 N	103° 31' 10.664 W
9,225.0	2.46	227.02	9,221.3	-153.8	-135.7	399,048.76	751,987.98	32° 5' 40.155 N	103° 31' 10.673 W
9,250.0	2.33	228.75	9,246.3	-154.5	-136.5	399,048.06	751,987.18	32° 5' 40.148 N	103° 31' 10.682 W
9,275.0	2.33	229.90	9,271.3	-155.2	-137.3	399,047.40	751,986.41	32° 5' 40.141 N	103° 31' 10.691 W
9,300.0	2.33	229.06	9,296.3	-155.9	-138.1	399,046.74	751,985.64	32° 5' 40.135 N	103° 31' 10.700 W
9,325.0	2.26	229.96	9,321.2	-156.5	-138.8	399,046.09	751,984.88	32° 5' 40.128 N	103° 31' 10.709 W
9,350.0	2.32	232.34	9,346.2	-157.1	-139.6	399,045.46	751,984.10	32° 5' 40.122 N	103° 31' 10.718 W
9,375.0	2.17	232.24	9,371.2	-157.7	-140.4	399,044.86	751,983.33	32° 5' 40.116 N	103° 31' 10.727 W
9,400.0	2.10	236.03	9,396.2	-158.3	-141.1	399,044.32	751,982.57	32° 5' 40.111 N	103° 31' 10.736 W
9,425.0	2.10	237.13	9,421.2	-158.8	-141.9	399,043.81	751,981.81	32° 5' 40.106 N	103° 31' 10.745 W
9,450.0	2.00	236.67	9,446.1	-159.3	-142.6	399,043.32	751,981.06	32° 5' 40.101 N	103° 31' 10.754 W
9,475.0	1.95	235.50	9,471.1	-159.8	-143.4	399,042.84	751,980.34	32° 5' 40.097 N	103° 31' 10.762 W
9,500.0	1.83	238.42	9,496.1	-160.2	-144.0	399,042.39	751,979.65	32° 5' 40.092 N	103° 31' 10.770 W
9,525.0	1.87	235.99	9,521.1	-160.6	-144.7	399,041.95	751,978.97	32° 5' 40.088 N	103° 31' 10.778 W
9,550.0	1.80	238.26	9,546.1	-161.1	-145.4	399,041.52	751,978.30	32° 5' 40.084 N	103° 31' 10.786 W
9,575.0	1.68	242.28	9,571.1	-161.5	-146.1	399,041.14	751,977.64	32° 5' 40.080 N	103° 31' 10.794 W
9,600.0	1.57	243.82	9,596.1	-161.8	-146.7	399,040.82	751,977.01	32° 5' 40.077 N	103° 31' 10.801 W
9,625.0	1.55	246.24	9,621.1	-162.1	-147.3	399,040.53	751,976.40	32° 5' 40.074 N	103° 31' 10.808 W
9,650.0	1.54	246.01	9,646.1	-162.3	-147.9	399,040.26	751,975.78	32° 5' 40.071 N	103° 31' 10.816 W
9,675.0	1.68	243.92	9,671.0	-162.6	-148.6	399,039.96	751,975.14	32° 5' 40.069 N	103° 31' 10.823 W
9,700.0	1.85	242.28	9,696.0	-163.0	-149.2	399,039.61	751,974.46	32° 5' 40.065 N	103° 31' 10.831 W
9,725.0	1.89	241.31	9,721.0	-163.4	-150.0	399,039.23	751,973.74	32° 5' 40.061 N	103° 31' 10.839 W
9,750.0	1.92	242.50	9,746.0	-163.8	-150.7	399,038.84	751,973.00	32° 5' 40.058 N	103° 31' 10.848 W
9,775.0	1.91	241.37	9,771.0	-164.2	-151.4	399,038.44	751,972.27	32° 5' 40.054 N	103° 31' 10.857 W
9,800.0	1.88	239.47	9,796.0	-164.6	-152.1	399,038.04	751,971.55	32° 5' 40.050 N	103° 31' 10.865 W
9,825.0	1.91	241.28	9,821.0	-165.0	-152.9	399,037.63	751,970.83	32° 5' 40.046 N	103° 31' 10.873 W
