

30-015- 44/31

MESQUITE SWD

SAND DUNES SWD #2

UDI #47

10/12/2017

Scientific Drilling

The Ultimate Partner In Wellbore Placement

NOV 29 2017

RECEIVED

SURVEY REPORT**SAND DUNES SWD #2****COMPUTED KEEPER GYRO WIRELINE SURVEY**

CUSTOMER Mesquite SWD
PROJECT Sand Dunes SWD #2
FIELD Sand Dunes SWD #2

SDI JOB NO. OP.004978
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Sand Dunes SWD #2
Lat/Long 32.231617° N, 103.799815° W
Northing 448,390.7 ft
Easting 664,971.9 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.28 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

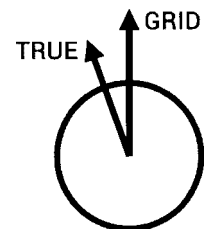
Lat/Long 32.231617° N, 103.799815° W
Northing 448,390.7 ft
Easting 664,971.9 ft
UWI 30-015-44131

DEPTH AND ELEVATION REFERENCE

Ground Level 3514.2 ft above Mean Sea
Level
Reference Datum RKB
Reference Height 17 ft above G.L.
Reference Elevation 3531.2 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 153.19°
Calculation Method Minimum Curvature

**LOCAL GRAVITY REFERENCE INFORMATION**

Local Gravity 998.491 mG [computed]
True to Grid subtract 0.28°

WELL NOTES

Keeper Gyro Wireline Survey in 3 1/2 IF

OPERATORS

Nathan Yerby

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	271.01	100.00	-0.05	0.00	-0.12	0.13	0.12	271.01
125.00	0.18	294.08	125.00	-0.10	0.02	-0.18	0.31	0.18	275.89
150.00	0.13	241.90	150.00	-0.13	0.02	-0.24	0.58	0.24	274.95
175.00	0.27	214.44	175.00	-0.10	-0.04	-0.30	0.65	0.30	262.21

200.00	0.32	200.00	200.00	-0.10	-0.04	-0.30	0.65	0.30	262.21
225.00	0.37	209.05	225.00	-0.10	-0.04	-0.30	0.65	0.30	262.21
250.00	0.42	214.09	250.00	-0.10	-0.04	-0.30	0.65	0.30	262.21
275.00	0.47	217.78	275.00	-0.10	-0.04	-0.30	0.65	0.30	262.21
300.00	0.52	210.57	300.00	-0.10	-0.04	-0.30	0.65	0.30	262.21

325.00	0.83	209.05	324.99	0.32	-0.92	-1.12	0.66	1.45	230.52
350.00	0.85	214.09	349.99	0.51	-1.23	-1.31	0.30	1.80	226.74
375.00	1.08	217.78	374.99	0.70	-1.57	-1.56	0.97	2.22	224.75
400.00	1.32	210.57	399.98	0.96	-2.01	-1.85	1.15	2.73	222.67
425.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10

450.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10
475.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10
500.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10
525.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10
550.00	1.29	204.80	424.98	1.29	-2.51	-2.12	0.54	3.28	220.10

575.00	1.81	210.35	574.92	3.71	-6.20	-4.04	0.72	7.40	213.10
600.00	1.92	209.27	599.90	4.16	-6.90	-4.44	0.48	8.21	212.77
625.00	2.01	205.56	624.89	4.66	-7.66	-4.84	0.63	9.06	212.26
650.00	1.93	206.69	649.87	5.18	-8.43	-5.21	0.35	9.92	211.73
675.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59

700.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59
725.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59
750.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59
775.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59
800.00	2.11	213.08	674.86	5.66	-9.20	-5.65	1.14	10.80	211.59

825.00	2.21	208.43	824.75	8.69	-14.03	-8.51	0.63	16.41	211.24
850.00	2.10	207.63	849.74	9.23	-14.86	-8.95	0.48	17.35	211.07

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
875.00	2.14	212.35	874.72	9.73	-15.66	-9.42	0.72	18.27	211.01
900.00	2.21	212.75	899.70	10.22	-16.46	-9.93	0.31	19.22	211.09
925.00	2.29	209.30	924.68	10.74	-17.30	-10.43	0.62	20.21	211.09

950.00	2.37	205.85	949.66	11.26	-18.14	-10.94	0.29	21.16	211.17
975.00	2.45	202.40	974.64	11.78	-18.98	-11.45	0.25	22.11	211.25
1000.00	2.53	198.95	999.62	12.30	-19.82	-11.96	0.21	23.06	211.33
1025.00	2.61	195.50	1024.60	12.82	-20.66	-12.47	0.17	24.01	211.41

1075.00	1.79	193.89	1074.59	14.09	-22.10	-12.49	0.39	25.38	209.47
1100.00	1.93	195.88	1099.58	14.70	-22.88	-12.70	0.61	26.17	209.02
1125.00	2.00	192.06	1124.56	15.35	-23.71	-12.90	0.60	26.99	208.55
1150.00	1.86	189.47	1149.55	16.01	-24.54	-13.06	0.65	27.80	208.02
1175.00	1.82	193.95	1174.53	16.64	-25.33	-13.22	0.60	28.57	207.57

1200.00	1.74	198.43	1200.00	17.26	-26.16	-13.43	0.56	29.34	207.12
1225.00	1.69	202.91	1224.98	17.88	-26.99	-13.64	0.52	30.11	206.67
1250.00	1.64	207.39	1249.96	18.50	-27.82	-13.85	0.48	30.88	206.22
1275.00	1.59	211.87	1274.94	19.12	-28.65	-14.06	0.44	31.65	205.77

1325.00	1.67	188.19	1324.46	20.41	-30.07	-14.25	0.60	33.27	205.36
1350.00	1.28	194.44	1349.45	20.92	-30.70	-14.38	1.67	33.90	205.09
1375.00	1.23	195.86	1374.44	21.32	-31.23	-14.52	0.26	34.44	204.94
1400.00	1.03	189.23	1399.44	21.70	-31.71	-14.63	0.94	34.92	204.77
1425.00	0.76	190.07	1424.43	22.02	-32.09	-14.69	1.08	35.29	204.60

1450.00	0.71	190.91	1449.42	22.34	-32.47	-14.75	1.22	35.66	204.43
1475.00	0.66	191.75	1474.41	22.66	-32.85	-14.81	1.36	36.03	204.26
1500.00	0.61	192.59	1499.40	22.98	-33.23	-14.87	1.50	36.40	204.09
1525.00	0.56	193.43	1524.39	23.30	-33.61	-14.93	1.64	36.77	203.92

1575.00	0.59	198.36	1574.42	23.52	-34.07	-15.29	0.88	37.35	204.16
1600.00	0.70	201.92	1599.42	23.71	-34.34	-15.38	0.44	37.63	204.13
1625.00	0.74	194.35	1624.42	23.93	-34.63	-15.48	0.42	37.94	204.08
1650.00	0.52	199.96	1649.41	24.13	-34.90	-15.56	0.89	38.21	204.03

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
1675.00	0.70	210.94	1674.41	24.29	-35.14	-15.68	0.85	38.47	204.05
1825.00	0.05	307.80	1824.41	24.84	-35.93	-16.03	0.29	39.34	204.05
1850.00	0.17	79.43	1849.41	24.84	-35.92	-16.01	0.84	39.32	204.02
1875.00	0.19	20.35	1874.41	24.82	-35.87	-15.95	0.71	39.26	203.98
1900.00	0.15	14.48	1899.41	24.77	-35.80	-15.93	0.16	39.19	203.99
1925.00	0.23	61.25	1924.41	24.74	-35.74	-15.88	0.68	39.11	203.95
2075.00	0.50	39.50	2074.41	24.39	-35.17	-15.52	1.08	38.44	203.82
2100.00	0.57	25.84	2099.41	24.27	-34.97	-15.40	0.58	38.21	203.77
2125.00	0.45	18.70	2124.41	24.13	-34.77	-15.31	0.53	37.99	203.77
2150.00	0.53	37.30	2149.40	24.01	-34.58	-15.21	0.72	37.78	203.74
2175.00	0.63	23.85	2174.40	23.87	-34.36	-15.09	0.68	37.53	203.70
2325.00	0.76	26.53	2324.39	22.88	-32.88	-14.34	0.75	35.87	203.56
2350.00	0.61	18.87	2349.39	22.69	-32.61	-14.22	0.68	35.57	203.57
2375.00	0.69	36.11	2374.39	22.53	-32.36	-14.09	0.84	35.29	203.53
2400.00	0.86	29.08	2399.39	22.35	-32.07	-13.91	0.78	34.96	203.45
2425.00	0.83	31.15	2424.39	22.15	-31.75	-13.72	0.17	34.59	203.38

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg

2575.00	1.00	39.79	2574.36	20.92	-29.53	-12.05	0.76	31.89	202.19
2600.00	1.17	39.94	2599.35	20.74	-29.17	-11.74	0.70	31.44	201.93
2625.00	1.09	34.30	2624.35	20.52	-28.78	-11.45	0.56	30.97	201.69
2650.00	1.07	45.91	2649.35	20.34	-28.42	-11.14	0.88	30.52	201.41
2675.00	1.15	39.88	2674.34	20.17	-28.06	-10.82	0.55	30.07	201.08

2700.00	1.07	39.94	2700.00	20.00	-27.71	-10.51	0.41	29.62	200.75
2725.00	1.07	39.94	2725.00	19.83	-27.35	-10.20	0.26	29.17	200.42
2750.00	1.07	39.94	2750.00	19.66	-26.99	-9.89	0.11	28.72	200.09
2775.00	1.07	39.94	2775.00	19.49	-26.63	-9.58	-0.04	28.27	199.76
2800.00	1.07	39.94	2800.00	19.32	-26.27	-9.27	-0.19	27.82	199.43

2825.00	0.97	45.72	2824.31	19.15	-25.95	-8.89	0.83	27.43	198.91
2850.00	0.98	59.71	2849.31	19.08	-25.69	-8.55	0.95	27.08	198.41
2875.00	1.11	51.93	2874.31	19.02	-25.44	-8.18	0.76	26.72	197.82
2900.00	0.90	57.54	2899.30	18.95	-25.18	-7.82	0.91	26.37	197.25
2925.00	1.01	63.11	2924.30	18.93	-24.98	-7.45	0.56	26.06	196.62

2950.00	1.01	63.11	2950.00	18.76	-24.62	-7.14	0.41	25.61	196.29
2975.00	1.01	63.11	2975.00	18.59	-24.26	-6.83	0.26	25.16	195.96
3000.00	1.01	63.11	3000.00	18.42	-23.90	-6.52	0.11	24.71	195.63
3025.00	1.01	63.11	3025.00	18.25	-23.54	-6.21	-0.04	24.26	195.30
3050.00	1.01	63.11	3050.00	18.08	-23.18	-5.90	-0.19	23.81	194.97

