

HOBBS OCD

MAY 22 2019

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COG Operating LLC

Lea County, NM (NAD27 NME)

Dominator 25 Federal

705H

OH / 63048 / 63050

Design: Surveys (Precision 595)

Standard Survey Report

10 September, 2018

Survey Report

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well 705H
Project:	Lea County, NM (NAD27 NME)	TVD Reference:	RKB @ 3364.40usft (Precision 595)
Site:	Dominator 25 Federal	MD Reference:	RKB @ 3364.40usft (Precision 595)
Well:	705H	North Reference:	Grid
Wellbore:	OH / 63048 / 63050	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Precision 595)	Database:	USA Compass

Project	Lea County, NM (NAD27 NME)		
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	Dominator 25 Federal				
Site Position:		Northing:	399,205.50 usft	Latitude:	32° 5' 41.93048 N
From:	Map	Easting:	748,959.60 usft	Longitude:	103° 31' 45.86098 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43 °

Well	705H					
Well Position	+N-S	0.00 usft	Northing:	399,190.90 usft	Latitude:	32° 5' 41.64945 N
	+E-W	0.00 usft	Easting:	750,803.70 usft	Longitude:	103° 31' 24.42654 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	usft	Ground Level:	3,339.40 usft

Wellbore	OH / 63048 / 63050				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	8/28/2018	6.69	59.78	47,821.77925556

Design	Surveys (Precision 595)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	355.65	

Survey Program	Date 9/10/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	11,767.00	Scientific Gyro Surveys (OH / 63048 / 630	NS-GYRO-MS	North sensing gyrocompassing m/s
11,767.00	17,532.00	Phoenix MWD Surveys (OH / 63048 / 6305	MWD+HDGM	OWSG Rev.2 MWD + HDGM

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.42	331.76	100.00	0.32	-0.17	0.34	0.42	0.42	0.00
125.00	0.36	337.73	125.00	0.48	-0.25	0.49	0.29	-0.24	23.88
150.00	0.40	333.64	150.00	0.63	-0.32	0.65	0.19	0.16	-16.36
175.00	0.42	334.83	175.00	0.79	-0.39	0.82	0.09	0.08	4.76
200.00	0.47	335.64	200.00	0.96	-0.47	1.00	0.20	0.20	3.24
225.00	0.63	337.51	225.00	1.19	-0.57	1.22	0.64	0.64	7.48
250.00	0.54	338.40	249.99	1.42	-0.66	1.47	0.36	-0.36	3.56
275.00	0.44	340.28	274.99	1.62	-0.74	1.67	0.41	-0.40	7.52
300.00	0.48	338.66	299.99	1.81	-0.81	1.87	0.17	0.16	-6.48

Survey Report

Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: Dominator 25 Federal
Well: 705H
Wellbore: OH / 63048 / 63050
Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
TVD Reference: RKB @ 3364.40usft (Precision 595)
MD Reference: RKB @ 3364.40usft (Precision 595)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
325.00	0.47	331.65	324.99	2.00	-0.90	2.06	0.24	-0.04	-28.04
350.00	0.47	334.34	349.99	2.18	-0.99	2.25	0.09	0.00	10.76
375.00	0.53	339.72	374.99	2.38	-1.08	2.46	0.30	0.24	21.52
400.00	0.53	339.28	399.99	2.60	-1.16	2.68	0.02	0.00	-1.76
425.00	0.52	337.45	424.99	2.81	-1.24	2.90	0.08	-0.04	-7.32
450.00	0.53	336.78	449.99	3.02	-1.33	3.11	0.05	0.04	-2.68
475.00	0.54	337.78	474.99	3.24	-1.42	3.33	0.05	0.04	4.00
500.00	0.52	338.75	499.98	3.45	-1.51	3.56	0.09	-0.08	3.88
525.00	0.48	339.74	524.98	3.66	-1.58	3.76	0.16	-0.16	3.96
550.00	0.51	342.91	549.98	3.86	-1.65	3.97	0.16	0.12	12.68
575.00	0.48	344.43	574.98	4.07	-1.71	4.19	0.13	-0.12	6.08
600.00	0.50	344.10	599.98	4.27	-1.77	4.39	0.08	0.08	-1.32
625.00	0.49	345.31	624.98	4.48	-1.83	4.61	0.06	-0.04	4.84
650.00	0.41	351.18	649.98	4.67	-1.87	4.80	0.37	-0.32	23.48
675.00	0.41	345.69	674.98	4.85	-1.90	4.98	0.16	0.00	-21.96
700.00	0.33	345.74	699.98	5.00	-1.94	5.14	0.32	-0.32	0.20
725.00	0.37	345.29	724.98	5.15	-1.98	5.29	0.16	0.16	-1.80
750.00	0.53	344.03	749.98	5.34	-2.03	5.48	0.64	0.64	-5.04
775.00	0.42	347.53	774.98	5.54	-2.09	5.68	0.45	-0.44	14.00
800.00	0.34	349.14	799.98	5.70	-2.12	5.85	0.32	-0.32	6.44
825.00	0.46	345.89	824.97	5.87	-2.16	6.02	0.49	0.48	-13.00
850.00	0.47	344.67	849.97	6.07	-2.21	6.22	0.06	0.04	-4.88
875.00	0.55	346.75	874.97	6.29	-2.26	6.44	0.33	0.32	8.32
900.00	0.48	347.44	899.97	6.51	-2.32	6.66	0.28	-0.28	2.76
925.00	0.54	344.69	924.97	6.72	-2.37	6.88	0.26	0.24	-11.00
950.00	0.51	345.10	949.97	6.94	-2.43	7.11	0.12	-0.12	1.64
975.00	0.47	347.68	974.97	7.15	-2.48	7.32	0.18	-0.16	10.32
1,000.00	0.48	351.42	999.97	7.35	-2.52	7.52	0.13	0.04	14.96
1,025.00	0.47	349.55	1,024.97	7.56	-2.55	7.73	0.07	-0.04	-7.48
1,050.00	0.41	349.09	1,049.97	7.75	-2.59	7.92	0.24	-0.24	-1.84
1,075.00	0.48	349.19	1,074.97	7.94	-2.62	8.11	0.28	0.28	0.40
1,100.00	0.33	357.44	1,099.96	8.11	-2.65	8.29	0.64	-0.60	33.00
1,125.00	0.34	1.93	1,124.96	8.26	-2.65	8.44	0.11	0.04	17.96
1,150.00	0.13	105.25	1,149.96	8.33	-2.62	8.50	1.56	-0.84	413.28
1,175.00	0.50	150.97	1,174.96	8.22	-2.54	8.39	1.68	1.48	182.88
1,200.00	0.54	157.59	1,199.96	8.02	-2.44	8.18	0.29	0.16	26.48
1,225.00	0.64	159.32	1,224.96	7.78	-2.34	7.93	0.41	0.40	6.92
1,250.00	0.54	159.22	1,249.96	7.54	-2.25	7.69	0.40	-0.40	-0.40
1,275.00	0.62	162.11	1,274.96	7.30	-2.17	7.44	0.34	0.32	11.56
1,300.00	0.67	164.68	1,299.96	7.03	-2.09	7.17	0.23	0.20	10.28
1,325.00	0.58	167.96	1,324.96	6.76	-2.02	6.90	0.39	-0.36	13.12
1,350.00	0.59	170.90	1,349.95	6.51	-1.98	6.65	0.13	0.04	11.76
1,375.00	0.53	169.67	1,374.95	6.27	-1.94	6.40	0.24	-0.24	-4.92