9,850.0	1.90	239.64	9,845.9	-165.4	-153.6	399,037.22	751,970.11	32° 5' 40.042 N	103° 31' 10.882 W
9,875.0	1.91	240.71	9,870.9	-165.8	-154.3	399,036.81	751,969.39	32° 5' 40.038 N	103° 31' 10.890 W
9,900.0	2.01	241.05	9,895.9	-166.2	-155.1	399,036.39	751,968.64	32° 5' 40.034 N	103° 31' 10.899 W
9,925.0	1.96	239.28	9,920.9	-166.6	-155.8	399,035.96	751,967.89	32° 5' 40.029 N	103° 31' 10.908 W
9,950.0	2.04	242.10	9,945.9	-167.1	-156.6	399,035.53	751,967.13	32° 5' 40.025 N	103° 31' 10.917 W



Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
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
9,975.0	1.93	240.98	9,970.9	-167.5	-157.3	399,035.12	751,966.37	32° 5' 40.021 N	103° 31' 10.925 W
10,000.0	1.92	241.23	9,995.9	-167.9	-158.1	399,034.71	751,965.63	32° 5' 40.017 N	103° 31' 10.934 W
10,025.0	1.83	243.69	10,020.8	-168.3	-158.8	399,034.34	751,964.91	32° 5' 40.014 N	103° 31' 10.942 W
10,050.0	1.93	246.87	10,045.8	-168.6	-159.5	399,033.99	751,964.16	32° 5' 40.010 N	103° 31' 10.951 W
10,075.0	1.83	246.93	10,070.8	-168.9	-160.3	399,033.67	751,963.41	32° 5' 40.007 N	103° 31' 10.960 W
10,100.0	1.86	249.58	10,095.8	-169.2	-161.0	399,033.37	751,962.66	32° 5' 40.004 N	103° 31' 10.969 W
10,125.0	1.81	250.60	10,120.8	-169.5	-161.8	399,033.10	751,961.91	32° 5' 40.002 N	103° 31' 10.977 W
10,150.0	1.84	251.95	10,145.8	-169.8	-162.5	399,032.85	751,961.15	32° 5' 39.999 N	103° 31' 10.986 W
10,175.0	1.89	254.79	10,170.8	-170.0	-163.3	399,032.61	751,960.37	32° 5' 39.997 N	103° 31' 10.995 W
10,200.0	1.88	252.77	10,195.8	-170.2	-164.1	399,032.38	751,959.58	32° 5' 39.995 N	103° 31' 11.005 W
10,225.0	1.89	252.46	10,220.7	-170.5	-164.9	399,032.14	751,958.80	32° 5' 39.992 N	103° 31' 11.014 W
10,250.0	1.84	249.95	10,245.7	-170.7	-165.7	399,031.88	751,958.03	32° 5' 39.990 N	103° 31' 11.023 W
10,275.0	1.85	242.14	10,270.7	-171.0	-166.4	399,031.55	751,957.29	32° 5' 39.987 N	103° 31' 11.031 W
10,300.0	1.97	224.90	10,295.7	-171.5	-167.1	399,031.06	751,956.63	32° 5' 39.982 N	103° 31' 11.039 W
10,325.0	1.98	221.16	10,320.7	-172.2	-167.7	399,030.43	751,956.05	32° 5' 39.976 N	103° 31' 11.046 W
10,350.0	2.09	217.73	10,345.7	-172.9	-168.2	399,029.74	751,955.48	32° 5' 39.969 N	103° 31' 11.052 W
10,375.0	2.25	217.40	10,370.7	-173.6	-168.8	399,028.99	751,954.91	32° 5' 39.962 N	103° 31' 11.059 W
10,400.0	2.37	214.15	10,395.6	-174.4	-169.4	399,028.17	751,954.32	32° 5' 39.953 N	103° 31' 11.066 W
10,425.0	2.33	215.59	10,420.6	-175.3	-170.0	399,027.33	751,953.73	32° 5' 39.945 N	103° 31' 11.073 W
