

COG

SURVEY REPORT

VIKING HELMET STATE COM #1H

NORAM 21

3/21/2017



The **Ultimate Partner** In Wellbore Placement

CUSTOMER
PROJECT
FIELD

COG
Viking Helmet State Com #1H
Viking Helmet State Com #1H

SDI JOB NO.
SDI DISTRICT
SDI KIT/UNIT

OP.000148
Midland

SITE INFORMATION

Site Name
Lat/Long
Northing
Easting

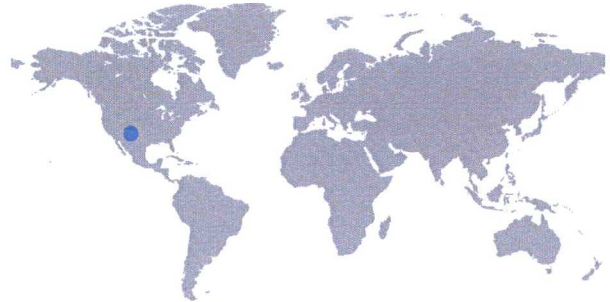
Viking Helmet State Com #1H
32.195107° N, 103.386899° W
435,988.3 ft
792,772.4 ft

Section
Township
Range

MAP INFORMATION

North Reference
Grid Correction
System
Datum
Map Zone

Grid North
-0.51 deg
US State Plane 1927
North American Datum 1927 (Clarke 1866)
New Mexico East: 3001



WELL INFORMATION

Lat/Long
Northing
Easting
UWI

32.195107° N, 103.381728° W
436,002.5 ft
794,372.3 ft
30-025-42782

DEPTH AND ELEVATION REFERENCE

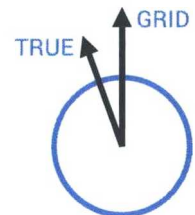
Ground Level
Reference Datum
Reference Height
Reference Elevation

3309 ft above Mean Sea Level
KB
29 ft above G.L.
3338 ft

VERTICAL SECTION REFERENCE

+N/-S
+E/-W
Proposal Direction
Calculation Method

0 ft
0 ft
179.51°
Minimum Curvature



LOCAL GRAVITY REFERENCE INFORMATION

Local Gravity
True to Grid

998.507 mG [computed]
subtract 0.51°

WELL NOTES

Keeper Gyro Survey ran in 4 1/2" Drill Pipe to 11,637'

OPERATORS

C. Booher

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	0.13	51.18	100.00	-0.07	0.07	0.09	0.13	0.11	51.18
125.00	0.16	23.48	125.00	-0.12	0.12	0.12	0.29	0.17	45.78
150.00	0.10	94.87	150.00	-0.14	0.15	0.16	0.63	0.21	46.92
175.00	0.13	115.75	175.00	-0.13	0.13	0.20	0.19	0.24	57.06
200.00	0.17	80.58	200.00	-0.12	0.13	0.26	0.38	0.29	64.56
225.00	0.37	113.96	225.00	-0.10	0.10	0.37	0.98	0.39	75.11
250.00	0.38	104.50	250.00	-0.04	0.05	0.52	0.25	0.53	84.98
275.00	0.45	108.83	275.00	0.01	-0.01	0.70	0.32	0.70	90.50
300.00	0.49	116.75	300.00	0.09	-0.09	0.89	0.31	0.89	95.56
325.00	0.49	124.26	325.00	0.20	-0.20	1.07	0.26	1.09	100.33
350.00	0.46	121.79	350.00	0.32	-0.31	1.25	0.15	1.28	103.92
375.00	0.46	115.46	374.99	0.42	-0.40	1.42	0.20	1.48	105.89
400.00	0.56	123.78	399.99	0.53	-0.52	1.61	0.50	1.69	107.72
425.00	0.60	128.60	424.99	0.68	-0.66	1.82	0.24	1.93	110.09
450.00	0.58	134.52	449.99	0.85	-0.83	2.01	0.25	2.17	112.55
475.00	0.51	132.32	474.99	1.02	-1.00	2.18	0.29	2.40	114.58
500.00	0.56	127.48	499.99	1.17	-1.15	2.36	0.28	2.62	115.92
525.00	0.58	127.25	524.99	1.32	-1.30	2.56	0.08	2.87	116.91
550.00	0.64	136.28	549.99	1.50	-1.48	2.75	0.45	3.13	118.18
575.00	0.59	135.10	574.98	1.69	-1.67	2.94	0.21	3.38	119.55
600.00	0.55	132.95	599.98	1.87	-1.84	3.12	0.18	3.63	120.54
625.00	0.60	128.05	624.98	2.03	-2.01	3.31	0.27	3.87	121.18
650.00	0.61	127.80	649.98	2.20	-2.17	3.52	0.05	4.13	121.61
675.00	0.61	135.76	674.98	2.38	-2.34	3.72	0.34	4.40	122.22
700.00	0.58	135.62	699.98	2.56	-2.53	3.90	0.14	4.65	122.96
725.00	0.56	127.86	724.98	2.73	-2.69	4.08	0.31	4.89	123.41
750.00	0.63	130.13	749.98	2.89	-2.86	4.28	0.29	5.15	123.69
775.00	0.67	135.61	774.97	3.09	-3.05	4.49	0.31	5.43	124.17
800.00	0.62	132.85	799.97	3.29	-3.25	4.69	0.25	5.71	124.67
825.00	0.59	137.23	824.97	3.48	-3.43	4.88	0.22	5.97	125.12
850.00	0.59	132.73	849.97	3.66	-3.62	5.06	0.19	6.22	125.53

