

30-015-43811

COG

GRAHAM NASH FEDERAL COM #7H

PATRIOT 2

2/21/2017

Scientific Drilling

The

In Wellbore Placement

SURVEY REPORT

GRAHAM NASH FEDERAL COM #7H

KEEPER GYRO SURVEYS

CUSTOMER COG
PROJECT Graham Nash Federal Com #7H
FIELD Bone Spring

SDI JOB NO. 420018
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Graham Nash Federal Com #7H
Lat/Long 32.021092° N, 104.095534° W
Northing
Easting

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.13 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001

**WELL INFORMATION**

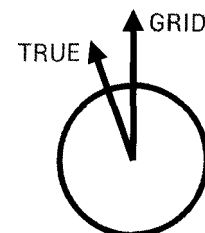
Lat/Long 32.021092° N, 104.095534° W
Northing
Easting
UWI 30-015-43811

DEPTH AND ELEVATION REFERENCE

Ground Level 2988 ft above Mean Sea Level
Reference Datum KB
Reference Height 21 ft above G.L.
Reference Elevation 3009 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 176.63°
Calculation Method Minimum Curvature

**LOCAL GRAVITY REFERENCE INFORMATION**

Local Gravity 998.524 mG [computed]
True to Grid subtract 0.13°

WELL NOTES**OPERATORS**

Grayson Wegner

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	1.07	276.25	99.99	-0.16	0.10	-0.93	1.07	0.93	276.25
125.00	1.15	272.84	124.99	-0.22	0.14	-1.41	0.41	1.41	275.65
150.00	1.21	272.63	149.98	-0.28	0.16	-1.92	0.27	1.93	274.87
175.00	1.25	271.81	174.98	-0.33	0.18	-2.46	0.16	2.46	274.29
200.00	1.24	273.14	199.97	-0.38	0.21	-3.00	0.12	3.01	273.96
225.00	1.25	271.87	224.97	-0.44	0.23	-3.54	0.12	3.55	273.74
250.00	1.26	267.73	249.96	-0.47	0.23	-4.09	0.37	4.10	273.21
275.00	1.29	270.24	274.95	-0.49	0.22	-4.65	0.25	4.65	272.71
300.00	1.23	272.52	299.95	-0.54	0.23	-5.19	0.32	5.20	272.56
325.00	1.27	274.09	324.94	-0.60	0.26	-5.74	0.23	5.74	272.64
350.00	1.43	274.89	349.94	-0.68	0.31	-6.33	0.65	6.33	272.81
375.00	1.38	275.40	374.93	-0.77	0.37	-6.94	0.21	6.95	273.02
400.00	1.41	278.67	399.92	-0.88	0.44	-7.54	0.33	7.56	273.34
425.00	1.39	277.64	424.91	-1.00	0.53	-8.15	0.13	8.16	273.70
450.00	1.38	279.06	449.91	-1.13	0.61	-8.74	0.14	8.76	274.02
475.00	1.31	280.27	474.90	-1.26	0.71	-9.32	0.34	9.35	274.37
500.00	1.27	287.72	499.89	-1.43	0.85	-9.87	0.69	9.90	274.91
525.00	1.23	288.37	524.89	-1.63	1.02	-10.38	0.17	10.43	275.59
550.00	1.30	290.02	549.88	-1.84	1.20	-10.91	0.34	10.97	276.27
575.00	1.30	291.78	574.87	-2.07	1.40	-11.44	0.16	11.52	276.98
600.00	1.24	293.78	599.87	-2.31	1.61	-11.95	0.29	12.05	277.70
625.00	1.30	295.18	624.86	-2.57	1.84	-12.45	0.27	12.58	278.43
650.00	1.28	295.22	649.86	-2.84	2.08	-12.96	0.08	13.12	279.14
675.00	1.30	294.37	674.85	-3.11	2.32	-13.47	0.11	13.67	279.77
700.00	1.39	293.91	699.84	-3.38	2.56	-14.00	0.35	14.24	280.36
725.00	1.43	295.32	724.83	-3.67	2.82	-14.56	0.23	14.83	280.94
750.00	1.39	293.77	749.83	-3.96	3.07	-15.12	0.21	15.43	281.48
775.00	1.40	294.26	774.82	-4.24	3.32	-15.68	0.05	16.03	281.95
800.00	1.40	294.25	799.81	-4.52	3.57	-16.24	0.01	16.62	282.40
825.00	1.38	296.19	824.81	-4.81	3.83	-16.78	0.20	17.21	282.85
850.00	1.40	296.50	849.80	-5.11	4.10	-17.33	0.08	17.80	283.30

