



HUNT

# SURVEY REPORT

UNIVERSITY 3-35 #102 HB

HP 394

6/2/2017



The **Ultimate Partner** In Wellbore Placement

CUSTOMER HUNT  
PROJECT University 3-35 #102 HB  
FIELD WOLFCAMP A

SDI JOB NO.  
SDI DISTRICT Midland  
SDI KIT/UNIT MWD-00292-M

## SITE INFORMATION

Site Name University 3-35 #102 HB  
Lat/Long 31° 12' 3.089" N, 101° 51' 20.883" W  
Northing 561,220 ft  
Easting 1,524,021 ft

Section  
Township  
Range

## MAP INFORMATION

North Reference Grid North  
Grid Correction 0.78 deg  
System US State Plane 1927  
Datum North American Datum 1927 (Clarke 1866)  
Map Zone Texas Central: 4203



## WELL INFORMATION

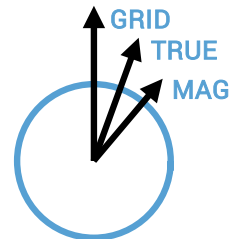
Lat/Long 31° 12' 3.089" N, 101° 51' 20.883" W  
Northing 561,220 ft  
Easting 1,524,021 ft  
UWI 42-461-40592

## DEPTH AND ELEVATION REFERENCE

Ground Level 2706 ft above Mean Sea Level  
Reference Datum KB  
Reference Height 25 ft above G.L.  
Reference Elevation 2731 ft

## VERTICAL SECTION REFERENCE

+N/-S 0 ft  
+E/-W 0 ft  
Proposal Direction 0.34°  
Calculation Method Minimum Curvature



## GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 998.483 mG [computed]

MD	MODEL	DATE	DECLINATION	TRUE TO GRID	MAG TO GRID
0-19215 ft	HDGM2016	02 Jun 2017	6.43°	add 0.78°	add 7.21°

## WELL NOTES

## OPERATORS

C.CLOYD, C.SAMPSON

SDI Operator Name (Printed)

