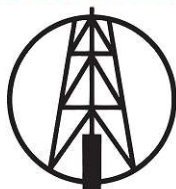


Date 11/5/2018
Time 3:05:22 PM

Stockholm Precision Tools AB



SPT™

Evolution in downhole
navigation systems

Report

Operator : Nathan
Crew : Rich

Well Info

Field : Wattenberg
Location : Bonanza Creek
Well Number : Wetco Farms 24-4
Units in : Imp. US
Latitude : 40.33509 N
Longitude : 104.44487 W
Start Depth : 0
Bottom Depth : 6900

Start coordinates

Coordinate System : Geographical
N/S : 0.000
E/W : 0.000
Altitude : 0.000

Tool Settings

Incline from : Vertical
Depth Input : Depth Sensor

Tool Info

Tool Type And Number : 1213
Tool Firmware : 1.063
Last Calibration Date : 8/3/2018 9:35:22 AM
SU Factory Number : 1436
SU Firmware : 1.020
Software Version : 1.491

Survey Time

Started : 11/5/2018 12:48:24 PM

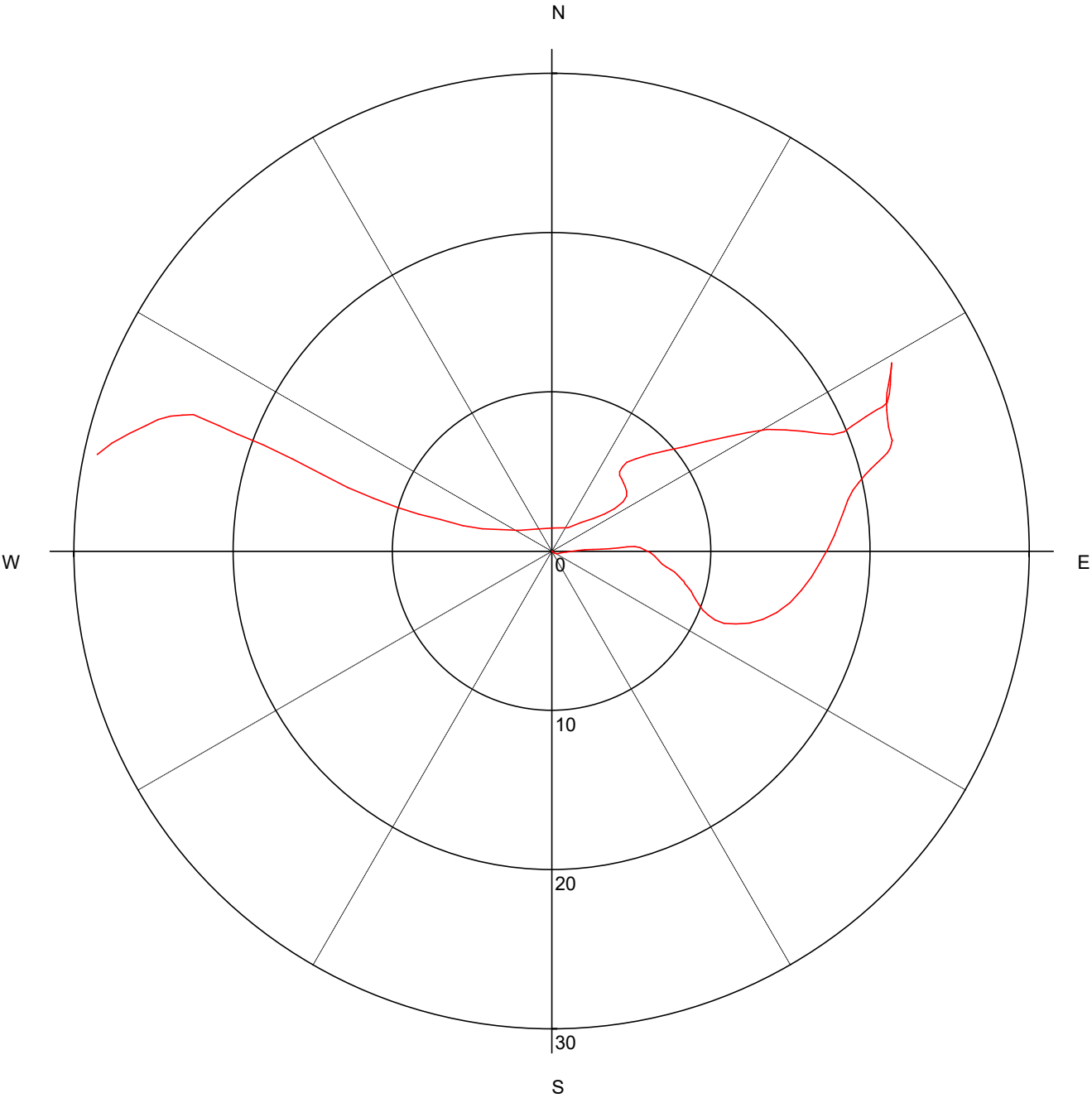
Md	Inc	Azim	TVD	N-S	E-W	Cls.Dis	Cls.Dir	DogLeg /100usft	Temp
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50.000	0.152	129.758	50.000	-0.103	0.150	0.182	124.566	0.304	67.560
100.000	0.153	73.801	99.999	-0.158	0.319	0.356	116.378	0.189	67.430
150.000	0.178	318.209	149.999	-0.133	0.464	0.482	105.975	0.355	67.270
200.000	0.230	81.011	199.999	-0.098	0.625	0.632	98.950	0.145	67.160
250.000	0.047	63.646	249.998	-0.054	0.913	0.915	93.364	0.362	67.080
300.000	0.377	74.352	299.996	-0.012	1.268	1.268	90.534	0.193	67.010
350.000	0.444	79.244	349.995	0.036	1.632	1.633	88.743	0.111	66.970
400.000	0.504	95.721	399.993	0.086	2.094	2.096	87.644	0.152	66.940
450.000	0.560	82.255	449.990	0.110	2.599	2.601	87.575	0.274	66.930
500.000	0.590	85.273	499.987	0.126	3.128	3.130	87.692	0.092	66.940
550.000	0.673	85.304	549.984	0.158	3.671	3.675	87.541	0.091	66.970
600.000	0.396	69.852	599.981	0.211	4.216	4.221	87.135	0.214	67.030
650.000	0.919	77.286	649.977	0.275	4.746	4.754	86.690	0.321	67.090
700.000	0.510	85.810	699.975	0.287	5.206	5.214	86.843	0.252	67.180
750.000	0.463	120.222	749.974	0.234	5.552	5.557	87.592	0.273	69.750
800.000	0.468	109.491	799.972	0.067	5.870	5.871	89.346	0.247	69.890
850.000	0.374	117.316	849.971	-0.089	6.196	6.197	90.824	0.180	70.030
