

COG

EIDER FEDERAL #302H

ENSIGN 155

6/8/2018

This survey is correct to the best of my knowledge and is supported by actual field data.

Kolton Cotton

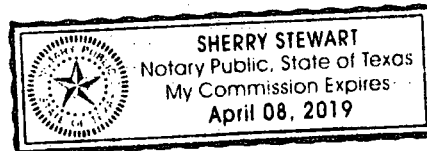
Notarized this date 1st of August, 2018.

Sherry Stewart

Notary Signature

County of Midland

State of Texas



Scientific Drilling

The Ultimate Partner In Wellbore Placement

CUSTOMER COG
PROJECT Lea County, New Mexico
FIELD N/A

SDI JOB NO. OP.000000
SDI DISTRICT Midland
SDI KIT/UNIT

SITE INFORMATION

Site Name Lea county, New Mexico
Lat/Long 32.1673509° N, 103.6502128° W
Northing 425,274 ft
Easting 711,380.4 ft

Section
Township
Range

MAP INFORMATION

North Reference Grid North
Grid Correction -0.36 deg
System US State Plane 1927
Datum North American Datum 1927 (Clarke 1866)
Map Zone New Mexico East: 3001



WELL INFORMATION

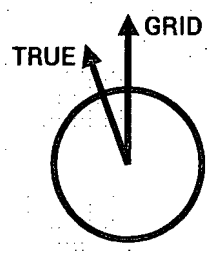
Lat/Long 32.1672684° N, 103.6501161° W
Northing 425,244.2 ft
Easting 711,410.5 ft
UWI 30-025-44637

DEPTH AND ELEVATION REFERENCE

Ground Level 3521 ft above Mean Sea Level
Reference Datum RKB
Reference Height 24 ft above G.L.
Reference Elevation 3545 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 359.19°
Calculation Method Minimum Curvature



LOCAL GRAVITY REFERENCE INFORMATION

Local Gravity 998.485 mG [computed]
True to Grid subtract 0.36°

WELL NOTES

Keeper Gyro survey

OPERATORS

Jeffrey Loyd

SDI Operator Name (Printed) SIGNATURE DATE

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE	CLOSURE
ft.	deg	deg	ft.	ft.	ft.	ft.	%/100ft	DIST	DIR
								ft.	deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	0.00	0.00
100.00	0.44	73.28	100.00	0.11	0.11	0.37	0.44	0.39	73.28
125.00	0.35	70.60	125.00	0.16	0.16	0.54	0.40	0.56	72.92
150.00	0.40	58.24	150.00	0.23	0.24	0.68	0.40	0.72	70.90
175.00	0.44	56.43	175.00	0.32	0.34	0.84	0.16	0.90	68.15
200.00	0.61	72.96	200.00	0.41	0.43	1.05	0.92	1.13	67.73
225.00	0.55	71.97	224.99	0.49	0.50	1.29	0.25	1.38	68.60
250.00	0.62	71.21	249.99	0.56	0.59	1.53	0.28	1.64	69.07
275.00	0.74	73.03	274.99	0.65	0.68	1.82	0.49	1.94	69.55
300.00	0.76	70.84	299.99	0.75	0.78	2.13	0.14	2.27	69.89
325.00	0.85	73.04	324.99	0.85	0.89	2.46	0.36	2.62	70.18
350.00	0.76	71.74	349.98	0.95	0.99	2.80	0.36	2.97	70.44
375.00	0.63	61.83	374.98	1.07	1.11	3.07	0.70	3.27	70.15
400.00	0.66	70.25	399.98	1.18	1.22	3.33	0.40	3.55	69.83
425.00	0.68	80.17	424.98	1.25	1.30	3.61	0.47	3.84	70.24
450.00	0.76	75.48	449.98	1.31	1.36	3.92	0.38	4.15	70.81
475.00	0.84	85.80	474.98	1.36	1.42	4.26	0.66	4.49	71.58
500.00	0.78	94.58	499.97	1.35	1.42	4.62	0.55	4.83	72.91
525.00	0.67	92.05	524.97	1.33	1.40	4.93	0.47	5.13	74.15
550.00	0.75	108.01	549.97	1.27	1.34	5.24	0.85	5.41	75.60
575.00	0.81	116.11	574.97	1.14	1.22	5.55	0.49	5.68	77.64
600.00	0.62	130.16	599.96	0.97	1.05	5.81	1.03	5.91	79.74
625.00	0.52	156.15	624.96	0.78	0.86	5.96	1.09	6.02	81.78
650.00	0.48	182.78	649.96	0.57	0.65	6.00	0.94	6.04	83.79
675.00	0.53	210.55	674.96	0.37	0.45	5.94	0.99	5.95	85.67
700.00	0.99	233.50	699.96	0.14	0.22	5.70	2.17	5.71	87.78
725.00	1.02	237.07	724.96	-0.10	-0.03	5.34	0.28	5.34	90.31
750.00	1.18	235.62	749.95	-0.37	-0.30	4.94	0.64	4.95	93.42
775.00	1.18	233.47	774.95	-0.66	-0.59	4.52	0.18	4.56	97.48
800.00	1.15	240.35	799.94	-0.93	-0.87	4.10	0.57	4.19	102.00
825.00	1.26	236.65	824.93	-1.20	-1.15	3.65	0.54	3.83	107.41
850.00	1.35	235.79	849.93	-1.51	-1.46	3.18	0.39	3.50	114.69

