

[illegible]

[illegible]





Logging Date			
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth		@	
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
Density	Viscosity		
Fluid Loss	PH		
Source Of Sample			
RM @ Measured Temperature		@	
RMF @ Measured Temperature		@	
RMC @ Measured Temperature		@	
Source RMF	RMC		
RM @ MRT	RMF @ MRT	@	@
Maximum Recorded Temperatures			
Circulation Stopped	Time		
Logger On Bottom	Time		
Unit Number	Location		
Recorded By			
Witnessed By			

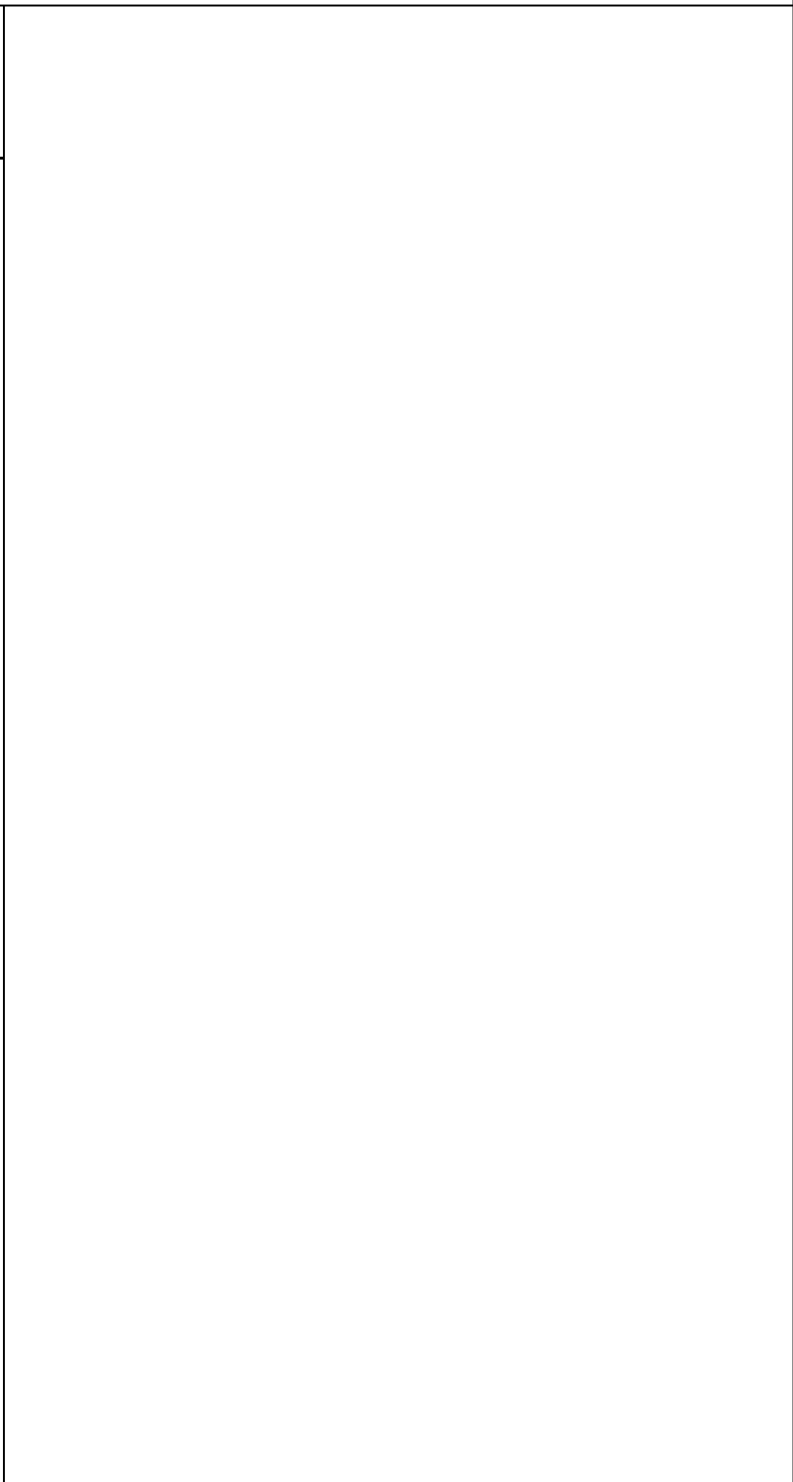
Rig: Cade 22	
Crew: Shane Walker & Jeff Mese	

