



COG Operating, LLC

Lea County, NM

Sec 25, T25S, R33E

Dominator 25 Federal #702H

Wellbore #1

Design: Wellbore #1

Survey Report - Geographic

17 July, 2018

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MAR 21 2019
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Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	Latitude:	32° 5' 41.926 N
From:	Map	Easting:	748,329.70 usft	Longitude:	103° 31' 53.183 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well:	Dominator 25 Federal #702H					
Well Position	+N-/S	0.0 usft	Northing:	399,202.30 usft	Latitude:	32° 5' 41.666 N
	+E-/W	0.0 usft	Easting:	752,093.70 usft	Longitude:	103° 31' 9.431 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,324.0 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	6/10/2018	6.80	59.80	47,883.0000000

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	356.00	

Survey Program		Date	7/17/2018	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	11,769.0	Scientific Gyros (Wellbore #1)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,917.0	17,392.0	QES MWD Surveys (Gyro Tie In) (Wellbor	MWD	OWSG MWD - Standard

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	399,202.30	752,093.70	32° 5' 41.666 N	103° 31' 9.431 W
100.0	0.47	324.88	100.0	0.3	-0.2	399,202.63	752,093.46	32° 5' 41.669 N	103° 31' 9.433 W
125.0	0.43	321.86	125.0	0.5	-0.4	399,202.79	752,093.34	32° 5' 41.671 N	103° 31' 9.435 W
150.0	0.36	303.20	150.0	0.6	-0.5	399,202.91	752,093.22	32° 5' 41.672 N	103° 31' 9.436 W
175.0	0.39	320.27	175.0	0.7	-0.6	399,203.02	752,093.10	32° 5' 41.673 N	103° 31' 9.438 W
200.0	0.48	329.99	200.0	0.9	-0.7	399,203.17	752,092.99	32° 5' 41.675 N	103° 31' 9.439 W
225.0	0.44	325.26	225.0	1.0	-0.8	399,203.34	752,092.89	32° 5' 41.677 N	103° 31' 9.440 W
250.0	0.46	323.07	250.0	1.2	-0.9	399,203.50	752,092.77	32° 5' 41.678 N	103° 31' 9.441 W
275.0	0.48	324.97	275.0	1.4	-1.0	399,203.67	752,092.65	32° 5' 41.680 N	103° 31' 9.443 W
300.0	0.54	327.43	300.0	1.6	-1.2	399,203.85	752,092.53	32° 5' 41.682 N	103° 31' 9.444 W
325.0	0.54	328.02	325.0	1.8	-1.3	399,204.05	752,092.40	32° 5' 41.684 N	103° 31' 9.446 W

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Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
350.0	0.51	327.52	350.0	1.9	-1.4	399,204.25	752,092.28	32° 5' 41.686 N	103° 31' 9.447 W
375.0	0.52	331.07	375.0	2.1	-1.5	399,204.44	752,092.16	32° 5' 41.687 N	103° 31' 9.448 W
400.0	0.50	333.43	400.0	2.3	-1.6	399,204.64	752,092.06	32° 5' 41.689 N	103° 31' 9.449 W
425.0	0.52	339.68	425.0	2.5	-1.7	399,204.84	752,091.97	32° 5' 41.691 N	103° 31' 9.450 W
450.0	0.55	342.76	450.0	2.8	-1.8	399,205.06	752,091.90	32° 5' 41.694 N	103° 31' 9.451 W
475.0	0.66	344.57	475.0	3.0	-1.9	399,205.31	752,091.82	32° 5' 41.696 N	103° 31' 9.452 W
500.0	0.62	343.60	500.0	3.3	-1.9	399,205.58	752,091.75	32° 5' 41.699 N	103° 31' 9.453 W
525.0	0.64	341.36	525.0	3.5	-2.0	399,205.84	752,091.66	32° 5' 41.701 N	103° 31' 9.454 W
550.0	0.64	340.10	550.0	3.8	-2.1	399,206.11	752,091.57	32° 5' 41.704 N	103° 31' 9.455 W
575.0	0.68	341.55	575.0	4.1	-2.2	399,206.38	752,091.48	32° 5' 41.707 N	103° 31' 9.456 W
600.0	0.70	341.00	600.0	4.4	-2.3	399,206.67	752,091.38	32° 5' 41.710 N	103° 31' 9.457 W
625.0	0.79	337.06	625.0	4.7	-2.4	399,206.97	752,091.26	32° 5' 41.713 N	103° 31' 9.459 W
650.0	0.81	343.77	650.0	5.0	-2.5	399,207.30	752,091.15	32° 5' 41.716 N	103° 31' 9.460 W
675.0	0.89	345.98	675.0	5.4	-2.6	399,207.66	752,091.05	32° 5' 41.719 N	103° 31' 9.461 W
700.0	0.78	337.02	700.0	5.7	-2.8	399,208.00	752,090.94	32° 5' 41.723 N	103° 31' 9.462 W
725.0	0.81	341.51	725.0	6.0	-2.9	399,208.32	752,090.82	32° 5' 41.726 N	103° 31' 9.464 W
750.0	0.92	345.81	750.0	6.4	-3.0	399,208.69	752,090.71	32° 5' 41.730 N	103° 31' 9.465 W
775.0	0.93	345.13	775.0	6.8	-3.1	399,209.08	752,090.61	32° 5' 41.733 N	103° 31' 9.466 W
800.0	1.01	347.64	800.0	7.2	-3.2	399,209.49	752,090.51	32° 5' 41.738 N	103° 31' 9.467 W
825.0	0.98	344.73	825.0	7.6	-3.3	399,209.91	752,090.41	32° 5' 41.742 N	103° 31' 9.468 W
850.0	1.02	346.42	849.9	8.0	-3.4	399,210.33	752,090.30	32° 5' 41.746 N	103° 31' 9.469 W
875.0	1.01	344.25	874.9	8.5	-3.5	399,210.76	752,090.19	32° 5' 41.750 N	103° 31' 9.471 W
900.0	1.01	347.67	899.9	8.9	-3.6	399,211.19	752,090.08	32° 5' 41.754 N	103° 31' 9.472 W
925.0	1.02	347.54	924.9	9.3	-3.7	399,211.62	752,089.98	32° 5' 41.759 N	103° 31' 9.473 W
950.0	0.73	348.42	949.9	9.7	-3.8	399,211.99	752,089.90	32° 5' 41.762 N	103° 31' 9.474 W
975.0	0.77	339	974.9	10.0	-3.8	399,212.32	752,089.88	32° 5' 41.766 N	103° 31' 9.474 W
1,000.0	0.67	4.79	999.9	10.3	-3.8	399,212.63	752,089.90	32° 5' 41.769 N	103° 31' 9.474 W
1,025.0	0.61	0.56	1,024.9	10.6	-3.8	399,212.91	752,089.92	32° 5' 41.771 N	103° 31' 9.474 W
1,050.0	0.69	6.24	1,049.9	10.9	-3.8	399,213.19	752,089.94	32° 5' 41.774 N	103° 31' 9.473 W
1,075.0	0.66	0.19	1,074.9	11.2	-3.7	399,213.49	752,089.95	32° 5' 41.777 N	103° 31' 9.473 W
1,100.0	0.73	3.93	1,099.9	11.5	-3.7	399,213.79	752,089.96	32° 5' 41.780 N	103° 31' 9.473 W
1,125.0	0.68	3.99	1,124.9	11.8	-3.7	399,214.10	752,089.98	32° 5' 41.783 N	103° 31' 9.473 W
1,150.0	0.69	4.02	1,149.9	12.1	-3.7	399,214.39	752,090.01	32° 5' 41.786 N	103° 31' 9.473 W
1,175.0	0.84	4.44	1,174.9	12.4	-3.7	399,214.73	752,090.03	32° 5' 41.789 N	103° 31' 9.472 W
1,200.0	0.52	2.88	1,199.9	12.7	-3.6	399,215.02	752,090.05	32° 5' 41.792 N	103° 31' 9.472 W
1,225.0	0.80	3.98	1,224.9	13.0	-3.6	399,215.31	752,090.07	32° 5' 41.795 N	103° 31' 9.472 W
1,250.0	0.61	4.02	1,249.9	13.3	-3.6	399,215.62	752,090.09	32° 5' 41.798 N	103° 31' 9.471 W
1,275.0	0.53	356.65	1,274.9	13.6	-3.6	399,215.87	752,090.09	32° 5' 41.801 N	103° 31' 9.471 W
1,300.0	0.83	1.96	1,299.9	13.9	-3.6	399,216.16	752,090.09	32° 5' 41.804 N	103° 31' 9.471 W
1,325.0	0.44	350.46	1,324.9	14.1	-3.6	399,216.44	752,090.08	32° 5' 41.806 N	103° 31' 9.471 W
1,350.0	0.69	1.43	1,349.9	14.4	-3.6	399,216.68	752,090.07	32° 5' 41.809 N	103° 31' 9.472 W
1,375.0	0.43	351.85	1,374.9	14.6	-3.6	399,216.93	752,090.06	32° 5' 41.811 N	103° 31' 9.472 W
1,400.0	0.85	327.93	1,399.9	14.9	-3.7	399,217.18	752,089.95	32° 5' 41.814 N	103° 31' 9.473 W
1,425.0	1.14	295.06	1,424.9	15.1	-4.1	399,217.44	752,089.62	32° 5' 41.816 N	103° 31' 9.477 W
1,450.0	1.51	287.09	1,449.9	15.3	-4.6	399,217.64	752,089.08	32° 5' 41.818 N	103° 31' 9.483 W
1,475.0	1.48	286.55	1,474.9	15.5	-5.2	399,217.83	752,088.46	32° 5' 41.820 N	103° 31' 9.490 W
1,500.0	1.51	280.82	1,499.9	15.7	-5.9	399,217.98	752,087.83	32° 5' 41.822 N	103° 31' 9.498 W
1,525.0	1.56	292.29	1,524.9	15.9	-6.5	399,218.17	752,087.19	32° 5' 41.824 N	103° 31' 9.505 W
1,550.0	1.55	287.77	1,549.9	16.1	-7.1	399,218.41	752,086.55	32° 5' 41.826 N	103° 31' 9.512 W
1,575.0	1.49	287.81	1,574.8	16.3	-7.8	399,218.61	752,085.92	32° 5' 41.828 N	103° 31' 9.520 W
1,600.0	1.39	282.51	1,599.8	16.5	-8.4	399,218.77	752,085.31	32° 5' 41.830 N	103° 31' 9.527 W
1,625.0	1.40	275.02	1,624.8	16.6	-9.0	399,218.87	752,084.71	32° 5' 41.831 N	103° 31' 9.534 W
1,650.0	1.48	289.78	1,649.8	16.7	-9.6	399,219.00	752,084.11	32° 5' 41.832 N	103° 31' 9.541 W
1,675.0	1.45	274.11	1,674.8	16.8	-10.2	399,219.13	752,083.49	32° 5' 41.833 N	103° 31' 9.548 W
1,700.0	1.38	275.18	1,699.8	16.9	-10.8	399,219.18	752,082.87	32° 5' 41.834 N	103° 31' 9.555 W

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Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	
1,725.0	1.38	267.51	1,724.8	16.9	-11.4	399,219.20	752,082.27	32° 5' 41.834 N	103° 31' 9.562 W	
1,750.0	1.38	267.56	1,749.8	16.9	-12.0	399,219.17	752,081.67	32° 5' 41.834 N	103° 31' 9.569 W	
1,775.0	1.34	268.98	1,774.8	16.9	-12.6	399,219.15	752,081.08	32° 5' 41.834 N	103° 31' 9.576 W	
1,800.0	1.40	261.44	1,799.8	16.8	-13.2	399,219.10	752,080.48	32° 5' 41.833 N	103° 31' 9.583 W	
1,825.0	1.38	267.92	1,824.8	16.7	-13.8	399,219.05	752,079.88	32° 5' 41.833 N	103° 31' 9.590 W	
1,850.0	1.38	263.80	1,849.8	16.7	-14.4	399,219.00	752,079.28	32° 5' 41.833 N	103° 31' 9.597 W	
1,875.0	1.33	268.90	1,874.8	16.7	-15.0	399,218.97	752,078.69	32° 5' 41.832 N	103° 31' 9.604 W	
1,900.0	1.36	268.03	1,899.8	16.7	-15.6	399,218.95	752,078.10	32° 5' 41.832 N	103° 31' 9.610 W	
1,925.0	1.38	266.58	1,924.7	16.6	-16.2	399,218.92	752,077.51	32° 5' 41.832 N	103° 31' 9.617 W	
1,950.0	1.35	266.20	1,949.7	16.6	-16.8	399,218.88	752,076.91	32° 5' 41.832 N	103° 31' 9.624 W	
1,975.0	1.38	262.34	1,974.7	16.5	-17.4	399,218.82	752,076.32	32° 5' 41.831 N	103° 31' 9.631 W	
2,000.0	1.33	267.83	1,999.7	16.5	-18.0	399,218.77	752,075.73	32° 5' 41.830 N	103° 31' 9.638 W	
2,025.0	1.31	261.03	2,024.7	16.4	-18.5	399,218.72	752,075.16	32° 5' 41.830 N	103° 31' 9.645 W	
2,050.0	1.35	264.22	2,049.7	16.3	-19.1	399,218.64	752,074.58	32° 5' 41.829 N	103° 31' 9.651 W	
2,075.0	1.32	258.60	2,074.7	16.3	-19.7	399,218.56	752,074.01	32° 5' 41.828 N	103° 31' 9.658 W	
2,100.0	1.24	256.25	2,099.7	16.1	-20.2	399,218.44	752,073.46	32° 5' 41.827 N	103° 31' 9.664 W	
2,125.0	1.14	257.12	2,124.7	16.0	-20.7	399,218.32	752,072.96	32° 5' 41.826 N	103° 31' 9.670 W	
2,150.0	1.13	252.14	2,149.7	15.9	-21.2	399,218.19	752,072.48	32° 5' 41.825 N	103° 31' 9.676 W	
2,175.0	1.11	250.17	2,174.7	15.7	-21.7	399,218.03	752,072.02	32° 5' 41.823 N	103° 31' 9.681 W	
2,200.0	1.06	252.34	2,199.7	15.6	-22.1	399,217.88	752,071.57	32° 5' 41.822 N	103° 31' 9.686 W	
2,225.0	1.13	249.60	2,224.7	15.4	-22.6	399,217.72	752,071.12	32° 5' 41.820 N	103° 31' 9.692 W	
2,250.0	1.02	258.45	2,249.7	15.3	-23.0	399,217.59	752,070.67	32° 5' 41.819 N	103° 31' 9.697 W	
2,275.0	1.11	247.11	2,274.7	15.2	-23.5	399,217.45	752,070.23	32° 5' 41.818 N	103° 31' 9.702 W	
2,300.0	1.02	251.32	2,299.7	15.0	-23.9	399,217.28	752,069.80	32° 5' 41.816 N	103° 31' 9.707 W	
2,325.0	1.03	247.47	2,324.7	14.8	-24.3	399,217.13	752,069.38	32° 5' 41.815 N	103° 31' 9.712 W	
2,350.0	1.02	248.25	2,349.7	14.7	-24.7	399,216.96	752,068.96	32° 5' 41.813 N	103° 31' 9.717 W	
2,375.0	1.01	250.04	2,374.6	14.5	-25.1	399,216.80	752,068.55	32° 5' 41.812 N	103° 31' 9.722 W	
2,400.0	1.02	250.00	2,399.6	14.4	-25.6	399,216.65	752,068.13	32° 5' 41.810 N	103° 31' 9.727 W	
2,425.0	0.95	255.69	2,424.6	14.2	-26.0	399,216.52	752,067.72	32° 5' 41.809 N	103° 31' 9.731 W	
2,450.0	0.99	250.11	2,449.6	14.1	-26.4	399,216.40	752,067.32	32° 5' 41.808 N	103° 31' 9.736 W	
2,475.0	0.86	250.78	2,474.6	14.0	-26.8	399,216.26	752,066.94	32° 5' 41.806 N	103° 31' 9.740 W	
2,500.0	0.84	252.74	2,499.6	13.8	-27.1	399,216.15	752,066.59	32° 5' 41.805 N	103° 31' 9.745 W	
2,525.0	0.77	252.53	2,524.6	13.7	-27.4	399,216.04	752,066.25	32° 5' 41.804 N	103° 31' 9.748 W	
2,550.0	0.68	254.15	2,549.6	13.7	-27.7	399,215.95	752,065.95	32° 5' 41.803 N	103° 31' 9.752 W	
2,575.0	0.56	255.36	2,574.6	13.6	-28.0	399,215.88	752,065.69	32° 5' 41.803 N	103° 31' 9.755 W	
2,600.0	0.56	239.60	2,599.6	13.5	-28.2	399,215.79	752,065.46	32° 5' 41.802 N	103° 31' 9.758 W	
2,625.0	0.51	249.00	2,624.6	13.4	-28.4	399,215.68	752,065.26	32° 5' 41.801 N	103° 31' 9.760 W	
2,650.0	0.51	248.12	2,649.6	13.3	-28.6	399,215.60	752,065.05	32° 5' 41.800 N	103° 31' 9.763 W	
2,675.0	0.58	250.14	2,674.6	13.2	-28.9	399,215.52	752,064.83	32° 5' 41.799 N	103° 31' 9.765 W	
2,700.0	0.56	261.40	2,699.6	13.2	-29.1	399,215.46	752,064.59	32° 5' 41.799 N	103° 31' 9.768 W	
2,725.0	1.51	237.49	2,724.6	13.0	-29.5	399,215.26	752,064.19	32° 5' 41.797 N	103° 31' 9.773 W	
2,750.0	2.24	235.66	2,749.6	12.5	-30.2	399,214.81	752,063.51	32° 5' 41.792 N	103° 31' 9.781 W	
2,775.0	2.53	234.70	2,774.6	11.9	-31.0	399,214.22	752,062.65	32° 5' 41.786 N	103° 31' 9.790 W	
2,800.0	2.46	234.28	2,799.6	11.3	-31.9	399,213.58	752,061.77	32° 5' 41.780 N	103° 31' 9.801 W	
2,825.0	2.51	232.90	2,824.5	10.6	-32.8	399,212.94	752,060.89	32° 5' 41.774 N	103° 31' 9.811 W	
2,850.0	2.58	232.90	2,849.5	10.0	-33.7	399,212.27	752,060.01	32° 5' 41.767 N	103° 31' 9.821 W	
2,875.0	2.47	233.02	2,874.5	9.3	-34.6	399,211.61	752,059.13	32° 5' 41.761 N	103° 31' 9.832 W	
2,900.0	2.31	232.67	2,899.5	8.7	-35.4	399,210.98	752,058.30	32° 5' 41.755 N	103° 31' 9.841 W	
2,925.0	2.38	228.61	2,924.4	8.0	-36.2	399,210.33	752,057.51	32° 5' 41.748 N	103° 31' 9.851 W	
2,950.0	2.31	226.19	2,949.4	7.3	-36.9	399,209.64	752,056.76	32° 5' 41.741 N	103° 31' 9.859 W	
2,975.0	2.28	225.79	2,974.4	6.6	-37.7	399,208.94	752,056.04	32° 5' 41.735 N	103° 31' 9.868 W	
3,000.0	2.26	226.64	2,999.4	6.0	-38.4	399,208.26	752,055.32	32° 5' 41.728 N	103° 31' 9.876 W	
3,025.0	2.17	229.45	3,024.4	5.3	-39.1	399,207.61	752,054.60	32° 5' 41.722 N	103° 31' 9.885 W	
3,050.0	2.12	227.71	3,049.3	4.7	-39.8	399,206.99	752,053.90	32° 5' 41.716 N	103° 31' 9.893 W	
3,075.0	2.00	227.67	3,074.3	4.1	-40.5	399,206.39	752,053.24	32° 5' 41.710 N	103° 31' 9.901 W	