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	1.35	231.05	874.92	-1.85	-1.81	2.71	0.45	3.26	123.82
900.00	1.48	224.70	899.91	-2.26	-2.23	2.25	0.82	3.17	134.74
925.00	1.51	230.48	924.91	-2.69	-2.67	1.77	0.61	3.20	146.49
950.00	1.70	228.92	949.90	-3.14	-3.12	1.23	0.79	3.36	158.45
975.00	1.84	225.73	974.88	-3.66	-3.65	0.67	0.66	3.71	169.64
1000.00	1.89	225.56	999.87	-4.22	-4.22	0.09	0.21	4.22	178.84
1025.00	1.95	227.11	1024.86	-4.79	-4.79	-0.52	0.33	4.82	186.20
1050.00	2.11	223.63	1049.84	-5.40	-5.42	-1.15	0.81	5.54	191.99
1075.00	2.04	225.43	1074.82	-6.04	-6.06	-1.79	0.38	6.32	196.41
1100.00	2.13	222.31	1099.81	-6.68	-6.72	-2.42	0.57	7.14	199.78
1125.00	2.29	220.45	1124.79	-7.40	-7.44	-3.05	0.69	8.04	202.30
1150.00	2.33	222.65	1149.77	-8.14	-8.19	-3.72	0.39	9.00	204.41
1175.00	2.47	222.78	1174.75	-8.90	-8.96	-4.43	0.57	10.00	206.30
1200.00	2.37	223.61	1199.72	-9.66	-9.73	-5.15	0.43	11.01	207.89
1225.00	2.30	221.76	1224.70	-10.40	-10.48	-5.84	0.41	12.00	209.13
1250.00	2.39	220.76	1249.68	-11.16	-11.25	-6.52	0.39	13.00	210.08
1275.00	2.25	220.00	1274.66	-11.92	-12.02	-7.17	0.55	14.00	210.82
1300.00	1.80	212.84	1299.65	-12.62	-12.73	-7.70	2.06	14.88	211.18
1325.00	1.26	190.54	1324.64	-13.21	-13.33	-7.97	3.20	15.53	210.86
1350.00	1.09	156.56	1349.63	-13.70	-13.82	-7.92	2.82	15.93	209.82
1375.00	0.99	133.06	1374.63	-14.07	-14.18	-7.67	1.74	16.12	208.39
1400.00	1.26	97.58	1399.62	-14.26	-14.37	-7.24	2.94	16.09	206.73
1425.00	2.05	83.97	1424.61	-14.26	-14.36	-6.52	3.49	15.77	204.42
1450.00	2.12	74.91	1449.60	-14.11	-14.19	-5.63	1.35	15.26	201.63
1475.00	2.06	71.50	1474.58	-13.86	-13.93	-4.75	0.55	14.72	198.85
1500.00	2.18	70.42	1499.56	-13.57	-13.63	-3.88	0.49	14.17	195.90
1525.00	2.06	71.65	1524.55	-13.28	-13.32	-3.01	0.48	13.66	192.71
1550.00	1.93	68.07	1549.53	-12.99	-13.03	-2.19	0.74	13.21	189.54
1575.00	1.24	60.75	1574.52	-12.71	-12.74	-1.56	2.88	12.83	187.00
1600.00	0.61	32.55	1599.52	-12.48	-12.49	-1.26	3.03	12.56	185.75
1625.00	0.44	345.92	1624.52	-12.27	-12.29	-1.21	1.76	12.35	185.62
1650.00	0.59	320.48	1649.52	-12.08	-12.10	-1.31	1.08	12.17	186.20