900.000	0.658	144.359	899.970	-0.304	6.463	6.470	92.690	0.374	70.170
950.000	0.492	138.678	949.968	-0.567	6.715	6.739	94.829	0.199	70.330
1000.000	0.452	90.044	999.967	-0.802	6.927	6.974	96.604	0.429	70.510
1050.000	0.405	122.012	1049.965	-0.981	7.197	7.263	97.759	0.111	70.700
1100.000	0.445	128.004	1099.964	-1.147	7.467	7.555	98.736	0.286	70.910
1150.000	0.340	136.701	1149.963	-1.309	7.708	7.819	99.636	0.085	71.130
1200.000	0.570	137.073	1199.963	-1.479	7.894	8.031	100.610	0.218	71.390
1250.000	0.256	146.927	1249.962	-1.641	8.048	8.213	101.523	0.174	71.650
1300.000	0.371	150.389	1299.961	-1.780	8.176	8.368	102.280	0.255	71.940
1350.000	0.414	22.110	1349.961	-1.896	8.300	8.514	102.870	0.609	72.230
1400.000	0.230	142.370	1399.960	-2.029	8.360	8.602	103.641	0.172	72.565
1450.000	0.563	134.642	1449.960	-2.180	8.496	8.771	104.389	0.832	72.920
1500.000	0.229	148.453	1499.960	-2.348	8.627	8.941	105.224	0.041	73.270
1550.000	0.550	313.090	1549.959	-2.526	8.748	9.106	106.106	0.817	73.660
1600.000	0.455	159.098	1599.958	-2.756	8.871	9.290	107.256	0.235	74.060
1650.000	0.325	148.758	1649.957	-2.990	9.012	9.495	108.357	0.257	74.490
1700.000	0.654	151.591	1699.955	-3.309	9.225	9.801	109.734	0.352	82.350
1750.000	0.497	140.791	1749.953	-3.691	9.483	10.176	111.267	0.125	82.740
1800.000	0.538	121.122	1799.950	-4.015	9.834	10.622	112.209	0.347	83.090
1850.000	0.600	115.321	1849.947	-4.318	10.258	11.130	112.828	0.298	83.469
1900.000	0.688	102.271	1899.944	-4.526	10.823	11.731	112.696	0.218	83.840
1950.000	0.991	90.775	1949.938	-4.566	11.572	12.441	111.531	0.533	84.232
2000.000	1.005	84.177	1999.931	-4.515	12.400	13.196	110.007	0.266	84.680
2050.000	1.016	72.508	2049.923	-4.289	13.250	13.927	107.936	0.294	85.110
2100.000	1.183	60.878	2099.913	-3.857	14.127	14.644	105.270	0.501	85.580
2150.000	1.126	50.310	2149.902	-3.236	14.954	15.300	102.210	0.443	86.070
2200.000	1.217	38.893	2199.891	-2.454	15.678	15.869	98.897	0.462	86.590
2250.000	1.124	31.758	2249.880	-1.617	16.312	16.392	95.660	0.371	87.120