10,450.0	2.33	215.16	10,445.6	-176.1	-170.6	399,026.50	751,953.14	32° 5' 39.937 N	103° 31' 11.080 W
10,475.0	2.43	214.10	10,470.6	-176.9	-171.1	399,025.65	751,952.55	32° 5' 39.929 N	103° 31' 11.087 W
10,500.0	2.35	213.98	10,495.5	-177.8	-171.7	399,024.79	751,951.97	32° 5' 39.920 N	103° 31' 11.094 W
10,525.0	2.37	214.24	10,520.5	-178.7	-172.3	399,023.93	751,951.39	32° 5' 39.912 N	103° 31' 11.100 W
10,550.0	2.13	215.35	10,545.5	-179.5	-172.9	399,023.13	751,950.83	32° 5' 39.904 N	103° 31' 11.107 W
10,575.0	2.15	216.02	10,570.5	-180.2	-173.4	399,022.37	751,950.29	32° 5' 39.896 N	103° 31' 11.113 W
10,600.0	2.03	219.06	10,595.5	-181.0	-174.0	399,021.65	751,949.73	32° 5' 39.889 N	103° 31' 11.120 W
10,625.0	2.08	218.29	10,620.5	-181.7	-174.5	399,020.95	751,949.17	32° 5' 39.882 N	103° 31' 11.127 W
10,650.0	1.98	219.01	10,645.4	-182.3	-175.1	399,020.25	751,948.62	32° 5' 39.876 N	103° 31' 11.133 W
10,675.0	1.88	219.14	10,670.4	-183.0	-175.6	399,019.60	751,948.09	32° 5' 39.869 N	103° 31' 11.139 W
10,700.0	1.84	218.13	10,695.4	-183.6	-176.1	399,018.97	751,947.58	32° 5' 39.863 N	103° 31' 11.145 W
10,725.0	1.85	218.89	10,720.4	-184.3	-176.6	399,018.34	751,947.08	32° 5' 39.857 N	103° 31' 11.151 W
10,750.0	1.96	218.73	10,745.4	-184.9	-177.1	399,017.69	751,946.56	32° 5' 39.850 N	103° 31' 11.157 W
10,775.0	2.07	219.87	10,770.4	-185.6	-177.7	399,017.01	751,946.00	32° 5' 39.844 N	103° 31' 11.164 W
10,800.0	2.17	219.21	10,795.4	-186.3	-178.3	399,016.30	751,945.42	32° 5' 39.837 N	103° 31' 11.171 W
10,825.0	2.09	220.03	10,820.3	-187.0	-178.9	399,015.58	751,944.82	32° 5' 39.830 N	103° 31' 11.178 W
10,850.0	2.18	219.26	10,845.3	-187.7	-179.5	399,014.86	751,944.23	32° 5' 39.822 N	103° 31' 11.185 W
10,875.0	2.26	219.26	10,870.3	-188.5	-180.1	399,014.11	751,943.62	32° 5' 39.815 N	103° 31' 11.192 W
10,900.0	2.30	219.56	10,895.3	-189.3	-180.7	399,013.34	751,942.99	32° 5' 39.808 N	103° 31' 11.199 W
10,925.0	2.26	219.97	10,920.3	-190.0	-181.3	399,012.58	751,942.35	32° 5' 39.800 N	103° 31' 11.207 W
10,950.0	2.26	221.07	10,945.2	-190.8	-182.0	399,011.83	751,941.71	32° 5' 39.793 N	103° 31' 11.214 W
10,975.0	2.23	221.06	10,970.2	-191.5	-182.6	399,011.09	751,941.07	32° 5' 39.785 N	103° 31' 11.222 W
11,000.0	2.28	222.91	10,995.2	-192.2	-183.3	399,010.36	751,940.41	32° 5' 39.778 N	103° 31' 11.229 W
11,025.0	2.21	222.39	11,020.2	-193.0	-184.0	399,009.64	751,939.74	32° 5' 39.771 N	103° 31' 11.237 W
11,050.0	2.21	218.64	11,045.2	-193.7	-184.6	399,008.91	751,939.12	32° 5' 39.764 N	103° 31' 11.244 W