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
875.00	0.64	127.88	874.97	3.83	-3.79	5.27	0.29	6.49	125.72
900.00	0.59	132.24	899.97	4.01	-3.96	5.47	0.29	6.76	125.89
925.00	0.51	133.62	924.97	4.17	-4.12	5.65	0.30	6.99	126.13
950.00	0.39	130.07	949.96	4.30	-4.25	5.79	0.50	7.19	126.29
975.00	0.27	119.19	974.96	4.39	-4.34	5.91	0.52	7.33	126.28
1000.00	0.26	122.60	999.96	4.45	-4.40	6.01	0.09	7.45	126.19
1025.00	0.18	114.93	1024.96	4.50	-4.44	6.09	0.35	7.54	126.11
1050.00	0.11	129.02	1049.96	4.53	-4.48	6.15	0.30	7.60	126.06
1075.00	0.07	167.40	1074.96	4.56	-4.51	6.17	0.28	7.64	126.15
1100.00	0.04	225.07	1099.96	4.58	-4.53	6.17	0.25	7.65	126.29
1125.00	0.08	284.20	1124.96	4.58	-4.53	6.14	0.29	7.63	126.40
1150.00	0.17	323.29	1149.96	4.55	-4.49	6.10	0.47	7.58	126.37
1175.00	0.14	350.50	1174.96	4.49	-4.44	6.08	0.32	7.52	126.13
1200.00	0.11	349.88	1199.96	4.43	-4.38	6.07	0.12	7.49	125.84
1225.00	0.02	65.16	1224.96	4.41	-4.36	6.07	0.42	7.47	125.69
1250.00	0.06	313.90	1249.96	4.40	-4.35	6.06	0.26	7.46	125.65
1275.00	0.06	258.46	1274.96	4.39	-4.34	6.04	0.23	7.44	125.72
1300.00	0.04	315.51	1299.96	4.39	-4.34	6.02	0.22	7.42	125.79
1325.00	0.16	337.34	1324.96	4.35	-4.30	6.00	0.49	7.38	125.63
1350.00	0.08	356.40	1349.96	4.30	-4.25	5.98	0.36	7.34	125.39
1375.00	0.07	217.13	1374.96	4.30	-4.24	5.97	0.56	7.33	125.40
1400.00	0.09	276.01	1399.96	4.31	-4.25	5.94	0.31	7.31	125.59
1425.00	0.04	25.08	1424.96	4.30	-4.25	5.93	0.43	7.29	125.60
1450.00	0.09	110.48	1449.96	4.29	-4.24	5.95	0.38	7.31	125.49
1475.00	0.03	191.97	1474.96	4.31	-4.26	5.97	0.36	7.33	125.49
1500.00	0.11	359.96	1499.96	4.29	-4.24	5.97	0.54	7.32	125.38
1525.00	0.10	75.46	1524.96	4.26	-4.21	5.99	0.51	7.32	125.10
1550.00	0.07	76.29	1549.96	4.25	-4.20	6.03	0.11	7.34	124.88
1575.00	0.08	60.42	1574.96	4.24	-4.19	6.06	0.08	7.36	124.67
1600.00	0.17	45.59	1599.96	4.21	-4.15	6.10	0.41	7.38	124.26
1625.00	0.10	50.00	1624.96	4.17	-4.11	6.14	0.31	7.39	123.81
1650.00	0.16	128.31	1649.96	4.17	-4.12	6.18	0.68	7.43	123.68

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
1675.00	0.14	106.26	1674.96	4.20	-4.15	6.24	0.25	7.49	123.63
1700.00	0.09	111.83	1699.96	4.22	-4.17	6.29	0.18	7.54	123.54
1725.00	0.12	89.32	1724.96	4.23	-4.17	6.33	0.19	7.58	123.40
1750.00	0.23	128.92	1749.96	4.26	-4.20	6.39	0.62	7.65	123.32
1775.00	0.13	29.12	1774.96	4.27	-4.21	6.45	1.12	7.70	123.15
1800.00	0.20	35.06	1799.96	4.21	-4.15	6.49	0.29	7.70	122.62
1825.00	0.14	37.15	1824.96	4.15	-4.09	6.53	0.23	7.70	122.06
1850.00	0.13	112.15	1849.96	4.13	-4.08	6.57	0.65	7.73	121.80
1875.00	0.21	122.96	1874.96	4.17	-4.11	6.64	0.38	7.81	121.77
1900.00	0.08	68.49	1899.96	4.19	-4.13	6.69	0.72	7.87	121.68
1925.00	0.17	52.52	1924.96	4.16	-4.10	6.74	0.39	7.89	121.33
1950.00	0.16	11.28	1949.96	4.10	-4.04	6.78	0.47	7.89	120.83
1975.00	0.13	76.89	1974.96	4.06	-4.00	6.81	0.64	7.90	120.45
2000.00	0.14	118.82	1999.96	4.07	-4.01	6.86	0.39	7.95	120.31
2025.00	0.10	87.31	2024.96	4.09	-4.03	6.91	0.31	8.00	120.21
2050.00	0.19	108.34	2049.96	4.10	-4.04	6.98	0.39	8.06	120.07
2075.00	0.12	97.08	2074.96	4.11	-4.05	7.04	0.31	8.12	119.94
2100.00	0.22	53.05	2099.96	4.09	-4.03	7.10	0.64	8.17	119.56
2125.00	0.16	58.10	2124.96	4.04	-3.98	7.17	0.25	8.20	119.03
2150.00	0.16	94.40	2149.96	4.03	-3.96	7.24	0.40	8.25	118.72
2175.00	0.20	76.06	2174.96	4.02	-3.96	7.31	0.29	8.32	118.42
2200.00	0.28	44.69	2199.96	3.97	-3.90	7.40	0.61	8.37	117.80
2225.00	0.28	55.75	2224.96	3.89	-3.82	7.49	0.22	8.41	117.03
2250.00	0.31	38.51	2249.96	3.80	-3.73	7.59	0.38	8.46	116.20
2275.00	0.33	77.10	2274.96	3.73	-3.67	7.70	0.85	8.53	115.45
2300.00	0.26	87.43	2299.96	3.71	-3.65	7.83	0.33	8.64	114.98
2325.00	0.35	72.88	2324.96	3.69	-3.62	7.96	0.45	8.74	114.47
2350.00	0.27	80.22	2349.96	3.66	-3.59	8.09	0.35	8.85	113.93
2375.00	0.37	69.11	2374.96	3.62	-3.55	8.22	0.49	8.96	113.36
2400.00	0.33	79.59	2399.96	3.58	-3.51	8.37	0.32	9.07	112.75
2425.00	0.38	73.11	2424.96	3.54	-3.47	8.52	0.27	9.20	112.17
2450.00	0.38	83.04	2449.96	3.51	-3.44	8.68	0.26	9.34	111.60

