



PHOENIX
TECHNOLOGY SERVICES

COG Operating LLC

Lea County, NM (NAD27 NME)

Harrier Federal Com

201H

OH

Plan: Plan 1 08-23-19

Standard Planning Report

23 August, 2019





Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Lea County, NM (NAD27 NME)
Site: Harrier Federal Com
Well: 201H
Wellbore: OH
Design: Plan 1 08-23-19

Local Co-ordinate Reference: Well 201H
TVD Reference: 327RKB4.3 @ 3274.30usft (Pioneer 84)
MD Reference: 327RKB4.3 @ 3274.30usft (Pioneer 84)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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	Harrier Federal Com			
Site Position:		Northing:	398,195.60 usft	Latitude: 32° 5' 34.543518 N
From: Map		Easting:	710,683.50 usft	Longitude: 103° 39' 10.862860 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.36 °

Well	201H			
Well Position	+N/-S	-9,819.80 usft	Northing:	388,375.80 usft
	+E/-W	1,227.40 usft	Easting:	711,910.90 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	Ground Level: 3,249.30 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	10/22/2019	6.62	59.67	47,705.12225688

Design	Plan 1 08-23-19			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	357.28

Plan Survey Tool Program		Date 8/23/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,484.56 Plan 1 08-23-19 (OH)	MWD+HRGM OWSG MWD + HRGM	



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Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	10.00	244.65	5,497.47	-18.64	-39.33	2.00	2.00	0.00	244.65	
7,688.56	10.00	244.65	7,652.77	-181.36	-382.77	0.00	0.00	0.00	0.00	
8,188.56	0.00	0.00	8,150.24	-200.00	-422.10	2.00	-2.00	0.00	180.00	
8,746.45	0.00	0.00	8,708.13	-200.00	-422.10	0.00	0.00	0.00	0.00	
9,656.66	91.02	359.65	9,281.00	383.16	-425.66	10.00	10.00	-0.04	359.65	
14,258.38	91.02	359.65	9,199.00	4,984.06	-453.77	0.00	0.00	0.00	0.00	5000' VS - Harrier Fer
14,282.08	90.55	359.65	9,198.68	5,007.76	-453.92	2.00	-2.00	0.00	-180.00	
19,484.56	90.55	359.65	9,149.00	10,209.90	-485.70	0.00	0.00	0.00	0.00	BHL - Harrier Federal