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1,400.00	0.51	167.18	1,399.95	6.05	-1.89	6.18	0.12	-0.08	-9.96
1,425.00	0.61	170.84	1,424.95	5.81	-1.85	5.93	0.42	0.40	14.64
1,450.00	0.68	175.47	1,449.95	5.53	-1.81	5.65	0.35	0.28	18.52
1,475.00	0.68	199.21	1,474.95	5.24	-1.85	5.37	1.12	0.00	94.96
1,500.00	0.97	221.12	1,499.95	4.94	-2.04	5.08	1.69	1.16	87.64
1,525.00	1.28	230.77	1,524.94	4.61	-2.39	4.78	1.45	1.24	38.60
1,550.00	1.50	238.61	1,549.93	4.26	-2.89	4.47	1.16	0.88	31.36
1,575.00	1.69	240.37	1,574.92	3.91	-3.49	4.16	0.78	0.76	7.04
1,600.00	2.53	242.60	1,599.91	3.47	-4.30	3.79	3.38	3.36	8.92
1,625.00	3.17	243.99	1,624.88	2.92	-5.41	3.32	2.57	2.56	5.56
1,650.00	3.50	244.03	1,649.83	2.28	-6.72	2.78	1.32	1.32	0.16
1,675.00	3.78	241.97	1,674.78	1.56	-8.13	2.17	1.24	1.12	-8.24
1,700.00	4.20	238.78	1,699.72	0.69	-9.64	1.42	1.90	1.68	-12.76
1,725.00	4.44	238.07	1,724.65	-0.29	-11.25	0.56	0.98	0.96	-2.84
1,750.00	4.56	237.65	1,749.57	-1.34	-12.91	-0.35	0.50	0.48	-1.68
1,775.00	4.66	236.57	1,774.49	-2.43	-14.59	-1.31	0.53	0.40	-4.32
1,800.00	4.72	236.17	1,799.41	-3.56	-16.30	-2.31	0.27	0.24	-1.60
1,825.00	4.77	236.04	1,824.32	-4.71	-18.01	-3.33	0.20	0.20	-0.52
1,850.00	4.77	235.33	1,849.24	-5.88	-19.73	-4.37	0.24	0.00	-2.84
1,875.00	4.78	235.19	1,874.15	-7.07	-21.44	-5.42	0.06	0.04	-0.56
1,900.00	4.86	234.08	1,899.06	-8.29	-23.15	-6.51	0.49	0.32	-4.44
1,925.00	5.11	231.68	1,923.97	-9.60	-24.88	-7.68	1.30	1.00	-9.60
1,950.00	5.65	229.17	1,948.86	-11.09	-26.69	-9.04	2.36	2.16	-10.04
1,975.00	6.04	228.70	1,973.73	-12.77	-28.61	-10.56	1.57	1.56	-1.88
2,000.00	6.17	228.06	1,998.59	-14.53	-30.59	-12.17	0.59	0.52	-2.56
2,025.00	6.30	228.31	2,023.44	-16.34	-32.62	-13.82	0.53	0.52	1.00
2,050.00	6.32	228.26	2,048.29	-18.17	-34.67	-15.49	0.08	0.08	-0.20
2,075.00	6.29	227.80	2,073.13	-20.01	-36.71	-17.16	0.24	-0.12	-1.84
2,100.00	6.29	228.22	2,097.98	-21.84	-38.75	-18.84	0.18	0.00	1.68
2,125.00	6.35	228.37	2,122.83	-23.67	-40.80	-20.51	0.25	0.24	0.60
2,150.00	6.40	227.81	2,147.68	-25.52	-42.87	-22.20	0.32	0.20	-2.24
2,175.00	6.33	228.20	2,172.52	-27.38	-44.93	-23.89	0.33	-0.28	1.56
2,200.00	6.36	229.15	2,197.37	-29.20	-47.00	-25.55	0.44	0.12	3.80
2,225.00	6.41	228.52	2,222.22	-31.03	-49.09	-27.22	0.34	0.20	-2.52
2,250.00	6.42	228.72	2,247.06	-32.88	-51.19	-28.90	0.10	0.04	0.80
2,275.00	6.39	228.68	2,271.90	-34.72	-53.29	-30.58	0.12	-0.12	-0.16
2,300.00	6.41	228.43	2,296.75	-36.56	-55.37	-32.26	0.14	0.08	-1.00
2,325.00	6.47	228.28	2,321.59	-38.43	-57.47	-33.96	0.25	0.24	-0.60
2,350.00	6.48	227.87	2,346.43	-40.31	-59.57	-35.68	0.19	0.04	-1.64
2,375.00	6.48	228.06	2,371.27	-42.20	-61.66	-37.40	0.09	0.00	0.76
2,400.00	6.45	227.92	2,396.11	-44.08	-63.75	-39.12	0.14	-0.12	-0.56
2,425.00	6.45	228.86	2,420.95	-45.95	-65.85	-40.82	0.42	0.00	3.76
2,450.00	6.39	227.56	2,445.80	-47.81	-67.94	-42.52	0.63	-0.24	-5.20

Survey Report

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 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

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2,475.00	6.21	224.71	2,470.65	-49.71	-69.92	-44.26	1.44	-0.72	-11.40
2,500.00	5.94	220.64	2,495.50	-51.65	-71.71	-46.07	2.03	-1.08	-16.28
2,525.00	5.74	217.76	2,520.38	-53.62	-73.32	-47.91	1.42	-0.80	-11.52
2,550.00	5.74	216.34	2,545.25	-55.62	-74.82	-49.78	0.57	0.00	-5.68
2,575.00	5.82	215.56	2,570.12	-57.66	-76.30	-51.70	0.45	0.32	-3.12
2,600.00	5.80	215.90	2,594.99	-59.71	-77.78	-53.64	0.16	-0.08	1.36
2,625.00	5.75	216.27	2,619.87	-61.74	-79.26	-55.55	0.25	-0.20	1.48
2,650.00	5.53	217.57	2,644.75	-63.71	-80.74	-57.40	1.02	-0.88	5.20
2,675.00	5.10	219.33	2,669.64	-65.52	-82.18	-59.10	1.84	-1.72	7.04
2,700.00	4.79	220.26	2,694.55	-67.18	-83.55	-60.65	1.28	-1.24	3.72
2,725.00	4.73	220.58	2,719.46	-68.76	-84.90	-62.12	0.26	-0.24	1.28
2,750.00	4.69	220.71	2,744.38	-70.32	-86.24	-63.57	0.17	-0.16	0.52
2,775.00	4.61	219.86	2,769.29	-71.86	-87.55	-65.01	0.42	-0.32	-3.40
2,800.00	4.55	220.10	2,794.21	-73.39	-88.83	-66.44	0.25	-0.24	0.96
2,825.00	4.51	219.75	2,819.13	-74.91	-90.10	-67.86	0.19	-0.16	-1.40
2,850.00	4.47	219.53	2,844.06	-76.41	-91.35	-69.26	0.17	-0.16	-0.88
2,875.00	4.43	220.33	2,868.98	-77.90	-92.59	-70.65	0.30	-0.16	3.20
2,900.00	4.42	220.05	2,893.91	-79.37	-93.84	-72.03	0.10	-0.04	-1.12
2,925.00	4.46	219.14	2,918.83	-80.87	-95.07	-73.42	0.32	0.16	-3.64
2,950.00	4.48	220.50	2,943.76	-82.36	-96.32	-74.82	0.43	0.08	5.44
2,975.00	4.62	219.11	2,968.68	-83.89	-97.59	-76.24	0.71	0.56	-5.56
3,000.00	4.56	218.86	2,993.60	-85.44	-98.84	-77.70	0.25	-0.24	-1.00
3,025.00	4.36	218.47	3,018.52	-86.96	-100.06	-79.12	0.81	-0.80	-1.56
3,050.00	4.29	218.39	3,043.45	-88.44	-101.23	-80.50	0.28	-0.28	-0.32
3,075.00	4.28	220.18	3,068.38	-89.88	-102.41	-81.85	0.54	-0.04	7.16
3,100.00	4.22	221.73	3,093.31	-91.28	-103.63	-83.16	0.52	-0.24	6.20
3,125.00	4.05	224.81	3,118.25	-92.59	-104.86	-84.37	1.12	-0.68	12.32
3,150.00	3.97	228.32	3,143.19	-93.79	-106.13	-85.47	1.03	-0.32	14.04
3,175.00	3.93	229.06	3,168.13	-94.93	-107.42	-86.51	0.26	-0.16	2.96
3,200.00	3.92	230.41	3,193.07	-96.04	-108.73	-87.51	0.37	-0.04	5.40
3,225.00	3.92	228.57	3,218.01	-97.15	-110.03	-88.52	0.50	0.00	-7.36
3,250.00	3.93	227.16	3,242.95	-98.30	-111.30	-89.57	0.39	0.04	-5.64
3,275.00	3.91	225.47	3,267.89	-99.48	-112.53	-90.65	0.47	-0.08	-6.76
3,300.00	3.93	223.79	3,292.83	-100.69	-113.73	-91.78	0.47	0.08	-6.72
3,325.00	3.94	222.40	3,317.78	-101.94	-114.91	-92.94	0.38	0.04	-5.56
3,350.00	3.89	221.94	3,342.72	-103.21	-116.05	-94.11	0.24	-0.20	-1.84
3,375.00	3.87	222.44	3,367.66	-104.46	-117.19	-95.27	0.16	-0.08	2.00
3,400.00	3.82	221.45	3,392.60	-105.71	-118.31	-96.43	0.33	-0.20	-3.96
3,425.00	3.81	218.83	3,417.55	-106.98	-119.38	-97.62	0.70	-0.04	-10.48
3,450.00	3.78	217.16	3,442.49	-108.29	-120.40	-98.84	0.46	-0.12	-6.68
3,475.00	3.74	217.59	3,467.44	-109.59	-121.39	-100.06	0.20	-0.16	1.72
3,500.00	3.74	217.49	3,492.39	-110.88	-122.39	-101.28	0.03	0.00	-0.40
3,525.00	3.91	218.43	3,517.33	-112.20	-123.41	-102.51	0.72	0.68	3.76
3,550.00	4.27	222.69	3,542.27	-113.55	-124.58	-103.77	1.88	1.44	17.04