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	1.50	293.26	874.79	-5.41	4.36	-17.90	0.52	18.42	283.70
900.00	1.51	291.66	899.78	-5.69	4.61	-18.50	0.17	19.07	284.00
925.00	1.56	291.66	924.77	-5.97	4.86	-19.13	0.19	19.73	284.25
950.00	1.55	290.53	949.76	-6.26	5.10	-19.76	0.12	20.41	284.48
975.00	1.58	292.55	974.75	-6.54	5.35	-20.39	0.24	21.09	284.71
1000.00	1.59	289.53	999.74	-6.83	5.60	-21.04	0.34	21.77	284.91
1025.00	1.52	290.81	1024.73	-7.10	5.84	-21.67	0.29	22.45	285.07
1050.00	1.57	290.80	1049.73	-7.38	6.07	-22.31	0.19	23.12	285.23
1075.00	1.54	289.12	1074.72	-7.64	6.31	-22.94	0.22	23.79	285.37
1100.00	1.55	287.62	1099.71	-7.89	6.52	-23.58	0.17	24.47	285.45
1125.00	1.60	282.68	1124.70	-8.11	6.70	-24.25	0.57	25.15	285.44
1150.00	1.63	284.10	1149.69	-8.31	6.86	-24.93	0.21	25.86	285.39
1175.00	1.58	282.97	1174.68	-8.52	7.03	-25.61	0.23	26.56	285.34
1200.00	1.56	284.02	1199.67	-8.72	7.19	-26.28	0.16	27.24	285.29
1225.00	1.62	282.30	1224.66	-8.91	7.34	-26.96	0.33	27.94	285.24
1250.00	1.64	278.54	1249.65	-9.08	7.47	-27.66	0.44	28.65	285.12
1275.00	1.63	279.99	1274.64	-9.24	7.59	-28.36	0.18	29.36	284.98
1300.00	1.62	278.23	1299.63	-9.39	7.70	-29.06	0.20	30.06	284.84
1325.00	1.72	276.48	1324.62	-9.53	7.79	-29.78	0.43	30.78	284.66
1350.00	1.67	277.45	1349.61	-9.66	7.88	-30.52	0.21	31.52	284.48
1375.00	1.62	277.64	1374.60	-9.80	7.98	-31.23	0.22	32.23	284.33
1400.00	1.66	275.03	1399.59	-9.92	8.05	-31.94	0.35	32.94	284.15
1425.00	1.66	274.09	1424.58	-10.02	8.11	-32.66	0.11	33.65	283.95
1450.00	1.70	273.72	1449.57	-10.11	8.16	-33.39	0.17	34.38	283.73
1475.00	1.64	272.88	1474.55	-10.19	8.20	-34.12	0.28	35.09	283.52
1500.00	1.48	270.70	1499.55	-10.26	8.23	-34.80	0.66	35.76	283.30
1525.00	1.41	271.33	1524.54	-10.31	8.24	-35.43	0.28	36.38	283.09
1550.00	1.10	274.86	1549.53	-10.36	8.26	-35.98	1.31	36.91	282.94
1575.00	1.04	282.08	1574.53	-10.46	8.33	-36.44	0.58	37.38	282.88
1600.00	1.06	282.67	1599.52	-10.58	8.43	-36.89	0.10	37.84	282.87
1625.00	1.05	281.56	1624.52	-10.71	8.53	-37.34	0.10	38.30	282.86
1650.00	1.00	282.60	1649.51	-10.83	8.62	-37.77	0.19	38.74	282.86