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Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
5,100.00	2.00	244.65	5,099.98	-0.75	-1.58	-0.67	2.00	2.00	0.00
5,200.00	4.00	244.65	5,199.84	-2.99	-6.31	-2.69	2.00	2.00	0.00
5,300.00	6.00	244.65	5,299.45	-6.72	-14.18	-6.04	2.00	2.00	0.00
5,400.00	8.00	244.65	5,398.70	-11.94	-25.19	-10.73	2.00	2.00	0.00
5,500.00	10.00	244.65	5,497.47	-18.64	-39.33	-16.75	2.00	2.00	0.00
Hold 10.00° Inc at 244.65° Azm									
5,600.00	10.00	244.65	5,595.95	-26.07	-55.02	-23.43	0.00	0.00	0.00
5,700.00	10.00	244.65	5,694.43	-33.51	-70.72	-30.11	0.00	0.00	0.00
5,800.00	10.00	244.65	5,792.91	-40.94	-86.41	-36.79	0.00	0.00	0.00
5,900.00	10.00	244.65	5,891.39	-48.38	-102.10	-43.47	0.00	0.00	0.00
6,000.00	10.00	244.65	5,989.87	-55.81	-117.79	-50.15	0.00	0.00	0.00
6,100.00	10.00	244.65	6,088.35	-63.25	-133.49	-56.83	0.00	0.00	0.00
6,200.00	10.00	244.65	6,186.83	-70.68	-149.18	-63.52	0.00	0.00	0.00
6,300.00	10.00	244.65	6,285.31	-78.12	-164.87	-70.20	0.00	0.00	0.00
6,400.00	10.00	244.65	6,383.79	-85.55	-180.56	-76.88	0.00	0.00	0.00
6,500.00	10.00	244.65	6,482.27	-92.99	-196.26	-83.56	0.00	0.00	0.00
6,600.00	10.00	244.65	6,580.75	-100.43	-211.95	-90.24	0.00	0.00	0.00
6,700.00	10.00	244.65	6,679.23	-107.86	-227.64	-96.92	0.00	0.00	0.00
6,800.00	10.00	244.65	6,777.72	-115.30	-243.33	-103.60	0.00	0.00	0.00
6,900.00	10.00	244.65	6,876.20	-122.73	-259.03	-110.28	0.00	0.00	0.00
7,000.00	10.00	244.65	6,974.68	-130.17	-274.72	-116.97	0.00	0.00	0.00
7,100.00	10.00	244.65	7,073.16	-137.60	-290.41	-123.65	0.00	0.00	0.00
7,200.00	10.00	244.65	7,171.64	-145.04	-306.10	-130.33	0.00	0.00	0.00
7,300.00	10.00	244.65	7,270.12	-152.47	-321.79	-137.01	0.00	0.00	0.00
7,400.00	10.00	244.65	7,368.60	-159.91	-337.49	-143.69	0.00	0.00	0.00
7,500.00	10.00	244.65	7,467.08	-167.34	-353.18	-150.37	0.00	0.00	0.00
7,600.00	10.00	244.65	7,565.56	-174.78	-368.87	-157.05	0.00	0.00	0.00
7,688.56	10.00	244.65	7,652.77	-181.36	-382.77	-162.97	0.00	0.00	0.00
Begin 2.00°/100' Drop									
7,700.00	9.77	244.65	7,664.05	-182.21	-384.54	-163.73	2.00	-2.00	0.00
7,800.00	7.77	244.65	7,762.87	-188.73	-398.32	-169.59	2.00	-2.00	0.00
7,900.00	5.77	244.65	7,862.17	-193.78	-408.98	-174.13	2.00	-2.00	0.00
8,000.00	3.77	244.65	7,961.82	-197.34	-416.49	-177.33	2.00	-2.00	0.00
8,100.00	1.77	244.65	8,061.70	-199.41	-420.86	-179.19	2.00	-2.00	0.00
8,188.56	0.00	0.00	8,150.24	-200.00	-422.10	-179.72	2.00	-2.00	0.00
Begin Vertical Hold									
8,200.00	0.00	0.00	8,161.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,300.00	0.00	0.00	8,261.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,400.00	0.00	0.00	8,361.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,500.00	0.00	0.00	8,461.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,600.00	0.00	0.00	8,561.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,700.00	0.00	0.00	8,661.68	-200.00	-422.10	-179.72	0.00	0.00	0.00
8,746.45	0.00	0.00	8,708.13	-200.00	-422.10	-179.72	0.00	0.00	0.00
KOP2, Begin 10.00°/100' Build									
8,800.00	5.36	359.65	8,761.60	-197.50	-422.12	-177.22	10.00	10.00	0.00
8,900.00	15.36	359.65	8,859.85	-179.55	-422.22	-159.28	10.00	10.00	0.00
9,000.00	25.36	359.65	8,953.49	-144.81	-422.44	-124.57	10.00	10.00	0.00
9,100.00	35.36	359.65	9,039.67	-94.34	-422.75	-74.14	10.00	10.00	0.00
9,200.00	45.36	359.65	9,115.78	-29.67	-423.14	-9.53	10.00	10.00	0.00
9,300.00	55.36	359.65	9,179.50	47.23	-423.61	67.31	10.00	10.00	0.00
9,400.00	65.36	359.65	9,228.90	134.03	-424.14	154.04	10.00	10.00	0.00