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
2475.00	0.38	74.32	2474.96	3.48	-3.40	8.84	0.23	9.48	111.06
2500.00	0.38	79.23	2499.96	3.44	-3.37	9.00	0.13	9.61	110.50
2525.00	0.40	60.08	2524.96	3.39	-3.31	9.16	0.53	9.74	109.85
2550.00	0.43	81.88	2549.95	3.33	-3.25	9.33	0.64	9.88	109.20
2575.00	0.37	77.54	2574.95	3.30	-3.22	9.50	0.28	10.03	108.71
2600.00	0.46	82.36	2599.95	3.27	-3.19	9.68	0.38	10.19	108.23
2625.00	0.39	73.65	2624.95	3.24	-3.15	9.86	0.38	10.35	107.72
2650.00	0.43	73.17	2649.95	3.19	-3.10	10.03	0.16	10.50	107.17
2675.00	0.40	86.73	2674.95	3.16	-3.07	10.21	0.41	10.66	106.73
2700.00	0.44	69.27	2699.95	3.12	-3.03	10.39	0.53	10.82	106.26
2725.00	0.42	60.88	2724.95	3.04	-2.95	10.56	0.26	10.96	105.62
2750.00	0.50	75.74	2749.95	2.97	-2.88	10.74	0.56	11.12	105.01
2775.00	0.44	70.90	2774.95	2.92	-2.82	10.94	0.29	11.29	104.47
2800.00	0.49	64.29	2799.95	2.84	-2.74	11.12	0.31	11.46	103.86
2825.00	0.46	81.00	2824.95	2.78	-2.68	11.32	0.57	11.63	103.33
2850.00	0.49	79.45	2849.95	2.75	-2.65	11.52	0.13	11.82	102.94
2875.00	0.48	75.90	2874.95	2.70	-2.60	11.73	0.12	12.01	102.51
2900.00	0.51	65.85	2899.94	2.63	-2.53	11.93	0.36	12.20	101.97
2925.00	0.51	84.79	2924.94	2.58	-2.47	12.15	0.67	12.40	101.52
2950.00	0.43	78.68	2949.94	2.55	-2.45	12.35	0.38	12.59	101.20
2975.00	0.54	67.11	2974.94	2.49	-2.38	12.55	0.58	12.77	100.75
3000.00	0.54	70.39	2999.94	2.41	-2.30	12.77	0.12	12.98	100.19
3025.00	0.47	80.11	3024.94	2.35	-2.24	12.98	0.44	13.17	99.79
3050.00	0.58	70.90	3049.94	2.29	-2.18	13.20	0.56	13.38	99.37
3075.00	0.52	72.94	3074.94	2.22	-2.11	13.43	0.27	13.60	98.91
3100.00	0.57	75.37	3099.94	2.16	-2.04	13.66	0.22	13.81	98.50
3125.00	0.54	80.11	3124.94	2.11	-1.99	13.90	0.21	14.04	98.14
3150.00	0.56	69.34	3149.93	2.05	-1.93	14.13	0.42	14.26	97.76
3175.00	0.53	79.28	3174.93	1.98	-1.86	14.36	0.40	14.48	97.38
3200.00	0.59	79.73	3199.93	1.94	-1.82	14.60	0.25	14.71	97.09
3225.00	0.56	80.04	3224.93	1.90	-1.77	14.85	0.14	14.95	96.80
3250.00	0.61	78.60	3249.93	1.85	-1.72	15.10	0.20	15.19	96.52

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS */100ft	CLOSURE DIST ft	CLOSURE DIR deg
3275.00	0.47	79.82	3274.93	1.81	-1.68	15.33	0.54	15.42	96.25
3300.00	0.53	81.12	3299.93	1.78	-1.64	15.54	0.22	15.63	96.04
3325.00	0.45	75.05	3324.93	1.73	-1.60	15.75	0.36	15.83	95.80
3350.00	0.52	86.84	3349.93	1.70	-1.57	15.96	0.47	16.04	95.61
3375.00	0.47	82.53	3374.92	1.69	-1.55	16.18	0.23	16.25	95.47
3400.00	0.51	85.52	3399.92	1.67	-1.53	16.39	0.18	16.46	95.32
3425.00	0.45	76.42	3424.92	1.64	-1.49	16.60	0.38	16.67	95.15
3450.00	0.46	90.49	3449.92	1.62	-1.47	16.80	0.45	16.86	95.01
3475.00	0.46	91.54	3474.92	1.62	-1.48	17.00	0.04	17.06	94.96
3500.00	0.42	97.52	3499.92	1.64	-1.49	17.19	0.23	17.25	94.96
3525.00	0.34	90.66	3524.92	1.65	-1.50	17.35	0.38	17.42	94.95
3550.00	0.38	99.71	3549.92	1.67	-1.52	17.51	0.28	17.57	94.96
3575.00	0.39	92.60	3574.92	1.69	-1.54	17.67	0.19	17.74	94.97
3600.00	0.49	124.07	3599.92	1.75	-1.60	17.85	1.04	17.92	95.12
3625.00	0.38	93.47	3624.92	1.82	-1.67	18.02	1.02	18.09	95.28
3650.00	0.40	107.34	3649.92	1.85	-1.70	18.18	0.38	18.26	95.33
3675.00	0.35	104.65	3674.92	1.90	-1.74	18.34	0.21	18.42	95.42
3700.00	0.55	106.83	3699.92	1.95	-1.79	18.53	0.81	18.61	95.53
3725.00	1.10	94.04	3724.91	2.01	-1.85	18.88	2.30	18.97	95.59
3750.00	1.44	89.08	3749.91	2.02	-1.86	19.43	1.45	19.52	95.46
3775.00	1.97	89.33	3774.90	2.02	-1.85	20.18	2.13	20.26	95.23
3800.00	2.51	87.79	3799.88	2.00	-1.82	21.15	2.15	21.23	94.92
3825.00	2.97	87.31	3824.85	1.96	-1.77	22.35	1.85	22.42	94.53
3850.00	3.63	87.97	3849.81	1.92	-1.71	23.79	2.65	23.85	94.12
3875.00	4.21	88.19	3874.75	1.87	-1.65	25.49	2.30	25.55	93.71
3900.00	4.81	88.08	3899.67	1.83	-1.59	27.46	2.41	27.50	93.32
3925.00	5.21	87.33	3924.57	1.76	-1.50	29.64	1.61	29.68	92.90
3950.00	5.62	87.56	3949.46	1.67	-1.40	31.99	1.65	32.02	92.50
3975.00	5.87	87.41	3974.34	1.58	-1.29	34.49	1.00	34.52	92.14
4000.00	6.28	88.05	3999.20	1.50	-1.18	37.13	1.66	37.15	91.83
4025.00	6.28	87.81	4024.05	1.43	-1.09	39.86	0.10	39.88	91.56
4050.00	6.66	88.12	4048.89	1.35	-0.99	42.68	1.53	42.69	91.32