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,575.00	4.87	230.32	3,567.19	-114.91	-126.02	-105.02	3.41	2.40	30.52
3,600.00	5.31	233.97	3,592.09	-116.27	-127.78	-106.24	2.18	1.76	14.60
3,625.00	5.56	234.84	3,616.98	-117.65	-129.70	-107.47	1.05	1.00	3.48
3,650.00	5.65	235.64	3,641.86	-119.04	-131.71	-108.70	0.48	0.36	3.20
3,675.00	5.71	236.40	3,666.73	-120.42	-133.76	-109.93	0.38	0.24	3.04
3,700.00	5.94	237.10	3,691.61	-121.81	-135.88	-111.15	0.96	0.92	2.80
3,725.00	6.02	237.30	3,716.47	-123.22	-138.07	-112.39	0.33	0.32	0.80
3,750.00	5.95	237.30	3,741.33	-124.63	-140.26	-113.63	0.28	-0.28	0.00
3,775.00	5.93	237.61	3,766.20	-126.02	-142.44	-114.85	0.15	-0.08	1.24
3,800.00	5.92	237.68	3,791.07	-127.40	-144.62	-116.07	0.05	-0.04	0.28
3,825.00	5.88	238.75	3,815.93	-128.76	-146.81	-117.25	0.47	-0.16	4.28
3,850.00	5.81	240.35	3,840.80	-130.05	-149.00	-118.37	0.71	-0.28	6.40
3,875.00	5.76	240.22	3,865.68	-131.30	-151.19	-119.45	0.21	-0.20	-0.52
3,900.00	5.58	241.49	3,890.55	-132.50	-153.35	-120.49	0.88	-0.72	5.08
3,925.00	5.41	244.06	3,915.44	-133.59	-155.48	-121.42	1.20	-0.68	10.28
3,950.00	5.11	244.35	3,940.33	-134.59	-157.54	-122.26	1.20	-1.20	1.16
3,975.00	4.82	244.59	3,965.24	-135.52	-159.49	-123.04	1.16	-1.16	0.96
4,000.00	4.72	245.22	3,990.15	-136.41	-161.37	-123.77	0.45	-0.40	2.52
4,025.00	4.57	245.26	4,015.07	-137.25	-163.21	-124.48	0.60	-0.60	0.16
4,050.00	4.35	245.66	4,039.99	-138.06	-164.98	-125.15	0.89	-0.88	1.60
4,075.00	4.24	247.18	4,064.92	-138.81	-166.70	-125.77	0.63	-0.44	6.08
4,100.00	4.23	248.46	4,089.86	-139.51	-168.41	-126.33	0.38	-0.04	5.12
4,125.00	4.21	247.88	4,114.79	-140.19	-170.11	-126.89	0.19	-0.08	-2.32
4,150.00	4.20	248.44	4,139.72	-140.87	-171.82	-127.44	0.17	-0.04	2.24
4,175.00	4.21	248.59	4,164.65	-141.55	-173.52	-127.98	0.06	0.04	0.60
4,200.00	4.22	247.93	4,189.59	-142.23	-175.23	-128.53	0.20	0.04	-2.64
4,225.00	4.25	247.97	4,214.52	-142.92	-176.94	-129.09	0.12	0.12	0.16
4,250.00	4.26	248.04	4,239.45	-143.61	-178.66	-129.65	0.05	0.04	0.28
4,275.00	4.29	247.68	4,264.38	-144.32	-180.39	-130.22	0.16	0.12	-1.44
4,300.00	4.52	243.54	4,289.31	-145.11	-182.13	-130.88	1.57	0.92	-16.56
4,325.00	4.80	239.33	4,314.22	-146.08	-183.91	-131.71	1.77	1.12	-16.84
4,350.00	4.76	237.72	4,339.14	-147.17	-185.69	-132.66	0.56	-0.16	-6.44
4,375.00	4.63	236.70	4,364.05	-148.28	-187.41	-133.64	0.62	-0.52	-4.08
4,400.00	4.52	235.97	4,388.97	-149.38	-189.07	-134.61	0.50	-0.44	-2.92
4,425.00	4.24	234.23	4,413.90	-150.48	-190.64	-135.58	1.24	-1.12	-6.96
4,450.00	4.19	231.85	4,438.83	-151.58	-192.11	-136.57	0.73	-0.20	-9.52
4,475.00	4.06	228.01	4,463.77	-152.74	-193.48	-137.62	1.22	-0.52	-15.36
4,500.00	3.87	223.13	4,488.71	-153.94	-194.72	-138.73	1.55	-0.76	-19.52
4,525.00	3.77	222.01	4,513.65	-155.17	-195.84	-139.87	0.50	-0.40	-4.48
4,550.00	3.75	221.58	4,538.60	-156.39	-196.94	-141.00	0.14	-0.08	-1.72
4,575.00	3.78	219.20	4,563.54	-157.64	-198.00	-142.17	0.64	0.12	-9.52
4,600.00	3.77	219.38	4,588.49	-158.92	-199.04	-143.36	0.06	-0.04	0.72
4,625.00	4.09	218.84	4,613.43	-160.25	-200.12	-144.61	1.29	1.28	-2.16

