



Survey Report

Service Company: Von Energy Services

Location: Kermit

Well: Smalls Federal #2H

Rig: Scan Drill Quest

API or UWI: 300-254-306400

Job Number: 181339

State: Texas

Operating Company: COG

County: Lea

Magnetic Declination: 6.40

Country: USA

Proposed Azimuth: 359.63

Comment

North Reference: GRID

Latitude: 32.3558166666667

Longitude: -103.472413888889

Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00

30-025-43064

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
100.00	0.56	95.21	100.00	-0.04	0.49	95.21	0.49	-0.05	0.56
125.00	0.60	87.19	125.00	-0.05	0.74	93.80	0.74	-0.05	0.36
150.00	0.57	91.41	150.00	-0.05	0.99	92.63	1.00	-0.05	0.21
175.00	0.61	82.76	174.99	-0.03	1.25	91.47	1.25	-0.04	0.39
200.00	0.65	92.83	199.99	-0.02	1.52	90.84	1.52	-0.03	0.47
225.00	0.61	83.30	224.99	-0.01	1.80	90.44	1.80	-0.03	0.45
250.00	0.60	73.68	249.99	0.04	2.06	88.92	2.06	0.03	0.41
275.00	0.60	74.61	274.99	0.11	2.31	87.27	2.31	0.10	0.04
300.00	0.66	61.93	299.99	0.21	2.56	85.25	2.57	0.20	0.61
325.00	0.68	55.71	324.99	0.36	2.81	82.62	2.83	0.35	0.30
350.00	0.74	53.58	349.98	0.54	3.06	79.94	3.11	0.52	0.26
375.00	0.75	50.63	374.98	0.74	3.32	77.38	3.40	0.72	0.16
400.00	0.77	52.78	399.98	0.95	3.58	75.16	3.70	0.93	0.14
425.00	0.78	51.74	424.98	1.16	3.85	73.28	4.02	1.13	0.07
450.00	0.74	42.80	449.97	1.38	4.09	71.37	4.32	1.35	0.50
475.00	0.70	40.53	474.97	1.61	4.30	69.43	4.59	1.59	0.20

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
500.00	0.61	39.83	499.97	1.83	4.48	67.78	4.84	1.80	0.36
525.00	0.63	41.19	524.97	2.04	4.66	66.38	5.09	2.01	0.10
550.00	0.64	36.79	549.97	2.25	4.83	65.01	5.33	2.22	0.20
575.00	0.63	26.71	574.97	2.49	4.98	63.45	5.57	2.46	0.45
600.00	0.67	21.08	599.97	2.75	5.09	61.66	5.79	2.71	0.30
625.00	0.68	17.80	624.96	3.02	5.19	59.78	6.01	2.99	0.16
650.00	0.72	19.39	649.96	3.31	5.29	57.93	6.24	3.28	0.18
675.00	0.74	20.89	674.96	3.61	5.40	56.21	6.50	3.58	0.11
700.00	0.76	17.58	699.96	3.92	5.51	54.54	6.76	3.89	0.19
725.00	0.82	19.47	724.95	4.25	5.62	52.89	7.04	4.21	0.26
750.00	0.91	24.40	749.95	4.60	5.76	51.39	7.37	4.56	0.47
775.00	1.02	27.28	774.95	4.98	5.94	50.05	7.75	4.94	0.48
800.00	1.10	32.13	799.94	5.38	6.17	48.93	8.19	5.34	0.48
825.00	1.23	34.03	824.94	5.80	6.45	48.02	8.68	5.76	0.54
850.00	1.39	33.02	849.93	6.28	6.76	47.13	9.23	6.24	0.65
875.00	1.45	35.81	874.92	6.79	7.11	46.34	9.83	6.74	0.37
900.00	1.51	34.21	899.92	7.32	7.48	45.64	10.47	7.27	0.29
925.00	1.46	38.30	924.91	7.84	7.87	45.09	11.11	7.79	0.47
950.00	1.25	43.98	949.90	8.29	8.25	44.88	11.70	8.23	1.00
975.00	1.07	51.74	974.90	8.63	8.63	44.99	12.20	8.57	0.95
1000.00	0.96	58.14	999.89	8.88	8.99	45.33	12.64	8.83	0.63
1025.00	0.82	74.93	1024.89	9.04	9.34	45.93	13.00	8.98	1.18
1050.00	1.04	55.08	1049.89	9.22	9.70	46.45	13.38	9.15	1.55
1075.00	0.69	83.41	1074.88	9.36	10.03	46.97	13.72	9.30	2.17
1100.00	0.58	79.24	1099.88	9.41	10.31	47.62	13.95	9.34	0.48
1125.00	0.53	75.60	1124.88	9.46	10.54	48.11	14.16	9.39	0.24
1150.00	0.43	84.57	1149.88	9.50	10.75	48.54	14.34	9.43	0.50
1175.00	0.38	80.39	1174.88	9.52	10.92	48.93	14.49	9.45	0.23
1200.00	0.38	80.62	1199.88	9.55	11.09	49.27	14.63	9.47	0.01
1225.00	0.38	78.12	1224.88	9.58	11.25	49.60	14.77	9.50	0.07
1250.00	0.39	77.28	1249.88	9.61	11.41	49.90	14.92	9.54	0.05
1275.00	0.34	82.71	1274.88	9.64	11.57	50.20	15.06	9.56	0.24
1300.00	0.47	71.10	1299.88	9.68	11.74	50.49	15.22	9.61	0.61
1325.00	0.74	61.80	1324.87	9.79	11.98	50.74	15.47	9.71	1.15
1350.00	0.83	62.28	1349.87	9.95	12.28	50.98	15.81	9.87	0.36
1375.00	0.88	60.75	1374.87	10.13	12.61	51.23	16.18	10.05	0.22
1400.00	0.90	57.53	1399.87	10.33	12.94	51.41	16.56	10.25	0.22