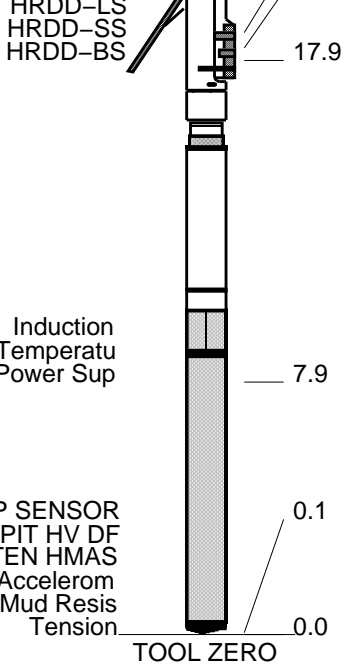
RUN 1			RUN 2		
SERVICE ORDER #:		11989810	SERVICE ORDER #:		
PROGRAM VERSION:		15C0-309	PROGRAM VERSION:		
FLUID LEVEL:			FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT	
GSR-U/Y	WITM (DTS)-A
NCT-B	
CNB-AB	
NCS-VB	

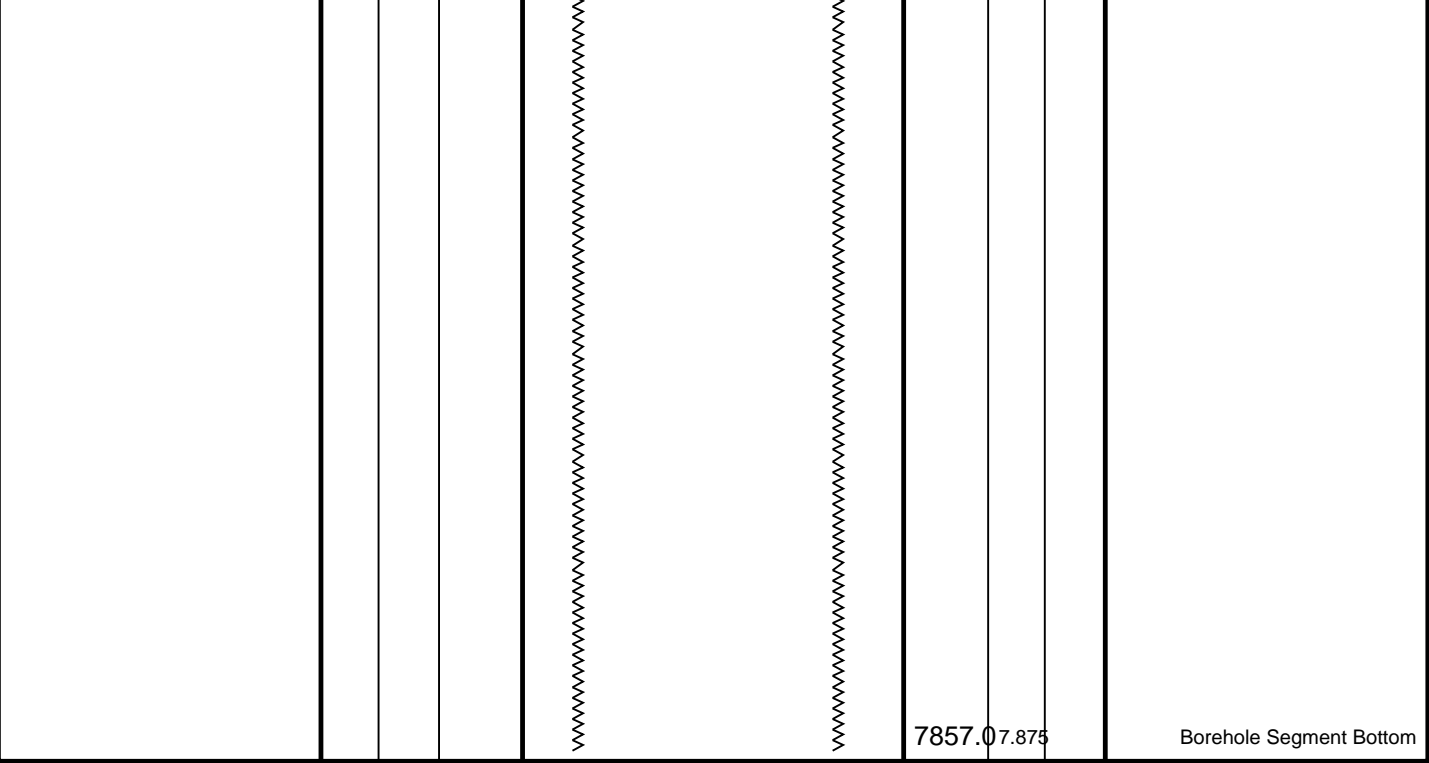
DOWNHOLE EQUIPMENT			
LEH-QT			51.6
LEH-QT 8415			
DTC-H	CTEM		48.6
ECH-KC		47.7	
DTCH0-A	TelStatus		
DTCH1-A	ToolStatu	45.6	
AH-NM4			45.6
AH-NM4			
GPIT-C			41.6
GPIC-C			
GPIH-B			
HILTB-FTB	HGNS HTEM		
HGNSD-B	HMCA	37.6	
HMCA	HGNS Gamm	36.9	37.6
HGNH			
NLS-KL			
NSR-F 1369			
HACCZ 430			
HCNT			
HGR	HGNS Neut	31.1	
HRCC-B 932	HGNS Neut	30.6	
HRMS-B 1929			
HRGD-B 885			
GLS-VJ 5363	HGNS sens	28.2	
MCFL Device			
HILT Nucl. LS 42767			
HILT Nucl. SS 42767			
HILT Nucl. BS 42767			
AIT-H 392			
AHIS-BA 392	HRCC cart	24.2	
AHRM-A			
NPV-N			
	MCFL	18.8	
	HILT cali	18.3	