3075.00	0.79	79.45	3074.28	19.36	-24.34	-5.24	0.70	24.90	192.16
3100.00	0.89	85.53	3099.28	19.48	-24.29	-4.88	0.54	24.78	191.37
3125.00	0.81	77.03	3124.27	19.59	-24.24	-4.52	0.60	24.65	190.56
3150.00	0.77	86.84	3149.27	19.70	-24.19	-4.18	0.56	24.55	189.80
3175.00	0.81	81.05	3174.27	19.83	-24.15	-3.84	0.34	24.45	189.02

3200.00	0.81	81.05	3200.00	19.66	-23.79	-3.53	0.19	24.00	188.69
3225.00	0.81	81.05	3225.00	19.49	-23.43	-3.22	-0.04	23.55	188.36
3250.00	0.81	81.05	3250.00	19.32	-23.07	-2.91	-0.19	23.10	188.03
3275.00	0.81	81.05	3275.00	19.15	-22.71	-2.60	-0.34	22.65	187.70
3300.00	0.81	81.05	3300.00	18.98	-22.35	-2.29	-0.49	22.20	187.37

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
3325.00	0.55	79.11	3324.26	20.23	-23.78	-2.19	0.55	23.88	185.27
3350.00	0.62	68.58	3349.26	20.28	-23.70	-1.95	0.51	23.78	184.70
3375.00	0.52	75.98	3374.26	20.31	-23.63	-1.71	0.49	23.69	184.15
3400.00	0.64	72.97	3399.26	20.36	-23.56	-1.47	0.48	23.60	183.57
3425.00	0.50	71.65	3424.26	20.40	-23.48	-1.23	0.57	23.51	183.00

3575.00	0.92	133.98	3574.25	21.43	-23.94	0.14	0.53	23.94	179.66
3600.00	1.24	142.07	3599.24	21.89	-24.29	0.45	1.42	24.30	178.93
3625.00	1.47	137.64	3624.24	22.46	-24.74	0.84	1.00	24.76	178.06
3650.00	1.87	143.10	3649.22	23.17	-25.31	1.30	1.73	25.34	177.06
3675.00	2.19	140.39	3674.21	24.04	-26.00	1.85	1.34	26.07	175.93

3825.00	3.66	145.11	3824.00	31.72	-32.27	6.48	0.92	32.91	168.65
3850.00	3.74	147.31	3848.95	33.32	-33.61	7.37	0.64	34.41	167.63
3875.00	3.98	146.76	3873.89	34.99	-35.02	8.29	0.97	35.99	166.68
3900.00	4.07	148.77	3898.83	36.74	-36.50	9.22	0.68	37.65	165.82
3925.00	4.34	149.22	3923.76	38.57	-38.07	10.17	1.06	39.41	165.05

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4075.00	4.99	152.40	4073.25	50.93	-49.01	15.93	0.61	51.53	161.99
4100.00	4.89	154.12	4098.16	53.08	-50.93	16.90	0.71	53.66	161.64
4125.00	4.97	152.11	4123.07	55.23	-52.85	17.87	0.77	55.79	161.32
4150.00	4.93	153.65	4147.97	57.38	-54.77	18.85	0.55	57.92	161.00
4175.00	5.03	152.58	4172.88	59.56	-56.70	19.84	0.55	60.07	160.72

4200.00	4.97	154.12	4200.00	61.71	-58.62	20.82	0.61	62.20	160.44
4225.00	4.89	154.12	4225.00	63.54	-60.53	21.80	0.71	64.33	160.12
4250.00	4.97	152.11	4250.00	65.37	-62.44	22.78	0.77	66.46	159.80
4275.00	4.93	153.65	4275.00	67.20	-64.35	23.76	0.55	68.59	159.48
4300.00	5.03	152.58	4300.00	69.03	-66.26	24.74	0.55	70.72	159.16

4325.00	4.26	152.31	4322.38	71.72	-67.57	25.30	0.45	72.15	159.47
4350.00	3.97	154.67	4347.32	73.51	-69.17	26.11	1.33	73.94	159.32
4375.00	3.92	154.28	4372.26	75.23	-70.73	26.85	0.25	75.65	159.21
4400.00	3.66	154.51	4397.21	76.89	-72.22	27.56	1.02	77.30	159.11
4425.00	3.69	154.56	4422.15	78.49	-73.66	28.25	0.12	78.90	159.02

4450.00	3.66	154.51	4447.10	80.10	-75.10	28.96	1.02	80.55	158.92
4475.00	3.69	154.56	4472.04	81.71	-76.54	29.67	0.12	82.15	158.83
4500.00	3.92	154.28	4496.98	83.32	-77.98	30.38	0.25	83.75	158.74
4525.00	3.97	154.67	4521.92	84.93	-79.42	31.09	1.33	85.35	158.65
4550.00	4.26	152.31	4546.86	86.54	-80.86	31.80	0.45	86.95	158.56

4575.00	3.08	155.38	4571.89	87.36	-81.64	32.14	0.80	87.74	158.51
4600.00	3.02	152.80	4596.86	88.69	-82.84	32.72	0.61	89.07	158.45
4625.00	2.87	155.44	4621.82	89.98	-84.00	33.28	0.81	90.35	158.39
4650.00	2.91	154.75	4646.79	91.24	-85.14	33.81	0.22	91.61	158.34
4675.00	2.70	154.70	4671.76	92.46	-86.25	34.33	0.86	92.83	158.29

4700.00	2.70	154.70	4696.72	93.68	-87.36	34.86	0.86	94.05	158.24
4725.00	2.91	154.75	4721.69	94.90	-88.47	35.38	0.22	95.27	158.19
4750.00	2.87	155.44	4746.65	96.12	-89.58	35.90	0.81	96.49	158.14
4775.00	3.02	152.80	4771.62	97.34	-90.69	36.42	0.61	97.71	158.09
4800.00	3.08	155.38	4796.58	98.56	-91.80	36.94	0.80	98.93	158.04

4825.00	2.20	156.40	4821.62	99.05	-92.26	37.05	0.67	99.42	158.12
4850.00	2.20	160.55	4846.60	100.00	-93.15	37.40	0.64	100.38	158.12

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
4875.00	1.91	160.10	4871.58	100.89	-93.99	37.70	1.18	101.27	158.14
4900.00	1.94	161.40	4896.57	101.72	-94.78	37.98	0.22	102.11	158.17
4925.00	1.83	160.94	4921.55	102.54	-95.56	38.24	0.44	102.93	158.19

5000.00	1.74	163.73	5096.47	107.96	-100.82	39.87	0.22	108.41	158.42
5025.00	1.61	162.38	5121.46	108.68	-101.52	40.08	0.57	109.14	158.46
5050.00	1.60	166.95	5146.45	109.37	-102.19	40.26	0.51	109.84	158.50
5075.00	1.44	165.44	5171.44	110.01	-102.84	40.42	0.66	110.49	158.54

5100.00	1.74	163.73	5096.47	107.96	-100.82	39.87	0.22	108.41	158.42
5125.00	1.61	162.38	5121.46	108.68	-101.52	40.08	0.57	109.14	158.46
5150.00	1.60	166.95	5146.45	109.37	-102.19	40.26	0.51	109.84	158.50
5175.00	1.44	165.44	5171.44	110.01	-102.84	40.42	0.66	110.49	158.54

5200.00	1.19	166.24	5321.40	113.40	-106.26	41.16	0.64	113.95	158.83
5225.00	1.21	171.21	5346.39	113.91	-106.77	41.26	0.43	114.47	158.87
5250.00	1.19	170.52	5371.39	114.40	-107.29	41.35	0.11	114.98	158.93
5275.00	1.19	173.75	5396.38	114.89	-107.80	41.42	0.27	115.48	158.98
5300.00	1.12	168.30	5421.37	115.37	-108.30	41.49	0.51	115.98	159.04

5325.00	1.19	166.24	5321.40	113.40	-106.26	41.16	0.64	113.95	158.83
5350.00	1.21	171.21	5346.39	113.91	-106.77	41.26	0.43	114.47	158.87
5375.00	1.19	170.52	5371.39	114.40	-107.29	41.35	0.11	114.98	158.93
5400.00	1.19	173.75	5396.38	114.89	-107.80	41.42	0.27	115.48	158.98
5425.00	1.12	168.30	5421.37	115.37	-108.30	41.49	0.51	115.98	159.04

5450.00	1.16	169.00	5571.35	118.16	-111.19	41.94	0.44	118.84	159.33
5475.00	1.09	175.52	5596.34	118.62	-111.68	42.01	0.59	119.32	159.38
5500.00	1.14	169.39	5621.34	119.08	-112.16	42.08	0.52	119.79	159.44
5525.00	1.12	175.22	5646.33	119.55	-112.65	42.14	0.47	120.27	159.49

5575.00	1.16	169.00	5571.35	118.16	-111.19	41.94	0.44	118.84	159.33
5600.00	1.09	175.52	5596.34	118.62	-111.68	42.01	0.59	119.32	159.38
5625.00	1.14	169.39	5621.34	119.08	-112.16	42.08	0.52	119.79	159.44
5650.00	1.12	175.22	5646.33	119.55	-112.65	42.14	0.47	120.27	159.49

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
5675.00	1.18	173.14	5671.33	120.01	-113.14	42.19	0.30	120.75	159.55

5700.00	1.18	173.14	5701.33	120.01	-113.14	42.19	0.30	120.75	159.55
5725.00	1.18	173.14	5721.33	120.01	-113.14	42.19	0.30	120.75	159.55
5750.00	1.18	173.14	5751.33	120.01	-113.14	42.19	0.30	120.75	159.55
5775.00	1.18	173.14	5771.33	120.01	-113.14	42.19	0.30	120.75	159.55
5800.00	1.18	173.14	5801.33	120.01	-113.14	42.19	0.30	120.75	159.55

5825.00	1.05	180.94	5821.30	122.68	-115.97	42.51	0.62	123.52	159.87
5850.00	0.95	174.59	5846.30	123.08	-116.41	42.52	0.60	123.93	159.93
5875.00	0.99	180.43	5871.29	123.46	-116.83	42.54	0.42	124.34	159.99
5900.00	0.97	175.55	5896.29	123.85	-117.26	42.56	0.34	124.74	160.05
5925.00	0.98	185.66	5921.28	124.23	-117.68	42.55	0.69	125.14	160.12