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	6.76	86.55	4073.72	1.24	-0.85	45.60	0.84	45.61	91.07
4100.00	6.85	85.73	4098.54	1.06	-0.65	48.55	0.51	48.56	90.77
4125.00	6.99	84.74	4123.36	0.84	-0.40	51.55	0.76	51.56	90.44
4150.00	6.99	83.72	4148.17	0.56	-0.09	54.58	0.50	54.58	90.10
4175.00	7.05	81.89	4172.99	0.20	0.29	57.61	0.94	57.61	89.71
4200.00	6.91	80.79	4197.80	-0.23	0.75	60.62	0.79	60.62	89.29
4225.00	6.61	79.10	4222.63	-0.72	1.26	63.51	1.45	63.53	88.86
4250.00	6.07	75.72	4247.47	-1.29	1.86	66.21	2.62	66.23	88.39
4275.00	5.33	73.83	4272.35	-1.92	2.51	68.60	3.03	68.65	87.91
4300.00	4.83	72.57	4297.25	-2.54	3.15	70.72	2.06	70.79	87.45
4325.00	4.38	72.85	4322.17	-3.12	3.74	72.64	1.82	72.73	87.05
4350.00	4.16	70.67	4347.10	-3.69	4.32	74.41	1.08	74.53	86.67
4375.00	3.92	68.92	4372.04	-4.28	4.93	76.06	1.07	76.22	86.29
4400.00	3.64	65.62	4396.98	-4.90	5.57	77.58	1.43	77.78	85.90
4425.00	3.28	62.63	4421.94	-5.55	6.22	78.94	1.62	79.18	85.49
4450.00	2.95	59.73	4446.90	-6.19	6.88	80.13	1.45	80.42	85.09
4475.00	2.47	51.76	4471.87	-6.84	7.53	81.11	2.44	81.46	84.69
4500.00	2.06	37.85	4496.85	-7.52	8.22	81.81	2.73	82.22	84.26
4525.00	1.92	26.85	4521.84	-8.25	8.95	82.27	1.62	82.76	83.79
4550.00	1.95	16.39	4546.83	-9.02	9.73	82.58	1.42	83.15	83.28
4575.00	2.09	11.64	4571.81	-9.88	10.59	82.79	0.87	83.46	82.71
4600.00	2.40	11.85	4596.79	-10.83	11.54	82.99	1.25	83.79	82.08
4625.00	2.61	14.79	4621.77	-11.90	12.61	83.24	0.99	84.19	81.39
4650.00	3.04	23.16	4646.74	-13.05	13.77	83.65	2.36	84.78	80.65
4675.00	3.61	33.41	4671.69	-14.31	15.03	84.34	3.28	85.67	79.89
4700.00	4.07	39.74	4696.64	-15.64	16.37	85.34	2.52	86.90	79.14
4725.00	4.17	43.17	4721.57	-16.98	17.72	86.53	1.06	88.33	78.43
4750.00	4.26	47.95	4746.51	-18.25	19.00	87.84	1.45	89.88	77.79
4775.00	4.29	52.69	4771.44	-19.43	20.19	89.28	1.42	91.53	77.26
4800.00	4.63	61.13	4796.36	-20.47	21.25	90.90	2.95	93.35	76.85
4825.00	4.52	65.87	4821.28	-21.34	22.14	92.69	1.57	95.29	76.57
4850.00	4.06	71.07	4846.21	-22.02	22.82	94.42	2.43	97.14	76.41

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	3.45	79.79	4871.16	-22.42	23.25	96.00	3.31	98.77	76.39
4900.00	2.83	86.61	4896.12	-22.58	23.42	97.36	2.91	100.13	76.48
4925.00	2.18	97.42	4921.10	-22.55	23.39	98.44	3.19	101.18	76.63
4950.00	1.79	107.67	4946.08	-22.36	23.21	99.29	2.11	101.96	76.84
4975.00	1.63	112.01	4971.07	-22.10	22.96	99.99	0.81	102.59	77.07
5000.00	1.57	111.97	4996.06	-21.84	22.70	100.64	0.26	103.16	77.29
5025.00	1.60	113.07	5021.05	-21.56	22.43	101.28	0.19	103.73	77.51
5050.00	1.58	113.06	5046.04	-21.29	22.16	101.91	0.12	104.30	77.73
5075.00	1.59	111.75	5071.03	-21.02	21.90	102.55	0.16	104.87	77.95
5100.00	1.60	110.90	5096.02	-20.76	21.64	103.20	0.10	105.45	78.16
5125.00	1.49	112.10	5121.01	-20.51	21.40	103.83	0.46	106.01	78.36
5150.00	1.55	112.77	5146.00	-20.25	21.14	104.44	0.27	106.56	78.56
5175.00	1.60	112.90	5171.00	-19.98	20.88	105.08	0.19	107.13	78.76
5200.00	1.58	113.37	5195.99	-19.70	20.60	105.72	0.10	107.71	78.97
5225.00	1.67	111.78	5220.98	-19.42	20.33	106.37	0.41	108.30	79.18
5250.00	1.66	111.85	5245.97	-19.15	20.06	107.05	0.06	108.91	79.39
5275.00	1.59	110.61	5270.96	-18.88	19.80	107.71	0.30	109.51	79.58
5300.00	1.66	109.46	5295.95	-18.63	19.56	108.37	0.31	110.12	79.77
5325.00	1.64	109.38	5320.93	-18.39	19.32	109.05	0.08	110.75	79.95
5350.00	1.57	109.48	5345.92	-18.15	19.09	109.71	0.27	111.36	80.13
5375.00	1.65	110.01	5370.91	-17.91	18.85	110.38	0.32	111.98	80.31
5400.00	1.65	111.49	5395.90	-17.64	18.60	111.05	0.17	112.60	80.49
5425.00	1.72	109.44	5420.89	-17.38	18.34	111.74	0.37	113.23	80.68
5450.00	1.69	108.62	5445.88	-17.13	18.10	112.44	0.14	113.89	80.86
5475.00	1.62	108.00	5470.87	-16.90	17.87	113.13	0.32	114.53	81.02
5500.00	1.67	107.22	5495.86	-16.68	17.65	113.81	0.24	115.17	81.18
5525.00	1.70	106.61	5520.85	-16.46	17.44	114.52	0.13	115.84	81.34
5550.00	1.64	108.15	5545.84	-16.23	17.22	115.21	0.29	116.49	81.50
5575.00	1.65	107.95	5570.83	-16.01	17.00	115.89	0.06	117.13	81.66
5600.00	1.76	106.40	5595.82	-15.78	16.78	116.60	0.45	117.81	81.81
5625.00	1.71	105.61	5620.81	-15.57	16.57	117.33	0.23	118.49	81.96
5650.00	1.71	106.34	5645.80	-15.36	16.37	118.05	0.09	119.18	82.11