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	0.97	285.48	1674.51	-10.95	8.72	-38.19	0.23	39.18	282.87
1700.00	0.99	283.36	1699.51	-11.09	8.83	-38.61	0.16	39.60	282.88
1725.00	0.99	283.38	1724.50	-11.21	8.93	-39.03	0.00	40.04	282.89
1750.00	0.84	284.53	1749.50	-11.33	9.03	-39.41	0.62	40.43	282.90
1775.00	0.48	285.38	1774.50	-11.42	9.10	-39.69	1.44	40.72	282.91
1800.00	0.21	279.55	1799.50	-11.46	9.14	-39.84	1.06	40.87	282.92
1825.00	0.07	226.47	1824.50	-11.46	9.13	-39.89	0.73	40.92	282.90
1850.00	0.15	152.81	1849.50	-11.42	9.09	-39.89	0.59	40.91	282.84
1875.00	0.27	145.96	1874.50	-11.34	9.02	-39.84	0.48	40.85	282.75
1900.00	0.47	150.81	1899.50	-11.20	8.88	-39.76	0.81	40.74	282.59
1925.00	0.68	149.36	1924.50	-10.97	8.66	-39.63	0.85	40.57	282.32
1950.00	0.84	152.00	1949.49	-10.68	8.37	-39.47	0.63	40.35	281.97
1975.00	0.80	154.86	1974.49	-10.35	8.05	-39.31	0.21	40.13	281.57
2000.00	0.88	157.20	1999.49	-10.00	7.71	-39.16	0.35	39.91	281.14
2025.00	0.88	152.18	2024.49	-9.65	7.37	-39.00	0.31	39.69	280.70
2050.00	0.91	151.46	2049.48	-9.29	7.02	-38.81	0.12	39.44	280.25
2075.00	0.98	153.91	2074.48	-8.91	6.65	-38.62	0.32	39.19	279.78
2100.00	1.18	142.61	2099.47	-8.50	6.26	-38.37	1.17	38.88	279.26
2125.00	1.32	141.14	2124.47	-8.05	5.83	-38.03	0.57	38.48	278.71
2150.00	1.37	138.42	2149.46	-7.59	5.38	-37.66	0.32	38.04	278.13
2175.00	1.41	139.18	2174.45	-7.11	4.93	-37.26	0.16	37.58	277.53
2200.00	1.55	136.22	2199.45	-6.61	4.45	-36.82	0.64	37.09	276.89
2225.00	1.53	135.45	2224.44	-6.10	3.97	-36.36	0.10	36.57	276.23
2250.00	1.52	135.31	2249.43	-5.60	3.49	-35.89	0.06	36.06	275.56
2275.00	1.40	136.03	2274.42	-5.12	3.04	-35.44	0.47	35.57	274.90
2300.00	1.27	136.85	2299.41	-4.67	2.62	-35.04	0.52	35.14	274.27
2325.00	1.21	139.18	2324.41	-4.25	2.21	-34.68	0.31	34.75	273.65
2350.00	1.14	136.02	2349.40	-3.85	1.83	-34.33	0.39	34.38	273.06
2375.00	1.06	138.35	2374.40	-3.48	1.48	-34.00	0.38	34.04	272.50
2400.00	1.12	136.44	2399.39	-3.11	1.13	-33.68	0.30	33.70	271.93
2425.00	1.05	138.41	2424.39	-2.74	0.79	-33.36	0.34	33.37	271.35
2450.00	1.01	140.94	2449.38	-2.39	0.44	-33.07	0.24	33.08	270.77