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
1425.00	1.08	61.17	1424.86	10.55	13.32	51.61	16.99	10.46	0.76
1450.00	1.19	54.67	1449.86	10.81	13.73	51.79	17.48	10.72	0.68
1475.00	1.15	58.45	1474.85	11.09	14.16	51.92	17.99	11.00	0.35
1500.00	1.12	58.03	1499.85	11.35	14.58	52.09	18.48	11.26	0.12
1525.00	1.26	53.66	1524.84	11.65	15.01	52.19	19.00	11.55	0.67
1550.00	1.25	53.83	1549.84	11.97	15.45	52.23	19.55	11.87	0.04
1575.00	1.23	55.33	1574.83	12.28	15.89	52.30	20.09	12.18	0.15
1600.00	1.13	56.56	1599.83	12.57	16.32	52.39	20.60	12.47	0.41
1625.00	1.10	59.71	1624.82	12.83	16.73	52.52	21.08	12.72	0.27
1650.00	1.03	54.03	1649.82	13.08	17.12	52.62	21.55	12.97	0.51
1675.00	0.96	53.64	1674.81	13.34	17.47	52.64	21.98	13.23	0.28
1700.00	0.74	58.79	1699.81	13.55	17.78	52.69	22.35	13.43	0.93
1725.00	0.68	57.54	1724.81	13.71	18.04	52.77	22.66	13.59	0.25
1750.00	0.67	54.81	1749.81	13.87	18.29	52.81	22.95	13.75	0.13
1775.00	0.61	54.43	1774.80	14.04	18.51	52.83	23.23	13.92	0.24
1800.00	0.65	49.76	1799.80	14.20	18.73	52.82	23.51	14.08	0.26
1825.00	0.61	52.46	1824.80	14.38	18.94	52.80	23.78	14.25	0.20
1850.00	0.65	44.96	1849.80	14.56	19.15	52.76	24.05	14.43	0.37
1875.00	0.66	41.17	1874.80	14.77	19.34	52.64	24.34	14.64	0.18
1900.00	0.73	44.05	1899.80	14.99	19.55	52.52	24.63	14.86	0.31
1925.00	0.80	41.60	1924.79	15.23	19.78	52.39	24.96	15.11	0.31
1950.00	0.76	44.63	1949.79	15.48	20.01	52.27	25.30	15.35	0.23
1975.00	0.84	43.25	1974.79	15.73	20.25	52.15	25.65	15.60	0.33
2000.00	0.94	43.95	1999.79	16.02	20.52	52.03	26.03	15.88	0.40
2025.00	0.91	47.87	2024.78	16.30	20.81	51.93	26.43	16.16	0.28
2050.00	0.95	46.53	2049.78	16.57	21.11	51.86	26.83	16.44	0.18
2075.00	1.02	40.31	2074.78	16.88	21.40	51.73	27.26	16.75	0.51
2100.00	1.25	30.60	2099.77	17.29	21.68	51.43	27.73	17.15	1.20
2125.00	1.44	21.27	2124.76	17.82	21.94	50.92	28.26	17.67	1.16
2150.00	1.45	19.72	2149.76	18.41	22.16	50.28	28.80	18.26	0.16
2175.00	1.52	20.68	2174.75	19.01	22.38	49.65	29.37	18.87	0.30
2200.00	1.46	21.20	2199.74	19.62	22.61	49.05	29.94	19.48	0.25
2225.00	1.40	21.77	2224.73	20.20	22.84	48.51	30.49	20.05	0.25
2250.00	1.28	21.94	2249.73	20.75	23.06	48.02	31.02	20.60	0.48
2275.00	1.11	19.19	2274.72	21.23	23.24	47.59	31.48	21.08	0.72
2300.00	1.04	20.78	2299.72	21.67	23.40	47.20	31.90	21.52	0.30
2325.00	1.11	19.79	2324.71	22.11	23.56	46.82	32.32	21.96	0.29