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
5675.00	1.66	106.45	5670.79	-15.14	16.16	118.75	0.22	119.85	82.25
5700.00	1.67	106.14	5695.78	-14.93	15.95	119.45	0.07	120.51	82.39
5725.00	1.75	106.16	5720.76	-14.72	15.75	120.16	0.31	121.19	82.53
5750.00	1.70	108.13	5745.75	-14.49	15.53	120.88	0.32	121.88	82.68
5775.00	1.70	107.02	5770.74	-14.26	15.30	121.59	0.14	122.55	82.83
5800.00	1.70	107.59	5795.73	-14.03	15.08	122.30	0.07	123.23	82.97
5825.00	1.72	106.28	5820.72	-13.81	14.86	123.01	0.19	123.91	83.11
5850.00	1.75	108.80	5845.71	-13.58	14.63	123.74	0.33	124.60	83.25
5875.00	1.54	126.50	5870.70	-13.25	14.31	124.37	2.19	125.19	83.44
5900.00	1.47	145.69	5895.69	-12.78	13.85	124.82	2.03	125.59	83.67
5925.00	1.48	148.29	5920.68	-12.23	13.31	125.17	0.27	125.88	83.93
5950.00	1.54	151.29	5945.67	-11.66	12.74	125.50	0.39	126.15	84.20
5975.00	1.55	151.80	5970.66	-11.07	12.15	125.82	0.08	126.41	84.49
6000.00	1.58	150.64	5995.65	-10.47	11.55	126.15	0.16	126.68	84.77
6025.00	1.55	152.90	6020.64	-9.86	10.95	126.47	0.27	126.95	85.05
6050.00	1.56	152.50	6045.64	-9.26	10.34	126.79	0.07	127.21	85.34
6075.00	1.59	150.17	6070.63	-8.65	9.74	127.12	0.28	127.49	85.62
6100.00	1.63	151.78	6095.62	-8.04	9.13	127.46	0.23	127.78	85.90
6125.00	1.58	150.09	6120.61	-7.42	8.51	127.80	0.26	128.08	86.19
6150.00	1.61	148.40	6145.60	-6.82	7.91	128.15	0.21	128.40	86.47
6175.00	1.64	146.81	6170.59	-6.22	7.32	128.53	0.22	128.74	86.74
6200.00	1.64	145.95	6195.58	-5.62	6.72	128.93	0.10	129.10	87.02
6225.00	1.67	145.82	6220.57	-5.02	6.12	129.33	0.16	129.48	87.29
6250.00	1.65	146.77	6245.56	-4.41	5.52	129.74	0.14	129.85	87.56
6275.00	1.71	145.22	6270.54	-3.80	4.91	130.15	0.30	130.24	87.84
6300.00	1.62	147.73	6295.53	-3.19	4.31	130.55	0.48	130.62	88.11
6325.00	1.66	145.56	6320.52	-2.59	3.71	130.94	0.29	130.99	88.38
6350.00	1.66	143.60	6345.51	-2.00	3.12	131.36	0.23	131.40	88.64
6375.00	1.65	142.84	6370.50	-1.42	2.54	131.79	0.09	131.82	88.89
6400.00	1.68	145.16	6395.49	-0.82	1.95	132.22	0.29	132.23	89.15
6425.00	1.64	143.36	6420.48	-0.23	1.37	132.64	0.26	132.65	89.41
6450.00	1.67	145.51	6445.47	0.36	0.78	133.06	0.28	133.06	89.66

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
6475.00	1.68	142.59	6470.46	0.95	0.19	133.49	0.34	133.49	89.92
6500.00	1.65	143.17	6495.45	1.54	-0.39	133.93	0.13	133.93	90.17
6525.00	1.60	144.14	6520.44	2.11	-0.96	134.35	0.23	134.35	90.41
6550.00	1.59	145.56	6545.43	2.68	-1.53	134.75	0.16	134.76	90.65
6575.00	1.66	141.50	6570.42	3.26	-2.10	135.17	0.53	135.19	90.89
6600.00	1.62	145.46	6595.41	3.84	-2.68	135.60	0.47	135.62	91.13
6625.00	1.74	141.35	6620.40	4.43	-3.26	136.04	0.68	136.07	91.37
6650.00	1.61	143.82	6645.39	5.01	-3.84	136.48	0.60	136.53	91.61
6675.00	1.69	142.36	6670.38	5.59	-4.42	136.91	0.36	136.98	91.85
6700.00	1.60	142.59	6695.37	6.16	-4.99	137.35	0.36	137.44	92.08
6725.00	1.28	140.27	6720.36	6.66	-5.48	137.74	1.30	137.85	92.28
6750.00	0.78	134.78	6745.36	7.00	-5.82	138.04	2.03	138.16	92.41
6775.00	0.26	146.50	6770.35	7.17	-5.98	138.19	2.12	138.32	92.48
6800.00	0.05	243.33	6795.35	7.22	-6.04	138.22	1.08	138.35	92.50
6825.00	0.25	288.67	6820.35	7.20	-6.02	138.15	0.89	138.28	92.50
6850.00	0.19	290.60	6845.35	7.17	-5.99	138.06	0.25	138.19	92.48
6875.00	0.21	290.19	6870.35	7.14	-5.96	137.98	0.08	138.11	92.47
6900.00	0.22	286.17	6895.35	7.11	-5.93	137.89	0.06	138.02	92.46
6925.00	0.22	292.56	6920.35	7.08	-5.90	137.80	0.10	137.93	92.45
6950.00	0.28	288.72	6945.35	7.04	-5.86	137.70	0.26	137.82	92.44
6975.00	0.21	295.31	6970.35	7.00	-5.82	137.60	0.31	137.72	92.42
7000.00	0.25	295.88	6995.35	6.96	-5.78	137.51	0.16	137.63	92.41
7025.00	0.23	291.14	7020.35	6.91	-5.74	137.42	0.12	137.54	92.39
7050.00	0.20	284.54	7045.35	6.88	-5.71	137.33	0.14	137.45	92.38
7075.00	0.25	282.76	7070.35	6.86	-5.69	137.23	0.21	137.35	92.37
7100.00	0.19	274.50	7095.35	6.84	-5.67	137.13	0.29	137.25	92.37
7125.00	0.25	273.20	7120.35	6.84	-5.66	137.04	0.24	137.16	92.37
7150.00	0.25	266.55	7145.35	6.84	-5.66	136.93	0.12	137.05	92.37
7175.00	0.22	272.88	7170.35	6.83	-5.67	136.83	0.14	136.95	92.37
7200.00	0.25	256.22	7195.35	6.84	-5.68	136.73	0.29	136.84	92.38
7225.00	0.30	264.82	7220.35	6.86	-5.69	136.61	0.26	136.73	92.39
7250.00	0.24	263.05	7245.35	6.87	-5.71	136.49	0.24	136.61	92.39