Md	Inc	Azim	TVD	N-S	E-W	Cls.Dis	Cls.Dir	DogLeg /100usft	Temp
2300.000	1.181	31.569	2299.869	-0.720	16.846	16.862	92.448	0.192	87.700
2350.000	1.098	29.151	2349.858	0.178	17.350	17.351	89.411	0.092	88.280
2400.000	0.913	24.580	2399.849	1.002	17.756	17.784	86.771	0.218	88.890
2450.000	0.921	18.964	2449.842	1.795	18.057	18.146	84.322	0.281	89.510
2500.000	0.622	14.795	2499.836	2.513	18.337	18.508	82.197	0.429	90.160
2550.000	0.795	17.052	2549.830	3.205	18.591	18.865	80.217	0.153	90.820
2600.000	0.807	33.690	2599.825	3.816	18.909	19.290	78.589	0.553	102.330
2650.000	0.800	33.533	2649.821	4.315	19.287	19.763	77.390	0.252	102.800
2700.000	0.805	37.827	2699.818	4.791	19.666	20.242	76.310	0.099	103.280
2750.000	0.571	52.244	2749.814	5.184	20.054	20.713	75.506	0.310	103.770
2800.000	0.582	42.167	2799.812	5.538	20.421	21.159	74.826	0.079	104.250
2850.000	0.577	47.758	2849.809	5.870	20.766	21.580	74.216	0.306	104.790
2900.000	0.483	46.504	2899.808	6.163	21.064	21.947	73.691	0.176	105.310
2950.000	0.434	29.949	2949.806	6.424	21.237	22.188	73.170	0.223	105.870
3000.000	0.236	359.647	2999.806	6.674	21.321	22.341	72.619	0.311	106.430
3050.000	0.155	17.055	3049.805	6.864	21.352	22.428	72.179	0.204	107.000
3100.000	0.050	118.885	3099.805	6.950	21.383	22.484	71.994	0.175	107.620
3150.000	0.196	264.033	3149.805	6.962	21.387	22.491	71.969	0.375	108.240
3200.000	0.290	231.041	3199.804	7.024	21.350	22.476	71.790	0.372	108.860
3250.000	0.479	333.930	3249.803	7.323	21.269	22.494	71.002	0.528	109.550
3300.000	0.567	348.081	3299.801	7.797	21.154	22.545	69.767	0.536	110.230
3350.000	0.591	355.524	3349.798	8.330	21.073	22.660	68.431	0.250	110.930
3400.000	0.535	354.537	3399.795	8.881	21.028	22.826	67.104	0.061	111.710
3450.000	0.680	354.696	3449.791	9.435	21.016	23.037	65.822	0.020	112.460
3500.000	0.623	13.141	3499.789	9.959	21.051	23.288	64.683	0.172	125.210
3550.000	0.601	12.091	3549.786	10.470	21.140	23.591	63.651	0.173	125.730
3600.000	0.556	9.759	3599.783	10.965	21.224	23.890	62.678	0.022	126.230
3650.000	0.520	359.572	3649.781	11.426	21.313	24.183	61.805	0.149	126.790
3700.000	0.330	358.225	3699.779	11.824	21.351	24.406	61.023	0.382	127.310
3750.000	0.417	190.295	3749.778	11.714	21.335	24.340	61.231	0.892	127.840
3800.000	0.613	195.095	3799.774	11.113	21.289	24.015	62.436	0.989	128.410
3850.000	0.737	184.015	3849.770	10.480	21.272	23.713	63.771	0.153	128.970
3900.000	0.574	188.580	3899.766	9.866	21.201	23.385	65.045	0.073	129.570
3950.000	0.508	205.298	3949.763	9.334	21.061	23.036	66.096	0.326	130.210
4000.000	0.563	239.690	3999.761	9.058	20.758	22.648	66.425	0.595	130.840
4050.000	0.365	248.484	4049.760	8.888	20.430	22.279	66.487	0.405	131.490
4100.000	0.430	245.269	4099.758	8.670	20.086	21.877	66.653	0.135	132.140
4150.000	0.515	244.711	4149.756	8.436	19.714	21.443	66.833	0.186	132.850
4200.000	0.354	238.968	4199.754	8.162	19.301	20.956	67.076	0.178	133.530
4250.000	0.678	227.768	4249.751	7.862	18.860	20.433	67.371	0.222	134.230
4300.000	0.800	222.095	4299.747	7.489	18.349	19.818	67.798	0.227	134.960
4350.000	1.010	270.342	4349.741	7.326	17.661	19.120	67.471	0.635	135.750
4400.000	0.937	276.704	4399.733	7.398	16.777	18.336	66.204	0.788	148.180
4450.000	1.369	275.123	4449.723	7.522	15.777	17.478	64.509	0.448	148.660
4500.000	1.370	274.698	4499.711	7.614	14.694	16.550	62.608	0.448	149.180
4550.000	1.333	263.048	4549.697	7.650	13.533	15.545	60.523	0.306	149.690