5950.00	0.98	182.86	5951.26	126.51	-120.40	42.23	1.10	127.59	160.67
5975.00	0.98	182.86	5971.26	126.51	-120.40	42.23	1.10	127.59	160.67
6000.00	0.98	182.86	6001.26	126.51	-120.40	42.23	1.10	127.59	160.67
6025.00	0.98	182.86	6021.26	126.51	-120.40	42.23	1.10	127.59	160.67
6050.00	0.98	182.86	6051.26	126.51	-120.40	42.23	1.10	127.59	160.67

6075.00	0.98	182.86	6071.26	126.51	-120.40	42.23	1.10	127.59	160.67
6100.00	1.03	188.29	6096.26	126.87	-120.83	42.19	0.43	127.99	160.75
6125.00	0.92	181.44	6121.25	127.23	-121.25	42.15	0.64	128.37	160.83
6150.00	0.92	186.71	6146.25	127.58	-121.65	42.12	0.34	128.74	160.90
6175.00	0.97	182.06	6171.25	127.93	-122.06	42.09	0.36	129.12	160.97

6200.00	0.97	182.06	6201.25	127.93	-122.06	42.09	0.36	129.12	160.97
6225.00	0.97	182.06	6221.25	127.93	-122.06	42.09	0.36	129.12	160.97
6250.00	0.97	182.06	6251.25	127.93	-122.06	42.09	0.36	129.12	160.97
6275.00	0.97	182.06	6271.25	127.93	-122.06	42.09	0.36	129.12	160.97
6300.00	0.97	182.06	6301.25	127.93	-122.06	42.09	0.36	129.12	160.97

6325.00	1.04	188.81	6321.22	130.15	-124.70	41.80	0.22	131.52	161.47
6350.00	0.95	181.27	6346.22	130.52	-125.13	41.76	0.63	131.92	161.54
6375.00	0.98	186.74	6371.22	130.88	-125.55	41.73	0.39	132.31	161.61
6400.00	1.01	182.83	6396.21	131.25	-125.98	41.70	0.29	132.70	161.69
6425.00	0.94	186.34	6421.21	131.61	-126.41	41.66	0.36	133.09	161.76

6450.00	0.94	186.34	6451.21	131.61	-126.41	41.66	0.36	133.09	161.76
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MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg

6575.00	1.06	185.40	6571.18	133.84	-129.06	41.36	0.27	135.52	162.23
6600.00	0.98	190.49	6596.18	134.21	-129.50	41.30	0.49	135.92	162.31
6625.00	1.03	190.08	6621.18	134.56	-129.93	41.22	0.21	136.31	162.40
6650.00	0.91	190.81	6646.17	134.89	-130.35	41.14	0.46	136.69	162.48
6675.00	0.97	194.74	6671.17	135.21	-130.75	41.05	0.33	137.04	162.57

6700.00	0.91	194.05	6701.17	135.54	-131.16	40.96	0.36	137.43	162.66
6725.00	0.86	193.34	6726.17	135.87	-131.59	40.87	0.39	137.82	162.75
6750.00	0.81	192.63	6751.17	136.20	-132.02	40.78	0.42	138.21	162.84
6775.00	0.76	191.92	6776.17	136.53	-132.45	40.69	0.45	138.60	162.93

6825.00	0.81	194.34	6821.15	136.94	-132.97	40.50	0.36	139.00	163.06
6850.00	0.86	194.05	6846.15	137.22	-133.32	40.42	0.20	139.31	163.14
6875.00	0.73	189.54	6871.15	137.49	-133.66	40.34	0.58	139.61	163.20
6900.00	0.74	195.43	6896.14	137.74	-133.97	40.27	0.31	139.89	163.27
6925.00	0.71	188.28	6921.14	137.98	-134.28	40.21	0.39	140.17	163.33

6950.00	0.66	187.57	6946.14	138.31	-134.61	40.12	0.42	140.56	163.42
6975.00	0.61	186.86	6971.14	138.64	-134.94	40.03	0.45	140.95	163.51
7000.00	0.56	186.15	7001.13	138.97	-135.27	39.94	0.48	141.34	163.60
7025.00	0.51	185.44	7026.13	139.30	-135.60	39.85	0.51	141.73	163.69

7075.00	0.66	191.67	7071.13	139.44	-136.08	39.88	0.26	141.80	163.67
7100.00	0.74	192.29	7096.13	139.68	-136.38	39.81	0.31	142.07	163.73
7125.00	0.67	186.92	7121.13	139.93	-136.68	39.76	0.39	142.35	163.78
7150.00	0.73	194.11	7146.13	140.17	-136.98	39.71	0.42	142.62	163.84
7175.00	0.72	188.50	7171.12	140.42	-137.29	39.64	0.29	142.90	163.89

7200.00	0.67	187.81	7201.12	140.66	-137.59	39.57	0.32	143.29	163.98
7225.00	0.62	187.10	7226.12	140.90	-137.89	39.50	0.35	143.68	164.07
7250.00	0.57	186.39	7251.12	141.14	-138.19	39.43	0.38	144.07	164.16
7275.00	0.52	185.68	7276.12	141.38	-138.49	39.36	0.41	144.46	164.25