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	0.65	311.74	1674.51	-11.88	-11.90	-1.50	0.46	12.00	187.19
1700.00	0.66	313.99	1699.51	-11.68	-11.71	-1.71	0.10	11.83	188.32
1725.00	0.56	317.84	1724.51	-11.49	-11.52	-1.90	0.42	11.67	189.35
1750.00	0.50	314.20	1749.51	-11.32	-11.35	-2.06	0.26	11.54	190.27
1775.00	0.61	312.31	1774.51	-11.15	-11.19	-2.23	0.42	11.41	191.29
1800.00	0.52	316.23	1799.51	-10.98	-11.02	-2.41	0.37	11.28	192.34
1825.00	0.68	320.44	1824.51	-10.78	-10.82	-2.58	0.66	11.12	193.43
1850.00	0.72	316.98	1849.51	-10.55	-10.59	-2.79	0.23	10.95	194.74
1875.00	0.66	313.60	1874.50	-10.33	-10.38	-3.00	0.29	10.80	196.11
1900.00	0.69	312.23	1899.50	-10.13	-10.17	-3.21	0.15	10.67	197.53
1925.00	0.55	321.69	1924.50	-9.93	-9.98	-3.40	0.72	10.54	198.81
1950.00	0.51	328.24	1949.50	-9.74	-9.79	-3.53	0.28	10.41	199.83
1975.00	0.47	329.34	1974.50	-9.56	-9.61	-3.64	0.16	10.28	200.76
2000.00	0.56	331.96	1999.50	-9.36	-9.41	-3.75	0.36	10.13	201.72
2025.00	0.68	311.96	2024.50	-9.15	-9.21	-3.92	0.98	10.01	203.05
2050.00	0.76	277.46	2049.49	-9.03	-9.09	-4.19	1.73	10.01	204.76
2075.00	0.96	264.07	2074.49	-9.02	-9.09	-4.56	1.13	10.17	206.65
2100.00	1.02	257.12	2099.49	-9.09	-9.16	-4.99	0.53	10.43	208.56
2125.00	1.05	255.75	2124.48	-9.19	-9.27	-5.42	0.18	10.74	210.35
2150.00	1.26	259.62	2149.48	-9.29	-9.37	-5.92	0.87	11.08	212.26
2175.00	1.16	252.54	2174.47	-9.41	-9.50	-6.43	0.70	11.47	214.09
2200.00	1.19	251.45	2199.47	-9.56	-9.66	-6.92	0.13	11.88	215.61
2225.00	1.26	248.18	2224.46	-9.73	-9.84	-7.42	0.41	12.32	217.01
2250.00	1.28	254.83	2249.46	-9.90	-10.02	-7.94	0.59	12.78	218.41
2275.00	1.17	254.13	2274.45	-10.04	-10.16	-8.46	0.45	13.22	219.78
2300.00	1.38	255.89	2299.44	-10.17	-10.30	-8.99	0.87	13.68	221.12
2325.00	1.51	244.49	2324.44	-10.38	-10.52	-9.58	1.25	14.23	222.34
2350.00	1.47	236.34	2349.43	-10.69	-10.84	-10.15	0.86	14.85	223.12
2375.00	1.56	233.14	2374.42	-11.07	-11.22	-10.69	0.47	15.49	223.61
2400.00	1.58	229.14	2399.41	-11.49	-11.65	-11.22	0.44	16.17	223.93
2425.00	1.64	222.33	2424.40	-11.97	-12.14	-11.72	0.81	16.87	224.00
2450.00	1.55	209.77	2449.39	-12.52	-12.70	-12.13	1.45	17.56	223.69

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	1:63	210.18	2474.38	-13.12	-13.30	-12.48	0.34	18.23	223.18
2500.00	1:57	197.21	2499.37	-13.75	-13.93	-12.76	1.47	18.89	222.48
2525.00	1:37	200.94	2524.36	-14.35	-14.54	-12.96	0.88	19.48	221.73
2550.00	1:35	194.08	2549.36	-14.91	-15.10	-13.14	0.66	20.02	221.03
2575.00	1:24	194.43	2574.35	-15.46	-15.65	-13.28	0.43	20.52	220.32
2600.00	1:24	191.23	2599.34	-15.98	-16.18	-13.40	0.28	21.01	219.64
2625.00	1:23	192.77	2624.34	-16.51	-16.70	-13.51	0.15	21.48	218.98
2650.00	1:26	191.43	2649.33	-17.04	-17.23	-13.63	0.18	21.97	218.34
2675.00	1:26	192.55	2674.33	-17.58	-17.77	-13.74	0.10	22.46	217.71
2700.00	1:23	190.17	2699.32	-18.11	-18.30	-13.85	0.25	22.95	217.11
2725.00	1:31	185.60	2724.31	-18.65	-18.85	-13.92	0.51	23.44	216.45
2750.00	1:33	189.82	2749.31	-19.22	-19.42	-14.00	0.40	23.94	215.79
2775.00	1:28	195.06	2774.30	-19.78	-19.98	-14.12	0.52	24.47	215.26
2800.00	1:18	202.90	2799.29	-20.28	-20.49	-14.30	0.77	24.98	214.91
2825.00	1:18	211.34	2824.29	-20.74	-20.94	-14.53	0.70	25.49	214.75
2850.00	1:17	220.61	2849.28	-21.14	-21.36	-14.83	0.76	26.00	214.78
2875.00	1:22	217.24	2874.28	-21.54	-21.76	-15.16	0.34	26.52	214.86
2900.00	1:06	221.35	2899.27	-21.92	-22.15	-15.47	0.71	27.01	214.94
2925.00	1:21	222.04	2924.27	-22.29	-22.51	-15.80	0.62	27.50	215.06
2950.00	1:10	220.53	2949.26	-22.66	-22.89	-16.13	0.46	28.01	215.17
2975.00	1:06	217.78	2974.26	-23.02	-23.26	-16.43	0.26	28.48	215.24
3000.00	0:89	202.67	2999.26	-23.38	-23.62	-16.65	1.24	28.90	215.17
3025.00	0:89	195.75	3024.25	-23.75	-23.99	-16.77	0.43	29.27	214.97
3050.00	0:92	187.21	3049.25	-24.13	-24.37	-16.85	0.55	29.63	214.66
3075.00	0:87	188.26	3074.25	-24.52	-24.76	-16.90	0.20	29.98	214.32
3100.00	0:85	181.28	3099.24	-24.89	-25.13	-16.93	0.43	30.31	213.97
3125.00	1:02	179.82	3124.24	-25.30	-25.54	-16.94	0.68	30.65	213.55
3150.00	0:98	182.35	3149.24	-25.74	-25.98	-16.95	0.23	31.02	213.12
3175.00	0:99	181.20	3174.23	-26.17	-26.41	-16.96	0.08	31.39	212.71
3200.00	1:06	184.17	3199.23	-26.61	-26.86	-16.98	0.37	31.77	212.30
3225.00	1:04	174.26	3224.22	-27.07	-27.31	-16.98	0.73	32.16	211.86
3250.00	1:10	177.86	3249.22	-27.54	-27.78	-16.94	0.37	32.54	211.38