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	1.82	228.52	3,099.3	3.5	-41.1	399,205.83	752,052.62	32° 5' 41.704 N	103° 31' 9.908 W	
3,125.0	1.82	224.01	3,124.3	3.0	-41.7	399,205.28	752,052.04	32° 5' 41.699 N	103° 31' 9.915 W	
3,150.0	1.66	220.71	3,149.3	2.4	-42.2	399,204.72	752,051.53	32° 5' 41.693 N	103° 31' 9.921 W	
3,175.0	1.40	215.77	3,174.3	1.9	-42.6	399,204.20	752,051.12	32° 5' 41.688 N	103° 31' 9.925 W	
3,200.0	1.37	209.55	3,199.3	1.4	-42.9	399,203.69	752,050.79	32° 5' 41.683 N	103° 31' 9.929 W	
3,225.0	1.28	208.68	3,224.3	0.9	-43.2	399,203.19	752,050.51	32° 5' 41.678 N	103° 31' 9.933 W	
3,250.0	1.20	210.80	3,249.3	0.4	-43.5	399,202.72	752,050.24	32° 5' 41.673 N	103° 31' 9.936 W	
3,275.0	1.42	216.86	3,274.3	-0.1	-43.8	399,202.24	752,049.92	32° 5' 41.669 N	103° 31' 9.940 W	
3,300.0	2.27	237.28	3,299.2	-0.6	-44.4	399,201.73	752,049.32	32° 5' 41.664 N	103° 31' 9.947 W	
3,325.0	2.40	241.44	3,324.2	-1.1	-45.3	399,201.21	752,048.44	32° 5' 41.659 N	103° 31' 9.957 W	
3,350.0	2.46	239.91	3,349.2	-1.6	-46.2	399,200.69	752,047.52	32° 5' 41.654 N	103° 31' 9.968 W	
3,375.0	2.46	240.51	3,374.2	-2.1	-47.1	399,200.16	752,046.59	32° 5' 41.648 N	103° 31' 9.978 W	
3,400.0	2.22	241.64	3,399.2	-2.6	-48.0	399,199.66	752,045.69	32° 5' 41.644 N	103° 31' 9.989 W	
3,425.0	2.23	239.17	3,424.1	-3.1	-48.8	399,199.18	752,044.85	32° 5' 41.639 N	103° 31' 9.999 W	
3,450.0	2.15	239.82	3,449.1	-3.6	-49.7	399,198.70	752,044.03	32° 5' 41.634 N	103° 31' 10.008 W	
3,475.0	2.13	239.14	3,474.1	-4.1	-50.5	399,198.22	752,043.22	32° 5' 41.630 N	103° 31' 10.018 W	
3,500.0	2.15	236.13	3,499.1	-4.6	-51.3	399,197.73	752,042.44	32° 5' 41.625 N	103° 31' 10.027 W	
3,525.0	2.07	235.17	3,524.1	-5.1	-52.0	399,197.21	752,041.68	32° 5' 41.620 N	103° 31' 10.036 W	
3,550.0	1.95	235.31	3,549.1	-5.6	-52.7	399,196.71	752,040.96	32° 5' 41.615 N	103° 31' 10.044 W	
3,575.0	1.99	235.14	3,574.0	-6.1	-53.4	399,196.22	752,040.25	32° 5' 41.610 N	103° 31' 10.052 W	
3,600.0	1.97	235.97	3,599.0	-6.6	-54.2	399,195.73	752,039.54	32° 5' 41.605 N	103° 31' 10.061 W	
3,625.0	1.92	237.47	3,624.0	-7.0	-54.9	399,195.26	752,038.83	32° 5' 41.601 N	103° 31' 10.069 W	
3,650.0	1.87	239.45	3,649.0	-7.5	-55.6	399,194.83	752,038.12	32° 5' 41.596 N	103° 31' 10.077 W	
3,675.0	2.00	234.39	3,674.0	-7.9	-56.3	399,194.37	752,037.42	32° 5' 41.592 N	103° 31' 10.086 W	
3,700.0	1.90	236.05	3,699.0	-8.4	-57.0	399,193.88	752,036.72	32° 5' 41.587 N	103° 31' 10.094 W	
3,725.0	1.88	237.37	3,724.0	-8.9	-57.7	399,193.43	752,036.03	32° 5' 41.583 N	103° 31' 10.102 W	
3,750.0	1.83	240.39	3,748.9	-9.3	-58.4	399,193.01	752,035.34	32° 5' 41.579 N	103° 31' 10.110 W	
3,775.0	1.63	249.94	3,773.9	-9.6	-59.0	399,192.69	752,034.66	32° 5' 41.575 N	103° 31' 10.118 W	
3,800.0	1.54	254.38	3,798.9	-9.8	-59.7	399,192.48	752,034.00	32° 5' 41.573 N	103° 31' 10.125 W	
3,825.0	1.54	252.99	3,823.9	-10.0	-60.3	399,192.29	752,033.35	32° 5' 41.572 N	103° 31' 10.133 W	
3,850.0	1.48	254.56	3,848.9	-10.2	-61.0	399,192.11	752,032.72	32° 5' 41.570 N	103° 31' 10.140 W	
3,875.0	1.44	254.64	3,873.9	-10.4	-61.6	399,191.94	752,032.11	32° 5' 41.568 N	103° 31' 10.147 W	
3,900.0	1.32	253.80	3,898.9	-10.5	-62.2	399,191.77	752,031.53	32° 5' 41.567 N	103° 31' 10.154 W	
3,925.0	1.39	248.39	3,923.9	-10.7	-62.7	399,191.58	752,030.97	32° 5' 41.565 N	103° 31' 10.161 W	
3,950.0	1.30	248.88	3,948.9	-10.9	-63.3	399,191.37	752,030.42	32° 5' 41.563 N	103° 31' 10.167 W	
3,975.0	1.13	255.32	3,973.9	-11.1	-63.8	399,191.20	752,029.92	32° 5' 41.561 N	103° 31' 10.173 W	
4,000.0	1.05	259.21	3,998.9	-11.2	-64.2	399,191.10	752,029.46	32° 5' 41.560 N	103° 31' 10.178 W	
4,025.0	1.07	256.27	4,023.9	-11.3	-64.7	399,191.00	752,029.00	32° 5' 41.559 N	103° 31' 10.184 W	
4,050.0	1.03	261.25	4,048.9	-11.4	-65.1	399,190.91	752,028.56	32° 5' 41.558 N	103° 31' 10.189 W	
4,075.0	1.08	262.36	4,073.8	-11.5	-65.6	399,190.84	752,028.10	32° 5' 41.558 N	103° 31' 10.194 W	
4,100.0	1.11	264.20	4,098.8	-11.5	-66.1	399,190.79	752,027.63	32° 5' 41.557 N	103° 31' 10.200 W	
4,125.0	1.13	263.23	4,123.8	-11.6	-66.6	399,190.74	752,027.14	32° 5' 41.557 N	103° 31' 10.205 W	
4,150.0	1.10	269.65	4,148.8	-11.6	-67.0	399,190.70	752,026.66	32° 5' 41.556 N	103° 31' 10.211 W	
4,175.0	1.05	283.23	4,173.8	-11.5	-67.5	399,190.76	752,026.19	32° 5' 41.557 N	103° 31' 10.216 W	
4,200.0	0.98	268.31	4,198.8	-11.5	-67.9	399,190.80	752,025.76	32° 5' 41.557 N	103° 31' 10.221 W	
4,225.0	0.94	275.58	4,223.8	-11.5	-68.4	399,190.82	752,025.34	32° 5' 41.558 N	103° 31' 10.226 W	
4,250.0	0.70	252.93	4,248.8	-11.5	-68.7	399,190.79	752,024.99	32° 5' 41.557 N	103° 31' 10.230 W	
4,275.0	0.93	264.68	4,273.8	-11.6	-69.1	399,190.73	752,024.64	32° 5' 41.557 N	103° 31' 10.234 W	
4,300.0	1.05	263.25	4,298.8	-11.6	-69.5	399,190.68	752,024.21	32° 5' 41.556 N	103° 31' 10.239 W	
4,325.0	0.90	255.30	4,323.8	-11.7	-69.9	399,190.60	752,023.79	32° 5' 41.556 N	103° 31' 10.244 W	
4,350.0	0.96	257.02	4,348.8	-11.8	-70.3	399,190.51	752,023.40	32° 5' 41.555 N	103° 31' 10.249 W	
4,375.0	0.84	250.19	4,373.8	-11.9	-70.7	399,190.40	752,023.02	32° 5' 41.554 N	103° 31' 10.253 W	
4,400.0	0.77	240.99	4,398.8	-12.0	-71.0	399,190.26	752,022.70	32° 5' 41.552 N	103° 31' 10.257 W	
4,425.0	0.84	234.20	4,423.8	-12.2	-71.3	399,190.07	752,022.41	32° 5' 41.550 N	103° 31' 10.260 W	
4,450.0	0.75	229.49	4,448.8	-12.4	-71.6	399,189.85	752,022.13	32° 5' 41.548 N	103° 31' 10.264 W	



Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	0.66	217.90	4,473.8	-12.7	-71.8	399,189.63	752,021.92	32° 5' 41.546 N	103° 31' 10.266 W	
4,500.0	0.69	184.12	4,498.8	-12.9	-71.9	399,189.37	752,021.82	32° 5' 41.544 N	103° 31' 10.267 W	
4,525.0	0.70	165.13	4,523.8	-13.2	-71.8	399,189.07	752,021.85	32° 5' 41.541 N	103° 31' 10.267 W	
4,550.0	0.84	179.03	4,548.8	-13.6	-71.8	399,188.74	752,021.89	32° 5' 41.537 N	103° 31' 10.267 W	
4,575.0	0.72	184.72	4,573.8	-13.9	-71.8	399,188.40	752,021.88	32° 5' 41.534 N	103° 31' 10.267 W	
4,600.0	0.83	222.86	4,598.8	-14.2	-71.9	399,188.11	752,021.75	32° 5' 41.531 N	103° 31' 10.268 W	
4,625.0	1.73	255.66	4,623.8	-14.4	-72.4	399,187.89	752,021.26	32° 5' 41.529 N	103° 31' 10.274 W	
4,650.0	1.82	256.01	4,648.8	-14.6	-73.2	399,187.70	752,020.51	32° 5' 41.527 N	103° 31' 10.283 W	
4,675.0	1.86	252.16	4,673.8	-14.8	-74.0	399,187.48	752,019.74	32° 5' 41.525 N	103° 31' 10.292 W	
4,700.0	1.95	249.77	4,698.7	-15.1	-74.7	399,187.20	752,018.95	32° 5' 41.522 N	103° 31' 10.301 W	
4,725.0	1.95	242.82	4,723.7	-15.4	-75.5	399,186.86	752,018.17	32° 5' 41.519 N	103° 31' 10.310 W	
4,750.0	1.80	231.48	4,748.7	-15.9	-76.2	399,186.42	752,017.49	32° 5' 41.515 N	103° 31' 10.318 W	
4,775.0	1.77	228.03	4,773.7	-16.4	-76.8	399,185.92	752,016.89	32° 5' 41.510 N	103° 31' 10.325 W	
4,800.0	1.77	218.08	4,798.7	-16.9	-77.3	399,185.36	752,016.37	32° 5' 41.504 N	103° 31' 10.331 W	
4,825.0	1.77	207.37	4,823.7	-17.6	-77.7	399,184.71	752,015.95	32° 5' 41.498 N	103° 31' 10.336 W	
4,850.0	1.91	194.30	4,848.7	-18.3	-78.0	399,183.97	752,015.67	32° 5' 41.491 N	103° 31' 10.339 W	
4,875.0	2.09	186.48	4,873.6	-19.2	-78.2	399,183.11	752,015.52	32° 5' 41.482 N	103° 31' 10.341 W	
4,900.0	2.15	181.36	4,898.6	-20.1	-78.2	399,182.19	752,015.46	32° 5' 41.473 N	103° 31' 10.342 W	
4,925.0	2.40	174.28	4,923.6	-21.1	-78.2	399,181.20	752,015.50	32° 5' 41.463 N	103° 31' 10.342 W	
4,950.0	2.43	177.28	4,948.6	-22.2	-78.1	399,180.15	752,015.57	32° 5' 41.453 N	103° 31' 10.341 W	
4,975.0	2.19	188.59	4,973.6	-23.2	-78.2	399,179.15	752,015.53	32° 5' 41.443 N	103° 31' 10.341 W	
5,000.0	1.84	222.96	4,998.6	-23.9	-78.5	399,178.38	752,015.18	32° 5' 41.435 N	103° 31' 10.345 W	
5,025.0	1.96	230.93	5,023.5	-24.5	-79.1	399,177.82	752,014.58	32° 5' 41.430 N	103° 31' 10.353 W	
5,050.0	1.89	232.16	5,048.5	-25.0	-79.8	399,177.29	752,013.92	32° 5' 41.425 N	103° 31' 10.360 W	
5,075.0	1.99	237.83	5,073.5	-25.5	-80.5	399,176.81	752,013.23	32° 5' 41.420 N	103° 31' 10.368 W	
5,100.0	1.97	234.85	5,098.5	-26.0	-81.2	399,176.33	752,012.51	32° 5' 41.415 N	103° 31' 10.377 W	
5,125.0	1.91	236.79	5,123.5	-26.4	-81.9	399,175.86	752,011.81	32° 5' 41.411 N	103° 31' 10.385 W	
5,150.0	1.88	240.22	5,148.5	-26.9	-82.6	399,175.42	752,011.10	32° 5' 41.406 N	103° 31' 10.393 W	
5,175.0	2.30	254.65	5,173.5	-27.2	-83.4	399,175.09	752,010.26	32° 5' 41.403 N	103° 31' 10.403 W	
5,200.0	2.93	262.33	5,198.4	-27.4	-84.5	399,174.87	752,009.15	32° 5' 41.401 N	103° 31' 10.416 W	
5,225.0	2.83	263.01	5,223.4	-27.6	-85.8	399,174.71	752,007.90	32° 5' 41.400 N	103° 31' 10.430 W	
5,250.0	2.84	264.20	5,248.4	-27.7	-87.0	399,174.57	752,006.67	32° 5' 41.398 N	103° 31' 10.445 W	
5,275.0	2.90	264.63	5,273.3	-27.8	-88.3	399,174.45	752,005.43	32° 5' 41.397 N	103° 31' 10.459 W	
5,300.0	2.92	265.38	5,298.3	-28.0	-89.5	399,174.34	752,004.16	32° 5' 41.396 N	103° 31' 10.474 W	
5,325.0	2.92	265.11	5,323.3	-28.1	-90.8	399,174.23	752,002.89	32° 5' 41.395 N	103° 31' 10.489 W	
5,350.0	2.88	264.52	5,348.2	-28.2	-92.1	399,174.12	752,001.63	32° 5' 41.394 N	103° 31' 10.503 W	
5,375.0	2.72	263.95	5,373.2	-28.3	-93.3	399,174.00	752,000.42	32° 5' 41.393 N	103° 31' 10.517 W	
5,400.0	2.54	261.88	5,398.2	-28.4	-94.4	399,173.86	751,999.28	32° 5' 41.392 N	103° 31' 10.531 W	
5,425.0	2.66	262.78	5,423.2	-28.6	-95.5	399,173.71	751,998.16	32° 5' 41.390 N	103° 31' 10.544 W	
5,450.0	2.61	262.43	5,448.1	-28.7	-96.7	399,173.56	751,997.02	32° 5' 41.389 N	103° 31' 10.557 W	
5,475.0	2.70	262.89	5,473.1	-28.9	-97.8	399,173.41	751,995.87	32° 5' 41.388 N	103° 31' 10.570 W	
5,500.0	2.76	264.30	5,498.1	-29.0	-99.0	399,173.28	751,994.68	32° 5' 41.386 N	103° 31' 10.584 W	
5,525.0	2.64	263.26	5,523.0	-29.1	-100.2	399,173.15	751,993.51	32° 5' 41.385 N	103° 31' 10.598 W	
5,550.0	2.67	263.05	5,548.0	-29.3	-101.3	399,173.01	751,992.36	32° 5' 41.384 N	103° 31' 10.611 W	
5,575.0	2.63	262.82	5,573.0	-29.4	-102.5	399,172.87	751,991.22	32° 5' 41.383 N	103° 31' 10.624 W	
5,600.0	2.57	262.26	5,598.0	-29.6	-103.6	399,172.72	751,990.09	32° 5' 41.381 N	103° 31' 10.638 W	
5,625.0	2.41	260.89	5,622.9	-29.7	-104.7	399,172.56	751,989.02	32° 5' 41.380 N	103° 31' 10.650 W	
5,650.0	2.33	259.38	5,647.9	-29.9	-105.7	399,172.39	751,988.00	32° 5' 41.378 N	103° 31' 10.662 W	
5,675.0	2.26	258.53	5,672.9	-30.1	-106.7	399,172.19	751,987.02	32° 5' 41.376 N	103° 31' 10.673 W	
5,700.0	2.39	260.33	5,697.9	-30.3	-107.7	399,172.01	751,986.02	32° 5' 41.374 N	103° 31' 10.685 W	
5,725.0	2.32	259.12	5,722.9	-30.5	-108.7	399,171.83	751,985.01	32° 5' 41.373 N	103° 31' 10.697 W	
5,750.0	2.38	258.46	5,747.8	-30.7	-109.7	399,171.63	751,984.00	32° 5' 41.371 N	103° 31' 10.708 W	
5,775.0	2.40	257.42	5,772.8	-30.9	-110.7	399,171.41	751,982.98	32° 5' 41.369 N	103° 31' 10.720 W	
5,800.0	2.41	261.74	5,797.8	-31.1	-111.7	399,171.22	751,981.95	32° 5' 41.367 N	103° 31' 10.732 W	
5,825.0	2.34	263.08	5,822.8	-31.2	-112.8	399,171.08	751,980.93	32° 5' 41.366 N	103° 31' 10.744 W	