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
7325.00	0.82	188.44	7321.11	142.03	-139.27	39.31	0.06	144.71	164.24
7350.00	0.84	193.78	7346.11	142.31	-139.62	39.24	0.32	145.03	164.30
7375.00	0.82	188.76	7371.11	142.60	-139.97	39.17	0.30	145.35	164.37
7400.00	0.77	188.25	7396.10	142.88	-140.32	39.11	0.20	145.67	164.42
7425.00	0.83	190.79	7421.10	143.16	-140.66	39.06	0.28	145.98	164.48
7450.00	0.85	193.33	7446.10	143.44	-141.01	39.01	0.26	146.29	164.54
7475.00	0.87	195.87	7471.10	143.72	-141.35	38.96	0.24	146.60	164.60
7500.00	0.89	198.41	7501.10	144.00	-141.69	38.91	0.22	146.91	164.66
7525.00	0.91	200.95	7526.10	144.28	-142.04	38.86	0.20	147.22	164.72
7550.00	0.93	203.49	7551.10	144.56	-142.38	38.81	0.18	147.53	164.78
7575.00	0.94	175.39	7571.08	145.20	-142.97	39.01	0.17	148.20	164.74
7600.00	0.92	177.08	7596.08	145.57	-143.38	39.04	0.12	148.60	164.77
7625.00	0.89	177.19	7621.08	145.94	-143.77	39.06	0.13	148.98	164.80
7650.00	0.93	179.77	7646.07	146.29	-144.17	39.07	0.24	149.37	164.84
7675.00	0.96	178.14	7671.07	146.67	-144.58	39.08	0.15	149.77	164.88
7700.00	0.98	175.72	7701.07	147.04	-144.99	39.09	0.13	150.16	164.92
7725.00	1.00	173.30	7726.07	147.42	-145.40	39.10	0.11	150.55	164.96
7750.00	1.02	170.88	7751.07	147.80	-145.81	39.11	0.09	150.94	165.00
7775.00	1.04	168.46	7776.07	148.18	-146.22	39.12	0.07	151.33	165.04
7800.00	1.06	166.04	7801.07	148.56	-146.63	39.13	0.05	151.72	165.08
7825.00	1.10	178.54	7821.04	149.19	-147.39	39.12	0.04	152.49	165.14
7850.00	1.10	178.80	7846.04	149.62	-147.87	39.13	0.02	152.96	165.18
7875.00	1.13	180.04	7871.03	150.06	-148.35	39.13	0.14	153.43	165.22
7900.00	1.12	179.15	7896.03	150.50	-148.84	39.14	0.08	153.90	165.27
7925.00	1.16	181.16	7921.02	150.94	-149.34	39.13	0.23	154.38	165.32
7950.00	1.18	183.18	7946.02	151.38	-149.83	39.14	0.21	154.85	165.36
7975.00	1.20	185.20	7971.02	151.82	-150.32	39.15	0.19	155.32	165.40
8000.00	1.22	187.22	8001.02	152.26	-150.81	39.16	0.17	155.79	165.44
8025.00	1.24	189.24	8026.02	152.70	-151.30	39.17	0.15	156.26	165.48
8050.00	1.26	191.26	8051.02	153.14	-151.79	39.18	0.13	156.73	165.52
8075.00	1.28	193.28	8076.02	153.58	-152.28	39.19	0.11	157.20	165.56
8100.00	1.30	195.30	8101.02	154.02	-152.77	39.20	0.09	157.67	165.60
8125.00	1.32	197.32	8126.02	154.46	-153.26	39.21	0.07	158.14	165.64
8150.00	1.34	199.34	8151.02	154.90	-153.75	39.22	0.05	158.61	165.68
8175.00	1.36	201.36	8176.02	155.34	-154.24	39.23	0.03	159.08	165.72
8200.00	1.38	203.38	8201.02	155.78	-154.73	39.24	0.01	159.55	165.76
8225.00	1.40	205.40	8226.02	156.22	-155.22	39.25	0.00	160.02	165.80
8250.00	1.42	207.42	8251.02	156.66	-155.71	39.26	0.00	160.49	165.84
8275.00	1.44	209.44	8276.02	157.10	-156.20	39.27	0.00	160.96	165.88
8300.00	1.46	211.46	8301.02	157.54	-156.69	39.28	0.00	161.43	165.92
8325.00	1.48	213.48	8326.02	157.98	-157.18	39.29	0.00	161.90	165.96
8350.00	1.50	215.50	8351.02	158.42	-157.67	39.30	0.00	162.37	166.00
8375.00	1.52	217.52	8376.02	158.86	-158.16	39.31	0.00	162.84	166.04
8400.00	1.54	219.54	8401.02	159.30	-158.65	39.32	0.00	163.31	166.08
8425.00	1.56	221.56	8426.02	159.74	-159.14	39.33	0.00	163.78	166.12
8450.00	1.58	223.58	8451.02	160.18	-159.63	39.34	0.00	164.25	166.16
8475.00	1.60	225.60	8476.02	160.62	-160.12	39.35	0.00	164.72	166.20
8500.00	1.62	227.62	8501.02	161.06	-160.61	39.36	0.00	165.19	166.24
8525.00	1.64	229.64	8526.02	161.50	-161.10	39.37	0.00	165.66	166.28
8550.00	1.66	231.66	8551.02	161.94	-161.59	39.38	0.00	166.13	166.32
8575.00	1.68	233.68	8576.02	162.38	-162.08	39.39	0.00	166.60	166.36
8600.00	1.70	235.70	8601.02	162.82	-162.57	39.40	0.00	167.07	166.40
8625.00	1.72	237.72	8626.02	163.26	-163.06	39.41	0.00	167.54	166.44
8650.00	1.74	239.74	8651.02	163.70	-163.55	39.42	0.00	168.01	166.48
8675.00	1.76	241.76	8676.02	164.14	-164.04	39.43	0.00	168.48	166.52
8700.00	1.78	243.78	8701.02	164.58	-164.53	39.44	0.00	168.95	166.56
8725.00	1.80	245.80	8726.02	165.02	-165.02	39.45	0.00	169.42	166.60
8750.00	1.82	247.82	8751.02	165.46	-165.51	39.46	0.00	169.89	166.64
8775.00	1.84	249.84	8776.02	165.90	-166.00	39.47	0.00	170.36	166.68
8800.00	1.86	251.86	8801.02	166.34	-166.49	39.48	0.00	170.83	166.72
8825.00	1.88	253.88	8826.02	166.78	-166.98	39.49	0.00	171.30	166.76
8850.00	1.90	255.90	8851.02	167.22	-167.47	39.50	0.00	171.77	166.80
8875.00	1.92	257.92	8876.02	167.66	-167.96	39.51	0.00	172.24	166.84
8900.00	1.94	259.94	8901.02	168.10	-168.45	39.52	0.00	172.71	166.88
8925.00	1.96	261.96	8926.02	168.54	-168.94	39.53	0.00	173.18	166.92
8950.00	1.98	263.98	8951.02	168.98	-169.43	39.54	0.00	173.65	166.96
8975.00	2.00	266.00	8976.02	169.42	-169.92	39.55	0.00	174.12	167.00
9000.00	2.02	268.02	9001.02	169.86	-170.41	39.56	0.00	174.59	167.04
9025.00	2.04	270.04	9026.02	170.30	-170.90	39.57	0.00	175.06	167.08
9050.00	2.06	272.06	9051.02	170.74	-171.39	39.58	0.00	175.53	167.12
9075.00	2.08	274.08	9076.02	171.18	-171.88	39.59	0.00	176.00	167.16
9100.00	2.10	276.10	9101.02	171.62	-172.37	39.60	0.00	176.47	167.20
9125.00	2.12	278.12	9126.02	172.06	-172.86	39.61	0.00	176.94	167.24
9150.00	2.14	280.14	9151.02	172.50	-173.35	39.62	0.00	177.41	167.28
9175.00	2.16	282.16	9176.02	172.94	-173.84	39.63	0.00	177.88	167.32
9200.00	2.18	284.18	9201.02	173.38	-174.33	39.64	0.00	178.35	167.36
9225.00	2.20	286.20	9226.02	173.82	-174.82	39.65	0.00	178.82	167.40
9250.00	2.22	288.22	9251.02	174.26	-175.31	39.66	0.00	179.29	167.44
9275.00	2.24	290.24	9276.02	174.70	-175.80	39.67	0.00	179.76	167.48
9300.00	2.26	292.26	9301.02	175.14	-176.29	39.68	0.00	180.23	167.52
9325.00	2.28	294.28	9326.02	175.58	-176.78	39.69	0.00	180.70	167.56
9350.00	2.30	296.30	9351.02	176.02	-177.27	39.70	0.00	181.17	167.60
9375.00	2.32	298.32	9376.02	176.46	-177.76	39.71	0.00	181.64	167.64
9400.00	2.34	300.34	9401.02	176.90	-178.25	39.72	0.00	182.11	167.68
9425.00	2.36	302.36	9426.02	177.34	-178.74	39.73	0.00	182.58	167.72
9450.00	2.38	304.38	9451.02	177.78	-179.23	39.74	0.00	183.05	167.76
9475.00	2.40	306.40	9476.02	178.22	-179.72	39.75	0.00	183.52	167.80
9500.00	2.42	308.42	9501.02	178.66	-180.21	39.76	0.00	183.99	167.84
9525.00	2.44	310.44	9526.02	179.10	-180.70	39.77	0.00	184.46	167.88
9550.00	2.46	312.46	9551.02	179.54	-181.19	39.78	0.00	184.93	167.92
9575.00	2.48	314.48	9576.02	179.98	-181.68	39.79	0.00	185.40	167.96
9600.00	2.50	316.50	9601.02	180.42	-182.17	39.80	0.00	185.87	168.00
9625.00	2.52	318.52	9626.02	180.86	-182.66	39.81	0.00	186.34	168.04
9650.00	2.54	320.54	9651.02	181.30	-183.15	39.82	0.00	186.81	168.08
9675.00	2.56	322.56	9676.02	181.74	-183.64	39.83	0.00	187.28	168.12
9700.00	2.58	324.58	9701.02	182.18	-184.13	39.84	0.00	187.75	168.16
9725.00	2.60	326.60	9726.02	182.62	-184.62	39.85	0.00	188.22	168.20
9750.00	2.62	328.62	9751.02	183.06	-185.11	39.86	0.00	188.69	168.24
9775.00	2.64	330.64	9776.02	183.50	-185.60	39.87	0.00	189.16	168.28
9800.00	2.66	332.66	9801.02	183.94	-186.09	39.88	0.00	189.63	168.32
9825.00	2.68	334.68	9826.02	184.38	-186.58	39.89	0.00	190.10	168.36
9850.00	2.70	336.70	9851.02	184.82	-187.07	39.90	0.00	190.57	168.40
9875.00	2.72	338.72	9876.02	185.26	-187.56	39.91	0.00	191.04	168.44
9900.00	2.74	340.74	9901.02	185.70	-188.05	39.92	0.00	191.51	168.48
9925.00	2.76	342.76	9926.02	186.14	-188.54	39.93	0.00	191.98	168.52
9950.00	2.78	344.78	9951.02	186.58	-189.03	39.94	0.00	192.45	168.56
9975.00	2.80	346.80	9976.02	187.02	-189.52	39.95	0.00	192.92	168.60
10000.00	2.82	348.82	10001.02	187.46	-190.01	39.96	0.00	193.39	168

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
8075.00	0.95	181.87	8071.00	153.39	-152.13	39.05	0.24	157.06	165.60
8100.00	0.87	185.24	8095.99	153.73	-152.52	39.03	0.37	157.44	165.65
8125.00	0.67	187.28	8120.99	154.02	-152.86	38.99	0.81	157.75	165.69
8150.00	0.41	190.47	8145.99	154.21	-153.09	38.96	1.07	157.97	165.72
8175.00	0.27	184.56	8170.99	154.33	-153.24	38.94	0.55	158.11	165.74

8200.00	0.22	185.70	8200.99	154.41	-153.32	38.91	0.72	158.22	165.76
8225.00	0.17	187.19	8225.99	154.49	-153.41	38.87	0.73	158.31	165.77
8250.00	0.12	188.68	8250.99	154.57	-153.50	38.83	0.74	158.40	165.78
8275.00	0.07	190.17	8275.99	154.65	-153.59	38.79	0.75	158.49	165.79
8300.00	0.02	191.66	8300.99	154.73	-153.68	38.75	0.76	158.58	165.80

8325.00	0.40	246.14	8320.99	154.70	-153.82	38.60	0.60	158.59	165.91
8350.00	0.53	248.03	8345.99	154.68	-153.90	38.41	0.53	158.62	165.99
8375.00	0.58	253.74	8370.99	154.65	-153.98	38.18	0.29	158.64	166.07
8400.00	0.59	258.14	8395.99	154.59	-154.04	37.93	0.19	158.64	166.17
8425.00	0.49	261.36	8420.98	154.52	-154.08	37.70	0.42	158.63	166.25

8450.00	0.38	264.58	8445.98	154.44	-154.12	37.45	0.27	158.61	166.33
8475.00	0.27	267.79	8470.97	154.36	-154.16	37.20	0.17	158.59	166.41
8500.00	0.16	271.00	8495.96	154.27	-154.19	36.95	0.07	158.56	166.49
8525.00	0.05	274.21	8520.95	154.18	-154.22	36.70	0.02	158.53	166.57
8550.00	0.00	277.42	8545.94	154.09	-154.25	36.45	0.00	158.50	166.65

8575.00	0.91	73.15	8570.98	154.30	-153.78	37.80	1.77	158.35	166.19
8600.00	1.32	76.49	8595.98	154.40	-153.65	38.27	1.68	158.34	166.02
8625.00	1.57	78.69	8620.97	154.55	-153.52	38.88	1.04	158.36	165.79
8650.00	1.60	79.68	8645.96	154.74	-153.39	39.56	0.14	158.41	165.54
8675.00	1.56	82.01	8670.95	154.95	-153.28	40.24	0.30	158.47	165.29

8700.00	1.49	84.79	8695.94	155.16	-153.15	40.92	0.46	158.52	165.04
8725.00	1.42	87.00	8720.93	155.37	-153.02	41.59	0.62	158.57	164.79
8750.00	1.35	89.21	8745.92	155.58	-152.89	42.26	0.78	158.62	164.54
8775.00	1.28	91.42	8770.91	155.79	-152.76	42.93	0.94	158.67	164.29
8800.00	1.21	93.63	8795.90	156.00	-152.63	43.60	1.10	158.72	164.04

8825.00	1.49	84.79	8820.90	156.14	-152.63	44.16	0.30	158.89	163.86
8850.00	1.38	85.13	8845.89	156.38	-152.57	44.79	0.42	159.01	163.64