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
2350.00	1.01	23.13	2349.71	22.54	23.73	46.47	32.73	22.39	0.47
2375.00	1.07	22.67	2374.70	22.96	23.91	46.16	33.15	22.81	0.24
2400.00	1.25	24.03	2399.70	23.43	24.11	45.82	33.62	23.27	0.73
2425.00	1.22	27.62	2424.69	23.91	24.35	45.52	34.12	23.75	0.33
2450.00	1.32	27.52	2449.69	24.40	24.60	45.23	34.65	24.24	0.40
2475.00	1.43	27.30	2474.68	24.94	24.88	44.93	35.22	24.77	0.44
2500.00	1.34	24.39	2499.67	25.48	25.14	44.62	35.79	25.32	0.46
2525.00	1.38	23.70	2524.66	26.02	25.38	44.29	36.35	25.86	0.17
2550.00	1.33	21.05	2549.66	26.57	25.61	43.95	36.90	26.40	0.32
2575.00	1.41	20.11	2574.65	27.13	25.82	43.58	37.45	26.96	0.33
2600.00	1.42	19.90	2599.64	27.71	26.03	43.21	38.02	27.54	0.05
2625.00	1.42	21.46	2624.63	28.29	26.25	42.86	38.59	28.12	0.15
2650.00	1.36	19.28	2649.63	28.85	26.46	42.52	39.15	28.68	0.32
2675.00	1.43	19.62	2674.62	29.43	26.66	42.18	39.71	29.26	0.28
2700.00	1.42	19.23	2699.61	30.01	26.87	41.83	40.28	29.84	0.06
2725.00	1.38	20.91	2724.60	30.59	27.08	41.52	40.85	30.41	0.23
2750.00	1.22	21.37	2749.60	31.12	27.28	41.24	41.38	30.94	0.64
2775.00	1.05	22.04	2774.59	31.58	27.47	41.02	41.85	31.40	0.68
2800.00	0.88	26.47	2799.59	31.96	27.64	40.85	42.25	31.78	0.74
2825.00	0.57	30.32	2824.59	32.24	27.79	40.76	42.56	32.06	1.25
2850.00	0.37	57.53	2849.59	32.39	27.92	40.76	42.76	32.21	1.18
2875.00	0.32	77.11	2874.59	32.45	28.05	40.84	42.90	32.27	0.51
2900.00	0.38	88.79	2899.59	32.47	28.20	40.98	43.01	32.29	0.37
2925.00	0.49	83.82	2924.58	32.48	28.39	41.16	43.14	32.30	0.46
2950.00	0.60	76.51	2949.58	32.52	28.63	41.35	43.33	32.34	0.52
2975.00	0.63	71.15	2974.58	32.60	28.88	41.54	43.55	32.41	0.26
3000.00	0.78	67.47	2999.58	32.71	29.17	41.73	43.83	32.52	0.63
3025.00	0.94	59.23	3024.58	32.88	29.50	41.90	44.18	32.69	0.81
3050.00	0.88	62.66	3049.57	33.07	29.85	42.07	44.55	32.88	0.32
3075.00	0.78	67.45	3074.57	33.22	30.18	42.25	44.88	33.03	0.49
3100.00	0.86	66.03	3099.57	33.37	30.51	42.44	45.21	33.17	0.33
3125.00	0.73	93.92	3124.57	33.43	30.84	42.69	45.48	33.23	1.61
3150.00	0.72	110.42	3149.57	33.37	31.14	43.03	45.64	33.16	0.83
3175.00	0.80	114.19	3174.56	33.24	31.45	43.42	45.76	33.04	0.38
3200.00	0.79	113.84	3199.56	33.10	31.77	43.82	45.88	32.89	0.04
3225.00	0.81	120.65	3224.56	32.94	32.08	44.24	45.98	32.73	0.39
3250.00	0.86	117.91	3249.56	32.76	32.39	44.68	46.07	32.55	0.26