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	
5,850.0	2.28	264.26	5,847.8	-31.3	-113.8	399,170.97	751,979.93	32° 5' 41.365 N	103° 31' 10.756 W	
5,875.0	2.00	259.96	5,872.7	-31.5	-114.7	399,170.85	751,979.00	32° 5' 41.363 N	103° 31' 10.767 W	
5,900.0	2.03	254.99	5,897.7	-31.6	-115.6	399,170.65	751,978.14	32° 5' 41.362 N	103° 31' 10.777 W	
5,925.0	2.08	256.01	5,922.7	-31.9	-116.4	399,170.43	751,977.28	32° 5' 41.359 N	103° 31' 10.787 W	
5,950.0	1.99	256.43	5,947.7	-32.1	-117.3	399,170.22	751,976.41	32° 5' 41.357 N	103° 31' 10.797 W	
5,975.0	1.91	255.85	5,972.7	-32.3	-118.1	399,170.02	751,975.59	32° 5' 41.355 N	103° 31' 10.806 W	
6,000.0	1.89	255.56	5,997.7	-32.5	-118.9	399,169.81	751,974.78	32° 5' 41.354 N	103° 31' 10.816 W	
6,025.0	1.90	258.83	6,022.6	-32.7	-119.7	399,169.63	751,973.98	32° 5' 41.352 N	103° 31' 10.825 W	
6,050.0	1.88	258.80	6,047.6	-32.8	-120.5	399,169.47	751,973.17	32° 5' 41.350 N	103° 31' 10.835 W	
6,075.0	1.76	258.39	6,072.6	-33.0	-121.3	399,169.31	751,972.39	32° 5' 41.349 N	103° 31' 10.844 W	
6,100.0	1.66	258.81	6,097.6	-33.1	-122.0	399,169.16	751,971.66	32° 5' 41.347 N	103° 31' 10.852 W	
6,125.0	1.68	258.14	6,122.6	-33.3	-122.8	399,169.02	751,970.95	32° 5' 41.346 N	103° 31' 10.860 W	
6,150.0	1.77	260.71	6,147.6	-33.4	-123.5	399,168.88	751,970.21	32° 5' 41.345 N	103° 31' 10.869 W	
6,175.0	1.77	258.59	6,172.6	-33.6	-124.2	399,168.74	751,969.45	32° 5' 41.343 N	103° 31' 10.878 W	
6,200.0	1.58	262.18	6,197.6	-33.7	-125.0	399,168.62	751,968.73	32° 5' 41.342 N	103° 31' 10.886 W	
6,225.0	1.63	264.62	6,222.6	-33.8	-125.7	399,168.54	751,968.03	32° 5' 41.341 N	103° 31' 10.894 W	
6,250.0	1.60	266.41	6,247.5	-33.8	-126.4	399,168.48	751,967.33	32° 5' 41.341 N	103° 31' 10.903 W	
6,275.0	1.43	265.47	6,272.5	-33.9	-127.0	399,168.44	751,966.67	32° 5' 41.341 N	103° 31' 10.910 W	
6,300.0	1.24	270.00	6,297.5	-33.9	-127.6	399,168.41	751,966.09	32° 5' 41.340 N	103° 31' 10.917 W	
6,325.0	1.32	271.79	6,322.5	-33.9	-128.2	399,168.42	751,965.53	32° 5' 41.340 N	103° 31' 10.923 W	
6,350.0	1.16	276.56	6,347.5	-33.8	-128.7	399,168.46	751,964.99	32° 5' 41.341 N	103° 31' 10.930 W	
6,375.0	1.08	275.09	6,372.5	-33.8	-129.2	399,168.51	751,964.51	32° 5' 41.341 N	103° 31' 10.935 W	
6,400.0	1.11	277.55	6,397.5	-33.7	-129.7	399,168.56	751,964.03	32° 5' 41.342 N	103° 31' 10.941 W	
6,425.0	1.04	282.99	6,422.5	-33.7	-130.1	399,168.64	751,963.57	32° 5' 41.343 N	103° 31' 10.946 W	
6,450.0	1.02	284.72	6,447.5	-33.5	-130.6	399,168.75	751,963.13	32° 5' 41.344 N	103° 31' 10.951 W	
6,475.0	0.83	287.67	6,472.5	-33.4	-131.0	399,168.86	751,962.75	32° 5' 41.345 N	103° 31' 10.956 W	
6,500.0	0.82	287.00	6,497.5	-33.3	-131.3	399,168.97	751,962.40	32° 5' 41.346 N	103° 31' 10.960 W	
6,525.0	0.66	290.15	6,522.5	-33.2	-131.6	399,169.07	751,962.10	32° 5' 41.347 N	103° 31' 10.963 W	
6,550.0	0.70	290.90	6,547.5	-33.1	-131.9	399,169.18	751,961.82	32° 5' 41.348 N	103° 31' 10.967 W	
6,575.0	0.68	292.87	6,572.5	-33.0	-132.2	399,169.29	751,961.54	32° 5' 41.349 N	103° 31' 10.970 W	
6,600.0	0.60	296.38	6,597.5	-32.9	-132.4	399,169.40	751,961.28	32° 5' 41.351 N	103° 31' 10.973 W	
6,625.0	0.46	301.42	6,622.5	-32.8	-132.6	399,169.51	751,961.08	32° 5' 41.352 N	103° 31' 10.975 W	
6,650.0	0.53	298.61	6,647.5	-32.7	-132.8	399,169.62	751,960.89	32° 5' 41.353 N	103° 31' 10.977 W	
6,675.0	0.57	298.07	6,672.5	-32.6	-133.0	399,169.74	751,960.68	32° 5' 41.354 N	103° 31' 10.980 W	
6,700.0	0.57	301.21	6,697.5	-32.4	-133.2	399,169.86	751,960.47	32° 5' 41.355 N	103° 31' 10.982 W	
6,725.0	0.53	300.90	6,722.5	-32.3	-133.4	399,169.98	751,960.26	32° 5' 41.356 N	103° 31' 10.985 W	
6,750.0	0.59	280.91	6,747.5	-32.2	-133.7	399,170.07	751,960.04	32° 5' 41.357 N	103° 31' 10.987 W	
6,775.0	1.06	267.72	6,772.5	-32.2	-134.0	399,170.08	751,959.68	32° 5' 41.357 N	103° 31' 10.991 W	
6,800.0	1.49	256.41	6,797.5	-32.3	-134.6	399,170.00	751,959.13	32° 5' 41.357 N	103° 31' 10.998 W	
6,825.0	1.56	254.18	6,822.5	-32.5	-135.2	399,169.83	751,958.49	32° 5' 41.355 N	103° 31' 11.005 W	
6,850.0	1.55	253.89	6,847.5	-32.7	-135.9	399,169.64	751,957.84	32° 5' 41.353 N	103° 31' 11.013 W	
6,875.0	1.56	255.76	6,872.4	-32.8	-136.5	399,169.46	751,957.18	32° 5' 41.351 N	103° 31' 11.020 W	
6,900.0	1.44	251.17	6,897.4	-33.0	-137.1	399,169.28	751,956.55	32° 5' 41.350 N	103° 31' 11.028 W	
6,925.0	1.38	248.73	6,922.4	-33.2	-137.7	399,169.07	751,955.98	32° 5' 41.348 N	103° 31' 11.034 W	
6,950.0	1.38	250.30	6,947.4	-33.4	-138.3	399,168.86	751,955.41	32° 5' 41.346 N	103° 31' 11.041 W	
6,975.0	1.42	249.61	6,972.4	-33.7	-138.9	399,168.65	751,954.84	32° 5' 41.343 N	103° 31' 11.048 W	
7,000.0	1.37	249.55	6,997.4	-33.9	-139.4	399,168.43	751,954.27	32° 5' 41.341 N	103° 31' 11.054 W	
7,025.0	1.36	249.69	7,022.4	-34.1	-140.0	399,168.23	751,953.71	32° 5' 41.339 N	103° 31' 11.061 W	
7,050.0	1.42	251.11	7,047.4	-34.3	-140.6	399,168.02	751,953.14	32° 5' 41.337 N	103° 31' 11.068 W	
7,075.0	1.31	249.11	7,072.4	-34.5	-141.1	399,167.82	751,952.58	32° 5' 41.335 N	103° 31' 11.074 W	
7,100.0	1.29	247.16	7,097.4	-34.7	-141.6	399,167.61	751,952.05	32° 5' 41.333 N	103° 31' 11.080 W	
7,125.0	1.32	248.76	7,122.4	-34.9	-142.2	399,167.40	751,951.52	32° 5' 41.331 N	103° 31' 11.086 W	
7,150.0	1.22	245.80	7,147.4	-35.1	-142.7	399,167.18	751,951.01	32° 5' 41.329 N	103° 31' 11.092 W	
7,175.0	1.16	244.55	7,172.4	-35.3	-143.2	399,166.97	751,950.54	32° 5' 41.327 N	103° 31' 11.098 W	
7,200.0	1.17	245.41	7,197.4	-35.5	-143.6	399,166.75	751,950.08	32° 5' 41.325 N	103° 31' 11.103 W	



Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	1.20	245.27	7,222.3	-35.8	-144.1	399,166.54	751,949.61	32° 5' 41.323 N	103° 31' 11.109 W
7,250.0	1.19	243.88	7,247.3	-36.0	-144.6	399,166.31	751,949.14	32° 5' 41.321 N	103° 31' 11.114 W
7,275.0	1.20	245.78	7,272.3	-36.2	-145.0	399,166.09	751,948.67	32° 5' 41.319 N	103° 31' 11.120 W
7,300.0	1.22	242.36	7,297.3	-36.4	-145.5	399,165.86	751,948.19	32° 5' 41.316 N	103° 31' 11.125 W
7,325.0	1.15	241.61	7,322.3	-36.7	-146.0	399,165.62	751,947.74	32° 5' 41.314 N	103° 31' 11.131 W
7,350.0	1.10	240.69	7,347.3	-36.9	-146.4	399,165.38	751,947.31	32° 5' 41.312 N	103° 31' 11.136 W
7,375.0	1.01	236.37	7,372.3	-37.2	-146.8	399,165.14	751,946.91	32° 5' 41.309 N	103° 31' 11.140 W
7,400.0	1.03	240.37	7,397.3	-37.4	-147.2	399,164.91	751,946.54	32° 5' 41.307 N	103° 31' 11.145 W
7,425.0	1.12	243.09	7,422.3	-37.6	-147.6	399,164.68	751,946.12	32° 5' 41.305 N	103° 31' 11.149 W
7,450.0	1.06	243.39	7,447.3	-37.8	-148.0	399,164.47	751,945.70	32° 5' 41.303 N	103° 31' 11.154 W
7,475.0	1.01	236.91	7,472.3	-38.1	-148.4	399,164.25	751,945.31	32° 5' 41.301 N	103° 31' 11.159 W
7,500.0	1.10	242.33	7,497.3	-38.3	-148.8	399,164.02	751,944.91	32° 5' 41.298 N	103° 31' 11.164 W
7,525.0	1.10	239.74	7,522.3	-38.5	-149.2	399,163.78	751,944.49	32° 5' 41.296 N	103° 31' 11.168 W
7,550.0	1.09	237.68	7,547.3	-38.8	-149.6	399,163.53	751,944.08	32° 5' 41.294 N	103° 31' 11.173 W
7,575.0	1.11	237.04	7,572.3	-39.0	-150.0	399,163.28	751,943.68	32° 5' 41.291 N	103° 31' 11.178 W
7,600.0	1.08	234.67	7,597.3	-39.3	-150.4	399,163.01	751,943.28	32° 5' 41.289 N	103° 31' 11.183 W
7,625.0	1.11	235.44	7,622.3	-39.6	-150.8	399,162.73	751,942.89	32° 5' 41.286 N	103° 31' 11.187 W
7,650.0	1.09	237.28	7,647.3	-39.8	-151.2	399,162.47	751,942.49	32° 5' 41.283 N	103° 31' 11.192 W
7,675.0	1.08	235.57	7,672.3	-40.1	-151.6	399,162.21	751,942.10	32° 5' 41.281 N	103° 31' 11.196 W
7,700.0	1.10	241.56	7,697.3	-40.3	-152.0	399,161.96	751,941.69	32° 5' 41.278 N	103° 31' 11.201 W
7,725.0	1.19	248.02	7,722.3	-40.6	-152.5	399,161.75	751,941.24	32° 5' 41.276 N	103° 31' 11.206 W
7,750.0	1.35	260.83	7,747.2	-40.7	-153.0	399,161.60	751,940.71	32° 5' 41.275 N	103° 31' 11.213 W
7,775.0	1.34	262.80	7,772.2	-40.8	-153.6	399,161.52	751,940.13	32° 5' 41.274 N	103° 31' 11.219 W
7,800.0	1.26	260.39	7,797.2	-40.9	-154.1	399,161.44	751,939.57	32° 5' 41.273 N	103° 31' 11.226 W
7,825.0	1.29	261.72	7,822.2	-40.9	-154.7	399,161.35	751,939.02	32° 5' 41.272 N	103° 31' 11.232 W
7,850.0	1.35	263.35	7,847.2	-41.0	-155.3	399,161.28	751,938.45	32° 5' 41.272 N	103° 31' 11.239 W
7,875.0	1.35	262.54	7,872.2	-41.1	-155.8	399,161.20	751,937.86	32° 5' 41.271 N	103° 31' 11.246 W
7,900.0	1.34	261.81	7,897.2	-41.2	-156.4	399,161.12	751,937.28	32° 5' 41.270 N	103° 31' 11.252 W
7,925.0	1.38	262.68	7,922.2	-41.3	-157.0	399,161.04	751,936.69	32° 5' 41.270 N	103° 31' 11.259 W
7,950.0	1.36	263.09	7,947.2	-41.3	-157.6	399,160.97	751,936.10	32° 5' 41.269 N	103° 31' 11.266 W
7,975.0	1.36	263.08	7,972.2	-41.4	-158.2	399,160.90	751,935.51	32° 5' 41.268 N	103° 31' 11.273 W
8,000.0	1.46	265.27	7,997.2	-41.5	-158.8	399,160.84	751,934.90	32° 5' 41.268 N	103° 31' 11.280 W
8,025.0	1.45	265.87	8,022.2	-41.5	-159.4	399,160.79	751,934.27	32° 5' 41.267 N	103° 31' 11.288 W
8,050.0	1.45	267.00	8,047.2	-41.6	-160.1	399,160.75	751,933.63	32° 5' 41.267 N	103° 31' 11.295 W
8,075.0	1.30	262.06	8,072.2	-41.6	-160.7	399,160.69	751,933.04	32° 5' 41.266 N	103° 31' 11.302 W
8,100.0	1.36	262.07	8,097.1	-41.7	-161.2	399,160.61	751,932.46	32° 5' 41.266 N	103° 31' 11.309 W
8,125.0	1.32	262.17	8,122.1	-41.8	-161.8	399,160.53	751,931.88	32° 5' 41.265 N	103° 31' 11.315 W
8,150.0	1.34	262.62	8,147.1	-41.8	-162.4	399,160.46	751,931.31	32° 5' 41.264 N	103° 31' 11.322 W
8,175.0	1.27	262.21	8,172.1	-41.9	-163.0	399,160.38	751,930.74	32° 5' 41.263 N	103° 31' 11.329 W
8,200.0	1.24	261.72	8,197.1	-42.0	-163.5	399,160.30	751,930.20	32° 5' 41.263 N	103° 31' 11.335 W
8,225.0	1.32	264.37	8,222.1	-42.1	-164.0	399,160.24	751,929.65	32° 5' 41.262 N	103° 31' 11.341 W
8,250.0	1.35	264.52	8,247.1	-42.1	-164.6	399,160.18	751,929.07	32° 5' 41.262 N	103° 31' 11.348 W
8,275.0	1.34	263.39	8,272.1	-42.2	-165.2	399,160.12	751,928.48	32° 5' 41.261 N	103° 31' 11.355 W
8,300.0	1.43	267.07	8,297.1	-42.2	-165.8	399,160.07	751,927.88	32° 5' 41.261 N	103° 31' 11.362 W
8,325.0	1.39	263.87	8,322.1	-42.3	-166.4	399,160.02	751,927.27	32° 5' 41.260 N	103° 31' 11.369 W
8,350.0	1.10	272.21	8,347.1	-42.3	-167.0	399,160.00	751,926.73	32° 5' 41.260 N	103° 31' 11.375 W
8,375.0	1.20	258.36	8,372.1	-42.3	-167.5	399,159.95	751,926.23	32° 5' 41.260 N	103° 31' 11.381 W
8,400.0	1.26	259.85	8,397.1	-42.4	-168.0	399,159.85	751,925.70	32° 5' 41.259 N	103° 31' 11.387 W
8,425.0	1.19	261.47	8,422.1	-42.5	-168.5	399,159.77	751,925.18	32° 5' 41.258 N	103° 31' 11.393 W
8,450.0	1.21	257.71	8,447.1	-42.6	-169.0	399,159.67	751,924.66	32° 5' 41.257 N	103° 31' 11.399 W
8,475.0	1.08	259.52	8,472.1	-42.7	-169.5	399,159.57	751,924.17	32° 5' 41.256 N	103° 31' 11.405 W
8,500.0	1.14	258.58	8,497.0	-42.8	-170.0	399,159.48	751,923.70	32° 5' 41.255 N	103° 31' 11.410 W
8,525.0	1.20	255.86	8,522.0	-42.9	-170.5	399,159.37	751,923.20	32° 5' 41.254 N	103° 31' 11.416 W
8,550.0	1.17	257.61	8,547.0	-43.1	-171.0	399,159.25	751,922.70	32° 5' 41.253 N	103° 31' 11.422 W
8,575.0	1.17	257.19	8,572.0	-43.2	-171.5	399,159.14	751,922.20	32° 5' 41.252 N	103° 31' 11.428 W