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	1.27	83.45	8870.88	156.58	-152.52	45.36	0.49	159.12	163.44
8900.00	1.02	81.86	8895.88	156.75	-152.45	45.86	1.00	159.20	163.26
8925.00	0.62	73.58	8920.87	156.85	-152.38	46.21	1.66	159.24	163.13
8950.00	0.60	71.00	8945.87	156.84	-152.30	46.10	1.64	159.20	163.06
8975.00	0.71	69.00	8970.87	156.40	-152.32	46.70	0.30	159.10	163.08
9000.00	0.68	68.00	8995.87	156.00	-152.20	46.70	0.20	159.00	163.01
9025.00	0.50	67.00	9020.87	156.49	-151.00	46.40	0.00	158.81	163.01
9050.00	0.50	331.72	9045.87	156.20	-151.70	46.32	0.00	158.62	163.02
9075.00	0.53	336.69	9070.87	156.06	-151.50	46.23	0.12	158.39	163.03
9100.00	0.56	342.45	9095.87	155.83	-151.27	46.15	0.25	158.15	163.04
9125.00	0.54	342.36	9120.87	155.59	-151.04	46.07	0.08	157.91	163.04
9150.00	0.49	338.66	9145.87	155.37	-150.83	46.00	0.24	157.69	163.04
9175.00	0.46	327.48	9170.87	155.16	-150.65	45.91	0.40	157.49	163.05
9200.00	0.50	301.79	9195.87	154.97	-150.51	45.70	0.86	157.41	163.09
9225.00	0.52	290.65	9220.87	154.00	-150.00	45.10	0.45	157.00	163.16
9250.00	0.58	296.51	9245.87	153.00	-149.50	44.50	0.10	156.00	163.22
9275.00	0.50	230.00	9270.87	152.00	-149.00	44.00	0.20	156.00	163.29
9300.00	0.50	276.87	9295.87	151.00	-148.00	43.00	0.31	156.00	163.35
9325.00	0.52	262.66	9320.86	154.26	-150.24	44.72	0.57	156.75	163.42
9350.00	0.50	258.52	9345.86	154.19	-150.27	44.50	0.18	156.72	163.50
9375.00	0.62	251.93	9370.86	154.14	-150.33	44.27	0.54	156.72	163.59
9400.00	0.56	256.85	9395.86	154.09	-150.40	44.02	0.31	156.71	163.69
9425.00	0.52	257.64	9420.86	154.04	-150.46	43.79	0.14	156.70	163.77
9450.00	0.46	258.00	9445.86	154.00	-150.50	43.50	0.20	156.60	163.86
9475.00	0.40	271.00	9470.86	154.00	-150.50	43.00	0.20	156.70	163.99
9500.00	0.35	274.00	9500.86	154.00	-150.00	42.00	0.20	156.70	164.00
9525.00	0.40	230.00	9525.86	154.00	-150.00	42.00	0.10	156.00	164.10
9550.00	0.50	230.00	9550.86	154.00	-150.00	42.00	0.20	156.00	164.20
9575.00	0.71	228.78	9570.85	154.11	-151.19	42.50	0.08	157.05	164.30
9600.00	0.80	226.03	9595.85	154.20	-151.42	42.26	0.40	157.20	164.41
9625.00	0.89	223.62	9620.84	154.32	-151.68	42.00	0.37	157.38	164.52
9650.00	0.92	224.06	9645.84	154.45	-151.96	41.73	0.12	157.59	164.64

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
9675.00	0.96	226.03	9670.84	154.58	-152.25	41.44	0.22	157.79	164.77
9700.00	0.97	226.00	9695.83	154.70	-152.57	41.14	0.03	157.99	164.91
9725.00	0.57	221.23	9720.83	157.01	-151.78	40.00	1.60	158.16	165.01
9750.00	0.48	196.30	9745.83	157.50	-151.05	40.00	1.12	158.30	165.06
9775.00	0.36	180.12	9770.83	157.04	-153.11	40.75	0.42	158.45	165.09
9800.00	0.42	183.81	9795.83	155.19	-153.28	40.77	0.31	158.61	165.11
9825.00	0.40	183.73	9820.83	155.35	-153.46	40.76	0.09	158.78	165.13
9850.00	0.44	196.93	9845.83	155.49	-153.63	40.72	0.43	158.94	165.15
9875.00	0.62	220.16	9870.83	155.61	-153.83	40.61	1.09	159.10	165.21
9900.00	0.76	226.39	9895.83	155.71	-154.05	40.40	0.66	159.26	165.30
9925.00	0.90	228.56	9920.82	155.81	-154.29	40.13	0.55	159.43	165.42
9950.00	1.08	227.79	9945.82	155.92	-154.58	39.81	0.72	159.62	165.56
9975.00	1.50	225.10	9970.81	156.08	-154.75	39.73	1.07	159.88	165.72
10000.00	2.48	225.25	9995.81	156.27	-155.08	39.70	0.57	160.19	165.91
10025.00	1.67	228.51	10020.80	156.16	-155.74	39.58	0.38	160.53	166.12
10050.00	1.64	226.57	10045.79	156.56	-156.30	39.58	0.10	160.86	166.33
10075.00	1.51	225.25	10070.78	156.85	-156.77	37.55	0.19	161.20	166.53
10100.00	1.43	219.60	10095.77	157.08	-157.24	37.11	0.66	161.56	166.72
10125.00	1.33	198.96	10120.76	157.41	-157.76	36.82	2.02	162.00	166.86
10150.00	1.36	195.90	10145.76	157.83	-158.32	36.64	0.32	162.50	166.97
10175.00	1.40	199.03	10170.75	158.26	-158.89	36.46	0.34	163.02	167.08
10200.00	1.39	200.64	10195.74	158.58	-159.46	36.25	0.19	163.53	167.19
10225.00	1.33	198.95	10220.73	158.90	-160.02	36.05	0.31	164.03	167.30
10250.00	1.33	197.22	10245.72	159.30	-160.58	35.87	0.16	164.53	167.41
10275.00	1.35	195.25	10270.71	159.82	-161.13	35.70	0.18	165.04	167.51
10300.00	1.42	196.12	10295.71	160.36	-161.71	35.53	0.27	165.57	167.61
10325.00	1.47	197.86	10320.71	160.82	-162.32	35.35	0.27	166.12	167.71
10350.00	1.55	200.30	10345.70	161.27	-162.94	35.14	0.40	166.68	167.83
10375.00	1.50	199.88	10370.69	161.73	-163.56	34.91	0.20	167.24	167.95
10400.00	1.51	198.20	10395.68	162.18	-164.18	34.69	0.18	167.81	168.07
10425.00	1.50	197.09	10420.67	162.65	-164.81	34.49	0.12	168.38	168.18
10450.00	1.68	197.06	10445.66	163.14	-165.45	34.30	0.28	168.97	168.29

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
10575.00	1.22	199.26	10470.63	165.33	-166.31	32.00	0.30	169.57	168.41
10590.00	1.58	202.89	10495.64	164.10	-166.76	32.04	0.43	170.16	168.63
10595.00	1.43	202.86	10520.63	164.52	-167.37	33.07	0.50	170.70	168.66
10550.00	1.25	202.19	10545.63	164.90	-167.91	33.34	0.75	171.19	168.77
10575.00	1.25	200.00	10570.62	165.27	-168.42	33.15	0.19	171.65	168.86
10600.00	1.30	200.37	10595.62	165.65	-168.94	32.96	0.19	172.12	168.96
10625.00	1.30	202.56	10620.61	166.03	-169.47	32.75	0.20	172.60	169.06
10650.00	1.28	204.92	10645.60	166.38	-169.98	32.53	0.22	173.07	169.17
10675.00	1.19	208.84	10670.60	166.70	-170.46	32.28	0.49	173.49	169.28
10700.00	1.23	209.36	10695.60	167.00	-170.92	32.03	0.14	173.90	169.39
10725.00	1.53	212.56	10720.59	167.30	-171.40	31.74	0.52	174.32	169.51
10750.00	1.60	220.70	10745.68	167.58	-171.91	31.35	1.35	174.75	169.66
10775.00	1.81	222.57	10770.57	167.82	-172.44	30.83	1.18	175.18	169.86
10800.00	1.93	231.81	10795.65	168.01	-172.97	30.21	0.73	175.59	170.09
10825.00	1.95	232.30	10820.54	168.17	-173.49	29.54	0.11	175.99	170.34
10850.00	1.95	232.80	10845.52	168.33	-174.01	28.87	0.07	176.39	170.58
10875.00	1.91	240.46	10870.51	168.43	-174.47	28.17	1.04	176.73	170.83
10900.00	1.78	253.36	10895.50	168.38	-174.79	27.43	1.73	176.93	171.08
10925.00	1.62	263.99	10920.49	168.18	-174.94	26.71	1.42	176.96	171.32
10950.00	1.45	274.25	10945.48	167.90	-174.95	26.04	1.29	176.88	171.53
10975.00	1.31	275.26	10970.47	167.58	-174.90	25.44	0.56	176.74	171.72
11000.00	1.31	274.14	10995.46	167.27	-174.84	24.87	0.20	176.60	171.90
11025.00	1.36	272.43	11020.46	166.98	-174.73	24.29	0.26	176.49	172.09
11050.00	1.41	275.05	11045.45	166.68	-174.77	23.69	0.33	176.37	172.28
11075.00	1.40	275.57	11070.44	166.35	-174.71	23.08	0.06	176.23	172.47
11100.00	1.34	277.21	11095.43	166.02	-174.65	22.49	0.30	176.09	172.66
11125.00	1.27	276.20	11120.43	165.71	-174.58	21.92	0.28	175.95	172.84
11150.00	1.26	273.19	11145.42	165.42	-174.54	21.37	0.27	175.84	173.02
11175.00	1.29	272.68	11170.42	165.14	-174.51	20.81	0.13	175.74	173.20
11200.00	1.25	270.82	11195.41	164.87	-174.49	20.25	0.21	175.66	173.38
11225.00	1.20	270.47	11220.40	164.63	-174.46	19.72	0.25	175.59	173.55
11250.00	1.12	269.83	11245.40	164.40	-174.48	19.21	0.30	175.54	173.72

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	0.91	252.53	11270.39	164.22	-174.51	18.35	0.33	175.34	173.87
11300.00	0.94	255.70	11295.39	164.10	-174.59	18.35	0.36	175.55	174.00
11325.00	0.94	252.65	11320.39	164.02	-174.70	17.95	0.27	175.62	174.13
11350.00	0.90	254.22	11345.38	163.95	-174.81	17.57	0.17	175.70	174.26
11375.00	0.86	255.42	11370.38	163.87	-174.92	17.19	0.19	175.76	174.39
11400.00	0.82	249.22	11395.38	163.82	-175.03	16.85	0.40	175.83	174.50
11425.00	0.79	242.39	11420.38	163.80	-175.17	16.53	0.39	175.95	174.61
11450.00	0.84	235.59	11445.37	163.83	-175.35	16.22	0.43	176.10	174.71
11475.00	0.86	231.45	11470.37	163.89	-175.57	15.92	0.26	176.29	174.82
11500.00	0.85	227.73	11495.37	163.98	-175.82	15.64	0.21	176.51	174.92
11525.00	0.83	219.20	11520.37	164.10	-176.09	15.40	0.54	176.75	175.00
11550.00	0.73	212.19	11545.36	164.23	-176.37	15.20	0.42	176.99	175.07
11575.00	0.75	202.63	11570.36	164.44	-176.63	15.05	0.50	177.27	175.13
11600.00	0.82	200.43	11595.36	164.66	-176.94	14.93	0.33	177.57	175.18
11625.00	0.84	200.00	11620.36	164.91	-177.28	14.80	0.08	177.90	175.23
11650.00	0.83	203.04	11645.35	165.15	-177.62	14.67	0.18	178.23	175.28
11675.00	0.70	193.96	11670.35	165.39	-177.94	14.56	0.71	178.54	175.32
11700.00	0.62	187.48	11695.35	165.62	-178.22	14.51	0.45	178.81	175.35
11725.00	0.54	170.50	11720.35	165.84	-178.47	14.51	0.75	179.06	175.35
11750.00	0.54	151.07	11745.34	166.07	-178.70	14.57	0.36	179.29	175.34
11775.00	0.46	148.73	11770.34	166.30	-178.90	14.65	0.53	179.50	175.32
11800.00	0.32	140.88	11795.35	166.45	-179.04	14.75	0.60	179.65	175.29
11825.00	0.20	116.31	11820.35	166.56	-179.11	14.84	0.66	179.73	175.27
11850.00	0.23	58.93	11845.35	166.59	-179.10	14.92	0.83	179.72	175.24
11875.00	0.31	45.04	11870.35	166.56	-179.03	15.01	0.41	179.66	175.21
11900.00	0.85	39.92	11895.34	166.47	-178.84	15.17	2.15	179.48	175.15
11925.00	0.36	24.14	11920.34	166.34	-178.63	15.33	2.05	179.28	175.10
11950.00	0.43	18.63	11945.34	166.22	-178.46	15.47	0.53	179.12	175.08
11975.00	0.65	5.77	11970.34	166.04	-178.25	15.60	0.49	178.91	175.06
12000.00	0.52	12.60	11995.34	165.85	-178.02	15.43	0.28	178.68	175.04
12025.00	0.40	7.12	12020.34	165.60	-177.81	15.47	0.35	178.48	175.03
12050.00	0.51	4.59	12045.34	165.50	-177.60	15.49	0.25	178.27	175.01