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
2475.00	0.95	141.78	2474.38	-2.04	0.11	-32.81	0.23	32.81	270.19
2500.00	0.96	139.89	2499.38	-1.70	-0.21	-32.54	0.14	32.54	269.62
2525.00	0.89	140.42	2524.37	-1.38	-0.52	-32.28	0.32	32.29	269.07
2550.00	0.86	139.68	2549.37	-1.07	-0.82	-32.04	0.11	32.05	268.54
2575.00	0.85	141.48	2574.37	-0.77	-1.10	-31.80	0.12	31.82	268.01
2600.00	0.91	140.91	2599.37	-0.46	-1.40	-31.56	0.23	31.59	267.46
2625.00	0.87	143.24	2624.36	-0.14	-1.71	-31.32	0.20	31.37	266.88
2650.00	0.89	145.17	2649.36	0.19	-2.02	-31.10	0.14	31.16	266.28
2675.00	0.92	145.40	2674.36	0.53	-2.34	-30.87	0.09	30.96	265.66
2700.00	0.93	145.06	2699.35	0.87	-2.68	-30.64	0.05	30.76	265.01
2725.00	0.89	147.36	2724.35	1.21	-3.00	-30.42	0.22	30.57	264.36
2750.00	0.95	145.21	2749.35	1.56	-3.34	-30.20	0.31	30.39	263.69
2775.00	0.99	145.91	2774.34	1.92	-3.69	-29.96	0.14	30.19	262.99
2800.00	1.04	149.91	2799.34	2.31	-4.06	-29.73	0.36	30.00	262.22
2825.00	1.12	141.22	2824.34	2.71	-4.45	-29.46	0.72	29.79	261.41
2850.00	1.36	136.19	2849.33	3.13	-4.85	-29.10	1.05	29.51	260.54
2875.00	1.42	132.99	2874.32	3.58	-5.28	-28.67	0.39	29.15	259.57
2900.00	1.45	129.65	2899.31	4.02	-5.69	-28.20	0.36	28.77	258.59
2925.00	1.43	132.62	2924.31	4.46	-6.10	-27.73	0.31	28.39	257.59
2950.00	1.46	130.59	2949.30	4.91	-6.52	-27.26	0.24	28.02	256.54
2975.00	1.47	131.39	2974.29	5.36	-6.94	-26.77	0.08	27.66	255.46
3000.00	1.32	134.80	2999.28	5.80	-7.36	-26.33	0.66	27.34	254.39
3025.00	1.33	134.42	3024.28	6.23	-7.76	-25.92	0.04	27.05	253.32
3050.00	1.24	136.72	3049.27	6.65	-8.16	-25.52	0.41	26.80	252.26
3075.00	1.19	138.66	3074.26	7.06	-8.56	-25.17	0.25	26.58	251.22
3100.00	1.19	137.90	3099.26	7.47	-8.94	-24.82	0.07	26.38	250.19
3125.00	1.12	138.39	3124.25	7.86	-9.32	-24.49	0.27	26.20	249.17
3150.00	1.06	137.69	3149.25	8.23	-9.67	-24.17	0.23	26.03	248.19
3175.00	0.96	138.80	3174.25	8.58	-10.00	-23.87	0.41	25.88	247.27
3200.00	0.88	147.77	3199.24	8.91	-10.32	-23.63	0.66	25.79	246.41
3225.00	0.89	144.11	3224.24	9.24	-10.64	-23.42	0.23	25.72	245.57
3250.00	0.82	148.53	3249.24	9.57	-10.95	-23.21	0.38	25.66	244.75