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	1.20	252.52	8,597.0	-43.3	-172.0	399,159.00	751,921.70	32° 5' 41.251 N	103° 31' 11.434 W
8,625.0	1.15	249.70	8,622.0	-43.5	-172.5	399,158.84	751,921.22	32° 5' 41.249 N	103° 31' 11.439 W
8,650.0	1.19	248.94	8,647.0	-43.6	-173.0	399,158.66	751,920.74	32° 5' 41.247 N	103° 31' 11.445 W
8,675.0	1.12	248.42	8,672.0	-43.8	-173.4	399,158.47	751,920.27	32° 5' 41.245 N	103° 31' 11.450 W
8,700.0	1.14	244.93	8,697.0	-44.0	-173.9	399,158.28	751,919.82	32° 5' 41.243 N	103° 31' 11.456 W
8,725.0	1.11	245.73	8,722.0	-44.2	-174.3	399,158.07	751,919.37	32° 5' 41.241 N	103° 31' 11.461 W
8,750.0	1.02	247.74	8,747.0	-44.4	-174.8	399,157.89	751,918.94	32° 5' 41.240 N	103° 31' 11.466 W
8,775.0	1.10	244.38	8,772.0	-44.6	-175.2	399,157.70	751,918.52	32° 5' 41.238 N	103° 31' 11.471 W
8,800.0	1.12	247.25	8,797.0	-44.8	-175.6	399,157.50	751,918.08	32° 5' 41.236 N	103° 31' 11.476 W
8,825.0	0.96	255.08	8,822.0	-44.9	-176.0	399,157.35	751,917.65	32° 5' 41.235 N	103° 31' 11.481 W
8,850.0	0.93	259.83	8,847.0	-45.0	-176.4	399,157.26	751,917.25	32° 5' 41.234 N	103° 31' 11.486 W
8,875.0	1.02	261.61	8,872.0	-45.1	-176.9	399,157.20	751,916.83	32° 5' 41.233 N	103° 31' 11.491 W
8,900.0	1.05	262.60	8,897.0	-45.2	-177.3	399,157.13	751,916.38	32° 5' 41.232 N	103° 31' 11.496 W
8,925.0	1.13	262.49	8,922.0	-45.2	-177.8	399,157.07	751,915.91	32° 5' 41.232 N	103° 31' 11.501 W
8,950.0	1.19	262.67	8,947.0	-45.3	-178.3	399,157.01	751,915.41	32° 5' 41.231 N	103° 31' 11.507 W
8,975.0	1.23	260.10	8,972.0	-45.4	-178.8	399,156.93	751,914.89	32° 5' 41.231 N	103° 31' 11.513 W
9,000.0	1.20	256.19	8,997.0	-45.5	-179.3	399,156.82	751,914.37	32° 5' 41.229 N	103° 31' 11.519 W
9,025.0	1.21	255.13	9,021.9	-45.6	-179.8	399,156.69	751,913.86	32° 5' 41.228 N	103° 31' 11.525 W
9,050.0	1.11	253.94	9,046.9	-45.7	-180.3	399,156.55	751,913.37	32° 5' 41.227 N	103° 31' 11.531 W
9,075.0	1.10	256.56	9,071.9	-45.9	-180.8	399,156.43	751,912.91	32° 5' 41.226 N	103° 31' 11.536 W
9,100.0	1.07	263.67	9,096.9	-45.9	-181.3	399,156.35	751,912.44	32° 5' 41.225 N	103° 31' 11.542 W
9,125.0	1.27	264.85	9,121.9	-46.0	-181.8	399,156.30	751,911.93	32° 5' 41.225 N	103° 31' 11.548 W
9,150.0	1.34	259.47	9,146.9	-46.1	-182.3	399,156.22	751,911.37	32° 5' 41.224 N	103° 31' 11.554 W
9,175.0	1.23	261.86	9,171.9	-46.2	-182.9	399,156.13	751,910.82	32° 5' 41.223 N	103° 31' 11.561 W
9,200.0	1.25	269.20	9,196.9	-46.2	-183.4	399,156.09	751,910.28	32° 5' 41.223 N	103° 31' 11.567 W
9,225.0	1.32	273.84	9,221.9	-46.2	-184.0	399,156.10	751,909.72	32° 5' 41.223 N	103° 31' 11.573 W
9,250.0	1.42	267.87	9,246.9	-46.2	-184.6	399,156.11	751,909.12	32° 5' 41.223 N	103° 31' 11.580 W
9,275.0	1.33	265.26	9,271.9	-46.2	-185.2	399,156.08	751,908.52	32° 5' 41.223 N	103° 31' 11.587 W
9,300.0	1.20	267.66	9,296.9	-46.3	-185.7	399,156.04	751,907.97	32° 5' 41.222 N	103° 31' 11.594 W
9,325.0	1.25	275.55	9,321.9	-46.2	-186.3	399,156.06	751,907.44	32° 5' 41.222 N	103° 31' 11.600 W
9,350.0	1.43	275.31	9,346.9	-46.2	-186.8	399,156.11	751,906.86	32° 5' 41.223 N	103° 31' 11.607 W
9,375.0	1.47	278.30	9,371.9	-46.1	-187.5	399,156.19	751,906.23	32° 5' 41.224 N	103° 31' 11.614 W
9,400.0	1.50	278.41	9,396.9	-46.0	-188.1	399,156.28	751,905.59	32° 5' 41.225 N	103° 31' 11.621 W
9,425.0	1.53	276.39	9,421.8	-45.9	-188.8	399,156.37	751,904.93	32° 5' 41.226 N	103° 31' 11.629 W
9,450.0	1.52	275.36	9,446.8	-45.9	-189.4	399,156.43	751,904.27	32° 5' 41.226 N	103° 31' 11.637 W
9,475.0	1.49	274.72	9,471.8	-45.8	-190.1	399,156.49	751,903.62	32° 5' 41.227 N	103° 31' 11.644 W
9,500.0	1.49	274.51	9,496.8	-45.8	-190.7	399,156.54	751,902.97	32° 5' 41.228 N	103° 31' 11.652 W
9,525.0	2.07	268.38	9,521.8	-45.7	-191.5	399,156.56	751,902.19	32° 5' 41.228 N	103° 31' 11.661 W
9,550.0	2.82	267.55	9,546.8	-45.8	-192.6	399,156.52	751,901.13	32° 5' 41.227 N	103° 31' 11.673 W
9,575.0	3.13	268.48	9,571.8	-45.8	-193.9	399,156.47	751,899.83	32° 5' 41.227 N	103° 31' 11.688 W
9,600.0	3.25	267.53	9,596.7	-45.9	-195.3	399,156.42	751,898.44	32° 5' 41.227 N	103° 31' 11.704 W
9,625.0	3.23	267.55	9,621.7	-45.9	-196.7	399,156.36	751,897.03	32° 5' 41.226 N	103° 31' 11.721 W
9,650.0	3.27	267.59	9,646.6	-46.0	-198.1	399,156.30	751,895.61	32° 5' 41.226 N	103° 31' 11.737 W
9,675.0	3.26	268.60	9,671.6	-46.0	-199.5	399,156.26	751,894.19	32° 5' 41.225 N	103° 31' 11.754 W
9,700.0	3.28	268.58	9,696.6	-46.1	-200.9	399,156.22	751,892.76	32° 5' 41.225 N	103° 31' 11.770 W
9,725.0	3.33	268.63	9,721.5	-46.1	-202.4	399,156.19	751,891.32	32° 5' 41.225 N	103° 31' 11.787 W
9,750.0	3.32	268.78	9,746.5	-46.1	-203.8	399,156.15	751,889.87	32° 5' 41.225 N	103° 31' 11.804 W
9,775.0	3.33	269.32	9,771.4	-46.2	-205.3	399,156.13	751,888.42	32° 5' 41.225 N	103° 31' 11.821 W
9,800.0	3.31	269.49	9,796.4	-46.2	-206.7	399,156.11	751,886.98	32° 5' 41.225 N	103° 31' 11.838 W
9,825.0	3.32	268.86	9,821.3	-46.2	-208.2	399,156.09	751,885.53	32° 5' 41.224 N	103° 31' 11.854 W
9,850.0	3.36	269.11	9,846.3	-46.2	-209.6	399,156.07	751,884.07	32° 5' 41.224 N	103° 31' 11.871 W
9,875.0	3.36	269.24	9,871.3	-46.3	-211.1	399,156.05	751,882.61	32° 5' 41.224 N	103° 31' 11.888 W
9,900.0	3.41	268.71	9,896.2	-46.3	-212.6	399,156.02	751,881.13	32° 5' 41.224 N	103° 31' 11.906 W
9,925.0	3.44	268.90	9,921.2	-46.3	-214.1	399,155.99	751,879.64	32° 5' 41.224 N	103° 31' 11.923 W
9,950.0	3.39	268.06	9,946.1	-46.3	-215.5	399,155.95	751,878.15	32° 5' 41.224 N	103° 31' 11.940 W



Survey Report - Geographic



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	3.33	268.07	9,971.1	-46.4	-217.0	399,155.90	751,876.69	32° 5' 41.223 N	103° 31' 11.957 W	
10,000.0	3.25	267.15	9,996.0	-46.5	-218.4	399,155.84	751,875.25	32° 5' 41.223 N	103° 31' 11.974 W	
10,025.0	3.20	269.57	10,021.0	-46.5	-219.8	399,155.80	751,873.85	32° 5' 41.222 N	103° 31' 11.990 W	
10,050.0	3.24	272.36	10,046.0	-46.5	-221.3	399,155.82	751,872.44	32° 5' 41.223 N	103° 31' 12.007 W	
10,075.0	3.30	271.91	10,070.9	-46.4	-222.7	399,155.88	751,871.02	32° 5' 41.223 N	103° 31' 12.023 W	
10,100.0	3.29	270.88	10,095.9	-46.4	-224.1	399,155.91	751,869.58	32° 5' 41.224 N	103° 31' 12.040 W	
10,125.0	3.28	271.20	10,120.8	-46.4	-225.5	399,155.94	751,868.15	32° 5' 41.224 N	103° 31' 12.056 W	
10,150.0	3.23	272.05	10,145.8	-46.3	-227.0	399,155.98	751,866.73	32° 5' 41.225 N	103° 31' 12.073 W	
10,175.0	3.17	271.70	10,170.8	-46.3	-228.4	399,156.02	751,865.34	32° 5' 41.225 N	103° 31' 12.089 W	
10,200.0	3.06	270.58	10,195.7	-46.2	-229.7	399,156.05	751,863.98	32° 5' 41.226 N	103° 31' 12.105 W	
10,225.0	2.99	271.28	10,220.7	-46.2	-231.0	399,156.07	751,862.66	32° 5' 41.226 N	103° 31' 12.120 W	
10,250.0	2.84	270.71	10,245.7	-46.2	-232.3	399,156.09	751,861.39	32° 5' 41.226 N	103° 31' 12.135 W	
10,275.0	2.78	274.56	10,270.6	-46.1	-233.5	399,156.15	751,860.16	32° 5' 41.227 N	103° 31' 12.149 W	
10,300.0	2.92	274.62	10,295.6	-46.0	-234.8	399,156.25	751,858.93	32° 5' 41.228 N	103° 31' 12.164 W	
10,325.0	2.98	271.41	10,320.6	-46.0	-236.1	399,156.32	751,857.64	32° 5' 41.229 N	103° 31' 12.179 W	
10,350.0	2.77	266.67	10,345.5	-46.0	-237.3	399,156.30	751,856.39	32° 5' 41.229 N	103° 31' 12.193 W	
10,375.0	2.67	260.39	10,370.5	-46.1	-238.5	399,156.17	751,855.21	32° 5' 41.227 N	103° 31' 12.207 W	
10,400.0	2.44	257.40	10,395.5	-46.3	-239.6	399,155.95	751,854.12	32° 5' 41.225 N	103° 31' 12.220 W	
10,425.0	2.67	260.05	10,420.4	-46.6	-240.7	399,155.74	751,853.02	32° 5' 41.223 N	103° 31' 12.232 W	
10,450.0	2.58	257.10	10,445.4	-46.8	-241.8	399,155.51	751,851.90	32° 5' 41.221 N	103° 31' 12.245 W	
10,475.0	2.55	258.93	10,470.4	-47.0	-242.9	399,155.28	751,850.81	32° 5' 41.219 N	103° 31' 12.258 W	
10,500.0	2.71	260.48	10,495.4	-47.2	-244.0	399,155.07	751,849.68	32° 5' 41.217 N	103° 31' 12.271 W	
10,525.0	2.55	258.54	10,520.3	-47.4	-245.1	399,154.86	751,848.55	32° 5' 41.215 N	103° 31' 12.284 W	
10,550.0	2.65	256.18	10,545.3	-47.7	-246.3	399,154.62	751,847.45	32° 5' 41.213 N	103° 31' 12.297 W	
10,575.0	2.62	256.68	10,570.3	-48.0	-247.4	399,154.35	751,846.33	32° 5' 41.210 N	103° 31' 12.310 W	
10,600.0	2.44	253.81	10,595.3	-48.2	-248.4	399,154.07	751,845.26	32° 5' 41.207 N	103° 31' 12.323 W	
10,625.0	2.62	253.11	10,620.2	-48.5	-249.5	399,153.75	751,844.20	32° 5' 41.204 N	103° 31' 12.335 W	
10,650.0	2.45	254.03	10,645.2	-48.9	-250.6	399,153.44	751,843.14	32° 5' 41.201 N	103° 31' 12.347 W	
10,675.0	2.58	254.73	10,670.2	-49.2	-251.6	399,153.14	751,842.09	32° 5' 41.198 N	103° 31' 12.360 W	
10,700.0	2.50	250.54	10,695.2	-49.5	-252.7	399,152.81	751,841.03	32° 5' 41.195 N	103° 31' 12.372 W	
10,725.0	2.50	249.65	10,720.1	-49.9	-253.7	399,152.44	751,840.00	32° 5' 41.192 N	103° 31' 12.384 W	
10,750.0	2.45	250.14	10,745.1	-50.2	-254.7	399,152.07	751,838.99	32° 5' 41.188 N	103° 31' 12.396 W	
10,775.0	2.43	249.01	10,770.1	-50.6	-255.7	399,151.70	751,837.99	32° 5' 41.185 N	103° 31' 12.407 W	
10,800.0	2.37	249.39	10,795.1	-51.0	-256.7	399,151.33	751,837.01	32° 5' 41.181 N	103° 31' 12.419 W	
10,825.0	2.42	249.75	10,820.1	-51.3	-257.7	399,150.96	751,836.04	32° 5' 41.177 N	103° 31' 12.430 W	
10,850.0	2.48	248.25	10,845.0	-51.7	-258.7	399,150.58	751,835.04	32° 5' 41.174 N	103° 31' 12.442 W	
10,875.0	2.57	248.47	10,870.0	-52.1	-259.7	399,150.17	751,834.01	32° 5' 41.170 N	103° 31' 12.454 W	
10,900.0	2.58	246.58	10,895.0	-52.6	-260.7	399,149.75	751,832.98	32° 5' 41.166 N	103° 31' 12.466 W	
10,925.0	2.52	247.18	10,920.0	-53.0	-261.7	399,149.31	751,831.95	32° 5' 41.161 N	103° 31' 12.478 W	
10,950.0	2.65	246.58	10,944.9	-53.4	-262.8	399,148.87	751,830.92	32° 5' 41.157 N	103° 31' 12.490 W	
10,975.0	2.50	246.93	10,969.9	-53.9	-263.8	399,148.42	751,829.88	32° 5' 41.153 N	103° 31' 12.502 W	
11,000.0	2.64	246.52	10,994.9	-54.3	-264.8	399,147.98	751,828.86	32° 5' 41.148 N	103° 31' 12.514 W	
11,025.0	2.59	248.99	11,019.9	-54.8	-265.9	399,147.55	751,827.80	32° 5' 41.144 N	103° 31' 12.526 W	
11,050.0	3.13	256.73	11,044.8	-55.1	-267.1	399,147.19	751,826.61	32° 5' 41.141 N	103° 31' 12.540 W	
11,075.0	3.11	260.54	11,069.8	-55.4	-268.4	399,146.92	751,825.27	32° 5' 41.138 N	103° 31' 12.556 W	
11,100.0	3.23	259.50	11,094.8	-55.6	-269.8	399,146.68	751,823.91	32° 5' 41.136 N	103° 31' 12.571 W	
11,125.0	3.33	258.61	11,119.7	-55.9	-271.2	399,146.41	751,822.51	32° 5' 41.133 N	103° 31' 12.588 W	
11,150.0	3.00	261.15	11,144.7	-56.1	-272.5	399,146.16	751,821.15	32° 5' 41.131 N	103° 31' 12.604 W	
11,175.0	2.87	261.58	11,169.6	-56.3	-273.8	399,145.97	751,819.89	32° 5' 41.129 N	103° 31' 12.618 W	
11,200.0	2.87	259.13	11,194.6	-56.5	-275.0	399,145.76	751,818.65	32° 5' 41.127 N	103° 31' 12.633 W	
11,225.0	2.83	261.97	11,219.6	-56.7	-276.3	399,145.56	751,817.43	32° 5' 41.125 N	103° 31' 12.647 W	
11,250.0	2.96	258.01	11,244.5	-57.0	-277.5	399,145.34	751,816.18	32° 5' 41.123 N	103° 31' 12.661 W	
11,275.0	2.76	258.58	11,269.5	-57.2	-278.7	399,145.08	751,814.96	32° 5' 41.121 N	103° 31' 12.676 W	
11,300.0	2.40	260.22	11,294.5	-57.4	-279.8	399,144.88	751,813.86	32° 5' 41.119 N	103° 31' 12.689 W	
11,325.0	1.95	256.32	11,319.5	-57.6	-280.8	399,144.69	751,812.93	32° 5' 41.117 N	103° 31' 12.699 W	

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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	1.93	253.98	11,344.5	-57.8	-281.6	399,144.47	751,812.11	32° 5' 41.115 N	103° 31' 12.709 W	
11,375.0	1.92	252.17	11,369.4	-58.1	-282.4	399,144.23	751,811.31	32° 5' 41.113 N	103° 31' 12.718 W	
11,400.0	2.07	254.03	11,394.4	-58.3	-283.2	399,143.97	751,810.47	32° 5' 41.110 N	103° 31' 12.728 W	
11,425.0	2.11	255.20	11,419.4	-58.6	-284.1	399,143.73	751,809.59	32° 5' 41.108 N	103° 31' 12.738 W	
11,450.0	2.16	254.94	11,444.4	-58.8	-285.0	399,143.49	751,808.69	32° 5' 41.105 N	103° 31' 12.749 W	
11,475.0	2.28	258.27	11,469.4	-59.0	-285.9	399,143.27	751,807.75	32° 5' 41.103 N	103° 31' 12.760 W	
11,500.0	2.59	261.29	11,494.4	-59.2	-287.0	399,143.08	751,806.71	32° 5' 41.102 N	103° 31' 12.772 W	
11,525.0	2.66	261.48	11,519.3	-59.4	-288.1	399,142.91	751,805.57	32° 5' 41.100 N	103° 31' 12.785 W	
11,550.0	2.80	262.62	11,544.3	-59.6	-289.3	399,142.75	751,804.40	32° 5' 41.098 N	103° 31' 12.799 W	
11,575.0	2.89	262.37	11,569.3	-59.7	-290.5	399,142.58	751,803.17	32° 5' 41.097 N	103° 31' 12.813 W	
11,600.0	2.88	261.92	11,594.2	-59.9	-291.8	399,142.41	751,801.92	32° 5' 41.095 N	103° 31' 12.828 W	
11,625.0	2.63	260.51	11,619.2	-60.1	-293.0	399,142.23	751,800.73	32° 5' 41.094 N	103° 31' 12.841 W	
11,650.0	2.55	265.62	11,644.2	-60.2	-294.1	399,142.09	751,799.61	32° 5' 41.092 N	103° 31' 12.854 W	
11,675.0	2.66	259.87	11,669.2	-60.4	-295.2	399,141.95	751,798.49	32° 5' 41.091 N	103° 31' 12.867 W	
11,700.0	2.53	260.15	11,694.1	-60.5	-296.3	399,141.75	751,797.37	32° 5' 41.089 N	103° 31' 12.880 W	
11,725.0	2.65	259.43	11,719.1	-60.7	-297.4	399,141.55	751,796.26	32° 5' 41.087 N	103° 31' 12.893 W	
11,750.0	2.67	259.36	11,744.1	-61.0	-298.6	399,141.34	751,795.12	32° 5' 41.085 N	103° 31' 12.907 W	
11,769.0	2.68	264.02	11,763.1	-61.1	-299.5	399,141.21	751,794.24	32° 5' 41.084 N	103° 31' 12.917 W	
Gyro Tie-In @ 11769.0' MD / 11763.1' TVD										
11,917.0	2.20	270.00	11,910.9	-61.5	-305.7	399,140.85	751,787.96	32° 5' 41.081 N	103° 31' 12.990 W	
12,012.0	3.00	305.00	12,005.8	-60.0	-309.6	399,142.27	751,784.10	32° 5' 41.095 N	103° 31' 13.035 W	
12,106.0	4.30	326.30	12,099.6	-55.7	-313.6	399,146.62	751,780.13	32° 5' 41.139 N	103° 31' 13.080 W	
12,201.0	5.80	332.30	12,194.3	-48.5	-317.8	399,153.83	751,775.92	32° 5' 41.210 N	103° 31' 13.129 W	
12,230.0	6.33	334.03	12,223.1	-45.7	-319.2	399,156.57	751,774.54	32° 5' 41.237 N	103° 31' 13.145 W	
12,261.0	7.79	340.89	12,253.9	-42.2	-320.6	399,160.09	751,773.10	32° 5' 41.272 N	103° 31' 13.161 W	
12,293.0	8.10	342.49	12,285.6	-38.0	-322.0	399,164.29	751,771.72	32° 5' 41.314 N	103° 31' 13.177 W	
12,324.0	9.17	350.36	12,316.2	-33.5	-323.1	399,168.80	751,770.64	32° 5' 41.359 N	103° 31' 13.189 W	
12,356.0	12.69	358.79	12,347.6	-27.5	-323.6	399,174.83	751,770.14	32° 5' 41.419 N	103° 31' 13.194 W	
12,387.0	16.44	359.98	12,377.6	-19.7	-323.6	399,182.63	751,770.07	32° 5' 41.496 N	103° 31' 13.194 W	
12,419.0	19.41	1.42	12,408.1	-9.8	-323.5	399,192.47	751,770.20	32° 5' 41.593 N	103° 31' 13.192 W	
12,450.0	23.90	4.46	12,436.9	1.6	-322.9	399,203.89	751,770.82	32° 5' 41.706 N	103° 31' 13.184 W	
12,482.0	27.59	5.18	12,465.7	15.4	-321.7	399,217.74	751,771.99	32° 5' 41.843 N	103° 31' 13.169 W	
12,513.0	29.11	3.64	12,493.0	30.1	-320.6	399,232.41	751,773.12	32° 5' 41.988 N	103° 31' 13.154 W	
12,545.0	31.37	0.64	12,520.6	46.2	-320.0	399,248.51	751,773.70	32° 5' 42.147 N	103° 31' 13.146 W	
12,576.0	34.93	358.54	12,546.6	63.2	-320.1	399,265.46	751,773.57	32° 5' 42.315 N	103° 31' 13.146 W	
12,608.0	37.28	357.99	12,572.4	82.0	-320.7	399,284.31	751,772.99	32° 5' 42.502 N	103° 31' 13.151 W	
12,640.0	39.55	358.19	12,597.5	101.9	-321.4	399,304.18	751,772.33	32° 5' 42.698 N	103° 31' 13.157 W	
12,671.0	41.20	359.48	12,621.1	122.0	-321.8	399,324.25	751,771.93	32° 5' 42.897 N	103° 31' 13.160 W	
12,703.0	43.88	1.53	12,644.7	143.6	-321.6	399,345.88	751,772.13	32° 5' 43.111 N	103° 31' 13.156 W	
12,735.0	48.16	3.08	12,666.9	166.6	-320.6	399,368.88	751,773.07	32° 5' 43.339 N	103° 31' 13.143 W	
12,766.0	52.76	4.31	12,686.6	190.4	-319.1	399,392.73	751,774.62	32° 5' 43.574 N	103° 31' 13.123 W	
12,797.0	53.81	4.62	12,705.2	215.2	-317.1	399,417.51	751,776.55	32° 5' 43.819 N	103° 31' 13.098 W	
12,828.0	55.15	4.48	12,723.2	240.4	-315.1	399,442.66	751,778.55	32° 5' 44.068 N	103° 31' 13.073 W	
12,860.0	58.23	2.85	12,740.8	267.0	-313.4	399,469.34	751,780.25	32° 5' 44.332 N	103° 31' 13.051 W	
12,891.0	62.86	1.40	12,756.0	294.0	-312.5	399,496.31	751,781.25	32° 5' 44.599 N	103° 31' 13.037 W	
12,923.0	65.49	0.31	12,769.9	322.8	-312.0	399,525.11	751,781.67	32° 5' 44.884 N	103° 31' 13.029 W	
12,954.0	66.50	359.77	12,782.5	351.1	-312.0	399,553.42	751,781.69	32° 5' 45.164 N	103° 31' 13.027 W	
12,985.0	68.63	359.35	12,794.4	379.8	-312.2	399,582.08	751,781.47	32° 5' 45.448 N	103° 31' 13.027 W	
13,017.0	70.97	359.37	12,805.4	409.8	-312.6	399,612.10	751,781.14	32° 5' 45.745 N	103° 31' 13.028 W	
13,049.0	74.49	359.73	12,814.9	440.4	-312.8	399,642.66	751,780.90	32° 5' 46.047 N	103° 31' 13.028 W	
13,080.0	75.82	359.79	12,822.9	470.3	-312.9	399,672.62	751,780.77	32° 5' 46.344 N	103° 31' 13.027 W	
13,112.0	77.20	0.02	12,830.3	501.4	-313.0	399,703.74	751,780.72	32° 5' 46.652 N	103° 31' 13.025 W	
13,143.0	82.68	0.50	12,835.7	531.9	-312.8	399,734.25	751,780.86	32° 5' 46.953 N	103° 31' 13.020 W	
13,185.0	89.55	1.15	12,838.6	573.8	-312.2	399,776.12	751,781.46	32° 5' 47.368 N	103° 31' 13.010 W	
13,216.0	91.29	1.32	12,838.4	604.8	-311.6	399,807.11	751,782.13	32° 5' 47.674 N	103° 31' 12.999 W	