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
12075.00	0.67	0.60	12070.34	165.28	-177.34	15.50	0.64	178.02	175.00
12100.00	0.82	5.74	12095.33	165.00	-177.02	15.52	0.66	177.70	174.99
12125.00	0.94	356.42	12120.33	164.66	-176.63	15.53	0.74	177.32	174.98
12150.00	1.10	357.21	12145.33	164.25	-176.19	15.50	0.66	176.87	174.97
12175.00	1.14	0.15	12170.32	163.81	-175.70	15.49	0.28	176.38	174.96
12200.00	1.06	359.07	12195.32	163.38	-175.23	15.49	0.38	175.91	174.95
12225.00	1.00	358.09	12220.31	162.96	-174.76	15.48	0.23	175.44	174.94
12250.00	1.14	0.09	12245.31	162.52	-174.27	15.47	0.22	174.95	174.93
12275.00	1.06	359.01	12270.30	162.09	-173.79	15.47	0.34	174.48	174.91
12300.00	1.15	366.24	12295.30	161.65	-173.31	15.46	0.42	173.99	174.91
12325.00	1.09	3.33	12320.29	161.21	-172.82	15.44	0.60	173.51	174.89
12350.00	1.02	357.34	12345.29	160.81	-172.36	15.45	0.53	173.05	174.88
12375.00	0.84	355.79	12370.29	160.44	-171.96	15.42	0.73	172.65	174.87
12400.00	0.55	334.06	12395.29	160.15	-171.67	15.36	1.53	172.35	174.89
12425.00	0.47	295.58	12420.28	159.94	-171.51	15.21	1.39	172.19	174.93
12450.00	0.72	251.13	12445.28	159.84	-171.52	14.97	2.02	172.17	175.01
12475.00	0.71	248.37	12470.28	159.80	-171.63	14.68	0.74	172.25	175.11
12500.00	0.80	242.04	12495.28	159.79	-171.87	14.38	0.49	172.37	175.21
12525.00	0.72	245.24	12520.28	159.79	-171.92	14.08	0.36	172.49	175.32
12550.00	0.85	241.97	12545.27	159.79	-172.07	13.77	0.53	172.62	175.42
12575.00	0.84	239.71	12570.27	159.81	-172.25	13.45	0.14	172.77	175.53
12600.00	0.97	240.07	12595.27	159.83	-172.45	13.11	0.54	172.94	175.65
12625.00	1.02	234.70	12620.27	159.87	-172.68	12.74	0.43	173.15	175.78
12650.00	1.03	236.59	12645.26	159.93	-172.93	12.37	0.14	173.38	175.91
12675.00	1.07	235.24	12670.26	159.99	-173.19	11.99	0.18	173.61	176.04
12700.00	1.02	232.21	12695.25	160.06	-173.46	11.63	0.28	173.85	176.17
12725.00	1.00	235.28	12720.25	160.14	-173.72	11.27	0.23	174.09	176.29
12750.00	1.04	235.97	12745.24	160.20	-173.99	10.89	0.58	174.33	176.42
12775.00	1.05	232.81	12770.24	160.28	-174.28	10.48	0.25	174.59	176.56
12800.00	1.17	231.49	12795.23	160.37	-174.59	10.08	0.13	174.88	176.70
12825.00	1.20	232.36	12820.23	160.47	-174.91	9.67	0.14	175.17	176.84
12850.00	1.26	231.33	12845.22	160.58	-175.24	9.25	0.26	175.48	176.98

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
12875.00	1.30	229.39	12870.22	160.70	-175.60	8.82	0.24	175.82	177.13
12900.00	1.21	228.00	12895.21	160.84	-175.96	8.41	0.40	176.16	177.27
12925.00	1.27	227.86	12920.20	160.98	-176.32	8.00	0.22	176.50	177.40
12950.00	1.33	223.82	12945.20	161.15	-176.72	7.60	0.45	176.88	177.54
12975.00	1.37	218.84	12970.19	161.37	-177.16	7.21	0.49	177.30	177.67
13000.00	1.36	212.98	12995.18	161.64	-177.64	6.86	0.56	177.77	177.79
13025.00	1.35	209.50	13020.18	161.96	-178.14	6.55	0.93	178.26	177.89
13050.00	1.37	210.18	13045.17	162.28	-178.66	6.26	0.12	178.77	177.99
13075.00	1.37	208.18	13070.16	162.62	-179.18	5.97	0.19	179.28	178.09
13100.00	1.33	206.56	13095.16	162.96	-179.70	5.70	0.23	179.79	178.18
13125.00	1.33	206.85	13120.15	163.31	-180.22	5.44	0.03	180.30	178.27
13150.00	1.28	206.74	13145.14	163.64	-180.73	5.18	0.22	180.80	178.36
13175.00	1.24	206.73	13170.14	163.97	-181.22	4.93	0.17	181.29	178.44
13200.00	1.20	205.36	13195.13	164.29	-181.69	4.70	0.20	181.76	178.52
13225.00	1.14	206.49	13220.13	164.60	-182.15	4.48	0.23	182.21	178.59
13250.00	1.10	210.37	13245.12	164.88	-182.68	4.26	0.35	182.63	178.67
13275.00	1.02	209.14	13270.12	165.13	-182.98	4.02	0.34	183.03	178.74
13300.00	0.98	207.80	13295.11	165.38	-183.37	3.81	0.17	183.41	178.81
13325.00	0.95	206.93	13320.11	165.63	-183.74	3.61	0.15	183.78	178.87
13350.00	0.89	208.79	13345.11	165.86	-184.09	3.43	0.26	184.13	178.93
13375.00	0.86	208.83	13370.10	166.07	-184.43	3.24	0.12	184.46	178.99
13400.00	0.80	206.13	13395.10	166.29	-184.75	3.08	0.28	184.78	179.05
13425.00	0.78	210.75	13420.10	166.48	-185.05	2.91	0.28	185.08	179.10
13450.00	0.72	209.04	13445.10	166.66	-185.34	2.75	0.23	185.36	179.15
13475.00	0.66	209.58	13470.09	166.83	-185.60	2.60	0.21	185.62	179.20
13500.00	0.62	212.55	13495.09	166.98	-185.84	2.46	0.17	185.85	179.24
13525.00	0.55	209.29	13520.09	167.11	-186.05	2.33	0.30	186.07	179.28
13550.00	0.47	208.86	13545.09	167.24	-186.26	2.22	0.32	186.26	179.32
13575.00	0.47	209.38	13570.09	167.35	-186.43	2.12	0.02	186.44	179.35
13600.00	0.47	212.20	13595.09	167.46	-186.61	2.01	0.09	186.62	179.38
13625.00	0.42	206.80	13620.09	167.57	-186.78	1.92	0.27	186.79	179.41
13650.00	0.38	210.19	13645.09	167.67	-186.93	1.84	0.18	186.94	179.44

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	CLOSURE DIST ft	CLOSURE DIR deg
13675.00	0.38	214.28	13670.09	167.75	-187.07	1.75	0.11	187.08	179.47
13700.00	0.34	215.63	13695.09	167.83	-187.20	1.66	0.18	187.21	179.49
13725.00	0.28	210.41	13720.09	167.90	-187.31	1.59	0.26	187.32	179.52
13750.00	0.27	204.92	13745.09	167.97	-187.42	1.53	0.12	187.42	179.53
13775.00	0.26	203.10	13770.09	168.07	-187.52	1.49	0.04	187.53	179.55
13800.00	0.22	198.81	13795.09	168.11	-187.62	1.44	0.19	187.62	179.56
13825.00	0.17	183.78	13820.09	168.17	-187.70	1.43	0.28	187.70	179.56
13850.00	0.18	144.87	13845.09	168.24	-187.77	1.45	0.47	187.77	179.56
13875.00	0.15	139.65	13870.09	168.31	-187.83	1.49	0.13	187.83	179.55
13900.00	0.21	129.92	13895.09	168.39	-187.88	1.55	0.25	187.89	179.53
13925.00	0.21	122.32	13920.09	168.47	-187.93	1.62	0.11	187.94	179.51
13950.00	0.19	114.01	13945.09	168.54	-187.97	1.70	0.13	187.98	179.48
13975.00	0.16	107.82	13970.09	168.60	-188.00	1.77	0.14	188.01	179.46
14000.00	0.20	98.74	13995.09	168.65	-188.02	1.86	0.18	188.03	179.44
14025.00	0.18	91.34	14020.08	168.69	-188.03	1.93	0.12	188.04	179.41
14050.00	0.25	83.97	14045.08	168.73	-188.02	2.02	0.31	188.03	179.38
14075.00	0.34	78.18	14070.08	168.77	-188.00	2.15	0.37	188.01	179.34
14100.00	0.42	74.14	14095.08	168.80	-187.96	2.31	0.33	187.97	179.30
14125.00	0.47	74.55	14120.08	168.84	-187.91	2.50	0.20	187.92	179.24
14150.00	0.50	71.30	14145.08	168.88	-187.85	2.70	0.16	187.87	179.18
14175.00	0.52	68.18	14170.08	168.90	-187.77	2.91	0.14	187.79	179.11
14200.00	0.61	65.61	14195.08	168.92	-187.67	3.14	0.37	187.70	179.04
14225.00	0.74	64.09	14220.08	168.93	-187.56	3.40	0.53	187.58	178.96
14250.00	0.86	62.98	14245.08	168.93	-187.49	3.69	0.47	187.49	178.86
14275.00	0.93	62.48	14270.07	168.93	-187.21	4.06	0.30	187.25	178.76
14300.00	0.94	62.25	14295.07	168.92	-187.02	4.43	0.07	187.07	178.64
14325.00	1.02	61.80	14320.07	168.91	-186.82	4.80	0.33	186.88	178.53
14350.00	1.09	59.35	14345.06	168.89	-186.59	5.20	0.34	186.67	178.40
14375.00	1.50	57.08	14370.05	168.84	-186.29	5.68	1.63	186.38	178.25
14400.00	1.61	56.56	14395.05	168.76	-185.92	6.25	0.47	186.03	178.08
14425.00	1.63	56.32	14420.04	168.68	-185.53	6.84	0.08	185.66	177.89
14450.00	1.64	56.66	14445.03	168.60	-185.14	7.43	0.06	185.29	177.70