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
3275.00	0.79	114.17	3274.55	32.60	32.72	45.10	46.19	32.39	0.35
3300.00	0.88	120.56	3299.55	32.43	33.04	45.53	46.30	32.22	0.52
3325.00	0.89	117.45	3324.55	32.25	33.38	45.99	46.41	32.03	0.20
3350.00	0.86	113.93	3349.54	32.08	33.72	46.43	46.54	31.86	0.25
3375.00	0.86	115.69	3374.54	31.92	34.06	46.86	46.68	31.70	0.11
3400.00	0.92	114.41	3399.54	31.76	34.41	47.30	46.83	31.54	0.25
3425.00	0.91	113.62	3424.54	31.60	34.78	47.74	46.99	31.37	0.06
3450.00	0.88	112.06	3449.53	31.45	35.14	48.17	47.15	31.22	0.15
3475.00	0.78	112.30	3474.53	31.31	35.47	48.57	47.31	31.08	0.40
3500.00	0.76	102.83	3499.53	31.21	35.79	48.92	47.49	30.98	0.51
3525.00	0.64	99.60	3524.53	31.15	36.09	49.21	47.67	30.91	0.51
3550.00	0.57	89.65	3549.52	31.12	36.35	49.43	47.86	30.89	0.50
3575.00	0.63	89.51	3574.52	31.13	36.62	49.63	48.06	30.89	0.24
3600.00	0.55	94.67	3599.52	31.12	36.87	49.84	48.25	30.88	0.38
3625.00	0.50	90.91	3624.52	31.11	37.10	50.02	48.42	30.87	0.24
3650.00	0.46	91.38	3649.52	31.10	37.31	50.19	48.57	30.86	0.16
3675.00	0.25	83.35	3674.52	31.11	37.47	50.30	48.70	30.86	0.86
3700.00	0.37	81.50	3699.52	31.12	37.60	50.38	48.81	30.88	0.48
3725.00	0.30	86.59	3724.52	31.14	37.75	50.48	48.93	30.90	0.30
3750.00	0.31	92.78	3749.52	31.14	37.88	50.58	49.04	30.90	0.14
3775.00	0.24	78.91	3774.52	31.15	38.00	50.66	49.13	30.90	0.38
3800.00	0.13	82.12	3799.52	31.16	38.08	50.70	49.20	30.92	0.44
3825.00	0.16	78.80	3824.52	31.17	38.14	50.74	49.26	30.93	0.12
3850.00	0.21	62.28	3849.52	31.20	38.21	50.77	49.33	30.95	0.29
3875.00	0.19	59.59	3874.52	31.24	38.29	50.79	49.42	30.99	0.09
3900.00	0.11	22.72	3899.52	31.29	38.33	50.78	49.48	31.04	0.49
3925.00	0.07	352.21	3924.52	31.32	38.34	50.75	49.51	31.07	0.24
3950.00	0.15	5.11	3949.52	31.37	38.34	50.71	49.54	31.12	0.33
3975.00	0.18	20.30	3974.52	31.44	38.36	50.66	49.60	31.19	0.21
4000.00	0.18	28.27	3999.52	31.51	38.39	50.62	49.67	31.26	0.10
4025.00	0.42	55.63	4024.52	31.60	38.49	50.61	49.80	31.35	1.09
4050.00	0.75	65.83	4049.51	31.72	38.71	50.67	50.04	31.47	1.38
4075.00	0.87	70.99	4074.51	31.85	39.04	50.79	50.38	31.59	0.56
4100.00	1.03	80.85	4099.51	31.94	39.44	51.00	50.75	31.69	0.91
4125.00	1.11	87.44	4124.50	31.99	39.90	51.28	51.14	31.73	0.59
4150.00	1.24	98.18	4149.50	31.96	40.41	51.66	51.53	31.70	1.02
4175.00	1.39	97.25	4174.49	31.89	40.98	52.12	51.93	31.62	0.61