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,650.00	4.81	216.45	4,638.36	-161.78	-201.30	-146.05	2.97	2.88	-9.56
4,675.00	5.34	213.77	4,663.26	-163.59	-202.57	-147.76	2.32	2.12	-10.72
4,700.00	5.53	211.75	4,688.15	-165.58	-203.85	-149.65	1.08	0.76	-8.08
4,725.00	5.62	210.89	4,713.03	-167.66	-205.12	-151.62	0.49	0.36	-3.44
4,750.00	5.67	208.37	4,737.91	-169.80	-206.33	-153.66	1.01	0.20	-10.08
4,775.00	5.67	206.38	4,762.78	-171.99	-207.47	-155.76	0.79	0.00	-7.96
4,800.00	5.79	204.54	4,787.66	-174.24	-208.54	-157.92	0.88	0.48	-7.36
4,825.00	5.84	203.49	4,812.53	-176.56	-209.57	-160.15	0.47	0.20	-4.20
4,850.00	5.82	203.95	4,837.40	-178.88	-210.59	-162.39	0.20	-0.08	1.84
4,875.00	5.87	203.55	4,862.27	-181.21	-211.62	-164.64	0.26	0.20	-1.60
4,900.00	5.93	203.54	4,887.14	-183.57	-212.64	-166.91	0.24	0.24	-0.04
4,925.00	5.90	205.32	4,912.01	-185.91	-213.71	-169.17	0.74	-0.12	7.12
4,950.00	5.78	208.42	4,936.88	-188.18	-214.86	-171.34	1.35	-0.48	12.40
4,975.00	5.65	211.44	4,961.75	-190.34	-216.10	-173.40	1.31	-0.52	12.08
5,000.00	5.69	212.49	4,986.63	-192.43	-217.41	-175.39	0.44	0.16	4.20
5,025.00	5.65	213.30	5,011.51	-194.51	-218.75	-177.36	0.36	-0.16	3.24
5,050.00	5.56	213.63	5,036.39	-196.55	-220.09	-179.29	0.38	-0.36	1.32
5,075.00	5.44	213.34	5,061.27	-198.54	-221.42	-181.18	0.49	-0.48	-1.16
5,100.00	5.36	213.64	5,086.16	-200.51	-222.71	-183.04	0.34	-0.32	1.20
5,125.00	5.26	214.37	5,111.05	-202.42	-224.01	-184.85	0.48	-0.40	2.92
5,150.00	5.08	215.27	5,135.95	-204.27	-225.29	-186.60	0.79	-0.72	3.60
5,175.00	4.92	216.69	5,160.86	-206.04	-226.57	-188.26	0.81	-0.64	5.68
5,200.00	4.55	222.41	5,185.77	-207.63	-227.88	-189.75	2.40	-1.48	22.88
5,225.00	4.32	227.44	5,210.70	-209.00	-229.24	-191.01	1.81	-0.92	20.12
5,250.00	4.27	228.03	5,235.63	-210.26	-230.63	-192.16	0.27	-0.20	2.36
5,275.00	4.26	228.61	5,260.56	-211.49	-232.02	-193.29	0.18	-0.04	2.32
5,300.00	4.19	229.54	5,285.49	-212.70	-233.41	-194.38	0.39	-0.28	3.72
5,325.00	4.08	230.26	5,310.42	-213.86	-234.79	-195.44	0.49	-0.44	2.88
5,350.00	4.09	230.47	5,335.36	-215.00	-236.16	-196.47	0.07	0.04	0.84
5,375.00	3.89	234.36	5,360.30	-216.06	-237.54	-197.42	1.35	-0.80	15.56
5,400.00	3.72	238.94	5,385.25	-216.97	-238.92	-198.22	1.39	-0.68	18.32
5,425.00	3.62	241.62	5,410.19	-217.76	-240.31	-198.91	0.79	-0.40	10.72
5,450.00	3.54	242.20	5,435.15	-218.50	-241.69	-199.54	0.35	-0.32	2.32
5,475.00	3.57	241.86	5,460.10	-219.23	-243.06	-200.16	0.15	0.12	-1.36
5,500.00	3.60	241.77	5,485.05	-219.97	-244.43	-200.79	0.12	0.12	-0.36
5,525.00	3.56	242.18	5,510.00	-220.70	-245.81	-201.42	0.19	-0.16	1.64
5,550.00	3.50	242.68	5,534.95	-221.41	-247.18	-202.03	0.27	-0.24	2.00
5,575.00	3.49	242.65	5,559.91	-222.11	-248.53	-202.62	0.04	-0.04	-0.12
5,600.00	3.46	242.01	5,584.86	-222.81	-249.87	-203.22	0.20	-0.12	-2.56
5,625.00	3.43	240.80	5,609.81	-223.53	-251.19	-203.84	0.31	-0.12	-4.84
5,650.00	3.40	241.63	5,634.77	-224.25	-252.50	-204.45	0.23	-0.12	3.32
5,675.00	3.35	242.06	5,659.73	-224.95	-253.79	-205.05	0.22	-0.20	1.72
5,700.00	3.37	241.72	5,684.68	-225.64	-255.09	-205.64	0.11	0.08	-1.36

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,725.00	3.42	242.30	5,709.64	-226.33	-256.39	-206.23	0.24	0.20	2.32
5,750.00	3.39	242.39	5,734.60	-227.02	-257.71	-206.82	0.12	-0.12	0.36
5,775.00	3.28	244.15	5,759.55	-227.67	-259.01	-207.37	0.60	-0.44	7.04
5,800.00	2.97	250.86	5,784.52	-228.20	-260.26	-207.80	1.92	-1.24	26.84
5,825.00	2.61	260.13	5,809.49	-228.51	-261.44	-208.02	2.30	-1.44	37.08
5,850.00	2.42	266.22	5,834.46	-228.64	-262.52	-208.07	1.31	-0.76	24.36
5,875.00	2.35	269.65	5,859.44	-228.68	-263.56	-208.03	0.64	-0.28	13.72
5,900.00	2.31	270.01	5,884.42	-228.68	-264.58	-207.95	0.17	-0.16	1.44
5,925.00	2.26	268.47	5,909.40	-228.69	-265.58	-207.89	0.32	-0.20	-6.16
5,950.00	2.23	269.03	5,934.38	-228.72	-266.56	-207.84	0.15	-0.12	2.24
5,975.00	2.18	267.41	5,959.36	-228.75	-267.52	-207.80	0.32	-0.20	-6.48
6,000.00	2.16	265.02	5,984.34	-228.81	-268.46	-207.79	0.37	-0.08	-9.56
6,025.00	2.14	263.84	6,009.33	-228.90	-269.39	-207.81	0.19	-0.08	-4.72
6,050.00	2.11	260.20	6,034.31	-229.03	-270.31	-207.86	0.55	-0.12	-14.56
6,075.00	2.13	256.37	6,059.29	-229.22	-271.22	-207.98	0.57	0.08	-15.32
6,100.00	2.14	255.97	6,084.28	-229.44	-272.12	-208.14	0.07	0.04	-1.60
6,125.00	2.12	256.28	6,109.26	-229.66	-273.02	-208.29	0.09	-0.08	1.24
6,150.00	2.03	252.37	6,134.24	-229.90	-273.89	-208.47	0.67	-0.36	-15.64
6,175.00	1.79	250.77	6,159.23	-230.17	-274.69	-208.67	0.98	-0.96	-6.40
6,200.00	1.28	252.38	6,184.22	-230.38	-275.32	-208.83	2.05	-2.04	6.44
6,225.00	0.93	254.88	6,209.21	-230.52	-275.78	-208.94	1.41	-1.40	10.00
6,250.00	0.85	260.29	6,234.21	-230.60	-276.16	-208.99	0.46	-0.32	21.64
6,275.00	0.75	263.78	6,259.21	-230.65	-276.51	-209.01	0.44	-0.40	13.96
6,300.00	0.57	264.68	6,284.21	-230.68	-276.79	-209.02	0.72	-0.72	3.60
6,325.00	0.26	262.20	6,309.21	-230.70	-276.97	-209.03	1.24	-1.24	-9.92
6,350.00	0.08	255.83	6,334.21	-230.71	-277.05	-209.03	0.72	-0.72	-25.48
6,375.00	0.06	122.05	6,359.21	-230.72	-277.05	-209.04	0.52	-0.08	-535.12
6,400.00	0.11	70.11	6,384.21	-230.72	-277.02	-209.05	0.35	0.20	-207.76
6,425.00	0.13	44.50	6,409.21	-230.69	-276.98	-209.02	0.23	0.08	-102.44
6,450.00	0.13	70.75	6,434.21	-230.66	-276.93	-208.99	0.24	0.00	105.00
6,475.00	0.15	73.09	6,459.21	-230.64	-276.87	-208.98	0.08	0.08	9.36
6,500.00	0.25	65.74	6,484.21	-230.61	-276.79	-208.95	0.41	0.40	-29.40
6,525.00	0.45	63.85	6,509.21	-230.55	-276.65	-208.90	0.80	0.80	-7.56
6,550.00	0.83	68.76	6,534.20	-230.44	-276.39	-208.81	1.53	1.52	19.64
6,575.00	1.05	75.51	6,559.20	-230.32	-276.00	-208.72	0.98	0.88	27.00
6,600.00	1.09	77.07	6,584.20	-230.20	-275.55	-208.64	0.20	0.16	6.24
6,625.00	1.15	77.47	6,609.19	-230.10	-275.07	-208.57	0.24	0.24	1.60
6,650.00	1.19	75.99	6,634.19	-229.98	-274.58	-208.49	0.20	0.16	-5.92
6,675.00	1.15	74.39	6,659.18	-229.85	-274.08	-208.40	0.21	-0.16	-6.40
6,700.00	1.17	75.13	6,684.18	-229.72	-273.60	-208.30	0.10	0.08	2.96
6,725.00	1.22	74.89	6,709.17	-229.58	-273.09	-208.21	0.20	0.20	-0.96
6,750.00	1.26	73.03	6,734.16	-229.43	-272.57	-208.10	0.23	0.16	-7.44
6,775.00	1.26	71.09	6,759.16	-229.26	-272.05	-207.97	0.17	0.00	-7.76
6,800.00	1.26	74.00	6,784.15	-229.10	-271.52	-207.84	0.26	0.00	11.64