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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
13,248.0	91.29	0.97	12,837.6	636.8	-310.9	399,839.10	751,782.77	32° 5' 47.991 N	103° 31' 12.989 W
13,280.0	90.73	0.79	12,837.1	668.8	-310.4	399,871.09	751,783.26	32° 5' 48.307 N	103° 31' 12.981 W
13,311.0	90.62	0.68	12,836.7	699.8	-310.0	399,902.08	751,783.66	32° 5' 48.614 N	103° 31' 12.973 W
13,343.0	91.18	1.63	12,836.2	731.8	-309.4	399,934.07	751,784.31	32° 5' 48.931 N	103° 31' 12.963 W
13,375.0	90.73	0.68	12,835.7	763.8	-308.7	399,966.06	751,784.95	32° 5' 49.247 N	103° 31' 12.953 W
13,407.0	89.55	0.48	12,835.6	795.8	-308.4	399,998.06	751,785.27	32° 5' 49.564 N	103° 31' 12.946 W
13,436.0	90.28	1.18	12,835.6	824.8	-308.0	400,027.06	751,785.69	32° 5' 49.851 N	103° 31' 12.939 W
13,449.6	90.76	1.59	12,835.5	838.4	-307.7	400,040.65	751,786.02	32° 5' 49.985 N	103° 31' 12.934 W
Crossed 330' HL @ 13449.6' MD / 12835.5' TVD									
13,468.0	91.40	2.14	12,835.2	856.7	-307.1	400,059.04	751,786.62	32° 5' 50.167 N	103° 31' 12.925 W
13,499.0	93.98	2.63	12,833.7	887.7	-305.8	400,089.97	751,787.91	32° 5' 50.473 N	103° 31' 12.907 W
13,531.0	94.49	3.17	12,831.4	919.5	-304.2	400,121.85	751,789.52	32° 5' 50.788 N	103° 31' 12.886 W
13,562.0	94.32	2.61	12,829.0	950.4	-302.6	400,152.71	751,791.08	32° 5' 51.094 N	103° 31' 12.865 W
13,594.0	93.75	1.95	12,826.7	982.3	-301.3	400,184.61	751,792.35	32° 5' 51.409 N	103° 31' 12.847 W
13,625.0	93.29	1.20	12,824.8	1,013.2	-300.5	400,215.54	751,793.20	32° 5' 51.715 N	103° 31' 12.835 W
13,657.0	93.76	1.22	12,822.8	1,045.2	-299.8	400,247.47	751,793.88	32° 5' 52.031 N	103° 31' 12.824 W
13,719.0	93.08	1.53	12,819.1	1,107.0	-298.3	400,309.34	751,795.36	32° 5' 52.643 N	103° 31' 12.801 W
13,750.0	92.69	1.45	12,817.6	1,138.0	-297.5	400,340.29	751,796.17	32° 5' 52.949 N	103° 31' 12.789 W
13,781.0	91.68	0.55	12,816.4	1,169.0	-297.0	400,371.26	751,796.71	32° 5' 53.256 N	103° 31' 12.780 W
13,813.0	91.96	0.62	12,815.4	1,200.9	-296.7	400,403.25	751,797.03	32° 5' 53.572 N	103° 31' 12.774 W
13,844.0	92.13	0.57	12,814.3	1,231.9	-296.3	400,434.23	751,797.36	32° 5' 53.879 N	103° 31' 12.767 W
13,876.0	92.30	0.82	12,813.0	1,263.9	-296.0	400,466.20	751,797.74	32° 5' 54.195 N	103° 31' 12.760 W
13,907.0	91.23	1.24	12,812.1	1,294.9	-295.4	400,497.18	751,798.30	32° 5' 54.502 N	103° 31' 12.751 W
13,938.0	90.28	2.00	12,811.7	1,325.9	-294.5	400,528.16	751,799.18	32° 5' 54.808 N	103° 31' 12.738 W
13,970.0	90.50	1.86	12,811.5	1,357.8	-293.4	400,560.14	751,800.25	32° 5' 55.125 N	103° 31' 12.723 W
14,033.0	90.84	1.23	12,810.7	1,420.8	-291.7	400,623.12	751,801.95	32° 5' 55.748 N	103° 31' 12.697 W
14,096.0	90.06	359.63	12,810.2	1,483.8	-291.3	400,686.11	751,802.43	32° 5' 56.371 N	103° 31' 12.686 W
14,128.0	90.28	359.56	12,810.1	1,515.8	-291.5	400,718.11	751,802.20	32° 5' 56.688 N	103° 31' 12.686 W
14,159.0	90.67	0.50	12,809.9	1,546.8	-291.5	400,749.11	751,802.22	32° 5' 56.994 N	103° 31' 12.683 W
14,222.0	91.51	0.23	12,808.7	1,609.8	-291.1	400,812.10	751,802.62	32° 5' 57.618 N	103° 31' 12.673 W
14,285.0	90.45	358.96	12,807.6	1,672.8	-291.5	400,875.08	751,802.17	32° 5' 58.241 N	103° 31' 12.673 W
14,316.0	90.39	358.24	12,807.4	1,703.8	-292.3	400,906.07	751,801.41	32° 5' 58.548 N	103° 31' 12.679 W
14,348.0	90.11	358.27	12,807.2	1,735.8	-293.3	400,938.06	751,800.44	32° 5' 58.864 N	103° 31' 12.687 W
14,379.0	89.72	358.49	12,807.3	1,766.7	-294.1	400,969.04	751,799.56	32° 5' 59.171 N	103° 31' 12.695 W
14,411.0	88.15	357.88	12,807.9	1,798.7	-295.1	401,001.02	751,798.55	32° 5' 59.488 N	103° 31' 12.704 W
14,442.0	88.94	357.67	12,808.7	1,829.7	-296.3	401,031.99	751,797.35	32° 5' 59.794 N	103° 31' 12.715 W
14,473.0	89.44	356.82	12,809.1	1,860.6	-297.8	401,062.95	751,795.86	32° 6' 0.101 N	103° 31' 12.730 W
14,504.0	92.07	357.80	12,808.7	1,891.6	-299.3	401,093.91	751,794.40	32° 6' 0.407 N	103° 31' 12.744 W
14,536.0	94.48	358.86	12,806.9	1,923.5	-300.2	401,125.84	751,793.47	32° 6' 0.723 N	103° 31' 12.752 W
14,567.0	95.11	358.84	12,804.3	1,954.4	-300.8	401,156.72	751,792.85	32° 6' 1.029 N	103° 31' 12.756 W
14,599.0	94.60	359.73	12,801.6	1,986.3	-301.2	401,188.61	751,792.45	32° 6' 1.344 N	103° 31' 12.758 W
14,630.0	92.18	359.90	12,799.7	2,017.3	-301.3	401,219.55	751,792.35	32° 6' 1.651 N	103° 31' 12.757 W
14,661.0	92.13	359.32	12,798.6	2,048.2	-301.6	401,250.53	751,792.14	32° 6' 1.957 N	103° 31' 12.756 W
14,693.0	90.50	359.06	12,797.8	2,080.2	-302.0	401,282.51	751,791.69	32° 6' 2.274 N	103° 31' 12.759 W
14,724.0	89.94	359.03	12,797.7	2,111.2	-302.5	401,313.51	751,791.17	32° 6' 2.580 N	103° 31' 12.762 W
14,756.0	88.10	358.83	12,798.3	2,143.2	-303.1	401,345.50	751,790.58	32° 6' 2.897 N	103° 31' 12.766 W
14,787.0	87.65	358.53	12,799.4	2,174.2	-303.8	401,376.47	751,789.86	32° 6' 3.203 N	103° 31' 12.772 W
14,819.0	88.26	358.45	12,800.6	2,206.1	-304.7	401,408.44	751,789.02	32° 6' 3.520 N	103° 31' 12.779 W
14,850.0	88.71	358.86	12,801.4	2,237.1	-305.4	401,439.42	751,788.29	32° 6' 3.827 N	103° 31' 12.785 W
14,882.0	89.38	358.83	12,801.9	2,269.1	-306.0	401,471.41	751,787.65	32° 6' 4.143 N	103° 31' 12.789 W
14,914.0	90.22	359.17	12,802.0	2,301.1	-306.6	401,503.40	751,787.09	32° 6' 4.460 N	103° 31' 12.793 W
14,945.0	90.56	359.24	12,801.8	2,332.1	-307.0	401,534.40	751,786.66	32° 6' 4.767 N	103° 31' 12.795 W
14,976.0	90.62	358.93	12,801.5	2,363.1	-307.5	401,565.39	751,786.16	32° 6' 5.073 N	103° 31' 12.798 W
15,008.0	90.84	358.68	12,801.1	2,395.1	-308.2	401,597.38	751,785.50	32° 6' 5.390 N	103° 31' 12.803 W
15,071.0	90.28	357.85	12,800.5	2,458.1	-310.1	401,660.35	751,783.59	32° 6' 6.013 N	103° 31' 12.820 W

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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
15,102.0	89.89	357.43	12,800.4	2,489.0	-311.4	401,691.32	751,782.31	32° 6' 6.320 N	103° 31' 12.832 W
15,166.0	89.55	358.77	12,800.7	2,553.0	-313.5	401,755.29	751,780.19	32° 6' 6.953 N	103° 31' 12.851 W
15,197.0	88.88	358.61	12,801.2	2,584.0	-314.2	401,786.27	751,779.48	32° 6' 7.260 N	103° 31' 12.857 W
15,260.0	88.99	357.95	12,802.3	2,646.9	-316.1	401,849.23	751,777.59	32° 6' 7.883 N	103° 31' 12.873 W
15,323.0	89.55	0.06	12,803.1	2,709.9	-317.2	401,912.22	751,776.50	32° 6' 8.506 N	103° 31' 12.880 W
15,355.0	89.66	0.56	12,803.4	2,741.9	-317.0	401,944.22	751,776.67	32° 6' 8.823 N	103° 31' 12.875 W
15,386.0	90.00	0.54	12,803.4	2,772.9	-316.7	401,975.21	751,776.97	32° 6' 9.129 N	103° 31' 12.869 W
15,449.0	91.63	0.89	12,802.5	2,835.9	-315.9	402,038.20	751,777.75	32° 6' 9.753 N	103° 31' 12.855 W
15,481.0	92.47	1.09	12,801.4	2,867.9	-315.4	402,070.17	751,778.31	32° 6' 10.069 N	103° 31' 12.845 W
15,543.0	89.38	0.45	12,800.4	2,929.9	-314.6	402,132.15	751,779.14	32° 6' 10.682 N	103° 31' 12.830 W
15,606.0	90.95	1.14	12,800.2	2,992.8	-313.7	402,195.14	751,780.01	32° 6' 11.305 N	103° 31' 12.815 W
15,638.0	91.12	1.30	12,799.6	3,024.8	-313.0	402,227.13	751,780.70	32° 6' 11.622 N	103° 31' 12.804 W
15,669.0	88.99	0.59	12,799.6	3,055.8	-312.5	402,258.13	751,781.21	32° 6' 11.929 N	103° 31' 12.795 W
15,732.0	89.05	0.61	12,800.7	3,118.8	-311.8	402,321.11	751,781.87	32° 6' 12.552 N	103° 31' 12.782 W
15,795.0	86.19	358.91	12,803.3	3,181.8	-312.1	402,384.05	751,781.60	32° 6' 13.175 N	103° 31' 12.779 W
15,827.0	86.19	358.83	12,805.4	3,213.7	-312.7	402,415.97	751,780.97	32° 6' 13.491 N	103° 31' 12.784 W
15,859.0	87.65	359.75	12,807.2	3,245.6	-313.1	402,447.92	751,780.58	32° 6' 13.807 N	103° 31' 12.786 W
15,922.0	88.43	359.04	12,809.3	3,308.6	-313.8	402,510.88	751,779.91	32° 6' 14.430 N	103° 31' 12.788 W
15,985.0	89.44	357.53	12,810.5	3,371.5	-315.7	402,573.84	751,778.03	32° 6' 15.053 N	103° 31' 12.804 W
16,017.0	88.71	357.20	12,811.0	3,403.5	-317.1	402,605.80	751,776.56	32° 6' 15.369 N	103° 31' 12.819 W
16,048.0	90.00	357.22	12,811.3	3,434.5	-318.6	402,636.76	751,775.05	32° 6' 15.676 N	103° 31' 12.834 W
16,111.0	92.30	358.25	12,810.1	3,497.4	-321.1	402,699.69	751,772.56	32° 6' 16.299 N	103° 31' 12.857 W
16,174.0	91.29	357.03	12,808.1	3,560.3	-323.7	402,762.61	751,769.97	32° 6' 16.922 N	103° 31' 12.882 W
16,205.0	91.06	356.67	12,807.5	3,591.3	-325.4	402,793.55	751,768.26	32° 6' 17.228 N	103° 31' 12.899 W
16,234.0	92.58	357.68	12,806.6	3,620.2	-326.9	402,822.50	751,766.83	32° 6' 17.515 N	103° 31' 12.913 W
16,265.0	93.47	359.25	12,804.9	3,651.1	-327.7	402,853.45	751,766.00	32° 6' 17.821 N	103° 31' 12.920 W
16,297.0	94.82	0.57	12,802.6	3,683.1	-327.7	402,885.36	751,765.95	32° 6' 18.137 N	103° 31' 12.917 W
16,360.0	92.45	1.58	12,798.6	3,745.9	-326.6	402,948.22	751,767.13	32° 6' 18.759 N	103° 31' 12.898 W
16,391.0	91.06	1.90	12,797.7	3,776.9	-325.6	402,979.19	751,768.08	32° 6' 19.065 N	103° 31' 12.885 W
16,454.0	89.66	1.74	12,797.3	3,839.9	-323.6	403,042.16	751,770.08	32° 6' 19.688 N	103° 31' 12.856 W
16,486.0	90.00	1.50	12,797.4	3,871.8	-322.7	403,074.14	751,770.98	32° 6' 20.004 N	103° 31' 12.842 W
16,548.0	90.78	2.34	12,796.9	3,933.8	-320.6	403,136.11	751,773.06	32° 6' 20.617 N	103° 31' 12.813 W
16,580.0	91.01	2.18	12,796.4	3,965.8	-319.4	403,168.08	751,774.32	32° 6' 20.934 N	103° 31' 12.795 W
16,611.0	89.61	1.37	12,796.3	3,996.8	-318.4	403,199.06	751,775.28	32° 6' 21.240 N	103° 31' 12.782 W
16,675.0	89.89	0.82	12,796.5	4,060.7	-317.2	403,263.05	751,776.50	32° 6' 21.873 N	103° 31' 12.762 W
16,738.0	90.62	1.19	12,796.3	4,123.7	-316.1	403,326.04	751,777.61	32° 6' 22.497 N	103° 31' 12.743 W
16,769.0	91.18	1.12	12,795.8	4,154.7	-315.5	403,357.03	751,778.23	32° 6' 22.803 N	103° 31' 12.733 W
16,801.0	89.89	359.68	12,795.5	4,186.7	-315.2	403,389.02	751,778.46	32° 6' 23.120 N	103° 31' 12.728 W
16,863.0	87.93	359.25	12,796.7	4,248.7	-315.8	403,451.01	751,777.88	32° 6' 23.733 N	103° 31' 12.729 W
16,895.0	88.26	359.01	12,797.7	4,280.7	-316.3	403,482.98	751,777.39	32° 6' 24.050 N	103° 31' 12.732 W
16,927.0	88.38	359.06	12,798.7	4,312.7	-316.8	403,514.97	751,776.85	32° 6' 24.366 N	103° 31' 12.736 W
16,959.0	88.77	359.35	12,799.5	4,344.7	-317.3	403,546.95	751,776.41	32° 6' 24.683 N	103° 31' 12.738 W
17,021.0	90.00	359.34	12,800.1	4,406.6	-318.0	403,608.94	751,775.70	32° 6' 25.296 N	103° 31' 12.741 W
17,052.0	90.06	359.45	12,800.1	4,437.6	-318.3	403,639.94	751,775.37	32° 6' 25.603 N	103° 31' 12.742 W
17,084.0	88.49	0.14	12,800.5	4,469.6	-318.4	403,671.94	751,775.26	32° 6' 25.920 N	103° 31' 12.740 W
17,115.0	88.15	0.71	12,801.4	4,500.6	-318.2	403,702.92	751,775.49	32° 6' 26.226 N	103° 31' 12.735 W
17,147.0	88.66	0.63	12,802.3	4,532.6	-317.8	403,734.91	751,775.86	32° 6' 26.543 N	103° 31' 12.728 W
17,178.0	88.38	0.28	12,803.1	4,563.6	-317.6	403,765.90	751,776.11	32° 6' 26.849 N	103° 31' 12.722 W
17,241.0	89.22	359.99	12,804.4	4,626.6	-317.4	403,828.88	751,776.26	32° 6' 27.473 N	103° 31' 12.715 W
17,273.0	89.83	359.87	12,804.7	4,658.6	-317.5	403,860.88	751,776.22	32° 6' 27.789 N	103° 31' 12.713 W
17,277.1	89.86	359.89	12,804.7	4,662.7	-317.5	403,864.98	751,776.21	32° 6' 27.830 N	103° 31' 12.712 W
LTP @ 17277.1' MD / 12804.7' TVD									
17,336.0	90.22	0.23	12,804.7	4,721.6	-317.4	403,923.88	751,776.27	32° 6' 28.413 N	103° 31' 12.706 W
17,344.0	90.17	0.07	12,804.6	4,729.6	-317.4	403,931.88	751,776.29	32° 6' 28.492 N	103° 31' 12.705 W

Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Dominator 25 Federal #702H
Project:	Lea County, NM	TVD Reference:	RKB @ 3353.0usft (Noram #21)
Site:	Sec 25, T25S, R33E	MD Reference:	RKB @ 3353.0usft (Noram #21)
Well:	Dominator 25 Federal #702H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	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
17,392.0	90.17	0.07	12,804.5	4,777.6	-317.3	403,979.88	751,776.35	32° 6' 28.967 N	103° 31' 12.701 W
TD @ 17392.0' MD / 12804.5' TVD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,769.0	11,763.1	-61.1	-299.5	Gyro Tie-In @ 11769.0' MD / 11763.1' TVD
13,449.6	12,835.5	838.4	-307.7	Crossed 330' HL @ 13449.6' MD / 12835.5' TVD
17,277.1	12,804.7	4,662.7	-317.5	LTP @ 17277.1' MD / 12804.7' TVD
17,392.0	12,804.5	4,777.6	-317.3	TD @ 17392.0' MD / 12804.5' TVD

COG

SURVEY REPORT

DOMINATOR 25 FEDERAL COM #702H

NORAM 21

6/27/2018

This survey is correct to the best of my knowledge and is supported by actual field data.