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4200.00	1.41	102.47	4199.49	31.78	41.58	52.61	52.34	31.51	0.52
4225.00	1.52	105.64	4224.48	31.62	42.20	53.15	52.74	31.35	0.55
4250.00	1.46	112.58	4249.47	31.41	42.82	53.73	53.10	31.14	0.76
4275.00	1.20	124.88	4274.46	31.14	43.33	54.29	53.36	30.86	1.54
4300.00	0.77	140.07	4299.46	30.86	43.65	54.74	53.46	30.58	2.00
4325.00	0.48	166.79	4324.46	30.63	43.78	55.02	53.43	30.35	1.62
4350.00	0.43	193.32	4349.46	30.44	43.78	55.19	53.32	30.16	0.86
4375.00	0.54	202.18	4374.46	30.24	43.72	55.33	53.15	29.96	0.53
4400.00	0.67	218.95	4399.45	30.02	43.58	55.44	52.92	29.73	0.87
4425.00	0.64	223.97	4424.45	29.80	43.39	55.52	52.64	29.52	0.26
4450.00	0.69	217.92	4449.45	29.58	43.20	55.60	52.36	29.30	0.34
4475.00	0.57	218.53	4474.45	29.37	43.03	55.69	52.10	29.09	0.48
4500.00	0.49	225.27	4499.45	29.19	42.88	55.75	51.87	28.92	0.41
4525.00	0.33	250.01	4524.45	29.09	42.73	55.75	51.70	28.82	0.94
4550.00	0.31	285.99	4549.45	29.09	42.60	55.68	51.59	28.81	0.79
4575.00	0.61	298.57	4574.45	29.17	42.42	55.49	51.48	28.90	1.26
4600.00	0.48	280.69	4599.44	29.25	42.20	55.27	51.35	28.98	0.85
4625.00	0.62	281.34	4624.44	29.30	41.96	55.08	51.18	29.03	0.56
4650.00	0.66	295.58	4649.44	29.39	41.70	54.83	51.02	29.12	0.65
4675.00	0.63	279.78	4674.44	29.47	41.44	54.58	50.85	29.21	0.72
4700.00	0.63	309.45	4699.44	29.58	41.20	54.32	50.72	29.32	1.29
4725.00	0.77	308.02	4724.44	29.77	40.96	53.98	50.64	29.51	0.56
4750.00	0.77	307.67	4749.44	29.98	40.69	53.62	50.54	29.72	0.02
4775.00	0.80	299.53	4774.43	30.17	40.41	53.25	50.43	29.91	0.46
4800.00	0.63	304.37	4799.43	30.33	40.14	52.92	50.31	30.07	0.72
4825.00	0.56	307.63	4824.43	30.49	39.93	52.64	50.24	30.23	0.31
4850.00	0.46	303.96	4849.43	30.62	39.75	52.40	50.17	30.36	0.42
4875.00	0.39	308.95	4874.43	30.73	39.60	52.19	50.12	30.47	0.32
4900.00	0.43	289.28	4899.43	30.81	39.45	52.01	50.05	30.55	0.58
4925.00	0.38	282.88	4924.43	30.86	39.28	51.84	49.95	30.61	0.27
4950.00	0.41	282.03	4949.43	30.90	39.11	51.69	49.84	30.64	0.12
4975.00	0.48	265.86	4974.43	30.91	38.92	51.54	49.70	30.66	0.57
5000.00	0.44	296.78	4999.42	30.94	38.73	51.38	49.57	30.69	0.99
5025.00	0.42	277.70	5024.42	31.00	38.55	51.20	49.47	30.75	0.58
5050.00	0.33	269.62	5049.42	31.01	38.39	51.07	49.35	30.76	0.42
5075.00	0.44	287.92	5074.42	31.04	38.22	50.92	49.24	30.79	0.65
5100.00	0.59	268.33	5099.42	31.07	38.00	50.74	49.09	30.82	0.92