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9,500.00	75.36	359.65	9,262.47	228.09	-424.72	248.01	10.00	10.00	0.00
9,600.00	85.36	359.65	9,279.21	326.55	-425.32	346.39	10.00	10.00	0.00
9,656.66	91.02	359.65	9,281.00	383.16	-425.66	402.95	10.00	10.00	0.00
LP, Hold 91.02° Inc at 359.65° Azm									
9,700.00	91.02	359.65	9,280.22	426.49	-425.93	446.25	0.00	0.00	0.00
9,800.00	91.02	359.65	9,278.44	526.47	-426.54	546.15	0.00	0.00	0.00
9,900.00	91.02	359.65	9,276.66	626.45	-427.15	646.04	0.00	0.00	0.00
10,000.00	91.02	359.65	9,274.88	726.44	-427.76	745.94	0.00	0.00	0.00
10,100.00	91.02	359.65	9,273.10	826.42	-428.37	845.84	0.00	0.00	0.00
10,200.00	91.02	359.65	9,271.32	926.40	-428.98	945.74	0.00	0.00	0.00
10,300.00	91.02	359.65	9,269.53	1,026.38	-429.59	1,045.64	0.00	0.00	0.00
10,400.00	91.02	359.65	9,267.75	1,126.37	-430.20	1,145.54	0.00	0.00	0.00
10,500.00	91.02	359.65	9,265.97	1,226.35	-430.81	1,245.43	0.00	0.00	0.00
10,600.00	91.02	359.65	9,264.19	1,326.33	-431.43	1,345.33	0.00	0.00	0.00
10,700.00	91.02	359.65	9,262.41	1,426.31	-432.04	1,445.23	0.00	0.00	0.00
10,800.00	91.02	359.65	9,260.62	1,526.29	-432.65	1,545.13	0.00	0.00	0.00
10,900.00	91.02	359.65	9,258.84	1,626.28	-433.26	1,645.03	0.00	0.00	0.00
11,000.00	91.02	359.65	9,257.06	1,726.26	-433.87	1,744.93	0.00	0.00	0.00
11,100.00	91.02	359.65	9,255.28	1,826.24	-434.48	1,844.82	0.00	0.00	0.00
11,200.00	91.02	359.65	9,253.50	1,926.22	-435.09	1,944.72	0.00	0.00	0.00
11,300.00	91.02	359.65	9,251.71	2,026.21	-435.70	2,044.62	0.00	0.00	0.00
11,400.00	91.02	359.65	9,249.93	2,126.19	-436.31	2,144.52	0.00	0.00	0.00
11,500.00	91.02	359.65	9,248.15	2,226.17	-436.92	2,244.42	0.00	0.00	0.00
11,600.00	91.02	359.65	9,246.37	2,326.15	-437.53	2,344.32	0.00	0.00	0.00
11,700.00	91.02	359.65	9,244.59	2,426.14	-438.14	2,444.21	0.00	0.00	0.00
11,800.00	91.02	359.65	9,242.81	2,526.12	-438.76	2,544.11	0.00	0.00	0.00
11,900.00	91.02	359.65	9,241.02	2,626.10	-439.37	2,644.01	0.00	0.00	0.00
12,000.00	91.02	359.65	9,239.24	2,726.08	-439.98	2,743.91	0.00	0.00	0.00
12,100.00	91.02	359.65	9,237.46	2,826.06	-440.59	2,843.81	0.00	0.00	0.00
12,200.00	91.02	359.65	9,235.68	2,926.05	-441.20	2,943.71	0.00	0.00	0.00
12,300.00	91.02	359.65	9,233.90	3,026.03	-441.81	3,043.60	0.00	0.00	0.00
12,400.00	91.02	359.65	9,232.11	3,126.01	-442.42	3,143.50	0.00	0.00	0.00
12,500.00	91.02	359.65	9,230.33	3,225.99	-443.03	3,243.40	0.00	0.00	0.00
12,600.00	91.02	359.65	9,228.55	3,325.98	-443.64	3,343.30	0.00	0.00	0.00
12,700.00	91.02	359.65	9,226.77	3,425.96	-444.25	3,443.20	0.00	0.00	0.00
12,800.00	91.02	359.65	9,224.99	3,525.94	-444.86	3,543.10	0.00	0.00	0.00
12,900.00	91.02	359.65	9,223.20	3,625.92	-445.47	3,642.99	0.00	0.00	0.00
13,000.00	91.02	359.65	9,221.42	3,725.90	-446.09	3,742.89	0.00	0.00	0.00
13,100.00	91.02	359.65	9,219.64	3,825.89	-446.70	3,842.79	0.00	0.00	0.00
13,200.00	91.02	359.65	9,217.86	3,925.87	-447.31	3,942.69	0.00	0.00	0.00
13,300.00	91.02	359.65	9,216.08	4,025.85	-447.92	4,042.59	0.00	0.00	0.00
13,400.00	91.02	359.65	9,214.30	4,125.83	-448.53	4,142.49	0.00	0.00	0.00
13,500.00	91.02	359.65	9,212.51	4,225.82	-449.14	4,242.38	0.00	0.00	0.00
13,600.00	91.02	359.65	9,210.73	4,325.80	-449.75	4,342.28	0.00	0.00	0.00
13,700.00	91.02	359.65	9,208.95	4,425.78	-450.36	4,442.18	0.00	0.00	0.00
13,800.00	91.02	359.65	9,207.17	4,525.76	-450.97	4,542.08	0.00	0.00	0.00
13,900.00	91.02	359.65	9,205.39	4,625.75	-451.58	4,641.98	0.00	0.00	0.00
14,000.00	91.02	359.65	9,203.60	4,725.73	-452.19	4,741.88	0.00	0.00	0.00
14,100.00	91.02	359.65	9,201.82	4,825.71	-452.80	4,841.77	0.00	0.00	0.00
14,200.00	91.02	359.65	9,200.04	4,925.69	-453.42	4,941.67	0.00	0.00	0.00
14,258.38	91.02	359.65	9,199.00	4,984.06	-453.77	5,000.00	0.00	0.00	0.00
Begin 2.00°/100' Drop									
14,282.08	90.55	359.65	9,198.68	5,007.76	-453.92	5,023.67	2.00	-2.00	0.00



