



Survey

MD	Inclination	Azimuth	Tie-In	TVD	NS	EW	HD	VS@77.7°	DL	BR	TR	TFO	Comments
0.0	0.00	77.68	1	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	77.68	0	100.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	77.68	0	200.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	77.68	0	300.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	77.68	0	400.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
500.0	0.00	77.68	0	500.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	77.68	0	600.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	0.00	77.68	0	700.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	77.68	0	800.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	77.68	0	900.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	77.68	0	1,000.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	77.68	0	1,100.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	77.68	0	1,200.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	77.68	0	1,300.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,400.0	0.00	77.68	0	1,400.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	77.68	0	1,500.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	0.00	77.68	0	1,600.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	77.68	0	1,700.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	0.00	77.68	0	1,800.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,900.0	0.00	77.68	0	1,900.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	77.68	0	2,000.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,100.0	0.00	77.68	0	2,100.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.0	0.00	77.68	0	2,200.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,300.0	0.00	77.68	0	2,300.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,400.0	0.00	77.68	0	2,400.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,500.0	0.00	77.68	0	2,500.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,600.0	0.00	77.68	0	2,600.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,700.0	0.00	77.68	0	2,700.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,800.0	0.00	77.68	0	2,800.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,900.0	0.00	77.68	0	2,900.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,918.5	0.00	77.68	0	2,918.5	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	KOP
3,000.0	5.30	77.68	0	2,999.9	0.8	3.7	3.8	3.8	6.50	6.50	0.00	0.00	
3,100.0	11.80	77.68	0	3,098.7	4.0	18.2	18.6	18.6	6.50	6.50	0.00	0.00	
3,200.0	18.30	77.68	0	3,195.2	9.5	43.6	44.6	44.6	6.50	6.50	0.00	0.00	
3,300.0	24.80	77.68	0	3,288.2	17.3	79.4	81.3	81.3	6.50	6.50	0.00	0.00	
3,400.0	31.30	77.68	0	3,376.4	27.4	125.3	128.3	128.3	6.50	6.50	0.00	0.00	
3,500.0	37.80	77.68	0	3,458.7	39.5	180.7	185.0	185.0	6.50	6.50	0.00	0.00	
3,600.0	44.30	77.68	0	3,534.1	53.5	244.8	250.6	250.6	6.50	6.50	0.00	0.00	
3,700.0	50.80	77.68	0	3,601.6	69.2	316.9	324.4	324.4	6.50	6.50	0.00	0.00	
3,800.0	57.30	77.68	0	3,660.2	86.5	395.9	405.3	405.3	6.50	6.50	0.00	0.00	
3,900.0	63.80	77.68	0	3,709.4	105.0	481.0	492.3	492.3	6.50	6.50	0.00	0.00	
4,000.0	70.30	77.68	0	3,748.3	124.7	570.9	584.3	584.3	6.50	6.50	0.00	0.00	
4,100.0	76.80	77.68	0	3,776.6	145.1	664.5	680.2	680.2	6.50	6.50	0.00	0.00	
4,200.0	83.30	77.68	0	3,793.9	166.1	760.7	778.6	778.6	6.50	6.50	0.00	0.00	
4,300.0	89.80	77.68	0	3,799.9	187.4	858.2	878.4	878.4	6.50	6.50	0.00	0.00	
4,303.1	90.00	77.68	0	3,799.9	188.1	861.2	881.5	881.5	6.45	6.45	0.00	0.00	EOB
4,400.0	90.00	77.68	0	3,799.9	208.8	955.9	978.4	978.4	0.00	0.00	0.00	0.00	
4,500.0	90.00	77.68	0	3,799.9	230.1	1,053.6	1,078.4	1,078.4	0.00	0.00	0.00	0.00	
4,600.0	90.00	77.68	0	3,799.9	251.4	1,151.3	1,178.4	1,178.4	0.00	0.00	0.00	0.00	
4,700.0	90.00	77.68	0	3,799.9	272.8	1,249.0	1,278.4	1,278.4	0.00	0.00	0.00	0.00	
4,800.0	90.00	77.68	0	3,799.9	294.1	1,346.7	1,378.4	1,378.4	0.00	0.00	0.00	0.00	
4,900.0	90.00	77.68	0	3,799.9	315.4	1,444.3	1,478.4	1,478.4	0.00	0.00	0.00	0.00	
5,000.0	90.00	77.68	0	3,799.9	336.8	1,542.0	1,578.4	1,578.4	0.00	0.00	0.00	0.00	
5,100.0	90.00	77.68	0	3,799.9	358.1	1,639.7	1,678.4	1,678.4	0.00	0.00	0.00	0.00	
5,200.0	90.00	77.68	0	3,799.9	379.5	1,737.4	1,778.4	1,778.4	0.00	0.00	0.00	0.00	



Survey (Continued)

MD	Inclination	Azimuth	Tie-In	TVD	NS	EW	HD	VS@77.7°	DL	BR	TR	TFO	Comments
5,300.0	90.00	77.68	0	3,799.9	400.8	1,835.1	1,878.4	1,878.4	0.00	0.00	0.00	0.00	
5,400.0	90.00	77.68	0	3,799.9	422.1	1,932.8	1,978.4	1,978.4	0.00	0.00	0.00	0.00	
5,500.0	90.00	77.68	0	3,799.9	443.5	2,030.5	2,078.4	2,078.4	0.00	0.00	0.00	0.00	
5,600.0	90.00	77.68	0	3,799.9	464.8	2,128.2	2,178.4	2,178.4	0.00	0.00	0.00	0.00	
5,700.0	90.00	77.68	0	3,799.9	486.1	2,225.9	2,278.4	2,278.4	0.00	0.00	0.00	0.00	
5,800.0	90.00	77.68	0	3,799.9	507.5	2,323.6	2,378.4	2,378.4	0.00	0.00	0.00	0.00	
5,857.8	90.00	77.68	0	3,799.9	519.8	2,380.1	2,436.2	2,436.2	0.00	0.00	0.00	0.00	