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS "/100ft	CLOSURE DIST ft	CLOSURE DIR deg
3275.00	0.79	152.81	3274.23	9.88	-11.25	-23.04	0.27	25.64	243.96
3300.00	0.67	149.92	3299.23	10.17	-11.53	-22.89	0.48	25.63	243.25
3325.00	0.73	142.55	3324.23	10.43	-11.79	-22.72	0.42	25.59	242.57
3350.00	1.56	174.91	3349.22	10.91	-12.25	-22.59	4.09	25.70	241.52
3375.00	0.70	156.89	3374.22	11.39	-12.73	-22.50	3.69	25.85	240.49
3400.00	0.67	159.48	3399.22	11.67	-13.01	-22.39	0.18	25.89	239.84
3425.00	0.65	157.59	3424.22	11.95	-13.28	-22.28	0.11	25.94	239.21
3450.00	0.66	160.02	3449.21	12.22	-13.54	-22.18	0.11	25.99	238.59
3475.00	0.65	158.90	3474.21	12.49	-13.81	-22.08	0.05	26.04	237.97
3500.00	0.71	159.44	3499.21	12.77	-14.09	-21.97	0.21	26.10	237.33
3525.00	0.73	159.88	3524.21	13.07	-14.38	-21.86	0.09	26.17	236.66
3550.00	0.64	152.59	3549.21	13.35	-14.65	-21.75	0.51	26.22	236.02
3575.00	0.58	158.60	3574.21	13.60	-14.90	-21.64	0.34	26.27	235.45
3600.00	0.52	160.76	3599.21	13.83	-15.12	-21.55	0.27	26.33	234.95
3625.00	0.54	159.57	3624.20	14.05	-15.34	-21.47	0.08	26.39	234.47
3650.00	0.47	167.04	3649.20	14.26	-15.54	-21.41	0.38	26.46	234.02
3675.00	0.36	174.85	3674.20	14.44	-15.72	-21.38	0.47	26.54	233.67
3700.00	0.38	179.49	3699.20	14.60	-15.88	-21.37	0.13	26.63	233.38
3725.00	0.37	185.86	3724.20	14.76	-16.05	-21.38	0.17	26.73	233.11
3750.00	0.31	189.04	3749.20	14.91	-16.19	-21.40	0.25	26.84	232.89
3775.00	0.33	194.35	3774.20	15.04	-16.33	-21.43	0.14	26.94	232.69
3800.00	0.37	192.08	3799.20	15.19	-16.48	-21.46	0.18	27.06	232.49
3825.00	0.37	190.67	3824.20	15.34	-16.64	-21.50	0.04	27.18	232.26
3850.00	0.39	198.41	3849.20	15.50	-16.80	-21.54	0.22	27.31	232.05
3875.00	0.50	205.98	3874.20	15.67	-16.97	-21.61	0.51	27.48	231.85
3900.00	0.62	212.57	3899.20	15.88	-17.19	-21.73	0.53	27.71	231.66
3925.00	0.78	208.66	3924.20	16.13	-17.45	-21.89	0.67	27.99	231.43
3950.00	0.95	212.03	3949.19	16.45	-17.78	-22.08	0.70	28.34	231.16
3975.00	1.08	213.02	3974.19	16.80	-18.15	-22.32	0.53	28.76	230.88
4000.00	1.29	212.85	3999.18	17.22	-18.58	-22.60	0.84	29.26	230.57
4025.00	1.46	214.67	4024.18	17.70	-19.08	-22.93	0.71	29.83	230.24
4050.00	1.55	215.69	4049.17	18.21	-19.62	-23.31	0.39	30.46	229.92

MD ft	INC deg	AZIM deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS "/100ft	CLOSURE DIST ft	CLOSURE DIR deg
4075.00	1.53	215.01	4074.16	18.74	-20.16	-23.70	0.13	31.12	229.61
4100.00	1.54	214.69	4099.15	19.26	-20.71	-24.08	0.07	31.76	229.30
4125.00	1.61	213.19	4124.14	19.81	-21.28	-24.46	0.31	32.43	228.98
4150.00	1.63	214.35	4149.13	20.37	-21.87	-24.86	0.15	33.11	228.66
4175.00	1.53	215.70	4174.12	20.91	-22.44	-25.25	0.42	33.78	228.38
4200.00	1.53	214.84	4199.11	21.44	-22.98	-25.64	0.09	34.43	228.13
4225.00	1.58	214.27	4224.10	21.97	-23.54	-26.03	0.21	35.09	227.87
4250.00	1.60	214.54	4249.09	22.52	-24.12	-26.42	0.05	35.77	227.61
4275.00	1.58	215.60	4274.08	23.06	-24.68	-26.81	0.13	36.45	227.37
4300.00	1.54	215.78	4299.07	23.59	-25.24	-27.21	0.16	37.11	227.16
4325.00	1.57	214.92	4324.06	24.12	-25.79	-27.60	0.17	37.78	226.95
4350.00	1.69	214.82	4349.05	24.68	-26.37	-28.01	0.44	38.47	226.73
4375.00	1.84	214.46	4374.04	25.29	-27.01	-28.45	0.64	39.23	226.49
4400.00	2.07	214.22	4399.03	25.96	-27.71	-28.93	0.91	40.06	226.23
4425.00	2.21	214.68	4424.01	26.70	-28.48	-29.46	0.57	40.98	225.97
4450.00	2.25	213.36	4448.99	27.47	-29.29	-30.00	0.25	41.93	225.69
4475.00	2.22	214.15	4473.97	28.25	-30.10	-30.54	0.18	42.88	225.42
4500.00	2.23	212.54	4498.95	29.03	-30.91	-31.08	0.26	43.83	225.16
4525.00	2.30	213.57	4523.93	29.82	-31.74	-31.62	0.30	44.80	224.89
4550.00	2.24	211.54	4548.91	30.62	-32.57	-32.15	0.38	45.77	224.63
4575.00	2.27	211.62	4573.90	31.43	-33.41	-32.67	0.10	46.72	224.35
4600.00	2.28	211.24	4598.88	32.25	-34.26	-33.18	0.08	47.69	224.09
4625.00	2.29	210.75	4623.86	33.07	-35.11	-33.70	0.08	48.66	223.82
4650.00	2.29	211.72	4648.84	33.89	-35.96	-34.21	0.15	49.64	223.57
4675.00	2.21	210.82	4673.82	34.70	-36.80	-34.72	0.32	50.60	223.34
4700.00	2.22	210.35	4698.80	35.50	-37.63	-35.21	0.07	51.54	223.10
4725.00	2.16	209.41	4723.78	36.30	-38.46	-35.69	0.27	52.47	222.86
4750.00	2.06	209.29	4748.76	37.07	-39.26	-36.14	0.41	53.36	222.63
4775.00	1.98	210.62	4773.75	37.81	-40.03	-36.58	0.35	54.22	222.42
4800.00	1.91	208.91	4798.73	38.52	-40.76	-37.00	0.37	55.05	222.23
4825.00	1.84	206.53	4823.72	39.22	-41.49	-37.38	0.44	55.84	222.02
4850.00	1.79	206.62	4848.71	39.90	-42.19	-37.74	0.17	56.61	221.81