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Hold 90.55° Inc									
14,300.00	90.55	359.65	9,198.50	5,025.68	-454.03	5,041.57	0.00	0.00	0.00
14,400.00	90.55	359.65	9,197.55	5,125.67	-454.64	5,141.48	0.00	0.00	0.00
14,500.00	90.55	359.65	9,196.60	5,225.66	-455.25	5,241.39	0.00	0.00	0.00
14,600.00	90.55	359.65	9,195.64	5,325.66	-455.86	5,341.30	0.00	0.00	0.00
14,700.00	90.55	359.65	9,194.69	5,425.65	-456.47	5,441.21	0.00	0.00	0.00
14,800.00	90.55	359.65	9,193.73	5,525.65	-457.08	5,541.12	0.00	0.00	0.00
14,900.00	90.55	359.65	9,192.78	5,625.64	-457.69	5,641.03	0.00	0.00	0.00
15,000.00	90.55	359.65	9,191.82	5,725.63	-458.30	5,740.94	0.00	0.00	0.00
15,100.00	90.55	359.65	9,190.87	5,825.63	-458.91	5,840.85	0.00	0.00	0.00
15,200.00	90.55	359.65	9,189.91	5,925.62	-459.52	5,940.76	0.00	0.00	0.00
15,300.00	90.55	359.65	9,188.96	6,025.61	-460.14	6,040.67	0.00	0.00	0.00
15,400.00	90.55	359.65	9,188.00	6,125.61	-460.75	6,140.58	0.00	0.00	0.00
15,500.00	90.55	359.65	9,187.05	6,225.60	-461.36	6,240.49	0.00	0.00	0.00
15,600.00	90.55	359.65	9,186.09	6,325.59	-461.97	6,340.40	0.00	0.00	0.00
15,700.00	90.55	359.65	9,185.14	6,425.59	-462.58	6,440.31	0.00	0.00	0.00
15,800.00	90.55	359.65	9,184.18	6,525.58	-463.19	6,540.22	0.00	0.00	0.00
15,900.00	90.55	359.65	9,183.23	6,625.57	-463.80	6,640.13	0.00	0.00	0.00
16,000.00	90.55	359.65	9,182.27	6,725.57	-464.41	6,740.04	0.00	0.00	0.00
16,100.00	90.55	359.65	9,181.32	6,825.56	-465.02	6,839.95	0.00	0.00	0.00
16,200.00	90.55	359.65	9,180.36	6,925.56	-465.63	6,939.86	0.00	0.00	0.00
16,300.00	90.55	359.65	9,179.41	7,025.55	-466.24	7,039.77	0.00	0.00	0.00
16,400.00	90.55	359.65	9,178.45	7,125.54	-466.86	7,139.68	0.00	0.00	0.00
16,500.00	90.55	359.65	9,177.50	7,225.54	-467.47	7,239.59	0.00	0.00	0.00
16,600.00	90.55	359.65	9,176.54	7,325.53	-468.08	7,339.50	0.00	0.00	0.00
16,700.00	90.55	359.65	9,175.59	7,425.52	-468.69	7,439.41	0.00	0.00	0.00