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	1.14	181.45	3274.22	-28.03	-28.27	-16.94	0.32	32.96	210.93
3300.00	1.04	179.33	3299.21	-28.50	-28.74	-16.92	0.74	33.36	210.48
3325.00	1.06	191.20	3324.21	-28.95	-29.20	-16.94	1.31	33.76	210.12
3350.00	1.14	183.85	3349.20	-29.43	-29.67	-17.00	0.64	34.20	209.81
3375.00	1.26	178.62	3374.20	-29.95	-30.19	-17.01	0.66	34.66	209.40
3400.00	1.19	182.52	3399.19	-30.49	-30.73	-17.02	0.43	35.13	208.98
3425.00	1.32	176.90	3424.18	-31.03	-31.28	-17.01	0.72	35.60	208.54
3450.00	1.35	181.86	3449.18	-31.62	-31.86	-17.01	0.47	36.12	208.09
3475.00	1.30	179.14	3474.17	-32.19	-32.44	-17.01	0.33	36.63	207.67
3500.00	1.32	183.51	3499.16	-32.76	-33.01	-17.02	0.41	37.14	207.28
3525.00	1.48	184.71	3524.16	-33.37	-33.62	-17.07	0.64	37.70	206.92
3550.00	1.44	182.94	3549.15	-34.01	-34.25	-17.11	0.24	38.29	206.55
3575.00	1.44	181.03	3574.14	-34.63	-34.88	-17.13	0.19	38.86	206.16
3600.00	1.54	179.64	3599.13	-35.28	-35.53	-17.14	0.45	39.45	205.75
3625.00	1.31	174.80	3624.13	-35.91	-36.15	-17.11	1.04	40.00	205.33
3650.00	0.60	176.03	3649.12	-36.32	-36.57	-17.07	2.85	40.36	205.03
3675.00	0.35	19.31	3674.12	-36.38	-36.62	-17.04	3.74	40.39	204.95
3700.00	0.89	359.37	3699.12	-36.11	-36.36	-17.02	2.27	40.14	205.08
3725.00	1.01	357.87	3724.12	-35.70	-35.95	-17.03	0.52	39.77	205.35
3750.00	0.98	0.52	3749.11	-35.27	-35.51	-17.03	0.22	39.38	205.62
3775.00	0.98	0.08	3774.11	-34.84	-35.08	-17.03	0.05	39.00	205.89
3800.00	1.03	5.45	3799.10	-34.40	-34.65	-17.01	0.44	38.60	206.15
3825.00	0.72	349.69	3824.10	-34.02	-34.27	-17.02	1.56	38.26	206.41
3850.00	0.23	287.55	3849.10	-33.85	-34.10	-17.09	2.59	38.14	206.62
3875.00	0.50	226.94	3874.10	-33.91	-34.16	-17.22	1.75	38.25	206.75
3900.00	0.46	224.03	3899.10	-34.05	-34.30	-17.37	0.19	38.45	206.85
3925.00	0.61	224.28	3924.10	-34.22	-34.47	-17.53	0.58	38.67	206.96
3950.00	0.53	228.51	3949.10	-34.39	-34.64	-17.71	0.35	38.91	207.08
3975.00	0.54	216.58	3974.10	-34.56	-34.81	-17.87	0.45	39.13	207.17
4000.00	0.67	222.14	3999.09	-34.76	-35.02	-18.04	0.57	39.39	207.25
4025.00	0.72	226.73	4024.09	-34.97	-35.23	-18.25	0.29	39.68	207.38
4050.00	0.64	222.95	4049.09	-35.18	-35.44	-18.46	0.38	39.96	207.51