11,075.0	2.20	226.87	11,070.1	-194.4	-185.2	399,008.20	751,938.47	32° 5' 39.757 N	103° 31' 11.252 W
11,100.0	2.28	242.93	11,095.1	-194.9	-186.0	399,007.65	751,937.67	32° 5' 39.752 N	103° 31' 11.261 W
11,125.0	2.56	249.31	11,120.1	-195.4	-187.0	399,007.23	751,936.71	32° 5' 39.747 N	103° 31' 11.273 W
11,150.0	2.82	260.10	11,145.1	-195.7	-188.1	399,006.92	751,935.58	32° 5' 39.745 N	103° 31' 11.286 W
11,175.0	2.94	263.91	11,170.0	-195.9	-189.4	399,006.75	751,934.34	32° 5' 39.743 N	103° 31' 11.300 W
11,200.0	3.16	268.62	11,195.0	-195.9	-190.7	399,006.66	751,933.01	32° 5' 39.742 N	103° 31' 11.316 W
11,225.0	3.38	274.16	11,220.0	-195.9	-192.1	399,006.70	751,931.59	32° 5' 39.743 N	103° 31' 11.332 W
11,250.0	3.55	277.12	11,244.9	-195.7	-193.6	399,006.85	751,930.08	32° 5' 39.744 N	103° 31' 11.350 W
11,275.0	3.62	276.42	11,269.9	-195.6	-195.2	399,007.03	751,928.53	32° 5' 39.746 N	103° 31' 11.368 W
11,300.0	3.77	276.35	11,294.8	-195.4	-196.8	399,007.21	751,926.93	32° 5' 39.748 N	103° 31' 11.386 W
11,325.0	3.71	271.32	11,319.8	-195.3	-198.4	399,007.32	751,925.30	32° 5' 39.749 N	103° 31' 11.405 W



Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #802H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #802H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
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
11,350.0	3.59	261.05	11,344.7	-195.4	-200.0	399,007.22	751,923.72	32° 5' 39.748 N	103° 31' 11.424 W
11,375.0	3.50	252.15	11,369.7	-195.7	-201.5	399,006.86	751,922.22	32° 5' 39.745 N	103° 31' 11.441 W
11,400.0	3.67	251.69	11,394.6	-196.2	-203.0	399,006.38	751,920.74	32° 5' 39.740 N	103° 31' 11.458 W
11,425.0	3.80	245.99	11,419.6	-196.8	-204.5	399,005.79	751,919.22	32° 5' 39.735 N	103° 31' 11.476 W
11,450.0	4.08	234.67	11,444.5	-197.7	-206.0	399,004.94	751,917.74	32° 5' 39.726 N	103° 31' 11.493 W
11,475.0	4.12	233.14	11,469.4	-198.7	-207.4	399,003.89	751,916.29	32° 5' 39.716 N	103° 31' 11.510 W
11,500.0	3.93	233.92	11,494.4	-199.8	-208.8	399,002.84	751,914.88	32° 5' 39.706 N	103° 31' 11.527 W
11,525.0	3.40	234.50	11,519.3	-200.7	-210.1	399,001.91	751,913.59	32° 5' 39.697 N	103° 31' 11.542 W
11,550.0	3.02	235.05	11,544.3	-201.5	-211.3	399,001.10	751,912.44	32° 5' 39.689 N	103° 31' 11.555 W
11,575.0	2.93	239.64	11,569.3	-202.2	-212.3	399,000.40	751,911.35	32° 5' 39.682 N	103° 31' 11.568 W
11,600.0	2.92	246.13	11,594.2	-202.8	-213.5	398,999.82	751,910.22	32° 5' 39.676 N	103° 31' 11.581 W
11,625.0	3.19	249.93	11,619.2	-203.3	-214.7	398,999.32	751,908.98	32° 5' 39.671 N	103° 31' 11.596 W