Kolton Cotton

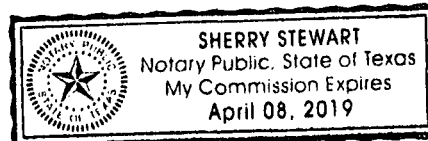
Notarized this date 1st of August, 2018.

Sherry Stewart

Notary Signature

County of Midland

State of Texas



SURVEY REPORT

DOMINATOR 25 FEDERAL COM #702H

KEEPER GYRO SURVEY - #702H

CUSTOMER COG
PROJECT Dominator 25 Federal Com #702H
FIELD N/A

SDI JOB NO. OP.011159
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Lea County New Mexico
Lat/Long 32.094907° N, 103.51929° W
Northing 399,202.3 ft
Easting 752,093.7 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.43 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

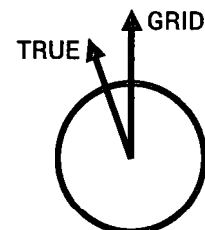
Lat/Long 32.094907° N, 103.51929° W
Northing 399,202.3 ft
Easting 752,093.7 ft
UWI 30-025-44713

DEPTH AND ELEVATION REFERENCE

Ground Level 3324 ft above Mean Sea Level
Reference Datum RKB
Reference Height 29 ft above G.L.
Reference Elevation 3353 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 356.00°
Calculation Method Minimum Curvature

**LOCAL GRAVITY REFERENCE INFORMATION**

Local Gravity 998.497 mG [computed]
True to Grid subtract 0.43°

WELL NOTES

Keeper Gyro Survey

OPERATORS

T Morgan

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.47	324.88	100.00	0.35	0.33	-0.23	0.47	0.41	324.88
125.00	0.43	321.86	125.00	0.51	0.49	-0.35	0.17	0.60	324.41
150.00	0.36	303.20	150.00	0.64	0.61	-0.47	0.58	0.77	321.97
175.00	0.39	320.27	175.00	0.75	0.71	-0.59	0.46	0.93	320.25
200.00	0.48	329.99	200.00	0.92	0.87	-0.70	0.47	1.12	321.17
225.00	0.44	325.26	225.00	1.10	1.04	-0.81	0.23	1.32	322.17
250.00	0.46	323.07	249.99	1.26	1.20	-0.93	0.11	1.52	322.42
275.00	0.48	324.97	274.99	1.44	1.37	-1.05	0.08	1.72	322.62
300.00	0.54	327.43	299.99	1.63	1.55	-1.17	0.26	1.94	323.03
325.00	0.54	328.02	324.99	1.84	1.75	-1.30	0.03	2.18	323.54
350.00	0.51	327.52	349.99	2.04	1.95	-1.42	0.13	2.41	323.94
375.00	0.52	331.07	374.99	2.24	2.14	-1.53	0.14	2.63	324.40
400.00	0.50	333.43	399.99	2.45	2.34	-1.64	0.12	2.85	325.01
425.00	0.52	339.68	424.99	2.66	2.54	-1.72	0.24	3.07	325.84
450.00	0.55	342.76	449.99	2.88	2.76	-1.80	0.17	3.30	326.92
475.00	0.66	344.57	474.99	3.14	3.01	-1.87	0.45	3.55	328.15
500.00	0.62	343.60	499.98	3.41	3.28	-1.95	0.18	3.82	329.30
525.00	0.64	341.36	524.98	3.68	3.55	-2.03	0.14	4.09	330.18
550.00	0.64	340.10	549.98	3.95	3.81	-2.12	0.06	4.36	330.85
575.00	0.68	341.55	574.98	4.22	4.08	-2.22	0.18	4.64	331.47
600.00	0.70	341.00	599.98	4.52	4.36	-2.31	0.09	4.94	332.06
625.00	0.79	337.06	624.98	4.83	4.67	-2.43	0.41	5.26	332.48
650.00	0.81	343.77	649.97	5.16	5.00	-2.55	0.38	5.61	332.97
675.00	0.89	345.98	674.97	5.52	5.35	-2.64	0.35	5.97	333.71
700.00	0.78	337.02	699.97	5.88	5.70	-2.76	0.69	6.33	334.17
725.00	0.81	341.51	724.96	6.21	6.02	-2.88	0.28	6.67	334.44
750.00	0.92	345.81	749.96	6.58	6.38	-2.99	0.53	7.05	334.94
775.00	0.93	345.13	774.96	6.97	6.78	-3.09	0.05	7.45	335.51
800.00	1.01	347.64	799.96	7.39	7.19	-3.19	0.37	7.86	336.09
825.00	0.98	344.73	824.95	7.82	7.61	-3.29	0.24	8.29	336.62
850.00	1.02	346.42	849.95	8.25	8.03	-3.40	0.18	8.72	337.07

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
875.00	1.01	344.25	874.94	8.68	8.46	-3.51	0.15	9.16	337.47
900.00	1.01	347.67	899.94	9.12	8.89	-3.62	0.24	9.59	337.85
925.00	1.02	347.54	924.94	9.55	9.32	-3.71	0.06	10.03	338.28
950.00	0.73	348.42	949.93	9.93	9.69	-3.79	1.17	10.41	338.63
975.00	0.77	3.39	974.93	10.26	10.02	-3.81	0.80	10.72	339.15
1000.00	0.67	4.79	999.93	10.57	10.33	-3.79	0.39	11.00	339.84
1025.00	0.61	0.56	1024.93	10.85	10.61	-3.78	0.33	11.26	340.40
1050.00	0.69	6.24	1049.93	11.13	10.89	-3.76	0.43	11.52	340.95
1075.00	0.66	0.19	1074.92	11.42	11.18	-3.74	0.31	11.79	341.49
1100.00	0.73	3.93	1099.92	11.72	11.49	-3.73	0.32	12.08	342.00
1125.00	0.68	3.99	1124.92	12.02	11.79	-3.71	0.17	12.36	342.53
1150.00	0.69	4.02	1149.92	12.32	12.09	-3.69	0.03	12.64	343.03
1175.00	0.84	4.44	1174.92	12.65	12.42	-3.67	0.60	12.95	343.56
1200.00	0.52	2.88	1199.91	12.94	12.72	-3.65	1.29	13.23	344.01
1225.00	0.80	3.98	1224.91	13.23	13.01	-3.63	1.13	13.50	344.42
1250.00	0.61	4.02	1249.91	13.53	13.31	-3.61	0.76	13.79	344.84
1275.00	0.53	356.65	1274.91	13.78	13.56	-3.60	0.43	14.03	345.12
1300.00	0.83	1.96	1299.91	14.08	13.86	-3.60	1.22	14.32	345.42
1325.00	0.44	350.46	1324.91	14.35	14.13	-3.61	1.65	14.59	345.66
1350.00	0.69	1.43	1349.90	14.60	14.38	-3.63	1.11	14.83	345.85
1375.00	0.43	351.85	1374.90	14.84	14.62	-3.64	1.10	15.07	346.04
1400.00	0.85	327.93	1399.90	15.10	14.88	-3.75	1.96	15.34	345.86
1425.00	1.14	295.06	1424.90	15.39	15.14	-4.07	2.52	15.68	344.94
1450.00	1.51	287.09	1449.89	15.62	15.34	-4.61	1.63	16.02	343.27
1475.00	1.48	286.55	1474.88	15.86	15.53	-5.24	0.11	16.39	341.37
1500.00	1.51	280.82	1499.87	16.05	15.68	-5.87	0.60	16.75	339.48
1525.00	1.56	292.29	1524.87	16.29	15.87	-6.51	1.24	17.15	337.72
1550.00	1.55	287.77	1549.86	16.56	16.11	-7.14	0.49	17.62	336.09
1575.00	1.49	287.81	1574.85	16.81	16.31	-7.77	0.25	18.07	334.51
1600.00	1.39	282.51	1599.84	17.02	16.47	-8.38	0.68	18.48	333.04
1625.00	1.40	275.02	1624.83	17.15	16.57	-8.98	0.73	18.84	331.54
1650.00	1.48	289.78	1649.82	17.33	16.70	-9.59	1.51	19.26	330.14

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
1675.00	1.45	274.11	1674.82	17.50	16.83	-10.21	1.60	19.69	328.77
1700.00	1.38	275.18	1699.81	17.60	16.88	-10.82	0.30	20.05	327.35
1725.00	1.38	267.51	1724.80	17.65	16.90	-11.42	0.74	20.39	325.95
1750.00	1.38	267.56	1749.79	17.67	16.87	-12.02	0.03	20.72	324.53
1775.00	1.34	268.98	1774.79	17.69	16.85	-12.61	0.19	21.05	323.19
1800.00	1.40	261.44	1799.78	17.68	16.80	-13.21	0.76	21.37	321.83
1825.00	1.38	267.92	1824.77	17.67	16.75	-13.81	0.63	21.71	320.49
1850.00	1.38	263.80	1849.77	17.67	16.70	-14.41	0.40	22.06	319.22
1875.00	1.33	268.90	1874.76	17.67	16.66	-15.00	0.53	22.42	318.01
1900.00	1.36	268.03	1899.75	17.70	16.65	-15.58	0.15	22.80	316.89
1925.00	1.38	266.58	1924.75	17.71	16.62	-16.18	0.16	23.20	315.77
1950.00	1.35	266.20	1949.74	17.71	16.58	-16.78	0.14	23.59	314.67
1975.00	1.38	262.34	1974.73	17.69	16.52	-17.37	0.39	23.97	313.57
2000.00	1.33	267.83	1999.72	17.68	16.47	-17.96	0.56	24.37	312.53
2025.00	1.31	261.03	2024.72	17.67	16.42	-18.53	0.63	24.75	311.54
2050.00	1.35	264.22	2049.71	17.64	16.34	-19.10	0.33	25.14	310.55
2075.00	1.32	258.60	2074.70	17.59	16.26	-19.68	0.54	25.52	309.56
2100.00	1.24	256.25	2099.70	17.51	16.13	-20.22	0.37	25.87	308.58
2125.00	1.14	257.12	2124.69	17.42	16.01	-20.73	0.42	26.20	307.69
2150.00	1.13	252.14	2149.69	17.32	15.88	-21.21	0.40	26.50	306.83
2175.00	1.11	250.17	2174.68	17.20	15.73	-21.67	0.18	26.78	305.97
2200.00	1.06	252.34	2199.68	17.08	15.57	-22.12	0.25	27.05	305.15
2225.00	1.13	249.60	2224.67	16.95	15.42	-22.57	0.35	27.33	304.33
2250.00	1.02	258.45	2249.67	16.85	15.29	-23.02	0.80	27.63	303.58
2275.00	1.11	247.11	2274.66	16.75	15.15	-23.46	0.92	27.93	302.84
2300.00	1.02	251.32	2299.66	16.61	14.98	-23.90	0.48	28.21	302.08
2325.00	1.03	247.47	2324.66	16.48	14.82	-24.32	0.28	28.48	301.37
2350.00	1.02	248.25	2349.65	16.34	14.65	-24.73	0.07	28.75	300.65
2375.00	1.01	250.04	2374.65	16.22	14.50	-25.15	0.13	29.03	299.96
2400.00	1.02	250.00	2399.64	16.09	14.35	-25.56	0.01	29.31	299.30
2425.00	0.95	255.69	2424.64	16.00	14.22	-25.97	0.47	29.61	298.70
2450.00	0.99	250.11	2449.64	15.90	14.09	-26.38	0.41	29.91	298.12

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
2475.00	0.86	250.78	2474.63	15.79	13.96	-26.76	0.51	30.18	297.55
2500.00	0.84	252.74	2499.63	15.70	13.84	-27.11	0.15	30.44	297.05
2525.00	0.77	252.53	2524.63	15.62	13.74	-27.45	0.29	30.69	296.59
2550.00	0.68	254.15	2549.63	15.55	13.65	-27.75	0.38	30.92	296.19
2575.00	0.56	255.36	2574.63	15.50	13.57	-28.01	0.47	31.13	295.86
2600.00	0.56	239.60	2599.62	15.42	13.48	-28.23	0.61	31.29	295.53
2625.00	0.51	249.00	2624.62	15.33	13.38	-28.44	0.40	31.43	295.20
2650.00	0.51	248.12	2649.62	15.27	13.30	-28.65	0.03	31.58	294.91
2675.00	0.58	250.14	2674.62	15.20	13.22	-28.87	0.30	31.75	294.60
2700.00	0.56	261.40	2699.62	15.15	13.16	-29.11	0.45	31.94	294.32
2725.00	1.51	237.49	2724.62	14.99	12.96	-29.50	4.09	32.22	293.72
2750.00	2.24	235.66	2749.60	14.58	12.51	-30.18	2.94	32.67	292.51
2775.00	2.53	234.70	2774.58	14.05	11.92	-31.03	1.16	33.24	291.00
2800.00	2.46	234.28	2799.56	13.48	11.28	-31.92	0.27	33.86	289.47
2825.00	2.51	232.90	2824.53	12.90	10.64	-32.79	0.31	34.48	287.98
2850.00	2.58	232.90	2849.51	12.30	9.97	-33.68	0.27	35.12	286.49
2875.00	2.47	233.02	2874.48	11.70	9.31	-34.55	0.43	35.79	285.08
2900.00	2.31	232.67	2899.46	11.13	8.68	-35.39	0.62	36.43	283.78
2925.00	2.38	228.61	2924.44	10.53	8.03	-36.18	0.72	37.06	282.51
2950.00	2.31	226.19	2949.42	9.90	7.34	-36.93	0.48	37.65	281.24
2975.00	2.28	225.79	2974.40	9.25	6.64	-37.65	0.14	38.23	280.01
3000.00	2.26	226.64	2999.38	8.62	5.96	-38.36	0.16	38.82	278.83
3025.00	2.17	229.45	3024.36	8.03	5.31	-39.08	0.56	39.44	277.74
3050.00	2.12	227.71	3049.34	7.46	4.69	-39.78	0.32	40.06	276.73
3075.00	2.00	227.67	3074.33	6.90	4.09	-40.45	0.50	40.65	275.77
3100.00	1.82	228.52	3099.31	6.39	3.53	-41.07	0.71	41.22	274.91
3125.00	1.82	224.01	3124.30	5.88	2.98	-41.64	0.57	41.75	274.10
3150.00	1.66	220.71	3149.29	5.36	2.42	-42.15	0.77	42.22	273.29
3175.00	1.40	215.77	3174.28	4.86	1.90	-42.57	1.18	42.61	272.55
3200.00	1.37	209.55	3199.27	4.38	1.39	-42.89	0.61	42.92	271.86
3225.00	1.28	208.68	3224.27	3.90	0.89	-43.18	0.38	43.18	271.18
3250.00	1.20	210.80	3249.26	3.45	0.42	-43.44	0.36	43.45	270.55

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
3275.00	1.42	216.86	3274.26	3.00	-0.06	-43.76	1.05	43.76	269.93
3300.00	2.27	237.28	3299.24	2.52	-0.57	-44.37	4.25	44.37	269.26
3325.00	2.40	241.44	3324.22	2.07	-1.09	-45.24	0.85	45.26	268.62
3350.00	2.46	239.91	3349.20	1.61	-1.61	-46.17	0.35	46.20	268.00
3375.00	2.46	240.51	3374.18	1.15	-2.14	-47.10	0.10	47.15	267.40
3400.00	2.22	241.64	3399.16	0.72	-2.64	-47.99	0.97	48.06	266.86
3425.00	2.23	239.17	3424.14	0.30	-3.12	-48.84	0.39	48.93	266.35
3450.00	2.15	239.82	3449.12	-0.13	-3.60	-49.66	0.35	49.79	265.85
3475.00	2.13	239.14	3474.10	-0.54	-4.07	-50.46	0.13	50.63	265.38
3500.00	2.15	236.13	3499.08	-0.99	-4.57	-51.25	0.46	51.45	264.90
3525.00	2.07	235.17	3524.07	-1.45	-5.09	-52.01	0.38	52.26	264.41
3550.00	1.95	235.31	3549.05	-1.90	-5.59	-52.73	0.46	53.03	263.94
3575.00	1.99	235.14	3574.04	-2.34	-6.08	-53.44	0.16	53.78	263.50
3600.00	1.97	235.97	3599.02	-2.78	-6.57	-54.15	0.15	54.55	263.08
3625.00	1.92	237.47	3624.01	-3.19	-7.04	-54.86	0.28	55.31	262.69
3650.00	1.87	239.45	3648.99	-3.58	-7.47	-55.56	0.33	56.06	262.34
3675.00	2.00	234.39	3673.98	-3.99	-7.93	-56.27	0.85	56.83	261.98
3700.00	1.90	236.05	3698.96	-4.42	-8.42	-56.97	0.46	57.58	261.60
3725.00	1.88	237.37	3723.95	-4.83	-8.87	-57.65	0.19	58.33	261.26
3750.00	1.83	240.39	3748.94	-5.19	-9.29	-58.35	0.43	59.08	260.96
3775.00	1.63	249.94	3773.93	-5.47	-9.61	-59.03	1.40	59.80	260.76
3800.00	1.54	254.38	3798.92	-5.63	-9.82	-59.69	0.60	60.49	260.66
3825.00	1.54	252.99	3823.91	-5.78	-10.01	-60.33	0.15	61.16	260.58
3850.00	1.48	254.56	3848.90	-5.91	-10.19	-60.96	0.31	61.81	260.51
3875.00	1.44	254.64	3873.89	-6.04	-10.36	-61.58	0.13	62.44	260.45
3900.00	1.32	253.80	3898.88	-6.16	-10.52	-62.16	0.51	63.04	260.39
3925.00	1.39	248.39	3923.88	-6.32	-10.72	-62.71	0.59	63.62	260.30
3950.00	1.30	248.88	3948.87	-6.49	-10.93	-63.26	0.38	64.20	260.20
3975.00	1.13	255.32	3973.86	-6.62	-11.09	-63.76	0.84	64.72	260.13
4000.00	1.05	259.21	3998.86	-6.69	-11.20	-64.23	0.45	65.20	260.11
4025.00	1.07	256.27	4023.86	-6.76	-11.30	-64.68	0.24	65.66	260.09
4050.00	1.03	261.25	4048.85	-6.82	-11.39	-65.13	0.40	66.12	260.08