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
7275.00	0.27	274.08	7270.35	6.87	-5.71	136.38	0.23	136.50	92.40
7300.00	0.16	279.84	7295.35	6.86	-5.70	136.29	0.45	136.41	92.39
7325.00	0.29	266.19	7320.35	6.86	-5.70	136.19	0.56	136.31	92.40
7350.00	0.24	268.34	7345.35	6.87	-5.70	136.08	0.22	136.20	92.40
7375.00	0.23	264.51	7370.35	6.87	-5.71	135.98	0.07	136.10	92.40
7400.00	0.22	266.93	7395.35	6.88	-5.72	135.88	0.04	136.00	92.41
7425.00	0.21	266.96	7420.35	6.88	-5.72	135.78	0.05	135.90	92.41
7450.00	0.22	255.09	7445.35	6.90	-5.74	135.69	0.18	135.81	92.42
7475.00	0.15	250.92	7470.35	6.92	-5.76	135.61	0.29	135.74	92.43
7500.00	0.16	243.47	7495.35	6.94	-5.78	135.55	0.09	135.68	92.44
7525.00	0.17	245.07	7520.35	6.98	-5.82	135.49	0.06	135.61	92.46
7550.00	0.17	251.86	7545.35	7.00	-5.84	135.42	0.09	135.54	92.47
7575.00	0.17	249.15	7570.35	7.03	-5.87	135.35	0.04	135.47	92.48
7600.00	0.21	259.18	7595.35	7.05	-5.89	135.27	0.21	135.39	92.49
7625.00	0.16	244.81	7620.35	7.07	-5.91	135.19	0.30	135.32	92.50
7650.00	0.21	249.20	7645.35	7.10	-5.94	135.12	0.24	135.25	92.52
7675.00	0.19	249.03	7670.35	7.13	-5.98	135.03	0.11	135.17	92.53
7700.00	0.23	249.91	7695.35	7.16	-6.01	134.95	0.17	135.08	92.55
7725.00	0.23	256.09	7720.35	7.19	-6.04	134.85	0.10	134.99	92.56
7750.00	0.20	240.59	7745.35	7.22	-6.07	134.77	0.26	134.90	92.58
7775.00	0.31	254.52	7770.35	7.26	-6.11	134.66	0.48	134.80	92.60
7800.00	0.25	247.71	7795.35	7.30	-6.15	134.55	0.24	134.69	92.62
7825.00	0.28	241.82	7820.35	7.35	-6.20	134.44	0.16	134.59	92.64
7850.00	0.26	228.20	7845.35	7.41	-6.27	134.35	0.28	134.49	92.67
7875.00	0.28	229.34	7870.35	7.49	-6.34	134.26	0.09	134.41	92.70
7900.00	0.23	212.16	7895.35	7.57	-6.42	134.19	0.35	134.34	92.74
7925.00	0.30	219.21	7920.35	7.66	-6.52	134.12	0.30	134.28	92.78
7950.00	0.25	202.30	7945.35	7.76	-6.62	134.06	0.37	134.22	92.83
7975.00	0.31	210.78	7970.35	7.87	-6.72	134.00	0.28	134.17	92.87
8000.00	0.30	201.32	7995.35	7.99	-6.84	133.94	0.20	134.12	92.93
8025.00	0.42	175.73	8020.34	8.14	-7.00	133.93	0.79	134.11	92.99
8050.00	0.38	169.52	8045.34	8.31	-7.17	133.95	0.25	134.14	93.06

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
8075.00	0.26	173.16	8070.34	8.45	-7.31	133.97	0.47	134.17	93.12
8100.00	0.36	173.65	8095.34	8.59	-7.44	133.99	0.41	134.19	93.18
8125.00	0.38	164.29	8120.34	8.75	-7.60	134.02	0.26	134.23	93.25
8150.00	0.31	159.37	8145.34	8.89	-7.74	134.06	0.31	134.29	93.31
8175.00	0.33	163.26	8170.34	9.02	-7.88	134.11	0.12	134.34	93.36
8200.00	0.33	153.81	8195.34	9.16	-8.01	134.16	0.22	134.40	93.42
8225.00	0.30	157.70	8220.34	9.29	-8.14	134.22	0.14	134.47	93.47
8250.00	0.37	149.08	8245.34	9.42	-8.27	134.28	0.32	134.54	93.52
8275.00	0.33	140.41	8270.34	9.54	-8.39	134.37	0.26	134.63	93.57
8300.00	0.40	146.90	8295.34	9.67	-8.52	134.46	0.32	134.73	93.63
8325.00	0.42	130.81	8320.34	9.80	-8.65	134.58	0.46	134.86	93.68
8350.00	0.39	139.95	8345.34	9.93	-8.77	134.70	0.29	134.99	93.73
8375.00	0.38	130.07	8370.34	10.05	-8.89	134.82	0.26	135.11	93.77
8400.00	0.41	136.26	8395.34	10.16	-9.01	134.95	0.20	135.25	93.82
8425.00	0.48	131.01	8420.34	10.30	-9.14	135.09	0.32	135.40	93.87
8450.00	0.37	138.12	8445.34	10.43	-9.27	135.22	0.48	135.54	93.92
8475.00	0.43	130.92	8470.34	10.55	-9.39	135.34	0.30	135.67	93.97
8500.00	0.36	140.47	8495.33	10.67	-9.51	135.46	0.37	135.80	94.02
8525.00	0.43	129.29	8520.33	10.79	-9.63	135.58	0.41	135.93	94.06
8550.00	0.39	135.40	8545.33	10.91	-9.75	135.72	0.22	136.07	94.11
8575.00	0.41	131.84	8570.33	11.03	-9.87	135.84	0.11	136.20	94.16
8600.00	0.40	137.42	8595.33	11.16	-10.00	135.97	0.16	136.33	94.20
8625.00	0.40	133.07	8620.33	11.28	-10.12	136.09	0.12	136.47	94.25
8650.00	0.46	139.59	8645.33	11.42	-10.26	136.22	0.32	136.60	94.31
8675.00	0.37	143.79	8670.33	11.56	-10.40	136.33	0.40	136.73	94.36
8700.00	0.42	141.89	8695.33	11.70	-10.54	136.44	0.23	136.84	94.42
8725.00	0.43	150.21	8720.33	11.86	-10.69	136.54	0.25	136.96	94.48
8750.00	0.39	142.42	8745.33	12.01	-10.84	136.64	0.29	137.07	94.54
8775.00	0.46	146.80	8770.33	12.16	-10.99	136.75	0.31	137.19	94.60
8800.00	0.34	148.38	8795.33	12.31	-11.14	136.84	0.47	137.29	94.65
8825.00	0.37	137.18	8820.33	12.43	-11.26	136.93	0.30	137.40	94.70
8850.00	0.40	147.90	8845.33	12.57	-11.39	137.04	0.31	137.51	94.75