11,650.0	3.21	254.33	11,644.2	-203.7	-216.0	398,998.90	751,907.66	32° 5' 39.667 N	103° 31' 11.611 W
11,675.0	3.06	253.91	11,669.1	-204.1	-217.4	398,998.52	751,906.34	32° 5' 39.664 N	103° 31' 11.626 W
11,700.0	2.68	251.65	11,694.1	-204.4	-218.6	398,998.15	751,905.15	32° 5' 39.660 N	103° 31' 11.640 W
11,723.0	2.33	245.14	11,717.1	-204.8	-219.5	398,997.79	751,904.21	32° 5' 39.657 N	103° 31' 11.651 W
Gyro Tie In @ 11723.0' MD / 11717.1' TVD									
11,796.0	2.10	215.70	11,790.0	-206.5	-221.6	398,996.08	751,902.08	32° 5' 39.640 N	103° 31' 11.676 W
11,903.0	2.70	204.10	11,896.9	-210.4	-223.8	398,992.18	751,899.91	32° 5' 39.601 N	103° 31' 11.702 W
11,997.0	5.16	207.29	11,990.7	-216.2	-226.6	398,986.41	751,897.07	32° 5' 39.544 N	103° 31' 11.735 W
12,029.0	6.22	226.18	12,022.5	-218.7	-228.5	398,983.93	751,895.16	32° 5' 39.520 N	103° 31' 11.758 W
12,060.0	9.57	247.89	12,053.2	-220.8	-232.1	398,981.79	751,891.56	32° 5' 39.499 N	103° 31' 11.800 W
12,092.0	14.62	258.08	12,084.5	-222.6	-236.6	398,979.96	751,885.14	32° 5' 39.481 N	103° 31' 11.874 W
12,124.0	21.01	267.20	12,115.0	-223.8	-248.3	398,978.84	751,875.44	32° 5' 39.471 N	103° 31' 11.987 W
12,156.0	26.74	276.90	12,144.2	-223.2	-261.1	398,979.43	751,862.55	32° 5' 39.478 N	103° 31' 12.137 W
12,187.0	30.68	287.49	12,171.4	-220.0	-275.6	398,982.64	751,848.07	32° 5' 39.511 N	103° 31' 12.305 W
12,219.0	31.33	300.06	12,198.9	-213.3	-290.6	398,989.27	751,833.07	32° 5' 39.578 N	103° 31' 12.479 W
12,251.0	29.96	310.02	12,226.4	-204.0	-304.0	398,998.58	751,819.74	32° 5' 39.671 N	103° 31' 12.633 W
12,282.0	28.74	319.21	12,253.5	-193.4	-314.8	399,009.21	751,808.93	32° 5' 39.777 N	103° 31' 12.758 W
12,314.0	28.55	334.29	12,281.6	-180.7	-323.1	399,021.94	751,800.58	32° 5' 39.903 N	103° 31' 12.854 W
12,344.0	30.32	345.91	12,307.8	-166.8	-328.1	399,035.76	751,795.62	32° 5' 40.040 N	103° 31' 12.910 W
12,375.0	32.25	356.13	12,334.3	-151.0	-330.5	399,051.61	751,793.16	32° 5' 40.197 N	103° 31' 12.937 W
12,407.0	33.39	6.59	12,361.2	-133.7	-330.1	399,068.89	751,793.59	32° 5' 40.368 N	103° 31' 12.931 W
12,438.0	35.61	11.38	12,386.7	-116.4	-327.3	399,086.22	751,796.35	32° 5' 40.540 N	103° 31' 12.897 W
12,469.0	37.81	9.42	12,411.6	-98.2	-324.0	399,104.44	751,799.69	32° 5' 40.720 N	103° 31' 12.857 W
12,501.0	42.81	11.09	12,436.0	-77.8	-320.3	399,124.80	751,803.39	32° 5' 40.921 N	103° 31' 12.812 W
12,533.0	46.95	11.07	12,458.6	-55.6	-316.0	399,146.96	751,807.73	32° 5' 41.140 N	103° 31' 12.760 W