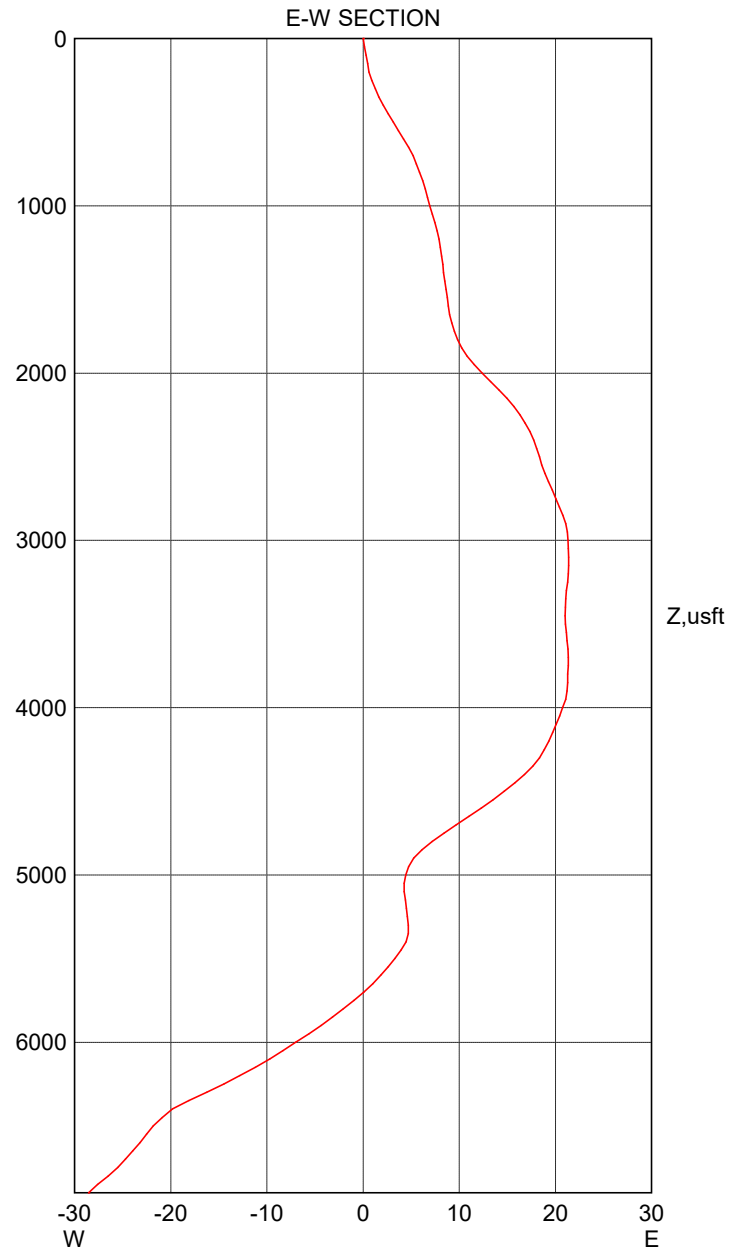
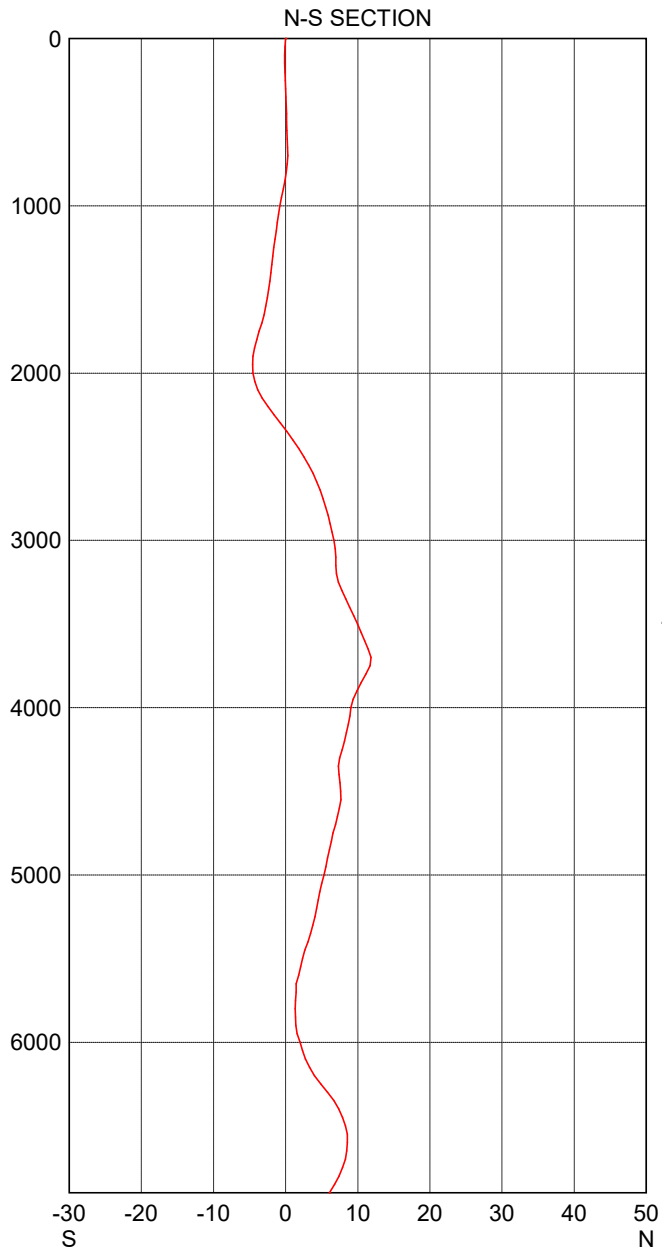
Md	Inc	Azim	TVD	N-S	E-W	Cls.Dis	Cls.Dir	DogLeg /100usft	Temp
4600.000	1.444	254.633	4599.681	7.453	12.288	14.371	58.760	0.529	150.240
4650.000	1.356	254.116	4649.664	7.177	11.007	13.140	56.895	0.241	150.780
4700.000	1.510	254.487	4699.646	6.901	9.699	11.903	54.567	0.155	151.370
4750.000	1.434	259.258	4749.628	6.579	8.416	10.682	51.983	0.178	151.950
4800.000	1.304	258.677	4799.612	6.322	7.189	9.573	48.668	0.349	152.590
4850.000	1.135	254.309	4849.600	6.058	6.127	8.616	45.322	0.426	153.210
4900.000	0.810	253.102	4899.592	5.798	5.283	7.844	42.344	0.546	153.880
4950.000	0.648	221.891	4949.588	5.589	4.722	7.317	40.192	0.642	154.530
5000.000	0.491	208.802	4999.587	5.302	4.449	6.921	40.003	0.555	155.250
5050.000	0.456	209.114	5049.585	5.007	4.264	6.577	40.417	0.206	155.950
5100.000	0.421	143.747	5099.584	4.754	4.268	6.388	41.913	0.556	156.730
5150.000	0.330	149.458	5149.584	4.536	4.397	6.317	44.108	0.345	157.540
5200.000	0.465	177.104	5199.583	4.299	4.503	6.225	46.326	0.282	158.330
5250.000	0.240	151.678	5249.582	4.058	4.620	6.149	48.710	0.105	159.150