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
8875.00	0.38	143.85	8870.33	12.71	-11.53	137.13	0.15	137.61	94.81
8900.00	0.46	138.69	8895.32	12.85	-11.68	137.24	0.36	137.74	94.86
8925.00	0.44	148.17	8920.32	13.01	-11.83	137.36	0.31	137.87	94.92
8950.00	0.38	143.46	8945.32	13.16	-11.98	137.46	0.27	137.98	94.98
8975.00	0.40	139.38	8970.32	13.29	-12.11	137.57	0.15	138.10	95.03
9000.00	0.43	147.76	8995.32	13.44	-12.26	137.68	0.27	138.22	95.09
9025.00	0.41	149.04	9020.32	13.59	-12.42	137.77	0.09	138.33	95.15
9050.00	0.44	144.26	9045.32	13.75	-12.57	137.87	0.18	138.45	95.21
9075.00	0.45	147.27	9070.32	13.91	-12.73	137.98	0.10	138.57	95.27
9100.00	0.51	154.07	9095.32	14.09	-12.91	138.08	0.33	138.69	95.34
9125.00	0.48	153.11	9120.32	14.29	-13.11	138.18	0.12	138.80	95.42
9150.00	0.49	147.31	9145.32	14.47	-13.29	138.28	0.20	138.92	95.49
9175.00	0.62	152.37	9170.32	14.68	-13.50	138.41	0.54	139.06	95.57
9200.00	0.72	157.71	9195.31	14.95	-13.76	138.53	0.49	139.21	95.67
9225.00	0.62	164.95	9220.31	15.23	-14.04	138.62	0.52	139.33	95.78
9250.00	0.69	162.60	9245.31	15.50	-14.32	138.70	0.30	139.44	95.89
9275.00	0.71	161.40	9270.31	15.80	-14.61	138.80	0.10	139.57	96.01
9300.00	0.75	165.09	9295.31	16.10	-14.92	138.89	0.25	139.69	96.13
9325.00	0.79	168.27	9320.30	16.43	-15.25	138.97	0.23	139.80	96.26
9350.00	0.79	173.00	9345.30	16.78	-15.59	139.02	0.26	139.90	96.40
9375.00	0.81	173.99	9370.30	17.12	-15.94	139.06	0.09	139.97	96.54
9400.00	0.91	170.38	9395.30	17.50	-16.31	139.12	0.44	140.07	96.69
9425.00	0.92	169.05	9420.29	17.89	-16.70	139.19	0.10	140.19	96.84
9450.00	0.93	172.72	9445.29	18.29	-17.10	139.25	0.24	140.30	97.00
9475.00	0.99	175.76	9470.29	18.71	-17.52	139.29	0.31	140.39	97.17
9500.00	1.02	180.87	9495.28	19.14	-17.95	139.31	0.37	140.46	97.34
9525.00	1.02	182.76	9520.28	19.59	-18.40	139.29	0.13	140.50	97.52
9550.00	1.03	181.64	9545.28	20.03	-18.84	139.27	0.09	140.54	97.70
9575.00	1.03	180.07	9570.27	20.48	-19.29	139.27	0.11	140.60	97.89
9600.00	1.12	181.15	9595.27	20.95	-19.76	139.26	0.39	140.66	98.08
9625.00	1.17	182.36	9620.26	21.45	-20.26	139.25	0.21	140.71	98.28
9650.00	1.25	180.57	9645.26	21.98	-20.79	139.23	0.34	140.78	98.49

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
9675.00	1.26	186.04	9670.25	22.52	-21.33	139.20	0.48	140.83	98.71
9700.00	1.29	186.84	9695.24	23.08	-21.89	139.14	0.13	140.85	98.94
9725.00	1.29	190.35	9720.24	23.63	-22.44	139.06	0.32	140.86	99.17
9750.00	1.38	192.50	9745.23	24.20	-23.01	138.94	0.41	140.83	99.40
9775.00	1.39	195.59	9770.22	24.78	-23.60	138.79	0.30	140.79	99.65
9800.00	1.41	195.53	9795.22	25.37	-24.18	138.63	0.11	140.72	99.90
9825.00	1.51	197.67	9820.21	25.98	-24.80	138.45	0.44	140.65	100.15
9850.00	1.53	198.49	9845.20	26.61	-25.43	138.24	0.12	140.56	100.42
9875.00	1.55	201.03	9870.19	27.24	-26.06	138.01	0.28	140.45	100.69
9900.00	1.53	197.54	9895.18	27.87	-26.69	137.79	0.38	140.35	100.96
9925.00	1.62	196.16	9920.17	28.52	-27.35	137.60	0.39	140.29	101.24
9950.00	1.60	198.28	9945.16	29.19	-28.02	137.39	0.24	140.21	101.53
9975.00	1.59	196.96	9970.15	29.85	-28.68	137.18	0.15	140.14	101.81
10000.00	1.64	199.06	9995.14	30.52	-29.35	136.96	0.31	140.07	102.10
10025.00	1.74	197.36	10020.13	31.22	-30.05	136.73	0.46	139.99	102.40
10050.00	1.86	197.19	10045.12	31.97	-30.80	136.49	0.47	139.93	102.72
10075.00	1.89	198.71	10070.11	32.74	-31.58	136.24	0.22	139.85	103.05
10100.00	1.92	199.35	10095.09	33.53	-32.36	135.97	0.16	139.77	103.39
10125.00	1.94	198.47	10120.08	34.32	-33.16	135.70	0.13	139.69	103.73
10150.00	1.95	197.87	10145.06	35.12	-33.96	135.44	0.09	139.63	104.08
10175.00	1.93	199.89	10170.05	35.92	-34.76	135.16	0.28	139.56	104.42
10200.00	1.90	200.11	10195.04	36.70	-35.55	134.88	0.14	139.48	104.77
10225.00	1.96	199.59	10220.02	37.49	-36.34	134.59	0.28	139.41	105.11
10250.00	1.98	200.00	10245.01	38.30	-37.15	134.30	0.10	139.34	105.46
10275.00	2.00	201.20	10269.99	39.11	-37.96	133.99	0.18	139.27	105.82
10300.00	1.99	202.45	10294.98	39.92	-38.77	133.67	0.18	139.18	106.18
10325.00	2.01	202.84	10319.96	40.72	-39.58	133.33	0.08	139.08	106.53
10350.00	2.01	202.32	10344.95	41.53	-40.39	133.00	0.07	138.99	106.89
10375.00	2.03	202.67	10369.93	42.34	-41.20	132.66	0.10	138.91	107.25
10400.00	2.08	201.74	10394.91	43.17	-42.04	132.32	0.24	138.84	107.62
10425.00	2.09	204.57	10419.90	44.00	-42.87	131.96	0.41	138.75	108.00
10450.00	1.93	204.80	10444.88	44.79	-43.67	131.60	0.63	138.65	108.36