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	0.65	228.07	4074.09	-35.37	-35.64	-18.66	0.23	40.23	207.63
4100.00	0.54	210.59	4099.09	-35.56	-35.83	-18.82	0.84	40.48	207.71
4125.00	0.57	218.52	4124.09	-35.76	-36.03	-18.96	0.33	40.71	207.75
4150.00	0.55	180.91	4149.09	-35.98	-36.25	-19.04	1.44	40.94	207.71
4175.00	0.59	161.87	4174.08	-36.22	-36.49	-19.00	0.77	41.14	207.50
4200.00	0.62	191.00	4199.08	-36.47	-36.75	-18.99	1.23	41.36	207.32
4225.00	0.66	176.19	4224.08	-36.75	-37.02	-19.00	0.68	41.62	207.17
4250.00	0.82	183.44	4249.08	-37.07	-37.35	-19.00	0.71	41.90	206.97
4275.00	0.82	176.85	4274.08	-37.43	-37.70	-19.00	0.38	42.22	206.75
4300.00	0.82	181.69	4299.07	-37.79	-38.06	-19.00	0.28	42.54	206.53
4325.00	0.86	168.06	4324.07	-38.15	-38.42	-18.97	0.81	42.85	206.27
4350.00	0.98	172.85	4349.07	-38.55	-38.82	-18.90	0.57	43.17	205.96
4375.00	1.12	163.83	4374.06	-38.99	-39.26	-18.81	0.86	43.53	205.59
4400.00	1.24	160.00	4399.06	-39.48	-39.75	-18.65	0.57	43.90	205.13
4425.00	1.33	161.31	4424.05	-40.01	-40.28	-18.46	0.39	44.31	204.63
4450.00	1.47	164.28	4449.05	-40.60	-40.86	-18.28	0.63	44.76	204.11
4475.00	1.50	163.16	4474.04	-41.22	-41.48	-18.10	0.17	45.26	203.57
4500.00	1.41	164.92	4499.03	-41.83	-42.09	-17.93	0.41	45.75	203.07
4525.00	1.41	165.41	4524.02	-42.43	-42.68	-17.77	0.05	46.23	202.60
4550.00	1.46	166.26	4549.01	-43.04	-43.29	-17.62	0.21	46.74	202.14
4575.00	1.33	170.83	4574.01	-43.63	-43.89	-17.49	0.69	47.24	201.73
4600.00	1.24	176.54	4599.00	-44.19	-44.44	-17.43	0.62	47.74	201.42
4625.00	1.10	178.46	4624.00	-44.70	-44.95	-17.41	0.57	48.21	201.17
4650.00	1.08	179.64	4648.99	-45.18	-45.43	-17.40	0.13	48.65	200.96
4675.00	1.10	175.51	4673.99	-45.65	-45.90	-17.38	0.32	49.08	200.74
4700.00	1.11	178.52	4698.98	-46.13	-46.38	-17.36	0.24	49.52	200.51
4725.00	1.20	176.68	4723.98	-46.64	-46.89	-17.33	0.37	49.99	200.29
4750.00	1.12	177.92	4748.97	-47.14	-47.39	-17.31	0.33	50.45	200.06
4775.00	1.09	181.88	4773.97	-47.62	-47.87	-17.31	0.33	50.91	199.88
4800.00	1.15	172.68	4798.96	-48.11	-48.36	-17.28	0.77	51.36	199.67
4825.00	1.16	183.87	4823.96	-48.61	-48.86	-17.27	0.90	51.82	199.47
4850.00	1.22	177.00	4848.95	-49.13	-49.38	-17.27	0.61	52.31	199.28