16,800.00	90.55	359.65	9,174.63	7,525.52	-469.30	7,539.32	0.00	0.00	0.00
16,900.00	90.55	359.65	9,173.68	7,625.51	-469.91	7,639.23	0.00	0.00	0.00
17,000.00	90.55	359.65	9,172.72	7,725.50	-470.52	7,739.14	0.00	0.00	0.00
17,100.00	90.55	359.65	9,171.77	7,825.50	-471.13	7,839.05	0.00	0.00	0.00
17,200.00	90.55	359.65	9,170.81	7,925.49	-471.74	7,938.95	0.00	0.00	0.00
17,300.00	90.55	359.65	9,169.86	8,025.48	-472.35	8,038.86	0.00	0.00	0.00
17,400.00	90.55	359.65	9,168.90	8,125.48	-472.97	8,138.77	0.00	0.00	0.00
17,500.00	90.55	359.65	9,167.95	8,225.47	-473.58	8,238.68	0.00	0.00	0.00
17,600.00	90.55	359.65	9,166.99	8,325.47	-474.19	8,338.59	0.00	0.00	0.00
17,700.00	90.55	359.65	9,166.04	8,425.46	-474.80	8,438.50	0.00	0.00	0.00
17,800.00	90.55	359.65	9,165.09	8,525.45	-475.41	8,538.41	0.00	0.00	0.00
17,900.00	90.55	359.65	9,164.13	8,625.45	-476.02	8,638.32	0.00	0.00	0.00
18,000.00	90.55	359.65	9,163.18	8,725.44	-476.63	8,738.23	0.00	0.00	0.00
18,100.00	90.55	359.65	9,162.22	8,825.43	-477.24	8,838.14	0.00	0.00	0.00
18,200.00	90.55	359.65	9,161.27	8,925.43	-477.85	8,938.05	0.00	0.00	0.00
18,300.00	90.55	359.65	9,160.31	9,025.42	-478.46	9,037.96	0.00	0.00	0.00
18,400.00	90.55	359.65	9,159.36	9,125.41	-479.07	9,137.87	0.00	0.00	0.00
18,500.00	90.55	359.65	9,158.40	9,225.41	-479.69	9,237.78	0.00	0.00	0.00
18,600.00	90.55	359.65	9,157.45	9,325.40	-480.30	9,337.69	0.00	0.00	0.00
18,700.00	90.55	359.65	9,156.49	9,425.39	-480.91	9,437.60	0.00	0.00	0.00
18,800.00	90.55	359.65	9,155.54	9,525.39	-481.52	9,537.51	0.00	0.00	0.00
18,900.00	90.55	359.65	9,154.58	9,625.38	-482.13	9,637.42	0.00	0.00	0.00
19,000.00	90.55	359.65	9,153.63	9,725.38	-482.74	9,737.33	0.00	0.00	0.00
19,100.00	90.55	359.65	9,152.67	9,825.37	-483.35	9,837.24	0.00	0.00	0.00
19,200.00	90.55	359.65	9,151.72	9,925.36	-483.96	9,937.15	0.00	0.00	0.00
19,300.00	90.55	359.65	9,150.76	10,025.36	-484.57	10,037.06	0.00	0.00	0.00
19,400.00	90.55	359.65	9,149.81	10,125.35	-485.18	10,136.97	0.00	0.00	0.00