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,825.00	1.27	72.29	6,809.15	-228.94	-271.00	-207.72	0.16	0.04	-6.84
6,850.00	1.26	71.10	6,834.14	-228.76	-270.47	-207.59	0.11	-0.04	-4.76
6,875.00	1.25	72.22	6,859.13	-228.59	-269.95	-207.46	0.11	-0.04	4.48
6,900.00	1.26	70.06	6,884.13	-228.42	-269.43	-207.32	0.19	0.04	-8.64
6,925.00	1.27	67.59	6,909.12	-228.22	-268.92	-207.16	0.22	0.04	-9.88
6,950.00	1.26	66.03	6,934.12	-228.00	-268.41	-206.98	0.14	-0.04	-6.24
6,975.00	1.27	64.47	6,959.11	-227.77	-267.91	-206.79	0.14	0.04	-6.24
7,000.00	1.29	60.89	6,984.10	-227.51	-267.42	-206.57	0.33	0.08	-14.32
7,025.00	1.31	56.43	7,009.10	-227.22	-266.93	-206.32	0.41	0.08	-17.84
7,050.00	1.31	55.18	7,034.09	-226.90	-266.46	-206.03	0.11	0.00	-5.00
7,075.00	1.33	54.24	7,059.08	-226.56	-265.99	-205.73	0.12	0.08	-3.76
7,100.00	1.34	53.66	7,084.08	-226.22	-265.52	-205.43	0.07	0.04	-2.32
7,125.00	1.19	57.19	7,109.07	-225.91	-265.06	-205.15	0.68	-0.60	14.12
7,150.00	0.93	55.72	7,134.07	-225.65	-264.68	-204.93	1.05	-1.04	-5.88
7,175.00	0.45	37.87	7,159.07	-225.46	-264.45	-204.75	2.08	-1.92	-71.40
7,200.00	0.22	322.27	7,184.06	-225.34	-264.42	-204.64	1.80	-0.92	-302.40
7,225.00	0.27	288.53	7,209.06	-225.29	-264.51	-204.58	0.60	0.20	-134.96
7,250.00	0.33	269.25	7,234.06	-225.27	-264.63	-204.55	0.47	0.24	-77.12
7,275.00	0.33	272.41	7,259.06	-225.27	-264.78	-204.53	0.07	0.00	12.64
7,300.00	0.31	280.88	7,284.06	-225.25	-264.92	-204.51	0.21	-0.08	33.88
7,325.00	0.32	280.39	7,309.06	-225.23	-265.05	-204.47	0.04	0.04	-1.96
7,350.00	0.29	275.17	7,334.06	-225.21	-265.18	-204.44	0.16	-0.12	-20.88
7,375.00	0.30	274.71	7,359.06	-225.20	-265.31	-204.42	0.04	0.04	-1.84
7,400.00	0.34	277.22	7,384.06	-225.18	-265.45	-204.40	0.17	0.16	10.04
7,425.00	0.35	271.47	7,409.06	-225.17	-265.60	-204.38	0.14	0.04	-23.00
7,450.00	0.36	266.36	7,434.06	-225.17	-265.75	-204.37	0.13	0.04	-20.44
7,475.00	0.36	269.33	7,459.06	-225.18	-265.91	-204.36	0.07	0.00	11.88
7,500.00	0.37	268.65	7,484.06	-225.18	-266.07	-204.35	0.04	0.04	-2.72
7,525.00	0.35	262.03	7,509.06	-225.19	-266.23	-204.35	0.18	-0.08	-26.48
7,550.00	0.35	266.91	7,534.06	-225.21	-266.38	-204.36	0.12	0.00	19.52
7,575.00	0.39	272.82	7,559.06	-225.21	-266.54	-204.34	0.22	0.16	23.64
7,600.00	0.37	268.82	7,584.06	-225.21	-266.71	-204.33	0.13	-0.08	-16.00
7,625.00	0.36	272.63	7,609.06	-225.20	-266.86	-204.31	0.10	-0.04	15.24
7,650.00	0.36	275.30	7,634.06	-225.19	-267.02	-204.29	0.07	0.00	10.68
7,675.00	0.38	271.58	7,659.06	-225.18	-267.18	-204.27	0.12	0.08	-14.88
7,700.00	0.39	278.31	7,684.06	-225.17	-267.35	-204.24	0.19	0.04	26.92
7,725.00	0.37	275.26	7,709.06	-225.15	-267.51	-204.21	0.11	-0.08	-12.20
7,750.00	0.40	266.48	7,734.05	-225.15	-267.68	-204.20	0.26	0.12	-35.12
7,775.00	0.46	265.40	7,759.05	-225.16	-267.87	-204.20	0.24	0.24	-4.32
7,800.00	0.52	263.30	7,784.05	-225.18	-268.08	-204.20	0.25	0.24	-8.40
7,825.00	0.52	261.55	7,809.05	-225.21	-268.31	-204.21	0.06	0.00	-7.00
7,850.00	0.51	258.18	7,834.05	-225.25	-268.53	-204.24	0.13	-0.04	-13.48
7,875.00	0.56	258.49	7,859.05	-225.30	-268.76	-204.27	0.20	0.20	1.24

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,900.00	0.65	256.47	7,884.05	-225.36	-269.01	-204.30	0.37	0.36	-8.08
7,925.00	0.71	252.84	7,909.05	-225.44	-269.30	-204.36	0.30	0.24	-14.52
7,950.00	0.72	252.28	7,934.05	-225.53	-269.60	-204.43	0.05	0.04	-2.24
7,975.00	0.77	254.78	7,959.04	-225.62	-269.91	-204.50	0.24	0.20	10.00
8,000.00	0.78	253.99	7,984.04	-225.71	-270.23	-204.57	0.06	0.04	-3.16
8,025.00	0.74	251.49	8,009.04	-225.81	-270.55	-204.64	0.21	-0.16	-10.00
8,050.00	0.63	258.14	8,034.04	-225.89	-270.84	-204.70	0.54	-0.44	26.60
8,075.00	0.39	276.91	8,059.04	-225.91	-271.06	-204.70	1.16	-0.96	75.08
8,100.00	0.22	300.64	8,084.04	-225.87	-271.18	-204.65	0.83	-0.68	94.92
8,125.00	0.20	301.43	8,109.04	-225.83	-271.26	-204.60	0.08	-0.08	3.16
8,150.00	0.26	301.76	8,134.03	-225.77	-271.35	-204.54	0.24	0.24	1.32
8,175.00	0.25	302.68	8,159.03	-225.71	-271.44	-204.48	0.04	-0.04	3.68
8,200.00	0.25	302.62	8,184.03	-225.66	-271.53	-204.41	0.00	0.00	-0.24
8,225.00	0.24	306.37	8,209.03	-225.59	-271.62	-204.34	0.08	-0.04	15.00
8,250.00	0.14	312.75	8,234.03	-225.54	-271.69	-204.29	0.41	-0.40	25.52
8,275.00	0.14	302.38	8,259.03	-225.51	-271.73	-204.25	0.10	0.00	-41.48
8,300.00	0.19	307.87	8,284.03	-225.46	-271.79	-204.20	0.21	0.20	21.96
8,325.00	0.23	310.46	8,309.03	-225.41	-271.86	-204.14	0.16	0.16	10.36
8,350.00	0.20	301.31	8,334.03	-225.35	-271.94	-204.08	0.18	-0.12	-36.60
8,375.00	0.17	298.43	8,359.03	-225.31	-272.01	-204.03	0.13	-0.12	-11.52
8,400.00	0.17	280.95	8,384.03	-225.29	-272.08	-204.00	0.21	0.00	-69.92
8,425.00	0.23	270.42	8,409.03	-225.28	-272.16	-203.99	0.28	0.24	-42.12
8,450.00	0.27	286.62	8,434.03	-225.26	-272.27	-203.96	0.32	0.16	64.80
8,475.00	0.36	309.93	8,459.03	-225.19	-272.39	-203.88	0.62	0.36	93.24
8,500.00	0.28	273.50	8,484.03	-225.14	-272.51	-203.82	0.86	-0.32	-145.72
8,525.00	0.29	267.65	8,509.03	-225.14	-272.63	-203.81	0.12	0.04	-23.40
8,550.00	0.34	265.73	8,534.03	-225.15	-272.77	-203.81	0.20	0.20	-7.68
8,575.00	0.45	263.86	8,559.03	-225.16	-272.94	-203.81	0.44	0.44	-7.48
8,600.00	0.41	266.29	8,584.03	-225.18	-273.13	-203.81	0.18	-0.16	9.72
8,625.00	0.39	268.39	8,609.03	-225.19	-273.30	-203.81	0.10	-0.08	8.40
8,650.00	0.46	260.16	8,634.03	-225.21	-273.49	-203.81	0.37	0.28	-32.92
8,675.00	0.45	262.44	8,659.03	-225.24	-273.68	-203.83	0.08	-0.04	9.12
8,700.00	0.44	251.17	8,684.03	-225.28	-273.87	-203.86	0.35	-0.04	-45.08
8,725.00	0.48	264.85	8,709.03	-225.32	-274.07	-203.88	0.47	0.16	54.72
8,750.00	0.48	270.32	8,734.03	-225.33	-274.28	-203.88	0.18	0.00	21.88
8,775.00	0.47	264.96	8,759.02	-225.34	-274.48	-203.87	0.18	-0.04	-21.44
8,800.00	0.41	274.31	8,784.02	-225.34	-274.67	-203.86	0.37	-0.24	37.40
8,825.00	0.50	265.58	8,809.02	-225.34	-274.87	-203.84	0.45	0.36	-34.92
8,850.00	0.49	264.96	8,834.02	-225.36	-275.09	-203.85	0.05	-0.04	-2.48
8,875.00	0.37	269.83	8,859.02	-225.37	-275.27	-203.84	0.50	-0.48	19.48
8,900.00	0.19	136.11	8,884.02	-225.40	-275.33	-203.87	2.08	-0.72	-534.88
8,925.00	0.22	113.96	8,909.02	-225.45	-275.25	-203.92	0.34	0.12	-88.60
8,950.00	0.25	114.17	8,934.02	-225.49	-275.16	-203.97	0.12	0.12	0.84