SIGNATURE

DATE

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid	1524021.00	Invalid	Invalid
178.00	0.54	300.03	178.00	0.42	0.42	-0.73	0.30	0.54	1524020.27	0.30	178.00
237.00	0.64	305.58	236.99	0.75	0.75	-1.24	0.19	0.11	1524019.76	0.17	59.00
298.00	0.71	321.08	297.99	1.24	1.25	-1.76	0.32	0.19	1524019.24	0.11	61.00
359.00	0.69	313.50	358.99	1.78	1.79	-2.26	0.16	0.10	1524018.74	-0.04	61.00
454.00	0.88	322.42	453.98	2.74	2.76	-3.11	0.24	0.23	1524017.89	0.20	95.00
549.00	0.68	314.48	548.97	3.70	3.73	-3.96	0.24	0.23	1524017.04	-0.21	95.00
644.00	0.67	320.68	643.96	4.52	4.55	-4.71	0.08	0.07	1524016.29	0.00	95.00
825.00	0.61	327.53	824.95	6.15	6.19	-5.90	0.05	0.10	1524015.10	-0.03	181.00
912.00	2.00	180.47	911.94	5.02	5.06	-6.16	2.92	2.54	1524014.84	1.60	87.00
1007.00	2.69	168.92	1006.86	1.17	1.21	-5.75	0.88	0.83	1524015.25	0.73	95.00
1102.00	2.53	211.89	1101.77	-2.80	-2.76	-6.43	2.02	1.92	1524014.57	-0.17	95.00
1197.00	2.53	217.38	1196.67	-6.26	-6.21	-8.81	0.25	0.24	1524012.19	0.00	95.00
1292.00	1.46	132.57	1291.63	-8.75	-8.69	-9.18	2.95	2.80	1524011.82	-1.12	95.00
1386.00	2.29	98.51	1385.58	-9.82	-9.78	-6.45	1.44	1.35	1524014.55	0.88	94.00
1480.00	1.44	96.66	1479.53	-10.21	-10.19	-3.42	0.91	0.85	1524017.58	-0.91	94.00
1575.00	1.29	101.77	1574.50	-10.56	-10.55	-1.20	0.20	0.19	1524019.80	-0.16	95.00
1669.00	0.47	143.21	1668.49	-11.07	-11.07	0.07	1.05	0.99	1524021.07	-0.87	94.00
1764.00	1.32	242.60	1763.48	-11.89	-11.89	-0.67	1.55	1.47	1524020.33	0.90	95.00
1858.00	3.14	259.92	1857.41	-12.86	-12.84	-4.17	2.04	1.92	1524016.83	1.93	94.00
1953.00	3.57	263.00	1952.25	-13.71	-13.65	-9.67	0.50	0.47	1524011.33	0.46	95.00
2048.00	3.80	263.74	2047.05	-14.45	-14.36	-15.74	0.24	0.23	1524005.26	0.24	95.00
2142.00	3.89	247.06	2140.84	-16.07	-15.94	-21.77	1.19	1.12	1523999.23	0.10	94.00
2236.00	4.52	243.41	2234.59	-19.01	-18.84	-28.03	0.73	0.69	1523992.97	0.67	94.00
2331.00	4.43	245.52	2329.30	-22.25	-22.04	-34.72	0.20	0.19	1523986.28	-0.09	95.00
2426.00	3.99	245.01	2424.04	-25.20	-24.96	-41.05	0.47	0.45	1523979.95	-0.47	95.00
2520.00	3.99	242.10	2517.81	-28.14	-27.87	-46.90	0.22	0.20	1523974.10	0.00	94.00
2615.00	4.36	245.03	2612.56	-31.25	-30.94	-53.10	0.45	0.43	1523967.90	0.39	95.00
2709.00	4.29	244.58	2706.29	-34.31	-33.95	-59.51	0.08	0.08	1523961.49	-0.08	94.00
2804.00	3.94	247.70	2801.05	-37.11	-36.72	-65.74	0.43	0.41	1523955.26	-0.37	95.00
2898.00	3.65	241.30	2894.84	-39.80	-39.38	-71.35	0.55	0.51	1523949.65	-0.31	94.00
2993.00	3.80	243.66	2989.64	-42.68	-42.23	-76.82	0.22	0.21	1523944.18	0.15	95.00