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
14375.00	1.65	55.64	14377.97	168.15	-181.77	9.85	0.05	184.92	177.51
14400.00	1.65	55.60	14401.00	168.15	-181.35	9.85	0.04	184.55	177.32
14425.00	1.70	55.88	14423.99	168.31	-180.92	9.75	0.15	184.18	177.12
14450.00	1.69	55.45	14444.98	168.26	-183.24	9.87	0.06	183.80	176.92
14575.00	1.72	54.83	14569.97	168.17	-183.12	10.48	0.23	183.42	176.72
14600.00	1.69	55.42	14594.96	168.06	-182.69	11.09	0.16	183.03	176.53
14625.00	1.68	57.01	14619.95	167.97	-182.28	11.70	0.19	182.66	176.33
14650.00	1.60	58.41	14644.94	167.90	-181.90	12.31	0.36	182.32	176.13
14675.00	1.47	62.46	14669.93	167.87	-181.57	12.89	0.70	182.03	175.94
14700.00	1.30	65.23	14694.92	167.88	-181.21	13.49	0.77	181.80	175.76
14725.00	1.19	73.50	14719.91	167.97	-181.12	13.91	0.77	181.66	175.60
14750.00	1.12	73.72	14744.90	168.00	-180.98	14.34	0.28	181.55	175.44
14775.00	1.04	75.32	14769.89	168.03	-180.85	14.77	0.33	181.46	175.30
14800.00	0.97	74.79	14794.88	168.03	-180.72	15.19	0.52	181.39	175.17
14825.00	0.85	73.55	14819.90	168.29	-180.64	15.65	0.24	181.32	175.05
14850.00	0.82	69.17	14844.90	168.34	-180.52	16.00	0.29	181.23	174.94
14875.00	0.82	67.41	14869.90	168.37	-180.39	16.33	0.10	181.13	174.83
14900.00	0.63	64.19	14894.89	168.39	-180.26	16.62	0.77	181.03	174.73
14925.00	0.52	59.45	14919.89	168.38	-180.14	16.84	0.46	180.93	174.66
14950.00	0.53	55.91	14944.89	168.36	-180.02	17.04	0.13	180.82	174.59
14975.00	0.52	58.24	14969.89	168.33	-179.89	17.23	0.04	180.72	174.53
15000.00	0.51	55.15	14994.89	168.30	-179.77	17.41	0.05	180.61	174.47
15025.00	0.50	53.77	15019.89	168.27	-179.64	17.59	0.07	180.50	174.41
15050.00	0.53	53.79	15044.89	168.23	-179.51	17.77	0.13	180.38	174.35
15075.00	0.66	54.20	15069.89	168.19	-179.35	17.98	0.53	180.25	174.28
15100.00	0.79	56.00	15094.88	168.15	-179.17	18.24	0.52	180.10	174.19
15125.00	0.78	55.59	15119.88	168.10	-178.98	18.52	0.03	179.94	174.09
15150.00	0.81	55.15	15144.88	168.05	-178.78	18.81	0.13	179.77	173.99
15175.00	0.83	54.82	15169.88	168.00	-178.58	19.10	0.08	179.60	173.89
15200.00	0.86	55.78	15194.87	167.95	-178.37	19.40	0.12	179.42	173.79
15225.00	0.88	57.11	15219.87	167.91	-178.16	19.72	0.11	179.25	173.68
15250.00	0.82	51.67	15244.87	167.85	-177.94	20.02	0.40	179.07	173.58

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
15275.00	0.65	39.07	15269.87	167.78	-177.73	20.72	0.31	178.31	173.49
15300.00	0.71	39.30	15294.86	167.69	-177.51	20.72	0.25	178.69	173.41
15325.00	0.63	39.54	15319.86	167.59	-177.29	20.72	0.43	178.50	173.33
15350.00	0.57	37.02	15344.86	167.48	-177.09	20.88	0.25	178.32	173.28
15375.00	0.57	35.37	15369.86	167.36	-176.89	21.03	0.07	178.13	173.22
15400.00	0.63	34.26	15394.86	167.24	-176.67	21.18	0.25	177.94	173.17
15425.00	0.54	26.69	15419.86	167.10	-176.46	21.31	0.46	177.74	173.12
15450.00	0.58	37.53	15444.86	166.97	-176.23	21.45	0.71	177.53	173.06
15475.00	0.76	42.98	15469.86	166.85	-176.00	21.65	0.39	177.32	172.99
15500.00	0.67	35.26	15494.85	166.75	-175.77	21.86	0.32	177.13	172.91
15525.00	0.63	42.88	15519.85	166.65	-175.57	22.06	0.19	176.95	172.84
15550.00	0.64	43.77	15544.85	166.55	-175.35	22.26	0.05	176.77	172.77
15575.00	0.72	43.39	15569.85	166.45	-175.15	22.45	0.32	176.58	172.70
15600.00	0.73	46.95	15594.85	166.35	-174.92	22.68	0.19	176.39	172.61
15625.00	0.82	55.53	15619.84	166.28	-174.71	22.94	0.57	176.21	172.52
15650.00	0.75	50.97	15644.84	166.23	-174.51	23.21	0.35	176.05	172.42
15675.00	0.84	52.51	15669.84	166.16	-174.30	23.49	0.35	175.87	172.33
15700.00	0.91	54.97	15694.84	166.05	-174.09	23.79	0.33	175.69	172.22
15725.00	1.04	60.50	15719.84	165.95	-173.87	24.11	0.68	175.51	172.09
15750.00	1.00	62.43	15744.84	165.84	-173.63	24.56	0.21	175.36	171.95
15775.00	1.12	63.05	15769.82	165.74	-173.42	24.96	0.50	175.20	171.81
15800.00	1.21	65.34	15794.82	165.65	-173.19	25.42	0.39	175.05	171.65
15825.00	1.32	67.71	15819.81	165.58	-172.97	25.93	0.46	174.91	171.48
15850.00	1.28	66.73	15844.81	165.52	-172.76	26.45	0.18	174.77	171.30
15875.00	1.26	66.40	15869.80	165.45	-172.54	26.96	0.08	174.63	171.12
15900.00	1.31	64.68	15894.79	165.37	-172.30	27.47	0.26	174.48	170.94
15925.00	1.35	68.07	15919.79	165.29	-172.07	28.00	0.35	174.33	170.76
15950.00	1.27	66.58	15944.78	165.25	-171.85	28.53	0.36	174.20	170.57
15975.00	1.36	66.47	15969.77	165.23	-171.62	29.06	0.39	174.06	170.39
16000.00	1.48	71.00	15994.77	165.33	-171.39	29.59	0.73	173.93	170.19
16025.00	1.52	75.29	16019.76	165.46	-171.10	30.11	0.70	173.86	169.97
16050.00	1.76	78.72	16044.75	165.64	-170.74	30.69	0.62	173.83	169.73

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
16075.00	1.88	83.56	16069.73	166.88	-170.92	31.78	0.81	173.85	169.47
16100.00	1.93	88.36	16094.72	167.21	-170.86	32.61	0.67	173.95	169.20
16125.00	2.01	90.16	16119.70	167.58	-170.85	33.47	0.41	174.10	168.92
16150.00	2.22	93.28	16144.69	168.03	-170.88	34.39	0.95	174.31	168.62
16175.00	2.26	95.93	16169.67	168.54	-170.96	35.36	0.44	174.58	168.31
16200.00	2.29	94.94	16194.66	169.07	-171.06	36.35	0.21	174.87	168.00
16225.00	2.46	92.24	16219.63	169.60	-171.13	37.39	0.43	175.16	167.68
16250.00	2.56	94.28	16244.60	170.15	-171.20	38.48	0.47	175.47	167.33
16275.00	2.62	91.01	16269.58	170.71	-171.26	39.59	0.71	175.78	166.98
16300.00	2.64	90.62	16294.55	171.25	-171.29	40.73	0.32	176.00	166.62
16325.00	2.70	89.33	16319.53	171.77	-171.28	41.90	0.34	176.33	166.25
16350.00	2.63	87.17	16344.50	172.26	-171.25	43.06	0.49	176.58	165.89
16375.00	2.68	85.03	16369.47	172.72	-171.17	44.22	0.44	176.79	165.52
16400.00	2.81	85.79	16394.44	173.17	-171.07	45.41	0.53	177.00	165.13
16425.00	2.81	84.90	16419.41	173.63	-170.97	46.63	0.18	177.22	164.74
16450.00	2.82	85.66	16444.38	174.09	-170.87	47.86	0.14	177.46	164.35
16475.00	2.92	85.32	16469.35	174.57	-170.77	49.10	0.37	177.69	163.96
16500.00	2.94	84.67	16494.32	175.04	-170.67	50.39	0.17	177.95	163.56
16505.00	2.94	84.92	16499.31	175.12	-170.62	50.63	0.17	178.00	163.47
16510.00	2.96	84.34	16504.31	175.21	-170.62	50.89	0.61	178.06	163.39
16515.00	2.97	84.67	16509.30	175.33	-170.59	51.14	0.54	178.10	163.31
16520.00	2.96	85.33	16514.29	175.42	-170.57	51.40	0.72	178.15	163.23
16525.00	2.96	85.22	16519.29	175.52	-170.55	51.66	0.15	178.20	163.15
16530.00	2.99	85.83	16524.28	175.62	-170.53	51.92	0.86	178.26	163.07
16535.00	3.11	87.67	16529.27	175.72	-170.52	52.18	3.05	178.32	162.98
16540.00	3.16	88.27	16534.26	175.84	-170.51	52.45	1.29	178.39	162.90
16545.00	3.13	87.90	16539.26	175.90	-170.50	52.73	0.71	178.46	162.81
16550.00	3.02	87.01	16544.26	176.06	-170.48	53.00	2.36	178.53	162.73
16555.00	3.03	86.89	16549.27	176.17	-170.47	53.28	1.19	178.59	162.65
16560.00	3.12	85.53	16554.23	176.27	-170.46	53.53	1.85	178.66	162.57
16565.00	3.15	86.63	16559.23	176.38	-170.43	53.80	1.30	178.72	162.48
16570.00	3.10	88.31	16564.22	176.49	-170.42	54.07	2.04	178.79	162.40