MD ft	INC deg	AZIM deg	TVD ft	VS ft	N/S ft	E/W ft	DLS /100ft	CLOSURE DIST ft	CLOSURE DIR deg
4875.00	1.12	171.74	4873.95	-49.64	-49.89	-17.22	0.57	52.78	199.05
4900.00	1.01	180.17	4898.94	-50.10	-50.35	-17.19	0.77	53.20	198.85
4925.00	1.08	176.49	4923.94	-50.56	-50.80	-17.18	0.40	53.63	198.68
4950.00	1.20	180.57	4948.93	-51.05	-51.30	-17.16	0.57	54.10	198.50
4975.00	1.02	182.88	4973.93	-51.54	-51.79	-17.18	0.76	54.56	198.35
5000.00	1.07	180.02	4998.92	-51.99	-52.24	-17.19	0.31	55.00	198.21
5025.00	1.04	196.16	5023.92	-52.44	-52.69	-17.25	1.20	55.45	198.13
5050.00	0.92	211.27	5048.92	-52.83	-53.08	-17.42	1.13	55.87	198.17
5075.00	1.04	235.06	5073.91	-53.13	-53.38	-17.71	1.69	56.24	198.35
5100.00	1.29	249.98	5098.91	-53.35	-53.61	-18.16	1.55	56.60	198.71
5125.00	1.20	245.52	5123.90	-53.54	-53.81	-18.66	0.51	56.96	199.12
5150.00	1.29	250.67	5148.90	-53.74	-54.02	-19.17	0.57	57.31	199.54
5175.00	1.20	247.83	5173.89	-53.92	-54.21	-19.67	0.45	57.67	199.95
5200.00	1.29	250.62	5198.88	-54.11	-54.40	-20.18	0.43	58.02	200.35
5225.00	1.12	248.56	5223.88	-54.28	-54.58	-20.67	0.71	58.37	200.74
5250.00	0.35	163.13	5248.88	-54.44	-54.75	-20.88	4.58	58.59	200.87
5275.00	0.62	129.25	5273.88	-54.61	-54.91	-20.75	1.54	58.70	200.70
5300.00	0.85	123.37	5298.87	-54.80	-55.09	-20.49	0.97	58.78	200.40
5325.00	0.93	118.29	5323.87	-55.00	-55.29	-20.15	0.45	58.85	200.03
5350.00	0.93	121.46	5348.87	-55.21	-55.49	-19.80	0.21	58.92	199.64
5375.00	0.86	121.59	5373.86	-55.42	-55.70	-19.47	0.28	59.00	199.27
5400.00	0.75	126.92	5398.86	-55.62	-55.90	-19.18	0.55	59.09	198.94
5425.00	0.61	176.59	5423.86	-55.85	-56.13	-19.04	2.33	59.27	198.74
5450.00	0.94	208.64	5448.86	-56.16	-56.44	-19.13	2.14	59.59	198.72
5475.00	1.62	222.46	5473.85	-56.60	-56.88	-19.47	2.96	60.12	198.89
5500.00	1.86	229.27	5498.84	-57.12	-57.41	-20.01	1.26	60.79	199.22
5525.00	2.05	231.78	5523.83	-57.65	-57.95	-20.67	0.84	61.52	199.63
5550.00	2.02	230.89	5548.81	-58.19	-58.50	-21.36	0.18	62.28	200.06
5575.00	2.12	230.53	5573.79	-58.75	-59.07	-22.06	0.39	63.06	200.48
5600.00	1.96	233.04	5598.78	-59.29	-59.62	-22.76	0.72	63.82	200.89
5625.00	0.89	250.34	5623.77	-59.61	-59.94	-23.28	4.56	64.31	201.23
5650.00	0.36	341.23	5648.77	-59.60	-59.94	-23.49	3.86	64.37	201.40

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%100ft	ft	deg
5675.00	0.50	12.69	5673.77	-59.42	-59.76	-23.49	1.07	64.21	201.46
5700.00	0.47	344.59	5698.77	-59.21	-59.55	-23.50	0.95	64.02	201.53
5725.00	0.49	351.36	5723.77	-59.01	-59.34	-23.54	0.25	63.84	201.64
5750.00	0.43	359.21	5748.77	-58.81	-59.15	-23.56	0.37	63.66	201.72
5775.00	0.34	18.86	5773.76	-58.64	-58.98	-23.54	0.63	63.50	201.75
5800.00	0.44	340.77	5798.76	-58.48	-58.82	-23.54	1.08	63.36	201.81
5825.00	0.34	24.69	5823.76	-58.33	-58.66	-23.54	1.22	63.21	201.87
5850.00	0.41	354.60	5848.76	-58.17	-58.51	-23.52	0.82	63.06	201.90
5875.00	0.50	0.69	5873.76	-57.97	-58.31	-23.53	0.40	62.88	201.97
5900.00	0.50	4.95	5898.76	-57.76	-58.09	-23.52	0.15	62.67	202.04
5925.00	0.42	355.31	5923.76	-57.56	-57.89	-23.51	0.45	62.49	202.11
5950.00	0.51	358.07	5948.76	-57.35	-57.69	-23.53	0.37	62.30	202.18
5975.00	0.46	1.45	5973.76	-57.14	-57.48	-23.53	0.22	62.11	202.26
6000.00	0.42	348.17	5998.76	-56.95	-57.29	-23.54	0.44	61.94	202.34
6025.00	0.42	357.97	6023.76	-56.77	-57.11	-23.57	0.29	61.78	202.42
6050.00	0.55	343.47	6048.76	-56.56	-56.90	-23.60	0.72	61.60	202.53
6075.00	0.65	302.40	6073.76	-56.37	-56.71	-23.76	1.72	61.48	202.73
6100.00	0.82	299.65	6098.75	-56.20	-56.54	-24.03	0.72	61.44	203.03
6125.00	1.11	282.15	6123.75	-56.05	-56.40	-24.42	1.62	61.47	203.41
6150.00	1.27	279.93	6148.74	-55.95	-56.31	-24.93	0.70	61.58	203.89
6175.00	1.43	278.54	6173.74	-55.85	-56.21	-25.52	0.65	61.73	204.42
6200.00	1.53	272.73	6198.73	-55.77	-56.15	-26.16	0.70	61.94	204.98
6225.00	1.47	274.30	6223.72	-55.72	-56.11	-26.81	0.26	62.19	205.54
6250.00	1.66	268.42	6248.71	-55.70	-56.10	-27.49	0.98	62.47	206.11
6275.00	1.64	274.78	6273.70	-55.67	-56.08	-28.21	0.74	62.77	206.71
6300.00	1.82	270.67	6298.69	-55.63	-56.04	-28.97	0.87	63.08	207.33
6325.00	2.11	266.69	6323.67	-55.64	-56.06	-29.82	1.28	63.50	208.01
6350.00	2.05	264.41	6348.66	-55.69	-56.13	-30.73	0.42	63.99	208.70
6375.00	2.50	257.80	6373.64	-55.84	-56.29	-31.70	2.09	64.60	209.39
6400.00	2.87	253.53	6398.61	-56.11	-56.58	-32.83	1.68	65.42	210.13
6425.00	3.07	252.04	6423.58	-56.48	-56.97	-34.07	0.88	66.38	210.88
6450.00	2.99	253.49	6448.54	-56.85	-57.36	-35.33	0.45	67.37	211.63