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
3087.00	3.20	247.09	3083.47	-45.11	-44.63	-82.03	0.68	0.64	1523938.97	-0.64	94.00
3181.00	3.07	239.69	3177.33	-47.43	-46.92	-86.61	0.45	0.42	1523934.39	-0.13	94.00
3276.00	2.89	235.80	3272.20	-50.08	-49.55	-90.79	0.28	0.27	1523930.21	-0.19	95.00
3371.00	2.32	237.75	3367.10	-52.48	-51.92	-94.39	0.61	0.58	1523926.61	-0.60	95.00
3466.00	2.59	233.40	3462.01	-54.80	-54.22	-97.74	0.35	0.33	1523923.26	0.29	95.00
3560.00	2.42	235.80	3555.92	-57.21	-56.61	-101.09	0.21	0.20	1523919.91	-0.18	94.00
3654.00	1.88	237.11	3649.86	-59.18	-58.56	-104.03	0.58	0.54	1523916.97	-0.57	94.00
3749.00	1.66	237.83	3744.81	-60.78	-60.14	-106.51	0.23	0.22	1523914.49	-0.23	95.00
3844.00	1.58	238.93	3839.77	-62.20	-61.56	-108.80	0.09	0.09	1523912.20	-0.08	95.00
3939.00	1.39	244.86	3934.74	-63.38	-62.72	-110.97	0.26	0.24	1523910.03	-0.20	95.00
4033.00	1.43	247.67	4028.71	-64.32	-63.65	-113.09	0.08	0.08	1523907.91	0.04	94.00
4127.00	1.48	247.44	4122.68	-65.25	-64.56	-115.29	0.05	0.05	1523905.71	0.05	94.00
4222.00	1.72	246.48	4217.65	-66.30	-65.60	-117.73	0.25	0.24	1523903.27	0.25	95.00
4316.00	1.61	245.67	4311.61	-67.42	-66.71	-120.23	0.11	0.11	1523900.77	-0.11	94.00
4411.00	1.67	245.10	4406.57	-68.57	-67.85	-122.71	0.06	0.06	1523898.29	0.06	95.00
4505.00	1.63	242.73	4500.53	-69.78	-69.04	-125.14	0.09	0.08	1523895.86	-0.05	94.00
4599.00	1.88	243.52	4594.48	-71.10	-70.34	-127.71	0.27	0.26	1523893.29	0.27	94.00
4693.00	1.79	240.49	4688.44	-72.52	-71.75	-130.37	0.15	0.14	1523890.63	-0.11	94.00
4788.00	1.83	244.71	4783.39	-73.92	-73.13	-133.03	0.15	0.14	1523887.97	0.05	95.00
4883.00	1.75	239.12	4878.34	-75.33	-74.52	-135.65	0.20	0.19	1523885.35	-0.09	95.00
4977.00	1.62	243.15	4972.30	-76.68	-75.86	-138.07	0.19	0.18	1523882.93	-0.14	94.00
5072.00	1.54	237.16	5067.26	-77.99	-77.16	-140.34	0.19	0.19	1523880.66	-0.09	95.00
5166.00	1.38	238.74	5161.23	-79.27	-78.43	-142.37	0.17	0.16	1523878.63	-0.17	94.00
5261.00	1.12	231.88	5256.21	-80.45	-79.60	-144.08	0.32	0.30	1523876.92	-0.28	95.00
5356.00	0.84	225.85	5351.20	-81.52	-80.65	-145.31	0.31	0.30	1523875.69	-0.29	95.00
5451.00	0.89	226.66	5446.19	-82.51	-81.65	-146.35	0.06	0.05	1523874.65	0.06	95.00
5545.00	0.70	225.92	5540.18	-83.42	-82.55	-147.29	0.20	0.19	1523873.71	-0.20	94.00
5640.00	0.40	206.20	5635.17	-84.13	-83.25	-147.86	0.37	0.35	1523873.14	-0.31	95.00
5735.00	0.47	210.94	5730.17	-84.77	-83.89	-148.21	0.08	0.08	1523872.79	0.07	95.00
5830.00	0.70	228.46	5825.17	-85.49	-84.61	-148.84	0.30	0.29	1523872.16	0.24	95.00
5924.00	0.53	220.46	5919.16	-86.21	-85.32	-149.56	0.20	0.19	1523871.44	-0.18	94.00
6018.00	0.41	234.93	6013.16	-86.74	-85.85	-150.11	0.18	0.17	1523870.89	-0.13	94.00