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
5125.00	0.51	282.19	5124.42	31.09	37.77	50.54	48.91	30.84	0.62
5150.00	0.49	302.57	5149.42	31.17	37.57	50.32	48.81	30.92	0.71
5290.00	0.81	322.66	5289.41	32.28	36.46	48.49	48.70	32.04	0.28
5385.00	0.73	307.87	5384.40	33.18	35.58	47.00	48.65	32.95	0.22
5480.00	0.69	284.04	5479.39	33.69	34.55	45.72	48.25	33.47	0.31
5575.00	0.75	251.57	5574.39	33.63	33.40	44.80	47.40	33.42	0.43
5669.00	0.83	247.32	5668.38	33.18	32.19	44.14	46.23	32.97	0.11
5764.00	0.83	253.26	5763.37	32.71	30.90	43.36	45.00	32.51	0.09
5858.00	0.84	249.84	5857.36	32.28	29.60	42.52	43.79	32.09	0.05
5953.00	0.95	257.34	5952.35	31.87	28.17	41.48	42.54	31.68	0.17
6047.00	0.97	255.41	6046.33	31.50	26.64	40.23	41.25	31.32	0.04
6142.00	0.85	250.57	6141.32	31.06	25.20	39.06	40.00	30.89	0.15
6236.00	0.87	251.60	6235.31	30.60	23.87	37.95	38.81	30.45	0.03
6331.00	0.93	254.54	6330.30	30.17	22.44	36.64	37.60	30.02	0.08
6425.00	0.91	248.08	6424.29	29.69	21.01	35.29	36.37	29.55	0.11
6519.00	0.95	253.34	6518.28	29.18	19.57	33.85	35.14	29.06	0.10
6614.00	1.03	252.29	6613.26	28.70	18.01	32.10	33.88	28.58	0.09
6709.00	1.11	254.48	6708.24	28.19	16.31	30.04	32.57	28.09	0.09
6803.00	1.24	249.95	6802.22	27.60	14.47	27.67	31.16	27.51	0.17
6898.00	1.19	243.50	6897.20	26.81	12.62	25.22	29.63	26.73	0.15
6992.00	1.17	245.56	6991.18	25.97	10.88	22.72	28.16	25.90	0.05
7087.00	1.27	248.80	7086.16	25.19	9.01	19.68	26.76	25.13	0.13
7181.00	1.33	244.09	7180.14	24.34	7.06	16.17	25.34	24.29	0.13
7275.00	1.53	233.79	7274.11	23.12	5.07	12.36	23.67	23.09	0.35
7370.00	1.73	223.13	7369.07	21.33	3.06	8.17	21.54	21.31	0.38
7464.00	2.13	228.47	7463.02	19.13	0.78	2.35	19.15	19.13	0.47
7560.00	2.02	202.36	7558.96	16.38	-1.19	355.83	16.43	16.39	0.98
7654.00	2.05	192.47	7652.90	13.21	-2.19	350.60	13.39	13.22	0.37
7749.00	1.84	194.84	7747.84	10.08	-2.95	343.71	10.50	10.10	0.24
7844.00	1.74	197.89	7842.80	7.23	-3.78	332.40	8.16	7.25	0.15
7939.00	1.60	200.34	7937.76	4.61	-4.68	314.57	6.57	4.64	0.17
8034.00	1.71	202.68	8032.72	2.06	-5.69	289.93	6.05	2.10	0.14
8129.00	0.93	96.96	8127.70	0.66	-5.47	276.89	5.51	0.70	2.27
8223.00	1.11	84.21	8221.69	0.66	-3.81	279.84	3.87	0.69	0.31
8318.00	0.88	80.79	8316.67	0.87	-2.17	291.83	2.34	0.88	0.25
8413.00	0.66	73.29	8411.66	1.14	-0.93	320.93	1.47	1.15	0.25
8508.00	0.55	79.37	8506.66	1.39	0.04	1.77	1.39	1.39	0.13