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	2.81	252.23	6473.51	-57.21	-57.73	-36.54	0.75	68.33	212.33
6500.00	2.50	247.61	6498.48	-57.59	-58.13	-37.63	1.51	69.25	212.92
6525.00	2.34	249.36	6523.46	-57.96	-58.51	-38.61	0.72	70.11	213.42
6550.00	2.28	246.93	6548.44	-58.32	-58.89	-39.55	0.46	70.94	213.88
6575.00	2.16	248.23	6573.42	-58.68	-59.26	-40.44	0.52	71.75	214.31
6600.00	2.29	244.80	6598.40	-59.06	-59.65	-41.33	0.75	72.57	214.72
6625.00	2.29	243.90	6623.38	-59.48	-60.08	-42.24	0.14	73.44	215.11
6650.00	2.59	240.45	6648.36	-59.96	-60.58	-43.18	1.33	74.39	215.48
6675.00	3.03	235.19	6673.33	-60.60	-61.23	-44.21	2.02	75.53	215.83
6700.00	2.73	232.20	6698.30	-61.33	-61.98	-45.22	1.34	76.72	216.12
6725.00	2.97	233.79	6723.27	-62.06	-62.72	-46.21	1.01	77.91	216.38
6750.00	2.85	235.35	6748.24	-62.78	-63.46	-47.25	0.58	79.12	216.67
6775.00	2.56	231.17	6773.21	-63.47	-64.16	-48.19	1.38	80.25	216.91
6800.00	2.48	231.83	6798.18	-64.15	-64.85	-49.05	0.37	81.31	217.11
6825.00	2.53	229.40	6823.16	-64.83	-65.54	-49.90	0.48	82.37	217.28
6850.00	3.09	220.98	6848.13	-65.68	-66.41	-50.76	2.77	83.58	217.39
6875.00	3.46	220.44	6873.09	-66.75	-67.49	-51.69	1.51	85.01	217.45
6900.00	3.51	217.16	6898.04	-67.92	-68.67	-52.64	0.81	86.53	217.47
6925.00	3.56	218.35	6923.00	-69.13	-69.89	-53.59	0.36	88.07	217.48
6950.00	3.32	205.37	6947.95	-70.38	-71.16	-54.38	3.25	89.56	217.39
6975.00	3.08	197.15	6972.91	-71.67	-72.45	-54.89	2.07	90.90	217.15
7000.00	3.01	193.10	6997.88	-72.95	-73.73	-55.23	0.91	92.13	216.84
7025.00	3.08	191.08	7022.84	-74.24	-75.03	-55.51	0.53	93.33	216.50
7050.00	3.09	193.74	7047.80	-75.55	-76.35	-55.80	0.57	94.57	216.16
7075.00	3.02	189.38	7072.77	-76.85	-77.65	-56.07	0.97	95.78	215.83
7100.00	3.11	191.80	7097.73	-78.16	-78.97	-56.31	0.63	96.99	215.49
7125.00	3.16	193.51	7122.70	-79.49	-80.30	-56.61	0.42	98.25	215.18
7150.00	3.08	190.47	7147.66	-80.82	-81.63	-56.90	0.73	99.50	214.88
7175.00	3.11	191.90	7172.62	-82.14	-82.96	-57.16	0.32	100.74	214.57
7200.00	3.20	189.04	7197.58	-83.49	-84.31	-57.41	0.73	102.00	214.25
7225.00	3.17	188.36	7222.55	-84.86	-85.68	-57.62	0.19	103.26	213.92
7250.00	3.22	187.17	7247.51	-86.24	-87.07	-57.81	0.33	104.51	213.58