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	1.75	206.04	4873.69	40.58	-42.89	-38.08	0.17	57.35	221.60
4900.00	1.61	204.03	4898.68	41.22	-43.55	-38.39	0.60	58.06	221.40
4925.00	1.53	201.80	4923.67	41.84	-44.18	-38.66	0.42	58.71	221.18
4950.00	1.45	197.51	4948.67	42.43	-44.80	-38.88	0.54	59.31	220.95
4975.00	1.48	195.73	4973.66	43.03	-45.41	-39.06	0.23	59.90	220.70
5000.00	1.44	195.62	4998.65	43.64	-46.02	-39.23	0.18	60.48	220.45
5025.00	1.47	197.16	5023.64	44.23	-46.63	-39.41	0.20	61.06	220.20
5050.00	1.44	195.65	5048.63	44.83	-47.24	-39.59	0.19	61.64	219.96
5075.00	1.49	196.71	5073.63	45.44	-47.86	-39.77	0.21	62.22	219.73
5100.00	1.43	196.83	5098.62	46.03	-48.47	-39.95	0.22	62.81	219.50
5125.00	1.41	197.21	5123.61	46.62	-49.06	-40.14	0.09	63.39	219.29
5150.00	1.43	199.04	5148.60	47.19	-49.65	-40.33	0.20	63.97	219.09
5175.00	1.43	200.99	5173.59	47.77	-50.24	-40.54	0.19	64.56	218.90
5200.00	1.46	201.25	5198.59	48.34	-50.83	-40.77	0.10	65.16	218.73
5225.00	1.38	201.05	5223.58	48.91	-51.40	-40.99	0.29	65.75	218.57
5250.00	1.40	202.66	5248.57	49.45	-51.97	-41.22	0.16	66.33	218.42
5275.00	1.39	204.54	5273.56	50.00	-52.52	-41.46	0.19	66.92	218.29
5300.00	1.34	203.78	5298.56	50.52	-53.07	-41.71	0.20	67.50	218.16
5325.00	1.40	204.35	5323.55	51.06	-53.61	-41.95	0.22	68.08	218.04
5350.00	1.40	204.13	5348.54	51.60	-54.17	-42.20	0.02	68.67	217.92
5375.00	1.38	204.56	5373.53	52.13	-54.72	-42.45	0.11	69.26	217.80
5400.00	1.41	203.42	5398.53	52.67	-55.28	-42.70	0.17	69.85	217.68
5425.00	1.50	201.53	5423.52	53.25	-55.87	-42.94	0.42	70.46	217.55
5450.00	1.49	203.59	5448.51	53.83	-56.47	-43.19	0.22	71.09	217.41
5475.00	1.46	201.19	5473.50	54.41	-57.06	-43.44	0.28	71.72	217.28
5500.00	1.54	198.33	5498.49	55.02	-57.68	-43.66	0.46	72.34	217.12
5525.00	1.54	198.65	5523.48	55.64	-58.32	-43.87	0.04	72.98	216.95
5550.00	1.55	198.95	5548.48	56.26	-58.96	-44.09	0.05	73.62	216.79
5575.00	1.59	199.63	5573.47	56.90	-59.60	-44.32	0.20	74.27	216.63
5600.00	1.63	199.34	5598.46	57.55	-60.27	-44.55	0.17	74.95	216.47
5625.00	1.62	201.37	5623.45	58.19	-60.93	-44.80	0.24	75.63	216.32
5650.00	1.60	200.49	5648.44	58.83	-61.59	-45.05	0.12	76.31	216.18