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
8603.00	0.14	288.97	8601.66	1.51	0.38	14.19	1.56	1.51	0.71
8697.00	0.86	249.25	8695.65	1.30	-0.39	343.36	1.35	1.30	0.81
8791.00	0.86	233.99	8789.64	0.63	-1.62	291.30	1.74	0.64	0.24
8886.00	0.97	229.17	8884.63	-0.31	-2.80	263.60	2.82	-0.30	0.14
8980.00	0.59	215.28	8978.62	-1.23	-3.68	251.54	3.88	-1.21	0.45
9074.00	1.24	142.36	9072.61	-2.43	-3.34	233.98	4.13	-2.41	1.28
9168.00	1.50	150.17	9166.58	-4.30	-2.11	206.11	4.79	-4.29	0.34
9263.00	1.12	150.71	9261.56	-6.19	-1.04	189.50	6.28	-6.18	0.40
9357.00	1.36	172.22	9355.54	-8.10	-0.44	183.08	8.11	-8.09	0.55
9451.00	1.71	182.70	9449.50	-10.60	-0.35	181.90	10.61	-10.60	0.48
9546.00	1.73	194.11	9544.46	-13.41	-0.77	183.28	13.43	-13.41	0.36
9640.00	1.80	201.38	9638.42	-16.16	-1.65	185.84	16.25	-16.15	0.25
9734.00	0.50	160.22	9732.40	-17.92	-2.05	186.53	18.04	-17.91	1.55
9828.00	0.40	191.71	9826.39	-18.63	-1.98	186.06	18.73	-18.62	0.28
9922.00	0.70	209.85	9920.39	-19.45	-2.33	186.84	19.59	-19.43	0.37
10017.00	0.45	200.85	10015.38	-20.30	-2.75	187.72	20.49	-20.28	0.28
10111.00	0.66	191.31	10109.38	-21.18	-2.99	188.04	21.39	-21.16	0.24
10205.00	0.56	182.70	10203.37	-22.17	-3.12	188.01	22.38	-22.15	0.14
10299.00	0.73	195.11	10297.37	-23.20	-3.30	188.08	23.44	-23.18	0.23
10394.00	0.87	199.66	10392.36	-24.47	-3.70	188.59	24.74	-24.44	0.16
10488.00	1.17	221.97	10486.34	-25.85	-4.58	190.04	26.25	-25.82	0.52
10538.00	0.66	252.69	10536.34	-26.32	-5.19	191.17	26.83	-26.28	1.38
10581.00	5.77	1.55	10579.27	-24.23	-5.37	192.50	24.82	-24.19	13.99
10613.00	8.83	1.18	10611.00	-20.16	-5.28	194.67	20.84	-20.13	9.56
10644.00	10.51	8.75	10641.56	-14.99	-4.80	197.75	15.74	-14.96	6.79
10676.00	12.98	8.17	10672.89	-8.55	-3.84	204.22	9.37	-8.52	7.73
10707.00	13.98	2.38	10703.04	-1.36	-3.19	246.95	3.47	-1.34	5.41
10738.00	13.82	0.96	10733.13	6.08	-2.98	333.93	6.77	6.10	1.22
10770.00	13.64	358.90	10764.22	13.68	-2.99	347.69	14.00	13.70	1.63
10801.00	17.40	354.80	10794.08	21.95	-3.48	351.00	22.23	21.97	12.63
10833.00	19.96	354.77	10824.39	32.16	-4.41	352.20	32.46	32.19	8.00
10864.00	22.06	353.97	10853.33	43.22	-5.50	352.75	43.57	43.25	6.84
10895.00	24.74	352.59	10881.78	55.44	-6.95	352.86	55.88	55.48	8.82
10927.00	25.42	353.57	10910.76	68.91	-8.58	352.90	69.44	68.96	2.49
10958.00	27.16	353.42	10938.55	82.55	-10.14	353.00	83.17	82.61	5.62
10990.00	29.10	356.76	10966.77	97.57	-11.42	353.33	98.24	97.65	7.81
11021.00	29.89	357.24	10993.76	112.82	-12.21	353.82	113.48	112.89	2.66

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
11053.00	30.58	358.81	11021.40	128.92	-12.77	354.34	129.55	129.00	3.28
11084.00	32.71	356.21	11047.79	145.16	-13.48	354.69	145.79	145.25	8.16
11125.00	35.87	351.78	11081.67	168.11	-15.93	354.59	168.87	168.21	9.82
11157.00	38.41	352.14	11107.18	187.24	-18.63	354.32	188.17	187.36	7.97
11188.00	42.09	353.03	11130.83	207.10	-21.21	354.15	208.19	207.24	12.01
11219.00	46.72	353.04	11152.97	228.63	-23.84	354.05	229.87	228.78	14.94
11251.00	51.29	352.12	11173.96	252.57	-26.97	353.91	254.01	252.74	14.44
11282.00	55.46	355.18	11192.45	277.29	-29.70	353.89	278.88	277.48	15.61
11314.00	59.67	353.78	11209.61	304.16	-32.31	353.94	305.88	304.37	13.66
11345.00	62.36	354.62	11224.63	331.14	-35.04	353.96	332.99	331.36	9.00
11376.00	66.71	352.79	11237.96	358.95	-38.12	353.94	360.97	359.19	15.01
11408.00	72.73	353.68	11249.05	388.74	-41.65	353.88	390.97	389.01	18.99
11439.00	79.53	354.96	11256.47	418.67	-44.62	353.92	421.05	418.95	22.30
11485.00	89.30	356.20	11260.95	464.26	-48.14	354.08	466.75	464.57	21.41
11517.00	91.21	356.27	11260.80	496.19	-50.24	354.22	498.73	496.51	5.97
11548.00	91.24	356.38	11260.14	527.12	-52.23	354.34	529.70	527.45	0.37
11642.00	90.00	359.27	11259.12	621.04	-55.79	354.87	623.54	621.39	3.35
11736.00	90.65	359.54	11258.59	715.03	-56.77	355.46	717.28	715.38	0.75
11831.00	90.63	359.74	11257.53	810.02	-57.37	355.95	812.05	810.38	0.21
11925.00	89.66	359.68	11257.29	904.02	-57.84	356.34	905.87	904.37	1.03
12019.00	88.76	359.42	11258.59	998.01	-58.58	356.64	999.72	998.36	1.00
12113.00	88.47	1.01	11260.86	1091.98	-58.23	356.95	1093.53	1092.33	1.72
12208.00	89.86	0.19	11262.25	1186.96	-57.23	357.24	1188.34	1187.30	1.70
12302.00	88.91	359.64	11263.26	1280.95	-57.37	357.44	1282.23	1281.29	1.17
12397.00	88.79	0.85	11265.16	1375.93	-56.97	357.63	1377.11	1376.27	1.28
12491.00	91.32	1.29	11265.07	1469.90	-55.21	357.85	1470.94	1470.23	2.73
12586.00	90.54	0.65	11263.54	1564.88	-53.60	358.04	1565.79	1565.19	1.07
12680.00	91.85	1.59	11261.58	1658.84	-51.77	358.21	1659.64	1659.14	1.72
12774.00	90.47	0.71	11259.68	1752.79	-49.88	358.37	1753.50	1753.08	1.74
12868.00	92.21	2.21	11257.48	1846.73	-47.49	358.53	1847.34	1847.00	2.44
12962.00	91.68	1.59	11254.30	1940.63	-44.37	358.69	1941.13	1940.87	0.87
13057.00	91.38	1.38	11251.76	2035.56	-41.91	358.82	2035.99	2035.79	0.39
13151.00	90.81	1.18	11249.96	2129.52	-39.81	358.93	2129.89	2129.73	0.64
13245.00	91.12	1.35	11248.38	2223.48	-37.74	359.03	2223.80	2223.68	0.38
13339.00	90.54	0.54	11247.02	2317.46	-36.19	359.11	2317.74	2317.64	1.06
13434.00	90.24	359.96	11246.37	2412.45	-35.77	359.15	2412.72	2412.64	0.69
13528.00	89.67	359.19	11246.45	2506.45	-36.47	359.17	2506.72	2506.63	1.02