Database: USA Compass
 Company: COG Operating LLC
 Project: Lea County, NM (NAD27 NME)
 Site: Harrier Federal Com
 Well: 201H
 Wellbore: OH
 Design: Plan 1 08-23-19

Local Co-ordinate Reference: Well 201H
 TVD Reference: 327RKB4.3 @ 3274.30usft (Pioneer 84)
 MD Reference: 327RKB4.3 @ 3274.30usft (Pioneer 84)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned 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)
19,484.56	90.55	359.65	9,149.00	10,209.90	-485.70	10,221.45	0.00	0.00	0.00
TD at 19484.56									

Design Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BHL - Harrier Federal Cc - plan hits target center - Point	0.00	0.00	9,149.00	10,209.90	-485.70	398,585.70	711,425.20	32° 5' 38.357516 N	103° 39' 2.212618 W
LTP - Harrier Federal Cc - plan misses target center by 34.55usft at 19400.00usft MD (9149.81 TVD, 10125.35 N, -485.18 E) - Point	0.00	0.00	9,149.48	10,159.90	-485.30	398,535.70	711,425.60	32° 5' 37.862697 N	103° 39' 2.211648 W
5000' VS - Harrier Feder - plan hits target center - Point	0.00	0.00	9,199.00	4,984.06	-453.77	393,359.86	711,457.12	32° 4' 46.641177 N	103° 39' 2.226004 W
FTP - Harrier Federal Cc - plan misses target center by 294.25usft at 9165.06usft MD (9090.48 TVD, -53.76 N, -422.99 E) - Point	0.00	0.00	9,281.00	-278.00	-422.10	388,097.80	711,488.80	32° 3' 54.566249 N	103° 39' 2.244861 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
691.30	691.30	Rustler		-1.02	357.28
1,060.30	1,060.30	TOS		-1.02	357.28
4,376.30	4,376.30	BOS (Fletcher)		-1.02	357.28
4,576.30	4,576.30	LMAW (Top Delaware)		-1.02	357.28
4,614.30	4,614.30	BLCN		-1.02	357.28
5,633.32	5,628.76	CYCN		-1.02	357.28
7,260.98	7,231.69	BYCN		-1.02	357.28
8,831.01	8,792.39	Bone Sprg (BSGL)		-1.02	357.28
9,177.63	9,099.75	M Avalon Sh		-1.02	357.28

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,000.00	5,000.00	0.00	0.00	KOP, Begin 2.00°/100' Build
5,500.00	5,497.47	-18.64	-39.33	Hold 10.00° Inc at 244.65° Azm
7,688.56	7,652.77	-181.36	-382.77	Begin 2.00°/100' Drop
8,188.56	8,150.24	-200.00	-422.10	Begin Vertical Hold
8,746.45	8,708.13	-200.00	-422.10	KOP2, Begin 10.00°/100' Build
9,656.66	9,281.00	383.16	-425.66	LP, Hold 91.02° Inc at 359.65° Azm
14,258.38	9,199.00	4,984.06	-453.77	Begin 2.00°/100' Drop
14,282.08	9,198.68	5,007.76	-453.92	Hold 90.55° Inc
19,484.56	9,149.00	10,209.90	-485.70	TD at 19484.56