12,564.0	50.84	10.13	12,479.0	-32.7	-311.7	399,169.91	751,812.02	32° 5' 41.367 N	103° 31' 12.708 W
12,595.0	53.98	8.52	12,497.9	-8.4	-307.7	399,194.15	751,815.99	32° 5' 41.608 N	103° 31' 12.659 W
12,627.0	57.80	5.74	12,515.9	17.8	-304.4	399,220.43	751,819.26	32° 5' 41.866 N	103° 31' 12.619 W
12,658.0	59.07	4.94	12,532.1	44.1	-302.0	399,246.73	751,821.72	32° 5' 42.126 N	103° 31' 12.588 W
12,661.7	59.58	4.85	12,534.0	47.3	-301.7	399,249.90	751,821.99	32° 5' 42.157 N	103° 31' 12.585 W
FTP @ 12661.7' MD / 12634.0' TVD									
12,690.0	63.44	4.21	12,547.5	72.1	-299.7	399,274.69	751,823.95	32° 5' 42.403 N	103° 31' 12.560 W
12,721.0	68.47	3.88	12,560.1	100.3	-297.8	399,302.92	751,825.95	32° 5' 42.682 N	103° 31' 12.534 W
12,753.0	71.83	2.89	12,571.0	130.4	-296.0	399,332.96	751,827.72	32° 5' 42.979 N	103° 31' 12.511 W
12,784.0	74.40	0.95	12,580.0	160.0	-295.0	399,362.61	751,828.71	32° 5' 43.272 N	103° 31' 12.497 W
12,816.0	76.39	359.95	12,588.0	191.0	-294.7	399,393.57	751,828.95	32° 5' 43.579 N	103° 31' 12.491 W
12,848.0	78.46	359.95	12,595.0	222.2	-294.8	399,424.80	751,828.93	32° 5' 43.888 N	103° 31' 12.489 W
12,879.0	80.59	359.41	12,600.7	252.7	-294.9	399,455.28	751,828.76	32° 5' 44.189 N	103° 31' 12.488 W
12,910.0	83.16	359.21	12,605.0	283.4	-295.3	399,485.97	751,828.39	32° 5' 44.493 N	103° 31' 12.490 W
12,942.0	86.11	358.89	12,608.0	315.2	-295.8	399,517.82	751,827.86	32° 5' 44.808 N	103° 31' 12.493 W
13,036.0	90.09	357.99	12,611.1	409.1	-298.4	399,611.71	751,825.30	32° 5' 45.738 N	103° 31' 12.515 W
13,072.0	90.61	357.77	12,610.9	445.1	-299.7	399,647.69	751,823.97	32° 5' 46.094 N	103° 31' 12.527 W
13,165.0	91.26	359.56	12,609.4	538.0	-301.9	399,740.64	751,821.80	32° 5' 47.014 N	103° 31' 12.544 W

Company: COG Operating, LLC
 Project: Lea County, NM
 Site: Sec 25, T25S, R33E
 Well: Dominator 25 Federal #602H
 Wellbore: Wellbore #1
 Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
 TVD Reference: RKB @ 3352.0usft (Noram #21)
 MD Reference: RKB @ 3352.0usft (Noram #21)
 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
13,260.0	90.34	358.06	12,608.1	633.0	-303.9	399,835.61	751,819.83	32° 5' 47.954 N	103° 31' 12.559 W
13,354.0	88.99	359.04	12,608.6	727.0	-306.2	399,929.57	751,817.45	32° 5' 48.884 N	103° 31' 12.578 W
13,449.0	91.34	1.43	12,608.4	822.0	-305.9	400,024.56	751,817.84	32° 5' 49.823 N	103° 31' 12.565 W
13,544.0	91.34	0.88	12,606.1	916.9	-303.9	400,119.51	751,819.75	32° 5' 50.763 N	103° 31' 12.535 W
13,637.0	90.25	358.36	12,604.8	1,009.9	-304.6	400,212.49	751,819.14	32° 5' 51.683 N	103° 31' 12.534 W