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,975.00	0.24	122.32	8,959.02	-225.54	-275.07	-204.03	0.14	-0.04	32.60
9,000.00	0.23	121.65	8,984.02	-225.60	-274.98	-204.09	0.04	-0.04	-2.68
9,025.00	0.25	127.52	9,009.02	-225.66	-274.89	-204.15	0.13	0.08	23.48
9,050.00	0.25	125.19	9,034.02	-225.72	-274.80	-204.23	0.04	0.00	-9.32
9,075.00	0.24	120.97	9,059.02	-225.78	-274.72	-204.29	0.08	-0.04	-16.88
9,100.00	0.23	138.56	9,084.02	-225.84	-274.64	-204.36	0.29	-0.04	70.36
9,125.00	0.23	115.16	9,109.02	-225.90	-274.56	-204.43	0.37	0.00	-93.60
9,150.00	0.23	115.52	9,134.02	-225.94	-274.47	-204.48	0.01	0.00	1.44
9,175.00	0.20	147.58	9,159.02	-226.00	-274.40	-204.54	0.49	-0.12	128.24
9,200.00	0.16	113.08	9,184.02	-226.05	-274.34	-204.59	0.45	-0.16	-138.00
9,225.00	0.18	148.72	9,209.02	-226.10	-274.29	-204.64	0.42	0.08	142.56
9,250.00	0.20	170.13	9,234.02	-226.18	-274.26	-204.72	0.29	0.08	85.64
9,275.00	0.11	142.68	9,259.02	-226.24	-274.24	-204.79	0.46	-0.36	-109.80
9,300.00	0.20	171.48	9,284.02	-226.30	-274.22	-204.85	0.47	0.36	115.20
9,325.00	0.15	150.02	9,309.02	-226.37	-274.20	-204.92	0.33	-0.20	-85.84
9,350.00	0.12	170.65	9,334.02	-226.43	-274.18	-204.98	0.23	-0.12	82.52
9,375.00	0.15	180.76	9,359.02	-226.49	-274.17	-205.04	0.15	0.12	40.44
9,400.00	0.18	183.68	9,384.02	-226.56	-274.18	-205.11	0.12	0.12	11.68
9,425.00	0.06	141.43	9,409.02	-226.61	-274.17	-205.16	0.57	-0.48	-169.00
9,450.00	0.19	188.96	9,434.02	-226.66	-274.17	-205.21	0.62	0.52	190.12
9,475.00	0.18	191.43	9,459.02	-226.74	-274.18	-205.29	0.05	-0.04	9.88
9,500.00	0.09	193.14	9,484.02	-226.80	-274.20	-205.34	0.36	-0.36	6.84
9,525.00	0.10	228.23	9,509.02	-226.83	-274.22	-205.38	0.23	0.04	140.36
9,550.00	0.15	231.58	9,534.02	-226.86	-274.26	-205.41	0.20	0.20	13.40
9,575.00	0.18	273.09	9,559.02	-226.88	-274.32	-205.42	0.48	0.12	166.04
9,600.00	0.27	290.62	9,584.02	-226.86	-274.42	-205.39	0.45	0.36	70.12
9,625.00	0.44	289.58	9,609.02	-226.81	-274.56	-205.33	0.68	0.68	-4.16
9,650.00	0.39	284.38	9,634.02	-226.75	-274.74	-205.26	0.25	-0.20	-20.80
9,675.00	0.46	304.18	9,659.02	-226.68	-274.90	-205.17	0.65	0.28	79.20
9,700.00	0.47	293.03	9,684.02	-226.58	-275.08	-205.06	0.36	0.04	-44.60
9,725.00	0.52	291.57	9,709.01	-226.50	-275.28	-204.97	0.21	0.20	-5.84
9,750.00	0.49	298.31	9,734.01	-226.41	-275.48	-204.86	0.27	-0.12	26.96
9,775.00	0.22	310.99	9,759.01	-226.32	-275.61	-204.77	1.12	-1.08	50.72
9,800.00	0.53	93.81	9,784.01	-226.30	-275.53	-204.75	2.87	1.24	571.28
9,825.00	0.79	95.98	9,809.01	-226.32	-275.24	-204.80	1.04	1.04	8.68
9,850.00	1.16	98.43	9,834.01	-226.38	-274.82	-204.88	1.49	1.48	9.80
9,875.00	2.08	103.49	9,859.00	-226.52	-274.13	-205.08	3.72	3.68	20.24
9,900.00	2.17	104.41	9,883.98	-226.75	-273.23	-205.37	0.38	0.36	3.68
9,925.00	2.24	102.51	9,908.96	-226.97	-272.29	-205.66	0.40	0.28	-7.60
9,950.00	2.24	102.24	9,933.94	-227.18	-271.34	-205.94	0.04	0.00	-1.08
9,975.00	2.22	101.25	9,958.92	-227.38	-270.39	-206.21	0.17	-0.08	-3.96
10,000.00	2.10	100.69	9,983.91	-227.56	-269.46	-206.46	0.49	-0.48	-2.24
10,025.00	1.48	105.17	10,008.89	-227.73	-268.70	-206.69	2.54	-2.48	17.92
10,050.00	0.63	134.40	10,033.89	-227.81	-268.29	-206.90	3.92	-3.40	116.92