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
6113.00	0.10	73.16	6108.16	-86.91	-86.02	-150.31	0.53	0.51	1523870.69	-0.32	95.00
6208.00	0.32	24.94	6203.16	-86.65	-85.76	-150.12	0.27	0.26	1523870.88	0.23	95.00
6302.00	0.44	9.77	6297.15	-86.05	-85.16	-149.95	0.17	0.16	1523871.05	0.13	94.00
6396.00	0.38	20.20	6391.15	-85.40	-84.51	-149.78	0.10	0.10	1523871.22	-0.06	94.00
6491.00	0.38	33.11	6486.15	-84.83	-83.95	-149.49	0.09	0.09	1523871.51	0.00	95.00
6585.00	0.47	50.68	6580.15	-84.32	-83.44	-149.02	0.17	0.16	1523871.98	0.10	94.00
6679.00	0.51	23.98	6674.14	-83.69	-82.81	-148.55	0.25	0.23	1523872.45	0.04	94.00
6774.00	0.65	29.50	6769.14	-82.83	-81.95	-148.11	0.16	0.15	1523872.89	0.14	95.00
6868.00	1.00	18.34	6863.13	-81.58	-80.71	-147.59	0.41	0.38	1523873.41	0.37	94.00
6963.00	1.10	16.64	6958.11	-79.92	-79.05	-147.07	0.11	0.11	1523873.93	0.11	95.00
7057.00	1.55	14.06	7052.09	-77.82	-76.95	-146.50	0.49	0.46	1523874.50	0.48	94.00
7152.00	1.43	22.59	7147.06	-75.47	-74.61	-145.74	0.27	0.26	1523875.26	-0.14	95.00
7246.00	1.22	28.62	7241.03	-73.51	-72.65	-144.81	0.27	0.25	1523876.19	-0.22	94.00
7341.00	1.32	30.78	7336.01	-71.67	-70.82	-143.76	0.12	0.11	1523877.24	0.11	95.00
7435.00	1.27	29.02	7429.98	-69.83	-68.98	-142.71	0.07	0.07	1523878.29	-0.06	94.00
7530.00	1.15	34.41	7524.96	-68.12	-67.28	-141.66	0.17	0.16	1523879.34	-0.12	95.00
7625.00	1.04	22.29	7619.94	-66.53	-65.69	-140.79	0.27	0.25	1523880.21	-0.11	95.00
7719.00	0.92	33.40	7713.93	-65.10	-64.27	-140.05	0.24	0.23	1523880.95	-0.14	94.00
7736.00	1.07	23.91	7730.93	-64.85	-64.02	-139.91	1.32	0.23	1523881.09	0.91	17.00
7747.00	0.87	25.82	7741.93	-64.68	-63.85	-139.84	1.82	0.20	1523881.16	-1.80	11.00
7851.00	1.35	31.35	7845.91	-62.91	-62.09	-138.85	0.47	0.49	1523882.15	0.46	104.00
7913.00	1.84	24.90	7907.88	-61.38	-60.56	-138.05	0.85	0.53	1523882.95	0.80	62.00
7959.00	6.30	6.33	7953.76	-58.19	-57.37	-137.46	9.98	4.59	1523883.54	9.69	46.00
8008.00	10.67	2.95	8002.21	-50.98	-50.17	-136.93	8.96	4.39	1523884.07	8.91	49.00
8054.00	15.20	3.86	8047.03	-40.70	-39.89	-136.31	9.85	4.53	1523884.69	9.84	46.00
8103.00	19.76	2.59	8093.75	-26.00	-25.20	-135.50	9.35	4.58	1523885.50	9.32	49.00
8149.00	25.61	0.52	8136.18	-8.28	-7.48	-135.06	12.82	5.90	1523885.94	12.71	46.00
8197.00	31.59	359.50	8178.30	14.69	15.49	-135.07	12.51	6.01	1523885.93	12.47	48.00
8243.00	37.48	359.82	8216.18	40.76	41.56	-135.22	12.81	5.89	1523885.78	12.81	46.00
8292.00	44.23	358.53	8253.22	72.78	73.59	-135.71	13.87	6.79	1523885.29	13.76	49.00
8338.00	52.40	358.03	8283.79	107.08	107.90	-136.74	17.78	8.18	1523884.26	17.76	46.00
8386.00	60.54	359.17	8310.28	147.04	147.86	-137.70	17.08	8.20	1523883.30	16.97	48.00



MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
8432.00	65.13	359.64	8331.27	187.95	188.78	-138.12	10.02	4.61	1523882.88	9.98	46.00
8481.00	69.53	358.93	8350.16	233.15	233.97	-138.69	9.07	4.45	1523882.31	8.97	49.00
8527.00	74.34	0.34	8364.42	276.86	277.69	-138.96	10.86	5.00	1523882.04	10.46	46.00
8575.00	79.83	359.64	8375.14	323.63	324.46	-138.97	11.53	5.54	1523882.03	11.44	48.00
8670.00	88.12	359.07	8385.10	418.01	418.85	-140.04	8.74	8.30	1523880.96	8.72	95.00
8764.00	89.33	1.58	8387.20	511.97	512.81	-139.50	2.96	2.78	1523881.50	1.29	94.00
8859.00	89.80	1.55	8387.93	606.95	607.77	-136.91	0.50	0.47	1523884.09	0.49	95.00
8953.00	90.67	0.74	8387.54	700.94	701.75	-135.04	1.27	1.19	1523885.96	0.93	94.00
9048.00	91.85	359.68	8385.45	795.91	796.73	-134.69	1.67	1.58	1523886.31	1.24	95.00
9142.00	91.51	2.35	8382.69	889.86	890.66	-133.03	2.87	2.69	1523887.97	-0.36	94.00
9236.00	90.34	0.86	8381.18	983.82	984.61	-130.39	2.02	1.90	1523890.61	-1.25	94.00
9331.00	91.31	1.44	8379.81	1078.80	1079.58	-128.48	1.19	1.13	1523892.52	1.02	95.00
9425.00	90.03	1.41	8378.71	1172.77	1173.54	-126.15	1.36	1.28	1523894.85	-1.36	94.00
9520.00	90.84	1.00	8377.99	1267.76	1268.52	-124.15	0.95	0.90	1523896.85	0.85	95.00
9614.00	92.39	1.21	8375.34	1361.71	1362.46	-122.34	1.66	1.56	1523898.66	1.65	94.00
9709.00	91.14	1.30	8372.42	1456.65	1457.39	-120.26	1.31	1.25	1523900.74	-1.31	95.00
9804.00	89.80	1.27	8371.64	1551.63	1552.36	-118.13	1.41	1.34	1523902.87	-1.41	95.00
9898.00	90.20	0.39	8371.64	1645.63	1646.35	-116.76	1.03	0.97	1523904.24	0.43	94.00
9993.00	90.94	359.84	8370.69	1740.62	1741.34	-116.57	0.97	0.92	1523904.43	0.78	95.00
10087.00	89.16	1.55	8370.60	1834.61	1835.33	-115.43	2.62	2.46	1523905.57	-1.90	94.00
10182.00	90.03	1.54	8371.27	1929.59	1930.29	-112.87	0.92	0.87	1523908.13	0.92	95.00
10276.00	90.94	1.77	8370.47	2023.56	2024.25	-110.15	1.00	0.94	1523910.85	0.97	94.00
10371.00	88.59	0.76	8370.86	2118.54	2119.21	-108.06	2.69	2.56	1523912.94	-2.47	95.00
10465.00	89.23	0.40	8372.65	2212.52	2213.19	-107.12	0.78	0.73	1523913.88	0.68	94.00
10560.00	90.50	0.05	8372.88	2307.51	2308.19	-106.75	1.39	1.32	1523914.25	1.34	95.00
10654.00	88.62	0.80	8373.59	2401.51	2402.18	-106.05	2.15	2.03	1523914.95	-2.00	94.00
10749.00	89.87	0.30	8374.85	2496.50	2497.16	-105.13	1.41	1.34	1523915.87	1.31	95.00
10843.00	90.17	2.80	8374.82	2590.47	2591.12	-102.59	2.68	2.52	1523918.41	0.32	94.00
10938.00	87.95	3.00	8376.38	2685.35	2685.98	-97.78	2.34	2.22	1523923.22	-2.33	95.00
11033.00	88.49	3.40	8379.33	2780.19	2780.79	-92.48	0.71	0.67	1523928.52	0.56	95.00
11127.00	88.15	1.11	8382.09	2874.09	2874.67	-88.78	2.46	2.31	1523932.22	-0.35	94.00
11221.00	88.46	0.52	8384.87	2968.04	2968.62	-87.44	0.70	0.66	1523933.56	0.32	94.00