13,732.0	93.87	1.60	12,601.4	1,104.8	-304.6	400,307.40	751,819.10	32° 5' 52.622 N	103° 31' 12.526 W
13,825.0	93.33	1.80	12,595.6	1,197.6	-301.8	400,400.18	751,821.85	32° 5' 53.540 N	103° 31' 12.486 W
13,921.0	90.45	359.76	12,592.4	1,293.5	-300.5	400,496.10	751,823.16	32° 5' 54.489 N	103° 31' 12.462 W
14,015.0	91.49	0.74	12,590.8	1,387.5	-300.1	400,590.09	751,823.57	32° 5' 55.419 N	103° 31' 12.449 W
14,109.0	93.47	2.08	12,586.8	1,481.4	-297.8	400,683.96	751,825.88	32° 5' 56.348 N	103° 31' 12.414 W
14,202.0	89.55	0.90	12,584.3	1,574.3	-295.4	400,776.88	751,828.29	32° 5' 57.267 N	103° 31' 12.378 W
14,295.0	89.50	359.90	12,585.1	1,667.3	-294.8	400,869.87	751,828.94	32° 5' 58.188 N	103° 31' 12.362 W
14,389.0	88.91	358.90	12,586.4	1,761.3	-295.7	400,963.86	751,827.96	32° 5' 59.118 N	103° 31' 12.365 W
14,484.0	90.64	358.98	12,586.8	1,856.2	-297.5	401,058.84	751,828.20	32° 6' 0.058 N	103° 31' 12.377 W
14,578.0	90.36	358.62	12,585.9	1,950.2	-299.5	401,152.81	751,824.23	32° 6' 0.988 N	103° 31' 12.392 W
14,672.0	91.12	358.62	12,584.7	2,044.2	-301.7	401,246.78	751,821.97	32° 6' 1.918 N	103° 31' 12.410 W
14,767.0	92.27	358.86	12,581.9	2,139.1	-303.8	401,341.71	751,819.88	32° 6' 2.857 N	103° 31' 12.426 W
14,861.0	89.52	356.43	12,580.4	2,233.0	-307.7	401,435.60	751,816.02	32° 6' 3.787 N	103° 31' 12.463 W
14,955.0	89.11	356.43	12,581.6	2,326.8	-313.5	401,529.41	751,810.17	32° 6' 4.715 N	103° 31' 12.522 W
15,049.0	91.90	0.35	12,580.7	2,420.7	-316.2	401,623.35	751,807.53	32° 6' 5.645 N	103° 31' 12.545 W
15,143.0	90.92	359.45	12,578.4	2,514.7	-316.3	401,717.32	751,807.36	32° 6' 6.575 N	103° 31' 12.539 W
15,238.0	91.59	359.19	12,576.3	2,609.7	-317.5	401,812.29	751,806.23	32° 6' 7.515 N	103° 31' 12.543 W
15,331.0	90.31	356.99	12,574.8	2,702.6	-320.6	401,905.21	751,803.14	32° 6' 8.435 N	103° 31' 12.571 W
15,425.0	90.76	357.74	12,573.9	2,796.5	-324.9	401,999.11	751,798.81	32° 6' 9.364 N	103° 31' 12.613 W
15,519.0	88.74	357.00	12,574.3	2,890.4	-329.2	402,093.00	751,794.50	32° 6' 10.294 N	103° 31' 12.655 W
15,613.0	90.00	0.58	12,575.4	2,984.4	-331.2	402,186.96	751,792.52	32° 6' 11.224 N	103° 31' 12.670 W
15,708.0	91.33	2.23	12,574.3	3,079.3	-328.9	402,281.92	751,794.85	32° 6' 12.163 N	103° 31' 12.635 W
15,803.0	89.02	2.59	12,574.0	3,174.2	-324.9	402,376.83	751,798.84	32° 6' 13.102 N	103° 31' 12.580 W
15,897.0	89.91	2.74	12,574.9	3,268.1	-320.5	402,470.72	751,803.21	32° 6' 14.031 N	103° 31' 12.521 W