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4075.00	1.08	262.36	4073.85	-6.85	-11.45	-65.59	0.22	66.58	260.09
4100.00	1.11	264.20	4098.84	-6.87	-11.51	-66.06	0.17	67.05	260.12
4125.00	1.13	263.23	4123.84	-6.89	-11.56	-66.54	0.11	67.54	260.14
4150.00	1.10	269.65	4148.83	-6.89	-11.59	-67.03	0.51	68.02	260.19
4175.00	1.05	283.23	4173.83	-6.81	-11.54	-67.49	1.03	68.47	260.30
4200.00	0.98	268.31	4198.82	-6.73	-11.50	-67.93	1.10	68.89	260.39
4225.00	0.94	275.58	4223.82	-6.69	-11.48	-68.34	0.50	69.30	260.46
4250.00	0.70	252.93	4248.82	-6.69	-11.51	-68.69	1.60	69.65	260.49
4275.00	0.93	264.68	4273.82	-6.73	-11.57	-69.04	1.12	70.01	260.49
4300.00	1.05	263.25	4298.81	-6.74	-11.62	-69.47	0.47	70.44	260.51
4325.00	0.90	255.30	4323.81	-6.79	-11.69	-69.89	0.79	70.86	260.50
4350.00	0.96	257.02	4348.81	-6.86	-11.79	-70.28	0.24	71.26	260.48
4375.00	0.84	250.19	4373.80	-6.94	-11.90	-70.66	0.62	71.65	260.44
4400.00	0.77	240.99	4398.80	-7.06	-12.04	-70.98	0.60	71.99	260.37
4425.00	0.84	234.20	4423.80	-7.23	-12.23	-71.27	0.47	72.32	260.26
4450.00	0.75	229.49	4448.80	-7.42	-12.44	-71.55	0.44	72.62	260.13
4475.00	0.66	217.90	4473.79	-7.63	-12.67	-71.76	0.67	72.87	259.99
4500.00	0.69	184.12	4498.79	-7.89	-12.93	-71.86	1.57	73.01	259.80
4525.00	0.70	165.13	4523.79	-8.18	-13.23	-71.83	0.92	73.04	259.57
4550.00	0.84	179.03	4548.79	-8.52	-13.56	-71.79	0.93	73.06	259.31
4575.00	0.72	184.72	4573.79	-8.86	-13.90	-71.80	0.56	73.13	259.04
4600.00	0.83	222.86	4598.78	-9.14	-14.19	-71.94	2.07	73.32	258.84
4625.00	1.73	255.66	4623.78	-9.33	-14.41	-72.42	4.49	73.84	258.74
4650.00	1.82	256.01	4648.76	-9.46	-14.60	-73.17	0.36	74.62	258.71
4675.00	1.86	252.16	4673.75	-9.63	-14.82	-73.94	0.52	75.42	258.66
4700.00	1.95	249.77	4698.74	-9.85	-15.10	-74.73	0.49	76.24	258.58
4725.00	1.95	242.82	4723.72	-10.13	-15.44	-75.51	0.95	77.07	258.45
4750.00	1.80	231.48	4748.71	-10.52	-15.88	-76.19	1.60	77.83	258.23
4775.00	1.77	228.03	4773.70	-10.98	-16.38	-76.79	0.44	78.51	257.96
4800.00	1.77	218.08	4798.69	-11.51	-16.94	-77.31	1.23	79.15	257.64
4825.00	1.77	207.37	4823.67	-12.12	-17.58	-77.73	1.32	79.69	257.25
4850.00	1.91	194.30	4848.66	-12.84	-18.33	-78.01	1.78	80.13	256.78

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4875.00	2.09	186.48	4873.65	-13.69	-19.19	-78.16	1.30	80.48	256.21
4900.00	2.15	181.36	4898.63	-14.60	-20.11	-78.22	0.80	80.77	255.58
4925.00	2.40	174.28	4923.61	-15.59	-21.10	-78.18	1.50	80.98	254.90
4950.00	2.43	177.28	4948.59	-16.65	-22.15	-78.10	0.52	81.18	254.17
4975.00	2.19	188.59	4973.57	-17.64	-23.15	-78.15	2.05	81.51	253.50
5000.00	1.84	222.96	4998.55	-18.39	-23.92	-78.50	4.96	82.06	253.05
5025.00	1.96	230.93	5023.54	-18.90	-24.48	-79.10	1.16	82.80	252.80
5050.00	1.89	232.16	5048.53	-19.38	-25.01	-79.76	0.32	83.59	252.59
5075.00	1.99	237.83	5073.51	-19.82	-25.49	-80.45	0.86	84.39	252.42
5100.00	1.97	234.85	5098.50	-20.24	-25.97	-81.17	0.42	85.22	252.26
5125.00	1.91	236.79	5123.48	-20.67	-26.44	-81.87	0.34	86.04	252.10
5150.00	1.88	240.22	5148.47	-21.05	-26.88	-82.58	0.47	86.84	251.97
5175.00	2.30	254.65	5173.45	-21.33	-27.21	-83.42	2.68	87.74	251.93
5200.00	2.93	262.33	5198.43	-21.47	-27.43	-84.54	2.88	88.87	252.02
5225.00	2.83	263.01	5223.39	-21.54	-27.59	-85.78	0.41	90.11	252.17
5250.00	2.84	264.20	5248.36	-21.59	-27.73	-87.01	0.24	91.32	252.32
5275.00	2.90	264.63	5273.33	-21.63	-27.85	-88.26	0.25	92.55	252.49
5300.00	2.92	265.38	5298.30	-21.65	-27.96	-89.52	0.16	93.79	252.65
5325.00	2.92	265.11	5323.27	-21.67	-28.07	-90.79	0.06	95.03	252.82
5350.00	2.88	264.52	5348.23	-21.69	-28.18	-92.05	0.20	96.27	252.98
5375.00	2.72	263.95	5373.20	-21.73	-28.30	-93.27	0.66	97.47	253.12
5400.00	2.54	261.88	5398.18	-21.79	-28.44	-94.41	0.80	98.60	253.23
5425.00	2.66	262.78	5423.15	-21.86	-28.60	-95.53	0.50	99.72	253.34
5450.00	2.61	262.43	5448.13	-21.93	-28.74	-96.67	0.21	100.85	253.44
5475.00	2.70	262.89	5473.10	-22.00	-28.89	-97.82	0.38	102.00	253.54
5500.00	2.76	264.30	5498.07	-22.05	-29.02	-99.00	0.34	103.17	253.66
5525.00	2.64	263.26	5523.04	-22.09	-29.15	-100.17	0.51	104.33	253.77
5550.00	2.67	263.05	5548.02	-22.15	-29.29	-101.32	0.13	105.47	253.88
5575.00	2.63	262.82	5572.99	-22.21	-29.43	-102.47	0.15	106.61	253.97
5600.00	2.57	262.26	5597.96	-22.28	-29.58	-103.59	0.25	107.73	254.06
5625.00	2.41	260.89	5622.94	-22.36	-29.74	-104.67	0.70	108.81	254.14
5650.00	2.33	259.38	5647.92	-22.47	-29.91	-105.69	0.40	109.84	254.20

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
5675.00	2.26	258.53	5672.90	-22.59	-30.11	-106.67	0.32	110.84	254.24
5700.00	2.39	260.33	5697.88	-22.71	-30.29	-107.67	0.60	111.85	254.29
5725.00	2.32	259.12	5722.86	-22.82	-30.48	-108.68	0.35	112.87	254.34
5750.00	2.38	258.46	5747.84	-22.95	-30.67	-109.68	0.26	113.89	254.38
5775.00	2.40	257.42	5772.81	-23.10	-30.89	-110.70	0.20	114.93	254.41
5800.00	2.41	261.74	5797.79	-23.21	-31.08	-111.73	0.73	115.98	254.45
5825.00	2.34	263.08	5822.77	-23.28	-31.22	-112.76	0.36	117.00	254.52
5850.00	2.28	264.26	5847.75	-23.32	-31.33	-113.76	0.31	117.99	254.60
5875.00	2.00	259.96	5872.73	-23.38	-31.46	-114.68	1.27	118.92	254.66
5900.00	2.03	254.99	5897.72	-23.51	-31.65	-115.54	0.71	119.80	254.68
5925.00	2.08	256.01	5922.70	-23.67	-31.87	-116.41	0.24	120.69	254.69
5950.00	1.99	256.43	5947.69	-23.82	-32.08	-117.27	0.36	121.58	254.70
5975.00	1.91	255.85	5972.67	-23.97	-32.29	-118.10	0.34	122.43	254.71
6000.00	1.89	255.56	5997.66	-24.12	-32.49	-118.90	0.10	123.26	254.72
6025.00	1.90	258.83	6022.64	-24.24	-32.67	-119.70	0.43	124.08	254.73
6050.00	1.88	258.80	6047.63	-24.35	-32.83	-120.51	0.07	124.90	254.76
6075.00	1.76	258.39	6072.62	-24.45	-32.99	-121.29	0.47	125.70	254.78
6100.00	1.66	258.81	6097.61	-24.55	-33.14	-122.02	0.42	126.44	254.81
6125.00	1.68	258.14	6122.60	-24.64	-33.28	-122.74	0.10	127.17	254.83
6150.00	1.77	260.71	6147.59	-24.73	-33.42	-123.48	0.49	127.92	254.85
6175.00	1.77	258.59	6172.57	-24.81	-33.56	-124.23	0.26	128.69	254.88
6200.00	1.58	262.18	6197.56	-24.88	-33.68	-124.96	0.85	129.42	254.91
6225.00	1.63	264.62	6222.55	-24.92	-33.76	-125.65	0.34	130.11	254.96
6250.00	1.60	266.41	6247.54	-24.92	-33.82	-126.35	0.25	130.80	255.02
6275.00	1.43	265.47	6272.53	-24.92	-33.86	-127.01	0.69	131.45	255.07
6300.00	1.24	270.00	6297.53	-24.91	-33.89	-127.59	0.84	132.02	255.13
6325.00	1.32	271.79	6322.52	-24.86	-33.88	-128.15	0.33	132.55	255.19
6350.00	1.16	276.56	6347.52	-24.78	-33.84	-128.69	0.76	133.06	255.27
6375.00	1.08	275.09	6372.51	-24.70	-33.79	-129.17	0.33	133.52	255.34
6400.00	1.11	277.55	6397.51	-24.61	-33.74	-129.65	0.23	133.97	255.41
6425.00	1.04	282.99	6422.50	-24.50	-33.66	-130.11	0.50	134.39	255.50
6450.00	1.02	284.72	6447.50	-24.36	-33.55	-130.55	0.15	134.79	255.59

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
6475.00	0.83	287.67	6472.49	-24.22	-33.44	-130.94	0.78	135.14	255.67
6500.00	0.82	287.00	6497.49	-24.09	-33.33	-131.28	0.07	135.44	255.75
6525.00	0.66	290.15	6522.49	-23.97	-33.23	-131.58	0.67	135.71	255.83
6550.00	0.70	290.90	6547.49	-23.85	-33.13	-131.86	0.19	135.96	255.90
6575.00	0.68	292.87	6572.49	-23.72	-33.01	-132.14	0.14	136.20	255.97
6600.00	0.60	296.38	6597.48	-23.58	-32.90	-132.39	0.34	136.42	256.05
6625.00	0.46	301.42	6622.48	-23.46	-32.79	-132.60	0.61	136.59	256.11
6650.00	0.53	298.61	6647.48	-23.34	-32.68	-132.78	0.29	136.75	256.17
6675.00	0.57	298.07	6672.48	-23.21	-32.57	-132.99	0.18	136.92	256.24
6700.00	0.57	301.21	6697.48	-23.07	-32.44	-133.21	0.13	137.10	256.31
6725.00	0.53	300.90	6722.48	-22.94	-32.32	-133.41	0.16	137.27	256.38
6750.00	0.59	280.91	6747.48	-22.84	-32.24	-133.64	0.81	137.47	256.44
6775.00	1.06	267.72	6772.47	-22.80	-32.22	-133.99	2.05	137.81	256.48
6800.00	1.49	256.41	6797.47	-22.85	-32.31	-134.54	1.97	138.37	256.50
6825.00	1.56	254.18	6822.46	-22.97	-32.48	-135.19	0.36	139.03	256.49
6850.00	1.55	253.89	6847.45	-23.11	-32.67	-135.84	0.04	139.71	256.48
6875.00	1.56	255.76	6872.44	-23.24	-32.84	-136.49	0.21	140.39	256.47
6900.00	1.44	251.17	6897.43	-23.38	-33.03	-137.12	0.69	141.04	256.46
6925.00	1.38	248.73	6922.43	-23.55	-33.24	-137.70	0.33	141.65	256.43
6950.00	1.38	250.30	6947.42	-23.72	-33.45	-138.26	0.15	142.25	256.40
6975.00	1.42	249.61	6972.41	-23.89	-33.66	-138.84	0.19	142.86	256.37
7000.00	1.37	249.55	6997.40	-24.06	-33.87	-139.41	0.23	143.47	256.34
7025.00	1.36	249.69	7022.40	-24.23	-34.08	-139.97	0.01	144.06	256.32
7050.00	1.42	251.11	7047.39	-24.40	-34.28	-140.54	0.26	144.66	256.29
7075.00	1.31	249.11	7072.38	-24.56	-34.48	-141.10	0.48	145.25	256.27
7100.00	1.29	247.16	7097.38	-24.73	-34.70	-141.63	0.19	145.81	256.23
7125.00	1.32	248.76	7122.37	-24.91	-34.91	-142.15	0.19	146.38	256.20
7150.00	1.22	245.80	7147.36	-25.09	-35.12	-142.66	0.48	146.92	256.17
7175.00	1.16	244.55	7172.36	-25.27	-35.34	-143.14	0.27	147.43	256.13
7200.00	1.17	245.41	7197.35	-25.45	-35.56	-143.60	0.10	147.93	256.09
7225.00	1.20	245.27	7222.35	-25.63	-35.77	-144.07	0.10	148.44	256.06
7250.00	1.19	243.88	7247.34	-25.83	-36.00	-144.54	0.12	148.95	256.02

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
7275.00	1.20	245.78	7272.34	-26.01	-36.22	-145.01	0.16	149.46	255.98
7300.00	1.22	242.36	7297.33	-26.21	-36.45	-145.49	0.30	149.98	255.94
7325.00	1.15	241.61	7322.32	-26.42	-36.69	-145.94	0.28	150.48	255.89
7350.00	1.10	240.69	7347.32	-26.63	-36.93	-146.37	0.24	150.96	255.84
7375.00	1.01	236.37	7372.32	-26.84	-37.17	-146.77	0.46	151.40	255.79
7400.00	1.03	240.37	7397.31	-27.05	-37.40	-147.15	0.30	151.83	255.74
7425.00	1.12	243.09	7422.31	-27.24	-37.62	-147.56	0.41	152.28	255.70
7450.00	1.06	243.39	7447.30	-27.42	-37.84	-147.99	0.25	152.75	255.66
7475.00	1.01	236.91	7472.30	-27.62	-38.06	-148.38	0.51	153.18	255.61
7500.00	1.10	242.33	7497.29	-27.82	-38.29	-148.77	0.53	153.62	255.57
7525.00	1.10	239.74	7522.29	-28.03	-38.53	-149.19	0.20	154.09	255.52
7550.00	1.09	237.68	7547.29	-28.24	-38.77	-149.60	0.17	154.54	255.47
7575.00	1.11	237.04	7572.28	-28.47	-39.03	-150.01	0.12	155.00	255.41
7600.00	1.08	234.67	7597.28	-28.71	-39.30	-150.40	0.23	155.45	255.36
7625.00	1.11	235.44	7622.27	-28.96	-39.57	-150.79	0.13	155.90	255.29
7650.00	1.09	237.28	7647.27	-29.20	-39.84	-151.19	0.15	156.35	255.24
7675.00	1.08	235.57	7672.26	-29.43	-40.10	-151.59	0.14	156.80	255.18
7700.00	1.10	241.56	7697.26	-29.65	-40.35	-151.99	0.47	157.26	255.13
7725.00	1.19	248.02	7722.25	-29.83	-40.56	-152.44	0.62	157.75	255.10
7750.00	1.35	260.83	7747.25	-29.94	-40.71	-152.97	1.29	158.30	255.10
7775.00	1.34	262.80	7772.24	-29.98	-40.79	-153.55	0.19	158.88	255.12
7800.00	1.26	260.39	7797.23	-30.02	-40.87	-154.11	0.37	159.44	255.15
7825.00	1.29	261.72	7822.23	-30.07	-40.96	-154.66	0.17	160.00	255.17
7850.00	1.35	263.35	7847.22	-30.10	-41.03	-155.24	0.28	160.57	255.19
7875.00	1.35	262.54	7872.21	-30.14	-41.11	-155.82	0.08	161.15	255.22
7900.00	1.34	261.81	7897.21	-30.17	-41.19	-156.40	0.07	161.73	255.25
7925.00	1.38	262.68	7922.20	-30.21	-41.27	-156.99	0.18	162.33	255.27
7950.00	1.36	263.09	7947.19	-30.25	-41.34	-157.59	0.10	162.92	255.30
7975.00	1.36	263.08	7972.19	-30.28	-41.41	-158.18	0.01	163.51	255.33
8000.00	1.46	265.27	7997.18	-30.30	-41.47	-158.79	0.45	164.11	255.36
8025.00	1.45	265.87	8022.17	-30.30	-41.52	-159.42	0.07	164.74	255.40
8050.00	1.45	267.00	8047.16	-30.30	-41.56	-160.05	0.11	165.36	255.44

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
8075.00	1.30	262.06	8072.15	-30.31	-41.62	-160.65	0.75	165.95	255.48
8100.00	1.36	262.07	8097.15	-30.35	-41.70	-161.22	0.22	166.53	255.50
8125.00	1.32	262.17	8122.14	-30.39	-41.78	-161.80	0.15	167.11	255.52
8150.00	1.34	262.62	8147.13	-30.43	-41.85	-162.38	0.08	167.68	255.55
8175.00	1.27	262.21	8172.13	-30.46	-41.93	-162.94	0.28	168.25	255.57
8200.00	1.24	261.72	8197.12	-30.50	-42.01	-163.48	0.11	168.79	255.59
8225.00	1.32	264.37	8222.12	-30.53	-42.07	-164.04	0.39	169.35	255.61
8250.00	1.35	264.52	8247.11	-30.54	-42.13	-164.62	0.11	169.92	255.64
8275.00	1.34	263.39	8272.10	-30.56	-42.19	-165.20	0.11	170.50	255.67
8300.00	1.43	267.07	8297.09	-30.57	-42.24	-165.80	0.50	171.10	255.71
8325.00	1.39	263.87	8322.09	-30.58	-42.29	-166.42	0.36	171.71	255.74
8350.00	1.10	272.21	8347.08	-30.56	-42.31	-166.96	1.38	172.24	255.78
8375.00	1.20	258.36	8372.08	-30.57	-42.36	-167.45	1.18	172.73	255.81
8400.00	1.26	259.85	8397.07	-30.64	-42.46	-167.98	0.29	173.26	255.82
8425.00	1.19	261.47	8422.06	-30.69	-42.54	-168.51	0.30	173.79	255.83
8450.00	1.21	257.71	8447.06	-30.74	-42.64	-169.02	0.32	174.32	255.84
8475.00	1.08	259.52	8472.05	-30.81	-42.74	-169.51	0.55	174.82	255.85
8500.00	1.14	258.58	8497.05	-30.87	-42.83	-169.99	0.26	175.30	255.86
8525.00	1.20	255.86	8522.04	-30.95	-42.94	-170.48	0.32	175.81	255.86
8550.00	1.17	257.61	8547.04	-31.03	-43.06	-170.99	0.18	176.33	255.86
8575.00	1.17	257.19	8572.03	-31.11	-43.17	-171.48	0.03	176.84	255.87
8600.00	1.20	252.52	8597.03	-31.21	-43.31	-171.98	0.40	177.35	255.87
8625.00	1.15	249.70	8622.02	-31.34	-43.47	-172.47	0.30	177.86	255.85
8650.00	1.19	248.94	8647.02	-31.48	-43.65	-172.94	0.17	178.37	255.83
8675.00	1.12	248.42	8672.01	-31.63	-43.84	-173.41	0.28	178.87	255.81
8700.00	1.14	244.93	8697.01	-31.80	-44.03	-173.86	0.29	179.35	255.79
8725.00	1.11	245.73	8722.00	-31.97	-44.24	-174.31	0.14	179.84	255.76
8750.00	1.02	247.74	8747.00	-32.12	-44.42	-174.74	0.39	180.29	255.74
8775.00	1.10	244.38	8771.99	-32.28	-44.61	-175.16	0.40	180.75	255.71
8800.00	1.12	247.25	8796.99	-32.45	-44.81	-175.60	0.24	181.23	255.69
8825.00	0.96	255.08	8821.99	-32.57	-44.95	-176.03	0.86	181.68	255.67
8850.00	0.93	259.83	8846.98	-32.63	-45.04	-176.43	0.33	182.09	255.68