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
11315.00	89.63	0.77	8386.44	3062.03	3062.60	-86.38	1.28	1.20	1523934.62	1.25	94.00
11410.00	87.89	0.28	8388.50	3157.00	3157.56	-85.51	1.91	1.81	1523935.49	-1.84	95.00
11502.00	88.69	2.64	8391.25	3248.94	3249.49	-83.17	2.71	2.50	1523937.83	0.87	92.00
11594.00	89.53	2.67	8392.68	3340.85	3341.38	-78.90	0.91	0.84	1523942.10	0.91	92.00
11686.00	90.27	2.11	8392.84	3432.79	3433.29	-75.05	1.01	0.93	1523945.95	0.80	92.00
11777.00	91.18	0.50	8391.69	3523.76	3524.26	-72.97	2.03	1.85	1523948.03	1.00	91.00
11867.00	89.80	2.00	8390.92	3613.74	3614.23	-71.01	2.26	2.04	1523949.99	-1.53	90.00
11959.00	90.57	0.85	8390.63	3705.73	3706.20	-68.72	1.51	1.39	1523952.28	0.84	92.00
12050.00	89.80	2.96	8390.33	3796.68	3797.14	-65.69	2.47	2.25	1523955.31	-0.85	91.00
12145.00	90.40	3.00	8390.16	3891.58	3892.01	-60.75	0.64	0.61	1523960.25	0.64	95.00
12239.00	88.66	1.66	8390.94	3985.52	3985.93	-56.93	2.35	2.20	1523964.07	-1.86	94.00
12334.00	88.62	2.26	8393.19	4080.45	4080.84	-53.69	0.63	0.60	1523967.31	-0.04	95.00
12428.00	88.76	1.60	8395.34	4174.39	4174.76	-50.52	0.71	0.67	1523970.48	0.15	94.00
12523.00	89.06	1.38	8397.15	4269.35	4269.72	-48.04	0.39	0.37	1523972.96	0.32	95.00
12617.00	90.03	0.77	8397.90	4363.34	4363.69	-46.28	1.23	1.15	1523974.72	1.04	94.00
12712.00	90.24	359.03	8397.67	4458.34	4458.69	-46.45	1.84	1.74	1523974.55	0.21	95.00
12806.00	89.76	359.82	8397.67	4552.32	4552.68	-47.38	0.98	0.92	1523973.62	-0.50	94.00
12901.00	91.08	0.27	8396.98	4647.32	4647.68	-47.30	1.46	1.39	1523973.70	1.38	95.00
12996.00	91.08	2.37	8395.19	4742.28	4742.63	-45.11	2.21	2.10	1523975.89	0.00	95.00
13090.00	88.59	1.63	8395.47	4836.23	4836.57	-41.83	2.76	2.59	1523979.17	-2.65	94.00
13184.00	88.65	1.17	8397.73	4930.19	4930.51	-39.52	0.50	0.47	1523981.48	0.07	94.00
13279.00	88.39	0.62	8400.18	5025.15	5025.47	-38.04	0.64	0.61	1523982.96	-0.28	95.00
13373.00	89.56	0.14	8401.86	5119.14	5119.45	-37.41	1.35	1.27	1523983.59	1.25	94.00
13468.00	89.93	359.75	8402.28	5214.13	5214.45	-37.50	0.57	0.54	1523983.50	0.39	95.00
13562.00	90.03	0.85	8402.31	5308.13	5308.44	-37.02	1.18	1.11	1523983.98	0.11	94.00
13657.00	88.96	0.77	8403.14	5403.12	5403.43	-35.67	1.13	1.08	1523985.33	-1.13	95.00
13751.00	88.18	2.80	8405.49	5497.06	5497.35	-32.75	2.31	2.18	1523988.25	-0.82	94.00
13845.00	88.62	2.34	8408.11	5590.95	5591.22	-28.54	0.68	0.64	1523992.46	0.46	94.00
13940.00	89.93	1.87	8409.30	5685.89	5686.14	-25.05	1.46	1.39	1523995.95	1.38	95.00
14034.00	90.64	1.81	8408.84	5779.86	5780.09	-22.03	0.75	0.71	1523998.97	0.75	94.00
14129.00	88.39	2.86	8409.64	5874.79	5875.00	-18.16	2.62	2.49	1524002.84	-2.37	95.00
14223.00	88.12	1.15	8412.51	5968.71	5968.90	-14.87	1.84	1.73	1524006.13	-0.28	94.00