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	1.56	201.71	5673.43	59.46	-62.23	-45.30	0.20	76.97	216.05
5700.00	1.60	201.52	5698.42	60.09	-62.87	-45.55	0.17	77.64	215.92
5725.00	1.60	205.59	5723.41	60.71	-63.51	-45.83	0.45	78.32	215.81
5750.00	1.63	203.87	5748.40	61.33	-64.15	-46.12	0.23	79.01	215.71
5775.00	1.58	203.63	5773.39	61.96	-64.80	-46.41	0.19	79.70	215.61
5800.00	1.58	203.56	5798.38	62.57	-65.43	-46.68	0.01	80.37	215.51
5825.00	1.59	203.64	5823.37	63.19	-66.06	-46.96	0.01	81.05	215.41
5850.00	1.66	205.63	5848.36	63.81	-66.71	-47.25	0.37	81.75	215.31
5875.00	1.57	203.26	5873.35	64.43	-67.35	-47.55	0.45	82.44	215.22
5900.00	1.63	203.47	5898.34	65.06	-67.99	-47.82	0.24	83.12	215.12
5925.00	1.61	203.29	5923.33	65.69	-68.63	-48.10	0.07	83.81	215.02
5950.00	1.52	202.88	5948.32	66.30	-69.26	-48.37	0.39	84.48	214.93
5975.00	1.61	201.35	5973.31	66.91	-69.89	-48.63	0.41	85.15	214.83
6000.00	1.54	200.34	5998.30	67.54	-70.54	-48.87	0.31	85.81	214.72
6025.00	1.52	200.85	6023.29	68.15	-71.16	-49.11	0.08	86.46	214.61
6050.00	1.54	199.48	6048.28	68.76	-71.79	-49.34	0.16	87.11	214.50
6075.00	1.60	194.88	6073.27	69.40	-72.44	-49.54	0.55	87.76	214.37
6100.00	1.76	186.11	6098.26	70.11	-73.16	-49.67	1.21	88.43	214.17
6125.00	2.05	172.45	6123.25	70.94	-73.98	-49.65	2.15	89.10	213.87
6150.00	2.22	170.63	6148.23	71.86	-74.90	-49.51	0.73	89.79	213.47
6175.00	2.18	169.44	6173.21	72.82	-75.85	-49.35	0.25	90.49	213.05
6200.00	2.21	168.05	6198.20	73.76	-76.79	-49.16	0.26	91.18	212.63
6225.00	2.14	169.29	6223.18	74.71	-77.72	-48.97	0.34	91.86	212.22
6250.00	1.66	169.00	6248.16	75.53	-78.53	-48.82	1.93	92.47	211.87
6275.00	1.18	170.07	6273.16	76.14	-79.14	-48.70	1.90	92.93	211.61
6300.00	1.07	172.84	6298.15	76.63	-79.63	-48.63	0.51	93.30	211.41
6325.00	0.86	181.36	6323.15	77.05	-80.05	-48.61	1.02	93.65	211.27
6350.00	0.69	191.96	6348.14	77.38	-80.38	-48.64	0.89	93.95	211.18
6375.00	0.55	205.09	6373.14	77.63	-80.64	-48.72	0.77	94.21	211.14
6400.00	0.49	222.62	6398.14	77.81	-80.82	-48.85	0.68	94.44	211.15
6425.00	0.47	246.89	6423.14	77.92	-80.94	-49.01	0.81	94.63	211.20
6450.00	0.53	263.63	6448.14	77.96	-81.00	-49.22	0.62	94.78	211.29