MD	INC	AZIM	TVD	VS	N/S	E/W	DLS	CLOSURE DIST	CLOSURE DIR
ft	deg	deg	ft	ft	ft	ft	%/100ft	ft	deg
7275.00	3.17	188.04	7272.47	-87.62	-88.45	-57.99	0.28	105.76	213.25
7300.00	3.23	186.27	7297.43	-89.00	-89.83	-58.16	0.46	107.02	212.92
7325.00	3.19	187.09	7322.39	-90.39	-91.22	-58.33	0.23	108.28	212.59
7350.00	3.26	186.59	7347.35	-91.79	-92.62	-58.50	0.29	109.55	212.27
7375.00	3.28	185.45	7372.31	-93.20	-94.04	-58.64	0.27	110.83	211.95
7400.00	3.37	186.77	7397.27	-94.64	-95.48	-58.80	0.46	112.14	211.63
7425.00	3.53	183.50	7422.22	-96.14	-96.98	-58.93	1.00	113.48	211.29
7450.00	3.47	185.50	7447.18	-97.66	-98.50	-59.05	0.54	114.85	210.94
7475.00	3.52	183.78	7472.13	-99.18	-100.02	-59.18	0.47	116.22	210.61
7500.00	3.09	183.20	7497.09	-100.61	-101.46	-59.26	1.75	117.50	210.29
7525.00	2.22	179.45	7522.06	-101.77	-102.62	-59.30	3.52	118.52	210.02
7550.00	1.62	175.19	7547.05	-102.61	-103.45	-59.26	2.46	119.23	209.81
7575.00	1.61	168.68	7572.04	-103.31	-104.15	-59.16	0.74	119.78	209.60
7600.00	1.24	173.76	7597.03	-103.92	-104.77	-59.07	1.58	120.27	209.41
7625.00	0.70	184.71	7622.02	-104.34	-105.19	-59.05	2.25	120.63	209.31
7650.00	0.58	171.11	7647.02	-104.62	-105.46	-59.04	0.77	120.87	209.24
7675.00	0.47	182.87	7672.02	-104.85	-105.69	-59.03	0.61	121.06	209.18
7700.00	0.16	187.78	7697.02	-104.98	-105.83	-59.04	1.27	121.18	209.15
7725.00	0.10	102.60	7722.02	-105.02	-105.87	-59.02	0.72	121.21	209.14
7750.00	0.15	13.22	7747.02	-105.00	-105.84	-58.99	0.72	121.17	209.13
7775.00	0.14	11.61	7772.02	-104.93	-105.78	-58.98	0.04	121.11	209.14
7800.00	0.20	16.75	7797.02	-104.86	-105.71	-58.96	0.25	121.04	209.15
7825.00	0.18	26.18	7822.02	-104.79	-105.63	-58.93	0.15	120.96	209.16
7850.00	0.22	40.21	7847.02	-104.72	-105.56	-58.88	0.24	120.87	209.15
7875.00	0.31	40.11	7872.02	-104.63	-105.47	-58.81	0.36	120.76	209.14
7900.00	0.32	33.65	7897.02	-104.52	-105.36	-58.73	0.16	120.62	209.13
7925.00	0.37	31.35	7922.02	-104.40	-105.23	-58.65	0.20	120.47	209.13
7950.00	0.37	38.41	7947.02	-104.26	-105.10	-58.55	0.18	120.31	209.12
7975.00	0.49	44.86	7972.02	-104.13	-104.96	-58.43	0.51	120.13	209.10
8000.00	0.38	40.88	7997.02	-103.99	-104.83	-58.30	0.46	119.95	209.08
8025.00	0.33	26.88	8022.02	-103.87	-104.70	-58.21	0.39	119.79	209.07
8050.00	0.31	60.53	8047.02	-103.77	-104.60	-58.12	0.74	119.66	209.06

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	0.15	59.74	8072.02	-103.72	-104.55	-58.03	0.63	119.58	209.03
8100.00	0.08	223.28	8097.02	-103.72	-104.55	-58.02	0.92	119.57	209.03
8125.00	0.18	216.23	8122.02	-103.76	-104.59	-58.05	0.38	119.63	209.03
8150.00	0.25	217.90	8147.02	-103.84	-104.67	-58.11	0.28	119.72	209.04
8175.00	0.14	236.43	8172.02	-103.89	-104.73	-58.17	0.49	119.80	209.05
8200.00	0.22	222.46	8197.02	-103.95	-104.78	-58.23	0.36	119.87	209.06
8225.00	0.36	227.76	8222.02	-104.03	-104.87	-58.32	0.57	119.99	209.08
8250.00	0.29	230.51	8247.02	-104.12	-104.96	-58.42	0.27	120.13	209.10
8275.00	0.40	239.24	8272.02	-104.21	-105.05	-58.55	0.46	120.26	209.13
8300.00	0.35	223.24	8297.01	-104.30	-105.14	-58.67	0.46	120.41	209.16
8325.00	0.45	234.90	8322.01	-104.41	-105.26	-58.81	0.51	120.57	209.19
8350.00	0.66	239.14	8347.01	-104.54	-105.39	-59.01	0.85	120.78	209.25
8375.00	0.58	222.25	8372.01	-104.71	-105.55	-59.22	0.78	121.03	209.29
8400.00	0.65	230.80	8397.01	-104.89	-105.74	-59.41	0.44	121.28	209.33
8425.00	0.57	211.37	8422.01	-105.08	-105.93	-59.59	0.87	121.54	209.36
8444.44	0.81	226.36	8441.44	-105.26	-106.11	-59.74	1.53	121.77	209.38