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,075.00	0.54	172.45	10,058.89	-228.12	-268.18	-207.12	1.56	-0.36	152.20
10,100.00	0.48	177.73	10,083.89	-228.34	-268.16	-207.34	0.30	-0.24	21.12
10,125.00	0.52	186.01	10,108.89	-228.56	-268.17	-207.56	0.33	0.16	33.12
10,150.00	0.51	193.20	10,133.88	-228.78	-268.20	-207.78	0.26	-0.04	28.76
10,175.00	0.56	209.38	10,158.88	-228.99	-268.29	-207.99	0.63	0.20	64.72
10,200.00	0.67	215.95	10,183.88	-229.22	-268.43	-208.20	0.52	0.44	26.28
10,225.00	0.78	221.38	10,208.88	-229.47	-268.63	-208.43	0.52	0.44	21.72
10,250.00	1.24	229.94	10,233.88	-229.77	-268.95	-208.71	1.93	1.84	34.24
10,275.00	1.52	228.92	10,258.87	-230.16	-269.41	-209.06	1.12	1.12	-4.08
10,300.00	1.92	228.74	10,283.86	-230.65	-269.97	-209.51	1.60	1.60	-0.72
10,325.00	1.92	227.82	10,308.84	-231.21	-270.60	-210.02	0.12	0.00	-3.68
10,350.00	1.93	233.16	10,333.83	-231.74	-271.25	-210.50	0.72	0.04	21.36
10,375.00	1.93	231.32	10,358.82	-232.26	-271.91	-210.97	0.25	0.00	-7.36
10,400.00	1.72	231.10	10,383.80	-232.76	-272.53	-211.42	0.84	-0.84	-0.88
10,425.00	1.26	233.50	10,408.79	-233.16	-273.04	-211.78	1.86	-1.84	9.60
10,450.00	1.21	244.03	10,433.79	-233.44	-273.50	-212.02	0.93	-0.20	42.12
10,475.00	0.82	262.89	10,458.78	-233.57	-273.92	-212.13	2.03	-1.56	75.44
10,500.00	0.72	308.44	10,483.78	-233.50	-274.22	-212.03	2.41	-0.40	182.20
10,525.00	0.75	310.72	10,508.78	-233.29	-274.47	-211.80	0.17	0.12	9.12
10,550.00	0.71	312.70	10,533.78	-233.08	-274.70	-211.58	0.19	-0.16	7.92
10,575.00	0.54	314.22	10,558.78	-232.80	-274.90	-211.37	0.68	-0.68	6.08
10,600.00	0.15	340.21	10,583.78	-232.78	-275.00	-211.25	1.64	-1.56	103.96
10,625.00	0.18	355.73	10,608.78	-232.71	-275.01	-211.18	0.21	0.12	62.08
10,650.00	0.15	358.75	10,633.78	-232.64	-275.01	-211.11	0.12	-0.12	12.08
10,675.00	0.17	22.54	10,658.78	-232.57	-275.00	-211.05	0.28	0.08	95.16
10,700.00	0.13	347.54	10,683.78	-232.51	-274.99	-210.98	0.39	-0.16	-140.00
10,725.00	0.06	283.40	10,708.78	-232.48	-275.01	-210.95	0.47	-0.28	-258.56
10,750.00	0.06	291.84	10,733.78	-232.47	-275.04	-210.94	0.04	0.00	33.76
10,775.00	0.15	237.00	10,758.78	-232.49	-275.08	-210.95	0.50	0.36	-219.36
10,800.00	0.15	206.76	10,783.78	-232.53	-275.12	-211.00	0.31	0.00	-120.96
10,825.00	0.14	200.23	10,808.78	-232.59	-275.14	-211.05	0.08	-0.04	-26.12
10,850.00	0.15	227.58	10,833.78	-232.64	-275.18	-211.10	0.28	0.04	109.40
10,875.00	0.18	258.41	10,858.78	-232.67	-275.24	-211.12	0.37	0.12	123.32
10,900.00	0.22	248.05	10,883.78	-232.70	-275.32	-211.14	0.22	0.16	-41.44
10,925.00	0.22	239.89	10,908.77	-232.74	-275.41	-211.18	0.13	0.00	-32.64
10,950.00	0.32	252.32	10,933.77	-232.78	-275.52	-211.22	0.46	0.40	49.72
10,975.00	0.44	235.18	10,958.77	-232.86	-275.66	-211.28	0.66	0.48	-68.56
11,000.00	0.61	244.43	10,983.77	-232.97	-275.86	-211.38	0.76	0.68	37.00
11,025.00	0.61	244.44	11,008.77	-233.09	-276.10	-211.47	0.00	0.00	0.04
11,050.00	0.62	239.92	11,033.77	-233.21	-276.34	-211.58	0.20	0.04	-18.08
11,075.00	0.64	242.51	11,058.77	-233.35	-276.58	-211.70	0.14	0.08	10.36
11,100.00	0.70	246.13	11,083.77	-233.47	-276.84	-211.80	0.29	0.24	14.48
11,125.00	0.50	282.32	11,108.77	-233.51	-277.09	-211.82	1.67	-0.80	144.76

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,150.00	0.46	306.99	11,133.76	-233.43	-277.28	-211.72	0.84	-0.16	98.68
11,175.00	0.57	327.20	11,158.76	-233.26	-277.42	-211.55	0.84	0.44	80.84
11,200.00	0.59	335.91	11,183.76	-233.04	-277.54	-211.32	0.36	0.08	34.84
11,225.00	1.02	356.00	11,208.76	-232.70	-277.61	-210.97	2.03	1.72	80.36
11,250.00	1.62	12.03	11,233.75	-232.13	-277.55	-210.41	2.80	2.40	64.12
11,275.00	1.77	11.89	11,258.74	-231.41	-277.40	-209.70	0.60	0.60	-0.56
11,300.00	1.79	12.70	11,283.73	-230.65	-277.24	-208.96	0.13	0.08	3.24
11,325.00	1.82	11.19	11,308.72	-229.88	-277.07	-208.20	0.22	0.12	-6.04
11,350.00	1.86	12.87	11,333.71	-229.10	-276.91	-207.43	0.27	0.16	6.72
11,375.00	1.83	21.15	11,358.69	-228.33	-276.67	-206.68	1.07	-0.12	33.12
11,400.00	1.81	25.98	11,383.68	-227.60	-276.35	-205.98	0.62	-0.08	19.32
11,425.00	1.86	25.84	11,408.67	-226.88	-276.00	-205.29	0.20	0.20	-0.56
11,450.00	1.86	26.32	11,433.65	-226.15	-275.65	-204.59	0.06	0.00	1.92
11,475.00	1.81	27.76	11,458.64	-225.44	-275.28	-203.91	0.27	-0.20	5.76
11,500.00	1.63	27.17	11,483.63	-224.77	-274.94	-203.27	0.72	-0.72	-2.36
11,525.00	1.59	27.72	11,508.62	-224.15	-274.61	-202.67	0.17	-0.16	2.20
11,550.00	1.59	28.25	11,533.61	-223.54	-274.29	-202.09	0.06	0.00	2.12
11,575.00	1.25	30.09	11,558.60	-223.00	-273.99	-201.57	1.37	-1.36	7.36
11,600.00	0.80	43.20	11,583.60	-222.63	-273.73	-201.23	2.02	-1.80	52.44
11,625.00	0.56	52.31	11,608.60	-222.43	-273.52	-201.04	1.05	-0.96	36.44
11,650.00	0.54	35.85	11,633.60	-222.26	-273.35	-200.89	0.63	-0.08	-65.84
11,675.00	0.47	38.02	11,658.59	-222.08	-273.22	-200.72	0.29	-0.28	8.68
11,700.00	0.32	27.53	11,683.59	-221.94	-273.12	-200.59	0.66	-0.60	-41.96
11,725.00	0.29	357.76	11,708.59	-221.82	-273.09	-200.46	0.64	-0.12	-119.08
11,750.00	0.45	8.70	11,733.59	-221.66	-273.08	-200.30	0.70	0.64	43.76
11,767.00	0.47	355.64	11,750.59	-221.52	-273.07	-200.17	0.63	0.12	-76.82
Tie In									
11,969.00	0.99	278.84	11,952.58	-220.43	-274.86	-198.94	0.49	0.26	-38.02
First Phoenix MWD Survey									
12,064.00	0.77	254.51	12,047.57	-220.47	-276.29	-198.88	0.45	-0.23	-25.61
12,144.00	0.76	235.36	12,127.56	-220.92	-277.24	-199.25	0.32	-0.01	-23.94
12,218.00	0.95	340.58	12,201.56	-220.62	-277.85	-198.91	1.84	0.26	142.19
12,249.00	4.25	2.96	12,232.52	-219.23	-277.88	-197.52	10.94	10.65	72.19
12,281.00	8.05	3.36	12,264.33	-215.80	-277.68	-194.12	11.88	11.88	1.25
12,313.00	11.70	3.42	12,295.85	-210.33	-277.36	-188.68	11.41	11.41	0.19
12,344.00	15.13	2.03	12,326.00	-203.14	-277.03	-181.55	11.11	11.06	-4.48
12,376.00	19.21	359.10	12,356.57	-193.70	-276.96	-172.14	13.03	12.75	-9.16
12,408.00	22.02	358.73	12,386.52	-182.44	-277.18	-160.89	8.79	8.78	-1.16
12,439.00	24.31	358.82	12,415.02	-170.25	-277.44	-148.71	7.39	7.39	0.29
12,471.00	27.22	356.21	12,443.83	-156.36	-278.06	-134.81	9.76	9.09	-8.16
12,503.00	30.54	353.82	12,471.85	-140.97	-279.42	-119.37	10.98	10.38	-7.47
12,535.00	34.14	354.49	12,498.88	-123.94	-281.16	-102.26	11.31	11.25	2.09
12,566.00	37.72	356.54	12,523.98	-105.81	-282.56	-84.07	12.18	11.55	6.61
12,598.00	40.88	358.48	12,548.74	-85.58	-283.43	-63.82	10.59	9.88	6.06