15,991.0	92.47	2.76	12,572.9	3,362.0	-316.0	402,564.58	751,807.72	32° 6' 14.959 N	103° 31' 12.460 W
16,085.0	91.49	4.36	12,569.7	3,455.7	-310.1	402,658.34	751,813.55	32° 6' 15.887 N	103° 31' 12.384 W
16,180.0	89.27	2.86	12,569.0	3,550.5	-304.2	402,753.14	751,819.53	32° 6' 16.824 N	103° 31' 12.306 W
16,274.0	87.84	3.90	12,571.4	3,644.3	-298.6	402,846.95	751,825.07	32° 6' 17.752 N	103° 31' 12.234 W
16,367.0	86.25	358.86	12,576.2	3,737.2	-296.4	402,939.76	751,827.31	32° 6' 18.670 N	103° 31' 12.199 W
16,461.0	90.39	355.48	12,578.9	3,831.0	-301.0	403,033.57	751,822.87	32° 6' 19.599 N	103° 31' 12.245 W
16,555.0	90.73	359.92	12,578.0	3,924.9	-304.8	403,127.47	751,818.90	32° 6' 20.528 N	103° 31' 12.281 W
16,650.0	91.37	2.93	12,576.3	4,019.8	-302.4	403,222.41	751,821.26	32° 6' 21.468 N	103° 31' 12.245 W
16,744.0	92.66	358.53	12,573.0	4,113.7	-301.2	403,316.32	751,822.46	32° 6' 22.397 N	103° 31' 12.223 W
16,838.0	90.92	357.59	12,570.0	4,207.6	-304.4	403,410.22	751,819.28	32° 6' 23.326 N	103° 31' 12.252 W
16,932.0	92.86	0.38	12,566.9	4,301.5	-306.1	403,504.14	751,817.61	32° 6' 24.256 N	103° 31' 12.263 W
17,026.0	90.11	355.69	12,564.5	4,395.4	-309.3	403,598.02	751,814.39	32° 6' 25.185 N	103° 31' 12.292 W
17,121.0	91.49	356.20	12,563.2	4,490.2	-316.0	403,692.77	751,807.67	32° 6' 26.123 N	103° 31' 12.362 W
17,215.0	91.82	355.30	12,560.5	4,583.9	-323.0	403,786.47	751,800.71	32° 6' 27.051 N	103° 31' 12.434 W
17,293.9	91.82	355.30	12,558.0	4,662.5	-329.4	403,865.06	751,794.25	32° 6' 27.829 N	103° 31' 12.503 W
LTP @ 17293.9' MD / 12558.0' TVD									
17,310.0	91.82	355.30	12,557.4	4,678.5	-330.8	403,881.10	751,792.93	32° 6' 27.988 N	103° 31' 12.517 W
17,357.0	91.82	355.30	12,556.0	4,725.3	-334.6	403,927.92	751,789.08	32° 6' 28.452 N	103° 31' 12.557 W
17,382.0	91.82	355.30	12,555.2	4,750.2	-336.7	403,952.82	751,787.03	32° 6' 28.698 N	103° 31' 12.579 W
TD @ 17382.0' MD / 12555.2' TVD									



Survey Report - Geographic



Company: COG Operating, LLC
Project: Lea County, NM
Site: Sec 25, T25S, R33E
Well: Dominator 25 Federal #602H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Dominator 25 Federal #602H
TVD Reference: RKB @ 3352.0usft (Noram #21)
MD Reference: RKB @ 3352.0usft (Noram #21)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,723.0	11,717.1	-204.8	-219.5	Gyro Tie In @ 11723.0' MD / 11717.1' TVD
12,661.7	12,534.0	47.3	-301.7	FTP @ 12661.7' MD / 12534.0' TVD
17,293.9	12,558.0	4,662.5	-329.4	LTP @ 17293.9' MD / 12558.0' TVD
17,382.0	12,555.2	4,750.2	-336.7	TD @ 17382.0' MD / 12555.2' TVD