5300.000	0.345	178.390	5299.581	3.765	4.700	6.022	51.303	0.171	172.860
5350.000	0.284	188.552	5349.580	3.456	4.705	5.838	53.702	0.191	173.440
5400.000	0.502	229.217	5399.578	3.102	4.479	5.448	55.289	0.419	174.030
5450.000	0.780	247.400	5449.573	2.674	3.952	4.772	55.916	0.673	174.670
5500.000	0.950	247.404	5499.568	2.342	3.324	4.067	54.829	0.414	175.350
5550.000	0.940	251.324	5549.562	2.059	2.625	3.336	51.892	0.146	175.990
5600.000	1.320	262.038	5599.555	1.808	1.851	2.588	45.682	0.483	176.680
5650.000	0.983	242.690	5649.547	1.473	1.015	1.789	34.579	0.163	177.440
5700.000	1.110	267.165	5699.538	1.458	0.082	1.460	3.207	0.189	178.190
5750.000	1.557	265.924	5749.527	1.386	-0.966	1.689	325.114	0.670	179.030
5800.000	1.279	267.673	5799.515	1.314	-2.065	2.448	302.480	0.116	179.840
5850.000	1.131	274.907	5849.502	1.357	-3.181	3.458	293.105	0.093	180.670
5900.000	1.429	279.426	5899.488	1.410	-4.362	4.584	287.915	0.310	181.440
5950.000	1.554	283.102	5949.472	1.601	-5.605	5.829	285.937	0.223	182.310
6000.000	1.664	290.558	5999.451	1.983	-6.975	7.252	285.871	0.355	183.200
6050.000	1.668	286.877	6049.431	2.328	-8.345	8.664	285.585	0.197	184.110