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
13622.00	88.17	357.97	11248.22	2600.40	-38.80	359.15	2600.69	2600.60	2.06
13716.00	89.56	357.59	11250.08	2694.31	-42.44	359.10	2694.64	2694.53	1.53
13810.00	89.15	356.74	11251.14	2788.19	-47.09	359.03	2788.58	2788.43	1.01
13904.00	89.53	358.84	11252.22	2882.11	-50.71	358.99	2882.55	2882.37	2.27
13999.00	90.49	359.42	11252.20	2977.09	-52.15	359.00	2977.55	2977.37	1.18
14093.00	90.31	359.08	11251.55	3071.08	-53.38	359.00	3071.55	3071.36	0.41
14187.00	90.73	358.91	11250.70	3165.06	-55.03	359.00	3165.54	3165.35	0.48
14282.00	90.07	358.52	11250.03	3260.04	-57.16	359.00	3260.54	3260.34	0.81
14376.00	90.01	358.11	11249.96	3354.00	-59.93	358.98	3354.53	3354.31	0.44
14471.00	90.05	357.53	11249.92	3448.93	-63.54	358.94	3449.51	3449.27	0.61
14565.00	89.72	359.22	11250.11	3542.89	-66.21	358.93	3543.50	3543.24	1.83
14659.00	89.68	359.09	11250.61	3636.87	-67.59	358.94	3637.50	3637.23	0.14
14753.00	90.56	0.09	11250.41	3730.87	-68.27	358.95	3731.49	3731.23	1.42
14848.00	90.74	359.79	11249.33	3825.86	-68.36	358.98	3826.47	3826.22	0.37
14942.00	90.59	359.53	11248.24	3919.85	-68.92	358.99	3920.46	3920.22	0.32
15036.00	88.74	358.39	11248.79	4013.83	-70.63	358.99	4014.45	4014.20	2.31
15130.00	89.87	358.66	11249.93	4107.79	-73.05	358.98	4108.44	4108.18	1.24
15225.00	90.56	359.32	11249.57	4202.78	-74.72	358.98	4203.44	4203.17	1.00
15319.00	90.09	359.70	11249.04	4296.77	-75.53	358.99	4297.43	4297.17	0.64
15414.00	89.33	1.31	11249.52	4391.76	-74.69	359.03	4392.40	4392.15	1.87
15508.00	89.90	1.40	11250.15	4485.73	-72.47	359.07	4486.32	4486.11	0.61
15603.00	88.60	0.70	11251.40	4580.71	-70.73	359.12	4581.25	4581.07	1.55
15697.00	89.17	0.13	11253.23	4674.69	-70.04	359.14	4675.21	4675.04	0.86
15778.00	89.17	0.13	11254.40	4755.68	-69.86	359.16	4756.19	4756.03	0.00