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
8875.00	1.02	261.61	8871.98	-32.67	-45.11	-176.85	0.37	182.51	255.69
8900.00	1.05	262.60	8896.97	-32.70	-45.17	-177.30	0.14	182.96	255.71
8925.00	1.13	262.49	8921.97	-32.73	-45.24	-177.77	0.31	183.43	255.72
8950.00	1.19	262.67	8946.97	-32.76	-45.30	-178.27	0.24	183.93	255.74
8975.00	1.23	260.10	8971.96	-32.80	-45.38	-178.79	0.28	184.46	255.76
9000.00	1.20	256.19	8996.95	-32.87	-45.49	-179.31	0.36	184.99	255.76
9025.00	1.21	255.13	9021.95	-32.96	-45.62	-179.82	0.11	185.51	255.76
9050.00	1.11	253.94	9046.94	-33.07	-45.75	-180.31	0.41	186.02	255.76
9075.00	1.10	256.56	9071.94	-33.16	-45.88	-180.78	0.21	186.51	255.76
9100.00	1.07	263.67	9096.93	-33.20	-45.96	-181.24	0.56	186.98	255.77
9125.00	1.27	264.85	9121.93	-33.22	-46.01	-181.75	0.80	187.48	255.79
9150.00	1.34	259.47	9146.92	-33.26	-46.09	-182.31	0.56	188.05	255.81
9175.00	1.23	261.86	9171.92	-33.31	-46.18	-182.86	0.51	188.61	255.83
9200.00	1.25	269.20	9196.91	-33.32	-46.22	-183.40	0.64	189.14	255.85
9225.00	1.32	273.84	9221.90	-33.26	-46.21	-183.96	0.51	189.67	255.90
9250.00	1.42	267.87	9246.90	-33.21	-46.20	-184.56	0.69	190.25	255.95
9275.00	1.33	265.26	9271.89	-33.21	-46.23	-185.16	0.42	190.84	255.98
9300.00	1.20	267.66	9296.88	-33.20	-46.27	-185.71	0.58	191.39	256.01
9325.00	1.25	275.55	9321.88	-33.15	-46.25	-186.24	0.70	191.90	256.05
9350.00	1.43	275.31	9346.87	-33.05	-46.20	-186.82	0.75	192.45	256.11
9375.00	1.47	278.30	9371.86	-32.93	-46.12	-187.45	0.34	193.04	256.18
9400.00	1.50	278.41	9396.85	-32.80	-46.03	-188.09	0.11	193.64	256.25
9425.00	1.53	276.39	9421.85	-32.66	-45.94	-188.75	0.25	194.26	256.32
9450.00	1.52	275.36	9446.84	-32.55	-45.87	-189.41	0.12	194.89	256.39
9475.00	1.49	274.72	9471.83	-32.45	-45.82	-190.06	0.15	195.51	256.45
9500.00	1.49	274.51	9496.82	-32.35	-45.76	-190.71	0.03	196.13	256.51
9525.00	2.07	268.38	9521.81	-32.28	-45.75	-191.49	2.42	196.88	256.56
9550.00	2.82	267.55	9546.79	-32.25	-45.79	-192.55	3.01	197.92	256.62
9575.00	3.13	268.48	9571.75	-32.20	-45.84	-193.85	1.27	199.20	256.70
9600.00	3.25	267.53	9596.71	-32.15	-45.88	-195.24	0.53	200.56	256.77
9625.00	3.23	267.55	9621.67	-32.11	-45.94	-196.65	0.09	201.95	256.85
9650.00	3.27	267.59	9646.63	-32.08	-46.00	-198.07	0.15	203.34	256.92

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
9675.00	3.26	268.60	9671.59	-32.02	-46.05	-199.49	0.23	204.74	257.00
9700.00	3.28	268.58	9696.55	-31.96	-46.09	-200.92	0.09	206.14	257.08
9725.00	3.33	268.63	9721.51	-31.89	-46.12	-202.36	0.19	207.55	257.16
9750.00	3.32	268.78	9746.47	-31.83	-46.16	-203.81	0.04	208.97	257.24
9775.00	3.33	269.32	9771.43	-31.75	-46.18	-205.26	0.13	210.39	257.32
9800.00	3.31	269.49	9796.38	-31.66	-46.19	-206.71	0.09	211.81	257.40
9825.00	3.32	268.86	9821.34	-31.58	-46.22	-208.15	0.15	213.22	257.48
9850.00	3.36	269.11	9846.30	-31.51	-46.24	-209.61	0.20	214.65	257.56
9875.00	3.36	269.24	9871.26	-31.43	-46.26	-211.08	0.03	216.09	257.64
9900.00	3.41	268.71	9896.21	-31.35	-46.29	-212.55	0.22	217.53	257.71
9925.00	3.44	268.90	9921.17	-31.28	-46.32	-214.04	0.14	219.00	257.79
9950.00	3.39	268.06	9946.12	-31.21	-46.36	-215.53	0.29	220.46	257.86
9975.00	3.33	268.07	9971.08	-31.16	-46.41	-217.00	0.23	221.90	257.93
10000.00	3.25	267.15	9996.04	-31.12	-46.47	-218.43	0.39	223.32	257.99
10025.00	3.20	269.57	10021.00	-31.06	-46.51	-219.84	0.59	224.70	258.05
10050.00	3.24	272.36	10045.96	-30.94	-46.48	-221.24	0.65	226.07	258.13
10075.00	3.30	271.91	10070.92	-30.79	-46.43	-222.67	0.28	227.46	258.22
10100.00	3.29	270.88	10095.88	-30.65	-46.40	-224.10	0.25	228.85	258.30
10125.00	3.28	271.20	10120.84	-30.53	-46.37	-225.53	0.07	230.25	258.38
10150.00	3.23	272.05	10145.80	-30.39	-46.33	-226.95	0.27	231.63	258.46
10175.00	3.17	271.70	10170.76	-30.24	-46.28	-228.35	0.28	232.99	258.54
10200.00	3.06	270.58	10195.72	-30.12	-46.26	-229.70	0.51	234.32	258.61
10225.00	2.99	271.28	10220.69	-30.01	-46.24	-231.02	0.32	235.60	258.68
10250.00	2.84	270.71	10245.65	-29.90	-46.21	-232.29	0.61	236.84	258.75
10275.00	2.78	274.56	10270.62	-29.76	-46.16	-233.51	0.79	238.03	258.82
10300.00	2.92	274.62	10295.59	-29.57	-46.06	-234.75	0.54	239.23	258.90
10325.00	2.98	271.41	10320.56	-29.41	-45.99	-236.04	0.71	240.48	258.97
10350.00	2.77	266.67	10345.53	-29.35	-46.01	-237.29	1.26	241.71	259.03
10375.00	2.67	260.39	10370.50	-29.40	-46.14	-238.47	1.26	242.89	259.05
10400.00	2.44	257.40	10395.48	-29.53	-46.36	-239.56	1.10	244.01	259.05
10425.00	2.67	260.05	10420.45	-29.67	-46.57	-240.66	1.07	245.12	259.05
10450.00	2.58	257.10	10445.42	-29.82	-46.80	-241.78	0.65	246.27	259.05

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
10475.00	2.55	258.93	10470.40	-29.98	-47.03	-242.87	0.36	247.39	259.04
10500.00	2.71	260.48	10495.37	-30.10	-47.24	-244.00	0.72	248.53	259.04
10525.00	2.55	258.54	10520.35	-30.23	-47.44	-245.13	0.72	249.68	259.05
10550.00	2.65	256.18	10545.32	-30.40	-47.69	-246.24	0.57	250.81	259.04
10575.00	2.62	256.68	10570.29	-30.59	-47.96	-247.35	0.16	251.96	259.03
10600.00	2.44	253.81	10595.27	-30.80	-48.24	-248.42	0.86	253.06	259.01
10625.00	2.62	253.11	10620.25	-31.04	-48.56	-249.48	0.73	254.16	258.99
10650.00	2.45	254.03	10645.22	-31.27	-48.87	-250.54	0.70	255.26	258.96
10675.00	2.58	254.73	10670.20	-31.50	-49.17	-251.60	0.53	256.36	258.94
10700.00	2.50	250.54	10695.17	-31.75	-49.50	-252.65	0.81	257.46	258.92
10725.00	2.50	249.65	10720.15	-32.05	-49.87	-253.68	0.15	258.53	258.88
10750.00	2.45	250.14	10745.13	-32.35	-50.24	-254.69	0.24	259.60	258.84
10775.00	2.43	249.01	10770.10	-32.65	-50.61	-255.69	0.20	260.65	258.80
10800.00	2.37	249.39	10795.08	-32.95	-50.98	-256.67	0.25	261.68	258.77
10825.00	2.42	249.75	10820.06	-33.25	-51.35	-257.65	0.19	262.71	258.73
10850.00	2.48	248.25	10845.04	-33.56	-51.73	-258.64	0.38	263.77	258.69
10875.00	2.57	248.47	10870.01	-33.89	-52.13	-259.67	0.33	264.85	258.65
10900.00	2.58	246.58	10894.99	-34.25	-52.56	-260.70	0.34	265.95	258.60
10925.00	2.52	247.18	10919.96	-34.61	-53.00	-261.73	0.25	267.04	258.55
10950.00	2.65	246.58	10944.94	-34.98	-53.44	-262.76	0.54	268.14	258.50
10975.00	2.50	246.93	10969.91	-35.35	-53.89	-263.79	0.59	269.24	258.45
11000.00	2.64	246.52	10994.89	-35.72	-54.33	-264.83	0.57	270.34	258.41
11025.00	2.59	248.99	11019.86	-36.08	-54.76	-265.88	0.50	271.46	258.36
11050.00	3.13	256.73	11044.83	-36.36	-55.12	-267.08	2.65	272.71	258.34
11075.00	3.11	260.54	11069.79	-36.53	-55.39	-268.41	0.83	274.07	258.34
11100.00	3.23	259.50	11094.75	-36.68	-55.63	-269.77	0.50	275.45	258.35
11125.00	3.33	258.61	11119.71	-36.85	-55.90	-271.17	0.45	276.88	258.35
11150.00	3.00	261.15	11144.67	-37.00	-56.15	-272.53	1.43	278.25	258.36
11175.00	2.87	261.58	11169.64	-37.10	-56.34	-273.80	0.53	279.53	258.37
11200.00	2.87	259.13	11194.61	-37.22	-56.55	-275.03	0.49	280.78	258.38
11225.00	2.83	261.97	11219.58	-37.34	-56.75	-276.25	0.58	282.02	258.39
11250.00	2.96	258.01	11244.55	-37.48	-56.97	-277.49	0.96	283.28	258.40

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
11275.00	2.76	258.58	11269.52	-37.64	-57.22	-278.72	0.80	284.53	258.40
11300.00	2.40	260.22	11294.49	-37.77	-57.43	-279.82	1.49	285.65	258.40
11325.00	1.95	256.32	11319.47	-37.90	-57.62	-280.75	1.89	286.60	258.40
11350.00	1.93	253.98	11344.46	-38.06	-57.84	-281.57	0.33	287.44	258.39
11375.00	1.92	252.17	11369.44	-38.24	-58.08	-282.37	0.24	288.28	258.38
11400.00	2.07	254.03	11394.43	-38.44	-58.34	-283.20	0.62	289.15	258.36
11425.00	2.11	255.20	11419.41	-38.62	-58.58	-284.08	0.24	290.06	258.35
11450.00	2.16	254.94	11444.40	-38.79	-58.82	-284.98	0.20	290.99	258.34
11475.00	2.28	258.27	11469.38	-38.95	-59.04	-285.92	0.71	291.95	258.33
11500.00	2.59	261.29	11494.35	-39.06	-59.23	-286.97	1.33	293.01	258.34
11525.00	2.66	261.48	11519.33	-39.16	-59.40	-288.10	0.32	294.16	258.35
11550.00	2.80	262.62	11544.30	-39.24	-59.56	-289.28	0.59	295.35	258.37
11575.00	2.89	262.37	11569.27	-39.31	-59.72	-290.51	0.34	296.58	258.38
11600.00	2.88	261.92	11594.24	-39.40	-59.90	-291.75	0.09	297.84	258.40
11625.00	2.63	260.51	11619.21	-39.50	-60.08	-292.94	1.03	299.04	258.41
11650.00	2.55	265.62	11644.18	-39.56	-60.22	-294.06	0.98	300.16	258.43
11675.00	2.66	259.87	11669.16	-39.62	-60.36	-295.19	1.13	301.29	258.44
11700.00	2.53	260.15	11694.13	-39.74	-60.56	-296.30	0.52	302.42	258.45
11725.00	2.65	259.43	11719.11	-39.86	-60.76	-297.41	0.50	303.55	258.45
11750.00	2.67	259.36	11744.08	-40.00	-60.97	-298.55	0.11	304.71	258.46
11769.00	2.68	264.02	11763.06	-40.06	-61.10	-299.43	1.14	305.60	258.47

From Bottom to Top	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	17,252	22	5	17,049	50	5	16,898	26	5	16,728	22	5	16,546	29	5
	17,230	22	5	17,037	13	5	16,881	26	5	16,706	22	5	16,531	22	5
	17,208	22	5	17,024	12	5	16,855	18	5	16,684	22	5	16,509	22	5
	17,186	21	4	17,012	22	4	16,837	25	4	16,662	22	4	16,487	21	4
	17,165	22	4	16,990	22	4	16,812		4	16,640	21	4	16,466	19	4
	17,143	22	3	16,968	22	3	16,793	22	3	16,619	22	3	16,447	25	3
	17,121	22	3	16,946	22	3	16,771	21	3	16,597	22	3	16,422	17	3
	17,099		3	16,924		3	16,750		3	16,575		3	16,405		3
	Plug to Plug	91	32	Plug to Plug	47	32	Plug to Plug	76	32	Plug to Plug	82	32	Plug to Plug	69	32
Frac Plug		17,277	Total Shots	Frac Plug	17,059	Total Shots	Frac Plug	16,913	Total Shots	Frac Plug	16,744	Total Shots	Frac Plug	16,556	Total Shots

From Bottom to Top	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	16,378	27	5	16,204	21	5	16,029	22	5	15,848	28	5	15,666	35	5
	16,352	17	5	16,182	22	5	16,007	20	5	15,832	28	5	15,657	21	5
	16,335	23	5	16,160	22	5	15,987	24	5	15,804	15	5	15,636	22	5
	16,312	21	4	16,138	22	4	15,963	19	4	15,789	24	4	15,614	22	4
	16,291	22	4	16,116	22	4	15,944	24	4	15,765	20	4	15,592	22	4
	16,269	22	3	16,094	22	3	15,920	18	3	15,745	25	3	15,570	22	3
	16,247	22	3	16,072	21	3	15,902	26	3	15,720	19	3	15,548	22	3
	16,225		3	16,051		3	15,876		3	15,701		3	15,526		3
	Plug to Plug	77	32	Plug to Plug	76	32	Plug to Plug	77	32	Plug to Plug	76	32	Plug to Plug	60	32
Frac Plug		16,389	Total Shots	Frac Plug	16,214	Total Shots	Frac Plug	16,040	Total Shots	Frac Plug	15,865	Total Shots	Frac Plug	15,674	Total Shots

From Bottom to Top	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	15,500	26	5	15,330	28	5	15,155	22	5	14,980	22	5	14,809	18	5
	15,484	23	5	15,305	19	5	15,133	22	5	14,958	21	5	14,784	17	5
	15,461	19	5	15,286	24	5	15,111	21	5	14,937	22	5	14,767	27	5
	15,442	25	4	15,262	20	4	15,090	22	4	14,915	20	4	14,740	26	4
	15,417	17	4	15,242	24	4	15,068	22	4	14,895	24	4	14,714	18	4
	15,400	26	3	15,218	19	3	15,046	22	3	14,871	18	3	14,696	24	3
	15,374	16	3	15,199	22	3	15,024	22	3	14,853	26	3	14,672	19	3
	15,358		3	15,177		3	15,002		3	14,827		3	14,653		3
	Plug to Plug	68	32	Plug to Plug	79	32	Plug to Plug	76	32	Plug to Plug	76	32	Plug to Plug	77	32
Frac Plug		15,510	Total Shots	Frac Plug	15,341	Total Shots	Frac Plug	15,166	Total Shots	Frac Plug	14,991	Total Shots	Frac Plug	14,817	Total Shots

From Bottom to Top	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	14,618	35	5	14,451	27	5	14,281	26	5	14,107	21	5	13,889	65	5
	14,609	22	5	14,434	22	5	14,266	28	5	14,085	22	5	13,879	10	5
	14,587	22	5	14,412	21	5	14,238	28	5	14,063	22	5	13,869	15	5
	14,565	22	4	14,391	22	4	14,210	16	4	14,041	22	4	13,854	18	4
	14,543	21	4	14,369	19	4	14,194	24	4	14,019	22	4	13,836	13	4
	14,522	22	3	14,350	25	3	14,170	20	3	13,997	21	3	13,823	22	3
	14,500	22	3	14,325	18	3	14,150	22	3	13,976	22	3	13,801	22	3
	14,478		3	14,307		3	14,128		3	13,954		3	13,779		3
	Plug to Plug	61	32	Plug to Plug	68	32	Plug to Plug	80	32	Plug to Plug	77	32	Plug to Plug	53	32
Frac Plug		14,626	Total Shots	Frac Plug	14,459	Total Shots	Frac Plug	14,290	Total Shots	Frac Plug	14,118	Total Shots	Frac Plug	13,907	Total Shots

From Bottom to Top	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 25	Distance Between Perfs	Shots
	13,751	28	5	13,571	33	5	13,403	26	5	13,233	26	5		13080	5
	13,735	25	5	13,558	19	5	13,386	22	5	13,207	18	5			5
	13,710	18	5	13,539	22	5	13,364	19	5	13,189	22	5			5
	13,692	23	4	13,517	22	4	13,345	25	4	13,167	21	4			4
	13,669	21	4	13,495	22	4	13,320	17	4	13,146	23	4			4
	13,648	22	3	13,473	22	3	13,303	26	3	13,123	21	3			3
	13,626	22	3	13,451	22	3	13,277	18	3	13,102	22	3			3
	13,604		3	13,429		3	13,259		3	13,080		3			3
	Plug to Plug	76	32	Plug to Plug	66	32	Plug to Plug	69	32	Plug to Plug	77	32	Plug to Plug	0	32
Frac Plug		13,768	Total Shots	Frac Plug	13,583	Total Shots	Frac Plug	13,414	Total Shots	Frac Plug	13,244	Total Shots	Frac Plug		Total Shots

HOBBS OGD
MAR 21 2019
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Dominator Federal Com #702H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	1512	360100	404796
2	3024	360450	324744
3	3024	361250	438354
4	3024	361550	461160
5	3024	359740	423150
6	3024	364728	438438
7	3024	362150	347844
8	3024	362430	383250
9	3024	361470	501354
10	3024	360500	439824
11	3024	360050	385518
12	3024	359850	406182
13	3024	363580	327600
14	3024	361850	396522
15	3024	360700	428358
16	3024	360700	509460
17	3000	360900	392172
18	3024	361150	474962
19	3024	360850	447678
20	5040	360040	456372
21	3516	361300	693198
22	3516	361470	392604
23	5628	385700	470274
24	4746	405850	383840
Totals	78,366	8,738,358	10,327,653

4/17/22

1/1/22

1/1/22