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	1.78	211.69	10469.87	45.50	-44.38	131.21	1.08	138.52	108.69
10500.00	1.75	212.15	10494.86	46.15	-45.04	130.81	0.15	138.34	109.00
10525.00	1.51	218.83	10519.85	46.73	-45.62	130.40	1.20	138.15	109.28
10550.00	1.13	234.81	10544.84	47.13	-46.02	129.99	2.11	137.89	109.49
10575.00	1.15	244.07	10569.84	47.37	-46.27	129.56	0.74	137.57	109.65
10600.00	1.12	241.49	10594.83	47.60	-46.49	129.12	0.23	137.24	109.80
10625.00	1.12	244.42	10619.83	47.82	-46.72	128.68	0.23	136.90	109.95
10650.00	1.12	255.00	10644.82	47.98	-46.89	128.23	0.83	136.53	110.08
10675.00	1.26	266.59	10669.82	48.06	-46.97	127.72	1.11	136.08	110.19
10700.00	1.23	267.88	10694.81	48.08	-46.99	127.18	0.17	135.58	110.28
10725.00	1.28	268.03	10719.80	48.09	-47.01	126.63	0.20	135.07	110.37
10750.00	1.27	269.16	10744.80	48.10	-47.02	126.07	0.10	134.56	110.46
10775.00	1.24	265.80	10769.79	48.12	-47.05	125.53	0.32	134.05	110.55
10800.00	1.25	268.19	10794.79	48.14	-47.08	124.98	0.21	133.55	110.64
10825.00	1.24	269.29	10819.78	48.15	-47.09	124.44	0.12	133.05	110.73
10850.00	1.16	280.26	10844.77	48.11	-47.05	123.92	0.96	132.55	110.79
10875.00	1.08	288.08	10869.77	47.98	-46.93	123.45	0.69	132.07	110.81
10900.00	0.95	287.86	10894.77	47.84	-46.79	123.03	0.49	131.63	110.82
10925.00	0.86	291.24	10919.76	47.71	-46.66	122.66	0.42	131.23	110.83
10950.00	0.79	291.66	10944.76	47.57	-46.53	122.32	0.31	130.87	110.83
10975.00	0.66	280.02	10969.76	47.48	-46.44	122.02	0.77	130.56	110.84
11000.00	0.57	282.44	10994.76	47.43	-46.39	121.76	0.36	130.30	110.86
11025.00	0.62	280.04	11019.75	47.38	-46.34	121.50	0.21	130.04	110.88
11050.00	0.59	285.97	11044.75	47.32	-46.28	121.25	0.27	129.78	110.89
11075.00	0.59	299.99	11069.75	47.21	-46.18	121.01	0.58	129.52	110.89
11100.00	0.78	326.15	11094.75	47.01	-45.97	120.80	1.44	129.25	110.84
11125.00	0.90	334.00	11119.75	46.69	-45.66	120.62	0.68	128.97	110.73
11150.00	1.03	337.51	11144.74	46.30	-45.27	120.45	0.57	128.68	110.60
11175.00	0.97	343.04	11169.74	45.89	-44.86	120.30	0.45	128.39	110.45
11200.00	0.90	357.86	11194.74	45.49	-44.46	120.23	1.00	128.19	110.29
11225.00	0.81	8.45	11219.73	45.11	-44.09	120.25	0.73	128.08	110.13
11250.00	0.73	29.59	11244.73	44.80	-43.77	120.36	1.18	128.07	109.99

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	0.72	35.10	11269.73	44.54	-43.51	120.52	0.28	128.14	109.85
11300.00	0.71	44.04	11294.73	44.30	-43.27	120.72	0.45	128.24	109.72
11325.00	0.70	46.75	11319.73	44.08	-43.05	120.94	0.14	128.37	109.59
11350.00	0.68	52.60	11344.72	43.89	-42.86	121.17	0.29	128.52	109.48
11375.00	0.58	52.82	11369.72	43.73	-42.69	121.39	0.41	128.68	109.38
11400.00	0.50	61.40	11394.72	43.60	-42.56	121.59	0.45	128.82	109.29
11425.00	0.35	79.13	11419.72	43.53	-42.49	121.76	0.80	128.96	109.24
11450.00	0.25	104.33	11444.72	43.53	-42.49	121.88	0.65	129.08	109.22
11475.00	0.19	132.38	11469.72	43.58	-42.53	121.97	0.48	129.17	109.23
11500.00	0.25	318.46	11494.72	43.56	-42.52	121.96	1.79	129.16	109.22
11525.00	0.54	139.54	11519.72	43.61	-42.57	122.00	3.17	129.22	109.24
11550.00	0.09	135.05	11544.72	43.72	-42.67	122.09	1.81	129.34	109.27
11575.00	0.68	137.89	11569.72	43.84	-42.80	122.21	2.38	129.48	109.30
11600.00	0.05	58.09	11594.72	43.95	-42.90	122.32	2.70	129.62	109.33
11625.00	0.34	194.62	11619.72	44.01	-42.97	122.31	1.52	129.63	109.36
11637.00	0.30	224.54	11631.72	44.07	-43.03	122.28	1.43	129.62	109.39