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
16575.00	3.05	89.18	16569.21	176.61	-170.41	54.34	1.46	178.87	162.31
16580.00	3.00	89.06	16574.21	176.72	-170.41	54.61	0.88	178.94	162.23
16585.00	2.99	88.65	16579.20	176.83	-170.40	54.87	0.48	179.02	162.15
16590.00	3.04	87.81	16584.19	176.95	-170.39	55.13	1.37	179.09	162.07
16595.00	3.10	87.81	16589.18	177.06	-170.38	55.40	1.13	179.16	161.99
16600.00	3.12	88.84	16594.18	177.17	-170.38	55.67	1.20	179.24	161.91
16605.00	3.16	90.00	16599.17	177.29	-170.37	55.94	1.51	179.32	161.82
16610.00	3.19	90.79	16604.16	177.42	-170.38	56.22	1.06	179.41	161.74
16615.00	3.18	91.09	16609.15	177.55	-170.38	56.50	0.46	179.50	161.65
16620.00	3.13	91.08	16614.15	177.68	-170.38	56.77	0.84	179.59	161.57
16625.00	3.12	90.75	16619.14	177.81	-170.39	57.05	0.45	179.68	161.49
16630.00	3.16	90.68	16624.13	177.93	-170.39	57.32	0.77	179.78	161.41
16635.00	3.26	90.40	16629.12	178.06	-170.40	57.60	1.95	179.87	161.32
16640.00	3.33	90.74	16634.12	178.19	-170.40	57.89	1.55	179.96	161.24
16645.00	3.39	91.04	16639.11	178.33	-170.40	58.18	1.23	180.06	161.15
16650.00	3.42	91.63	16644.10	178.47	-170.41	58.48	0.99	180.16	161.06
16655.00	3.42	91.50	16649.09	178.61	-170.42	58.77	0.17	180.27	160.97
16660.00	3.41	91.27	16654.08	178.75	-170.43	59.07	0.36	180.37	160.88
16665.00	3.46	90.24	16659.07	178.89	-170.43	59.37	1.57	180.47	160.79
16670.00	3.53	90.31	16664.06	179.03	-170.43	59.68	1.46	180.58	160.70
16675.00	3.61	90.80	16669.05	179.17	-170.43	59.99	1.78	180.68	160.61
16680.00	3.71	92.09	16674.04	179.32	-170.44	60.31	2.56	180.80	160.51
16685.00	3.72	92.79	16679.03	179.48	-170.46	60.63	0.92	180.92	160.42
16690.00	3.70	93.56	16684.02	179.64	-170.47	60.95	1.07	181.04	160.33
16695.00	3.68	93.02	16689.01	179.80	-170.49	61.28	0.79	181.17	160.23
16700.00	3.72	92.13	16694.00	179.96	-170.51	61.60	1.35	181.29	160.14
16705.00	3.79	91.71	16698.99	180.12	-170.52	61.93	1.62	181.41	160.04
16710.00	3.88	91.56	16703.98	180.28	-170.53	62.26	1.73	181.54	159.94
16715.00	3.92	92.50	16708.97	180.44	-170.54	62.60	1.44	181.67	159.84
16720.00	3.88	93.03	16713.96	180.61	-170.56	62.94	1.11	181.80	159.74
16725.00	3.78	92.56	16718.94	180.78	-170.57	63.27	2.23	181.93	159.65
16730.00	3.77	91.80	16723.93	180.94	-170.58	63.60	1.00	182.06	159.55

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS %/100ft	CLOSURE DIST ft	CLOSURE DIR deg
16735.00	3.85	90.33	16728.92	181.09	-170.59	63.93	2.45	182.18	159.45
16740.00	3.86	89.79	16732.92	181.06	-170.59	64.28	2.41	182.30	159.35
16745.00	3.87	90.15	16736.90	181.10	-170.59	64.67	1.40	182.42	159.25
16750.00	4.04	91.10	16743.89	181.55	-170.59	64.97	1.36	182.55	159.15
16755.00	4.00	91.35	16749.87	181.73	-170.60	65.33	0.90	182.68	159.05
16760.00	3.95	90.31	16753.86	181.89	-170.61	65.67	1.74	182.81	158.95
16765.00	3.95	88.98	16758.85	182.04	-170.61	66.02	1.83	182.93	158.85
16770.00	4.02	88.59	16763.84	182.19	-170.60	66.36	1.61	183.05	158.74
16775.00	4.13	89.19	16768.83	182.35	-170.59	66.72	2.31	183.17	158.64
16780.00	4.16	90.21	16773.81	182.51	-170.59	67.08	1.61	183.30	158.53
16785.00	4.13	90.66	16778.80	182.67	-170.59	67.44	0.93	183.44	158.43
16790.00	4.12	89.76	16783.79	182.82	-170.59	67.80	1.30	183.57	158.32
16795.00	4.16	88.50	16788.77	183.00	-170.59	68.16	3.89	183.70	158.22
16800.00	4.26	87.88	16793.76	183.15	-170.58	68.53	2.11	183.83	158.11
16805.00	4.32	88.51	16798.75	183.31	-170.57	68.90	3.65	183.96	158.00
16810.00	4.31	89.69	16803.73	183.47	-170.56	69.28	3.80	184.09	157.89
16815.00	4.27	90.47	16808.72	183.64	-170.56	69.65	1.44	184.23	157.79
16820.00	4.22	90.61	16813.70	183.81	-170.56	70.02	0.91	184.38	157.68
16825.00	4.23	89.58	16818.69	183.98	-170.56	70.39	1.54	184.52	157.57
16830.00	4.31	89.10	16823.68	184.14	-170.56	70.76	1.72	184.66	157.47
16835.00	4.40	89.92	16828.66	184.31	-170.56	71.14	2.21	184.80	157.36
16840.00	4.29	91.07	16833.65	184.49	-170.55	71.53	1.78	184.95	157.25
16845.00	4.38	90.54	16838.64	184.67	-170.57	71.91	3.43	185.11	157.14
16850.00	4.32	90.53	16843.63	184.84	-170.58	72.28	1.51	185.26	157.03
16855.00	4.39	89.18	16848.60	185.01	-170.57	72.65	2.54	185.41	156.93
16860.00	4.45	89.85	16853.59	185.18	-170.57	73.03	1.58	185.58	156.82
16865.00	4.50	90.94	16858.57	185.36	-170.57	73.44	1.95	185.71	156.71
16870.00	4.48	91.42	16863.56	185.55	-170.58	73.83	0.85	185.87	156.60
16875.00	4.47	90.54	16868.54	185.73	-170.59	74.22	1.37	186.03	156.49
16880.00	4.55	89.52	16873.53	185.91	-170.59	74.61	2.14	186.19	156.38
16885.00	4.62	89.22	16878.51	186.08	-170.58	75.01	1.63	186.35	156.26
16890.00	4.62	90.12	16883.50	186.26	-170.58	75.42	1.45	186.51	156.15

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft	deg
16900.00	4.50	89.32	16900.14	185.44	-170.58	76.81	2.16	186.67	155.04
16905.00	4.32	90.22	16905.17	185.62	-170.50	76.20	2.41	186.83	155.03
16910.00	4.20	89.96	16910.15	185.79	-170.55	76.57	2.17	186.98	155.83
16915.00	4.27	87.94	16915.42	185.92	-170.57	76.92	1.55	187.13	155.72
16915.00	4.28	88.01	16908.42	187.10	-170.56	77.32	0.27	187.27	155.62
16920.00	4.22	88.28	16913.41	187.26	-170.55	77.69	1.25	187.41	155.51
16925.00	4.07	88.13	16918.40	187.41	-170.54	78.05	3.03	187.55	155.41
16930.00	3.99	87.31	16923.38	187.55	-170.52	78.40	1.96	187.68	155.31
16935.00	3.93	86.03	16928.37	187.69	-170.50	78.74	2.09	187.81	155.21
16940.00	3.98	86.26	16933.36	187.83	-170.48	79.09	0.95	187.98	155.11
16945.00	4.00	86.90	16938.35	187.96	-170.46	79.43	0.99	188.06	155.01
16950.00	3.94	87.15	16943.32	188.10	-170.44	79.78	1.20	188.19	154.92
16955.00	3.86	86.21	16948.32	188.24	-170.42	80.12	2.19	188.32	154.82
16960.00	3.80	84.58	16953.31	188.37	-170.40	80.46	2.42	188.43	154.73
16965.00	3.83	83.75	16958.30	188.49	-170.36	80.78	1.29	188.54	154.63
16970.00	3.90	83.70	16963.29	188.60	-170.33	81.12	1.45	188.66	154.53
16975.00	3.83	84.09	16968.28	188.72	-170.29	81.45	1.50	188.77	154.44
16980.00	3.72	83.12	16973.27	188.84	-170.25	81.78	2.66	188.88	154.34
16985.00	3.68	80.82	16978.26	188.94	-170.21	82.10	3.07	188.97	154.25
16990.00	3.72	79.34	16983.25	189.04	-170.16	82.42	2.04	189.06	154.16
16995.00	3.72	79.32	16988.24	189.13	-170.09	82.74	0.08	189.15	154.06
17000.00	3.70	80.16	16993.23	189.22	-170.03	83.06	1.17	189.23	153.97
17005.00	3.65	80.05	16998.22	189.31	-169.96	83.37	0.90	189.32	153.87
17010.00	3.82	78.48	17003.21	189.40	-169.92	83.69	3.86	189.41	153.78
17015.00	3.97	77.62	17008.19	189.49	-169.85	84.02	3.26	189.49	153.68
17020.00	4.09	78.04	17013.18	189.58	-169.77	84.37	2.49	189.58	153.58
17025.00	3.95	79.44	17018.17	189.67	-169.71	84.71	3.40	189.67	153.47
17030.00	3.77	78.59	17023.16	189.76	-169.64	85.04	3.81	189.76	153.38
17035.00	3.96	74.95	17028.15	189.84	-169.56	85.37	6.25	189.84	153.28
17039.00	4.00	75.18	17032.14	189.90	-169.49	85.64	3.10	189.90	153.19