Survey Report

Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Dominator 25 Federal
 Well: 705H
 Wellbore: OH / 63048 / 63050
 Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
 TVD Reference: RKB @ 3364.40usft (Precision 595)
 MD Reference: RKB @ 3364.40usft (Precision 595)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,630.00	43.79	357.83	12,572.39	-64.03	-284.13	-42.29	9.20	9.09	-2.03
12,662.00	46.74	356.07	12,594.91	-41.33	-285.35	-19.57	10.01	9.22	-5.50
12,693.00	50.15	354.90	12,615.48	-18.21	-287.18	3.63	11.36	11.00	-3.77
12,725.00	52.79	354.40	12,635.41	6.71	-289.52	28.65	8.34	8.25	-1.56
12,757.00	54.60	354.32	12,654.35	32.37	-292.05	54.43	5.66	5.66	-0.25
12,789.00	56.61	354.74	12,672.43	58.66	-294.57	80.83	6.37	6.28	1.31
12,820.00	58.66	355.22	12,689.02	84.74	-296.86	107.01	6.74	6.61	1.55
12,852.00	61.44	356.54	12,705.00	112.39	-298.84	134.73	9.39	8.69	4.13
12,883.00	63.06	358.23	12,719.43	139.80	-300.09	162.15	7.11	5.23	5.45
12,915.00	64.56	359.02	12,733.55	168.50	-300.78	190.83	5.18	4.69	2.47
12,947.00	65.54	358.74	12,747.05	197.51	-301.35	219.80	3.16	3.06	-0.88
12,978.00	66.13	358.21	12,759.74	225.78	-302.10	248.05	2.46	1.90	-1.71
13,010.00	69.70	358.57	12,771.77	255.42	-302.93	277.66	11.20	11.16	1.13
13,042.00	75.39	358.56	12,781.37	285.92	-303.70	308.13	17.78	17.78	-0.03
13,073.00	80.72	358.81	12,787.78	316.23	-304.39	338.41	17.21	17.19	0.81
13,105.00	82.64	358.27	12,792.41	347.88	-305.20	370.03	6.23	6.00	-1.69
13,137.00	83.89	357.85	12,796.16	379.64	-306.27	401.78	4.12	3.91	-1.31
13,168.00	84.89	357.85	12,799.19	410.47	-307.43	432.61	3.23	3.23	0.00
13,200.00	85.71	358.16	12,801.82	442.35	-308.54	464.47	2.74	2.56	0.97
13,232.00	85.91	357.45	12,804.15	474.24	-309.76	496.37	2.30	0.63	-2.22
13,279.00	89.44	356.35	12,806.06	521.12	-312.30	543.31	7.87	7.51	-2.34
13,343.00	91.46	356.35	12,805.56	584.99	-316.38	607.30	3.16	3.16	0.00
13,437.00	91.57	356.63	12,803.07	678.78	-322.13	701.25	0.32	0.12	0.30
13,533.00	89.86	356.73	12,801.88	774.60	-327.69	797.23	1.78	-1.78	0.10
13,628.00	90.03	356.42	12,801.97	869.43	-333.37	892.22	0.37	0.18	-0.33
13,723.00	91.57	356.18	12,800.64	964.22	-339.50	987.20	1.64	1.62	-0.25
13,818.00	91.04	358.14	12,798.48	1,059.08	-344.20	1,082.13	2.14	-0.56	2.06
13,913.00	88.18	0.76	12,799.12	1,154.05	-345.11	1,176.91	4.08	-3.01	2.76
14,008.00	90.70	0.86	12,800.05	1,249.03	-343.77	1,271.51	2.65	2.65	0.11
14,104.00	90.03	1.54	12,799.44	1,345.01	-341.76	1,367.05	0.99	-0.70	0.71
14,198.00	90.70	1.25	12,798.84	1,438.98	-339.47	1,460.58	0.78	0.71	-0.31
14,294.00	88.63	0.86	12,799.40	1,534.95	-337.70	1,556.15	2.19	-2.16	-0.41
14,389.00	90.48	1.42	12,800.14	1,629.93	-335.81	1,650.70	2.03	1.95	0.59
14,484.00	90.48	0.70	12,799.34	1,724.91	-334.06	1,745.28	0.76	0.00	-0.76
14,579.00	88.43	359.73	12,800.25	1,819.90	-333.70	1,839.96	2.39	-2.16	-1.02
14,674.00	88.04	359.41	12,803.17	1,914.85	-334.41	1,934.70	0.53	-0.41	-0.34
14,767.00	88.91	358.25	12,805.65	2,007.79	-336.31	2,027.52	1.56	0.94	-1.25
14,862.00	89.58	358.69	12,806.90	2,102.75	-338.85	2,122.39	0.84	0.71	0.46
14,957.00	90.17	359.57	12,807.11	2,197.74	-340.29	2,217.22	1.12	0.62	0.93
15,052.00	91.01	0.16	12,806.13	2,292.73	-340.51	2,311.95	1.08	0.88	0.62
15,148.00	91.62	359.74	12,803.93	2,388.71	-340.60	2,407.66	0.77	0.64	-0.44
15,243.00	90.50	358.85	12,802.17	2,483.68	-341.77	2,502.45	1.51	-1.18	-0.94
15,338.00	91.79	359.26	12,800.27	2,578.65	-343.33	2,597.26	1.42	1.36	0.43

Survey Report

Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: Dominator 25 Federal
Well: 705H
Wellbore: OH / 63048 / 63050
Design: Surveys (Precision 595)

Local Co-ordinate Reference: Well 705H
TVD Reference: RKB @ 3364.40usft (Precision 595)
MD Reference: RKB @ 3364.40usft (Precision 595)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,433.00	88.15	358.93	12,800.32	2,673.62	-344.83	2,692.07	3.85	-3.83	-0.35
15,527.00	87.76	359.23	12,803.68	2,767.54	-346.34	2,785.84	0.52	-0.41	0.32
15,618.00	87.71	358.11	12,807.27	2,858.45	-348.45	2,876.64	1.23	-0.05	-1.23
15,712.00	90.70	358.29	12,808.58	2,952.38	-351.40	2,970.53	3.19	3.18	0.19
15,807.00	92.16	358.20	12,806.21	3,047.31	-354.31	3,065.40	1.54	1.54	-0.09
15,902.00	93.64	358.20	12,801.40	3,142.13	-357.29	3,160.18	1.56	1.56	0.00
15,997.00	91.07	359.48	12,797.50	3,237.02	-359.21	3,254.95	3.02	-2.71	1.35
16,092.00	89.50	358.96	12,797.02	3,332.01	-360.51	3,349.76	1.74	-1.65	-0.55
16,187.00	89.78	358.78	12,797.62	3,426.99	-362.38	3,444.60	0.35	0.29	-0.19
16,282.00	88.71	359.63	12,798.87	3,521.97	-363.70	3,539.41	1.44	-1.13	0.89
16,378.00	89.50	359.58	12,800.37	3,617.96	-364.36	3,635.17	0.82	0.82	-0.05
16,473.00	90.36	359.61	12,800.49	3,712.95	-365.03	3,729.94	0.91	0.91	0.03
16,568.00	91.59	359.83	12,798.87	3,807.94	-365.49	3,824.69	1.32	1.29	0.23
16,663.00	91.79	359.25	12,796.07	3,902.89	-366.26	3,919.43	0.65	0.21	-0.61
16,758.00	89.24	0.21	12,795.22	3,997.88	-366.70	4,014.17	2.87	-2.68	1.01
16,854.00	89.44	359.83	12,796.32	4,093.87	-366.67	4,109.89	0.45	0.21	-0.40
16,947.00	89.61	0.66	12,797.09	4,186.87	-366.27	4,202.59	0.91	0.18	0.89
17,042.00	89.13	1.26	12,798.14	4,281.85	-364.68	4,297.17	0.81	-0.51	0.63
17,136.00	89.97	2.20	12,798.87	4,375.80	-361.84	4,390.64	1.34	0.89	1.00
17,230.00	89.94	1.23	12,798.95	4,469.76	-359.03	4,484.11	1.03	-0.03	-1.03
17,325.00	90.20	0.94	12,798.83	4,564.74	-357.23	4,578.68	0.41	0.27	-0.31
17,420.00	90.70	1.63	12,798.09	4,659.71	-355.10	4,673.22	0.90	0.53	0.73
17,472.00	91.04	2.48	12,797.30	4,711.67	-353.24	4,724.89	1.76	0.65	1.63
Final Phoenix MWD Survey									
17,532.00	91.04	2.48	12,796.21	4,771.60	-350.64	4,784.45	0.00	0.00	0.00
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,767.00	11,750.59	-221.52	-273.07	Tie In
11,969.00	11,952.58	-220.43	-274.86	First Phoenix MWD Survey
17,472.00	12,797.30	4,711.67	-353.24	Final Phoenix MWD Survey
17,532.00	12,796.21	4,771.60	-350.64	Projection to TD