6100.000	1.757	288.670	6099.411	2.754	-9.705	10.089	285.844	0.113	185.050
6150.000	1.811	293.016	6149.385	3.316	-11.189	11.670	286.507	0.352	186.030
6200.000	1.987	297.279	6199.354	3.999	-12.816	13.425	287.329	0.380	202.040
6250.000	2.424	298.396	6249.319	4.855	-14.467	15.260	288.552	0.579	202.690
6300.000	2.390	298.364	6299.278	5.787	-16.255	17.255	289.596	0.385	203.370
6350.000	2.086	303.816	6349.235	6.683	-18.131	19.323	290.235	0.405	204.030
6400.000	1.764	292.821	6399.201	7.377	-19.802	21.132	290.432	0.739	204.660
6450.000	1.283	298.105	6449.187	7.872	-20.886	22.321	290.651	0.797	205.410
6500.000	1.140	295.638	6499.176	8.281	-21.809	23.328	290.792	0.661	206.070
6550.000	0.817	285.201	6549.171	8.573	-22.501	24.079	290.856	0.566	206.820
6600.000	0.806	270.072	6599.166	8.541	-23.174	24.698	290.232	0.539	207.540
6650.000	0.870	260.093	6649.160	8.477	-23.948	25.404	289.492	0.349	208.280
6700.000	0.824	242.871	6699.153	8.268	-24.722	26.068	288.492	0.411	209.100
6750.000	1.100	244.153	6749.146	7.875	-25.492	26.681	287.167	0.285	209.890
6800.000	1.620	241.251	6799.132	7.390	-26.512	27.522	285.575	0.999	210.690
6850.000	1.090	228.032	6849.116	6.783	-27.619	28.440	283.799	0.312	211.553