MD	INC	AZIM	TVD	VS	+N/-S	+E/-W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	"/100ft	ft	deg
6475.00	0.55	269.91	6473.14	77.96	-81.01	-49.46	0.25	94.91	211.40
6500.00	0.57	272.12	6498.14	77.94	-81.01	-49.70	0.11	95.04	211.53
6525.00	0.65	274.09	6523.14	77.91	-80.99	-49.96	0.36	95.16	211.67
6550.00	0.72	275.91	6548.14	77.87	-80.96	-50.26	0.30	95.30	211.83
6575.00	0.71	276.48	6573.13	77.82	-80.93	-50.57	0.07	95.43	212.00
6600.00	0.76	273.32	6598.13	77.77	-80.90	-50.89	0.25	95.58	212.17
6625.00	0.72	269.10	6623.13	77.75	-80.90	-51.21	0.26	95.75	212.34
6650.00	0.70	269.86	6648.13	77.73	-80.90	-51.52	0.09	95.91	212.49
6675.00	0.73	261.70	6673.13	77.74	-80.92	-51.83	0.42	96.10	212.64
6700.00	0.69	251.73	6698.12	77.79	-80.99	-52.14	0.51	96.32	212.77
6725.00	0.59	241.18	6723.12	77.88	-81.10	-52.39	0.63	96.55	212.86
6750.00	0.49	211.01	6748.12	78.03	-81.26	-52.56	1.18	96.77	212.90
6775.00	0.54	195.64	6773.12	78.22	-81.46	-52.65	0.59	96.99	212.87
6800.00	0.60	187.67	6798.12	78.46	-81.70	-52.69	0.38	97.22	212.82
6825.00	0.63	182.85	6823.12	78.73	-81.97	-52.72	0.25	97.46	212.75
6850.00	0.95	184.06	6848.11	79.07	-82.31	-52.74	1.28	97.76	212.65
6875.00	1.18	178.58	6873.11	79.54	-82.78	-52.75	1.01	98.16	212.51
6900.00	1.47	178.66	6898.10	80.11	-83.36	-52.73	1.16	98.64	212.32
6925.00	1.62	172.78	6923.09	80.79	-84.03	-52.68	0.88	99.18	212.09
6950.00	1.74	171.92	6948.08	81.52	-84.76	-52.59	0.46	99.74	211.82
6975.00	1.80	171.98	6973.07	82.29	-85.52	-52.48	0.26	100.34	211.53
7000.00	1.31	170.56	6998.06	82.96	-86.19	-52.38	1.96	100.86	211.29
7025.00	0.79	167.07	7023.06	83.42	-86.64	-52.29	2.10	101.20	211.11
7050.00	0.53	156.15	7048.06	83.69	-86.91	-52.21	1.16	101.39	210.99
7075.00	0.52	152.64	7073.06	83.90	-87.12	-52.11	0.13	101.51	210.88
7100.00	0.48	144.25	7098.05	84.10	-87.30	-51.99	0.32	101.61	210.78
7125.00	0.50	135.38	7123.05	84.27	-87.47	-51.86	0.31	101.68	210.66
7150.00	0.51	133.92	7148.05	84.43	-87.62	-51.70	0.06	101.74	210.54
7175.00	0.54	129.46	7173.05	84.59	-87.77	-51.53	0.22	101.78	210.42
7200.00	0.57	123.28	7198.05	84.75	-87.92	-51.33	0.27	101.81	210.28
7225.00	0.74	133.38	7223.05	84.94	-88.10	-51.11	0.80	101.85	210.12
7244.00	0.67	138.89	7242.05	85.12	-88.26	-50.95	0.51	101.91	209.99