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
14318.00	87.48	358.99	8416.16	6063.63	6063.82	-14.75	2.37	2.25	1524006.25	-0.67	95.00
14412.00	89.66	2.41	8418.50	6157.58	6157.77	-13.60	4.31	4.05	1524007.40	2.32	94.00
14507.00	90.07	1.36	8418.72	6252.54	6252.71	-10.48	1.18	1.12	1524010.52	0.42	95.00
14602.00	90.50	1.64	8418.25	6347.52	6347.68	-8.00	0.54	0.52	1524013.00	0.46	95.00
14696.00	91.75	1.28	8416.40	6441.48	6441.63	-5.61	1.37	1.29	1524015.39	1.32	94.00
14790.00	89.73	1.84	8415.19	6535.45	6535.58	-3.04	2.23	2.09	1524017.96	-2.14	94.00
14884.00	90.50	1.81	8415.00	6629.42	6629.53	-0.05	0.82	0.77	1524020.95	0.82	94.00
14979.00	89.50	2.53	8415.00	6724.37	6724.46	3.55	1.31	1.24	1524024.55	-1.06	95.00
15073.00	89.97	2.08	8415.44	6818.31	6818.38	7.33	0.69	0.65	1524028.33	0.50	94.00
15167.00	85.62	1.06	8419.06	6912.19	6912.26	9.91	4.75	4.46	1524030.91	-4.62	94.00
15261.00	87.71	2.03	8424.52	7006.01	7006.06	12.44	2.45	2.30	1524033.44	2.23	94.00
15356.00	89.30	1.72	8427.00	7100.94	7100.97	15.54	1.70	1.61	1524036.54	1.66	95.00
15450.00	91.04	1.36	8426.72	7194.91	7194.93	18.06	1.90	1.78	1524039.06	1.86	94.00
15545.00	89.73	0.88	8426.08	7289.90	7289.91	19.92	1.47	1.40	1524040.92	-1.38	95.00
15639.00	89.46	0.53	8426.74	7383.90	7383.90	21.08	0.47	0.44	1524042.08	-0.29	94.00
15734.00	91.18	359.61	8426.21	7478.89	7478.89	21.19	2.05	1.95	1524042.19	1.81	95.00
15828.00	88.05	359.38	8426.84	7572.86	7572.88	20.36	3.34	3.14	1524041.36	-3.33	94.00
15923.00	88.15	358.80	8429.99	7667.79	7667.81	18.85	0.63	0.59	1524039.85	0.11	95.00
16017.00	90.64	1.08	8430.98	7761.77	7761.79	18.75	3.59	3.37	1524039.75	2.65	94.00
16112.00	87.45	0.25	8432.57	7856.74	7856.76	19.85	3.47	3.30	1524040.85	-3.36	95.00
16206.00	89.36	4.02	8435.18	7950.64	7950.64	23.35	4.50	4.23	1524044.35	2.04	94.00
16300.00	87.68	1.87	8437.61	8044.50	8044.47	28.17	2.91	2.73	1524049.17	-1.79	94.00
16394.00	87.61	1.08	8441.47	8138.40	8138.36	30.58	0.84	0.79	1524051.58	-0.07	94.00
16489.00	89.43	0.89	8443.92	8233.36	8233.31	32.21	1.92	1.83	1524053.21	1.91	95.00
16583.00	90.07	2.65	8444.34	8327.32	8327.26	35.11	2.00	1.88	1524056.11	0.68	94.00
16678.00	90.57	1.98	8443.81	8422.27	8422.18	38.94	0.89	0.84	1524059.94	0.53	95.00
16772.00	89.26	1.93	8443.94	8516.23	8516.13	42.14	1.39	1.31	1524063.14	-1.39	94.00
16866.00	91.48	2.28	8443.34	8610.17	8610.06	45.59	2.39	2.24	1524066.59	2.36	94.00
16961.00	91.78	0.58	8440.64	8705.11	8704.98	47.96	1.81	1.72	1524068.96	0.32	95.00
17056.00	92.59	1.04	8437.02	8800.04	8799.90	49.30	0.98	0.93	1524070.30	0.85	95.00
17150.00	90.97	0.93	8434.10	8893.99	8893.84	50.92	1.72	1.62	1524071.92	-1.72	94.00
17245.00	91.04	359.98	8432.42	8988.97	8988.82	51.67	1.01	0.96	1524072.67	0.07	95.00



MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	DOGLEG	EASTING	BUILD RATE	COURSE LENGTH
ft	deg	deg	ft	ft	ft	ft	°/100ft	deg	ft	°/100ft	ft
17340.00	90.94	1.06	8430.78	9083.96	9083.80	52.54	1.14	1.09	1524073.54	-0.11	95.00
17434.00	88.42	1.61	8431.30	9177.93	9177.77	54.72	2.74	2.58	1524075.72	-2.68	94.00
17529.00	90.67	2.68	8432.05	9272.87	9272.69	58.28	2.63	2.50	1524079.28	2.37	95.00
17623.00	88.59	0.90	8432.66	9366.83	9366.63	61.22	2.92	2.74	1524082.22	-2.22	94.00
17717.00	89.06	0.63	8434.59	9460.81	9460.61	62.47	0.58	0.55	1524083.47	0.50	94.00
17812.00	89.46	1.52	8435.81	9555.79	9555.58	64.25	1.03	0.98	1524085.25	0.42	95.00
17906.00	89.33	0.04	8436.81	9649.78	9649.56	65.53	1.58	1.48	1524086.53	-0.14	94.00
18001.00	89.76	359.23	8437.56	9744.77	9744.56	64.93	0.97	0.92	1524085.93	0.46	95.00
18095.00	90.64	359.58	8437.23	9838.76	9838.55	63.95	1.00	0.94	1524084.95	0.93	94.00
18190.00	91.08	1.19	8435.81	9933.74	9933.53	64.59	1.75	1.67	1524085.59	0.46	95.00
18284.00	89.87	2.05	8435.04	10027.71	10027.49	67.24	1.58	1.48	1524088.24	-1.29	94.00
18379.00	88.49	4.22	8436.40	10122.58	10122.33	72.43	2.71	2.58	1524093.43	-1.45	95.00
18473.00	90.44	7.36	8437.28	10216.14	10215.83	81.92	3.93	3.70	1524102.92	2.07	94.00
18568.00	88.55	6.38	8438.12	10310.51	10310.14	93.28	2.23	2.12	1524114.28	-1.98	95.00
18662.00	86.17	3.48	8442.44	10404.09	10403.68	101.35	4.00	3.76	1524122.35	-2.53	94.00
18757.00	87.38	3.28	8447.79	10498.81	10498.36	106.95	1.29	1.22	1524127.95	1.27	95.00
18851.00	90.13	2.90	8449.83	10592.67	10592.19	112.02	2.96	2.78	1524133.02	2.93	94.00
18945.00	88.52	1.97	8450.93	10686.60	10686.10	116.01	1.98	1.86	1524137.01	-1.72	94.00
19040.00	87.58	359.39	8454.16	10781.53	10781.02	117.14	2.89	2.74	1524138.14	-0.99	95.00
19134.00	87.88	358.77	8457.88	10875.43	10874.94	115.63	0.74	0.70	1524136.63	0.32	94.00
19160.00	87.65	358.75	8458.89	10901.40	10900.91	115.07	0.91	0.24	1524136.07	-0.90	26.00
19215.00	87.65	358.75	8461.15	10956.34	10955.85	113.87	0.00	0.00	1524134.87	0.00	55.00