Md	Inc	Azim	TVD	N-S	E-W	Cls.Dis	Cls.Dir	DogLeg /100usft	Temp
6900.000	1.462	240.015	6899.103	6.086	-28.520	29.162	282.047	0.139	212.670
6900.760	1.380	229.840	6899.862	6.077	-28.537	29.176	282.022	0.354	212.740

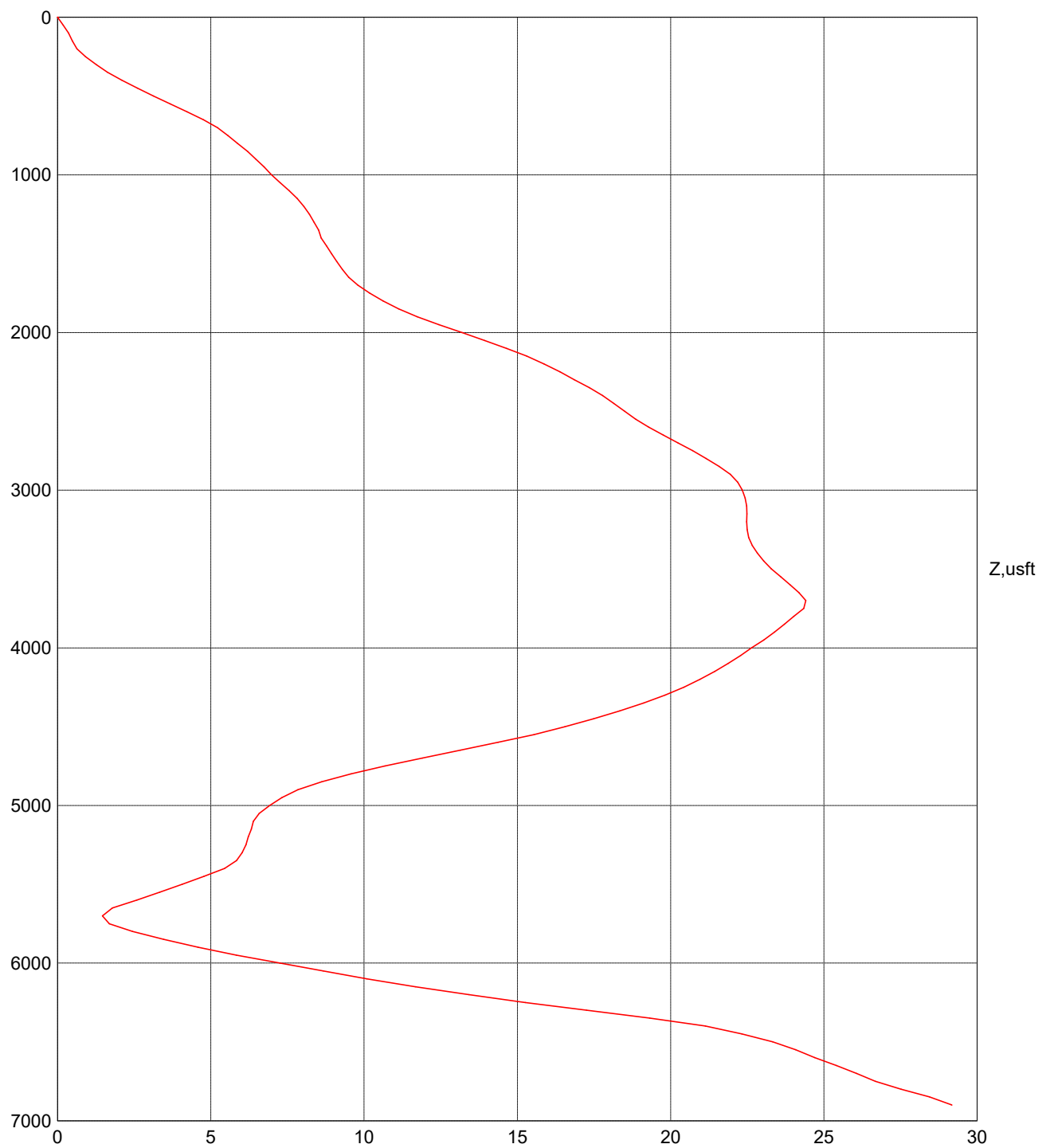
CROSS - SECTION
Displacement (usft)



VERTICAL SECTIONS
True Depth vs. Displacement (usft)



IN THE PLANE OF CLOSURE
True Depth vs. Displacement (usft)



DogLeg
True Depth (usft) vs. Deg/100usft