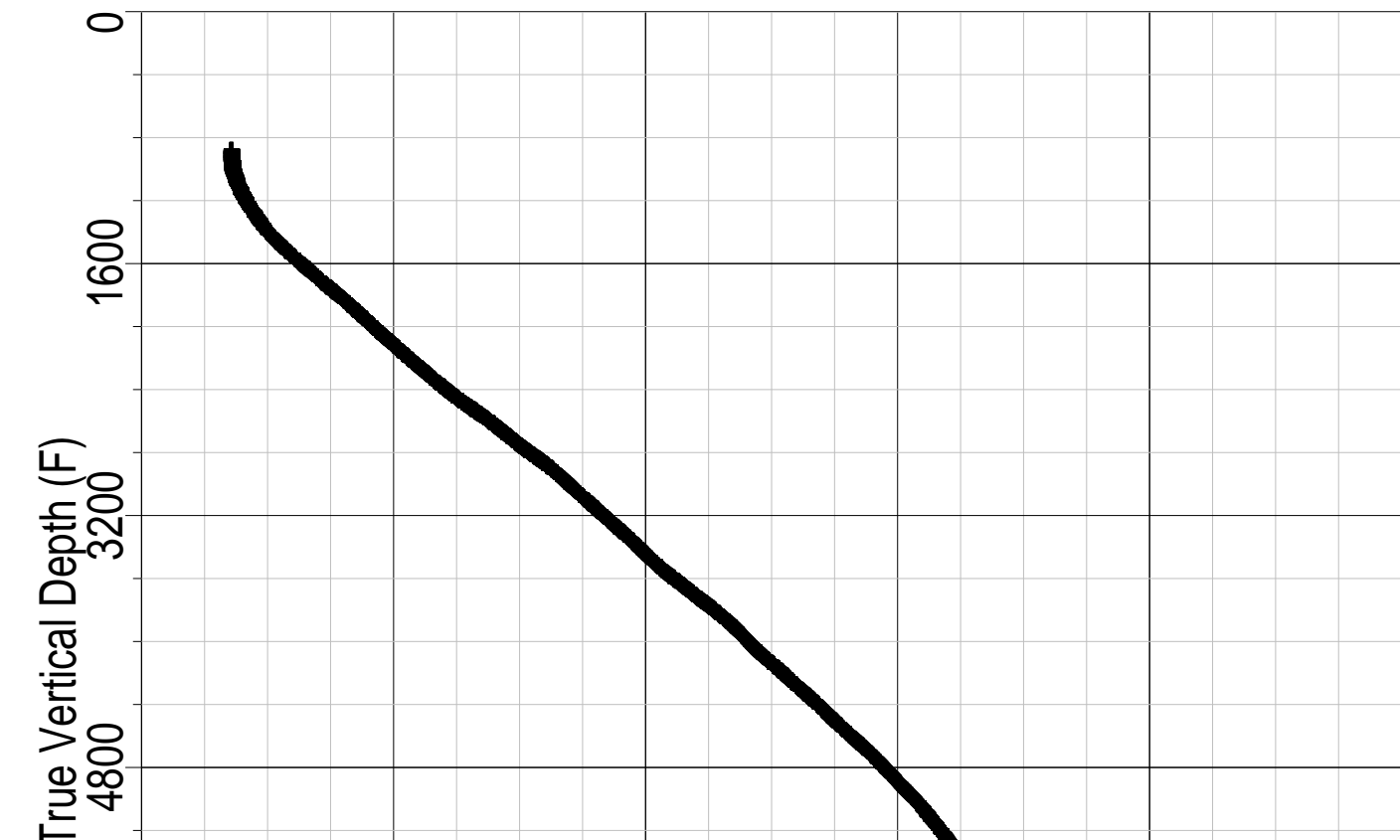
MAXIMUM STRING DIAMETER 4.63 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

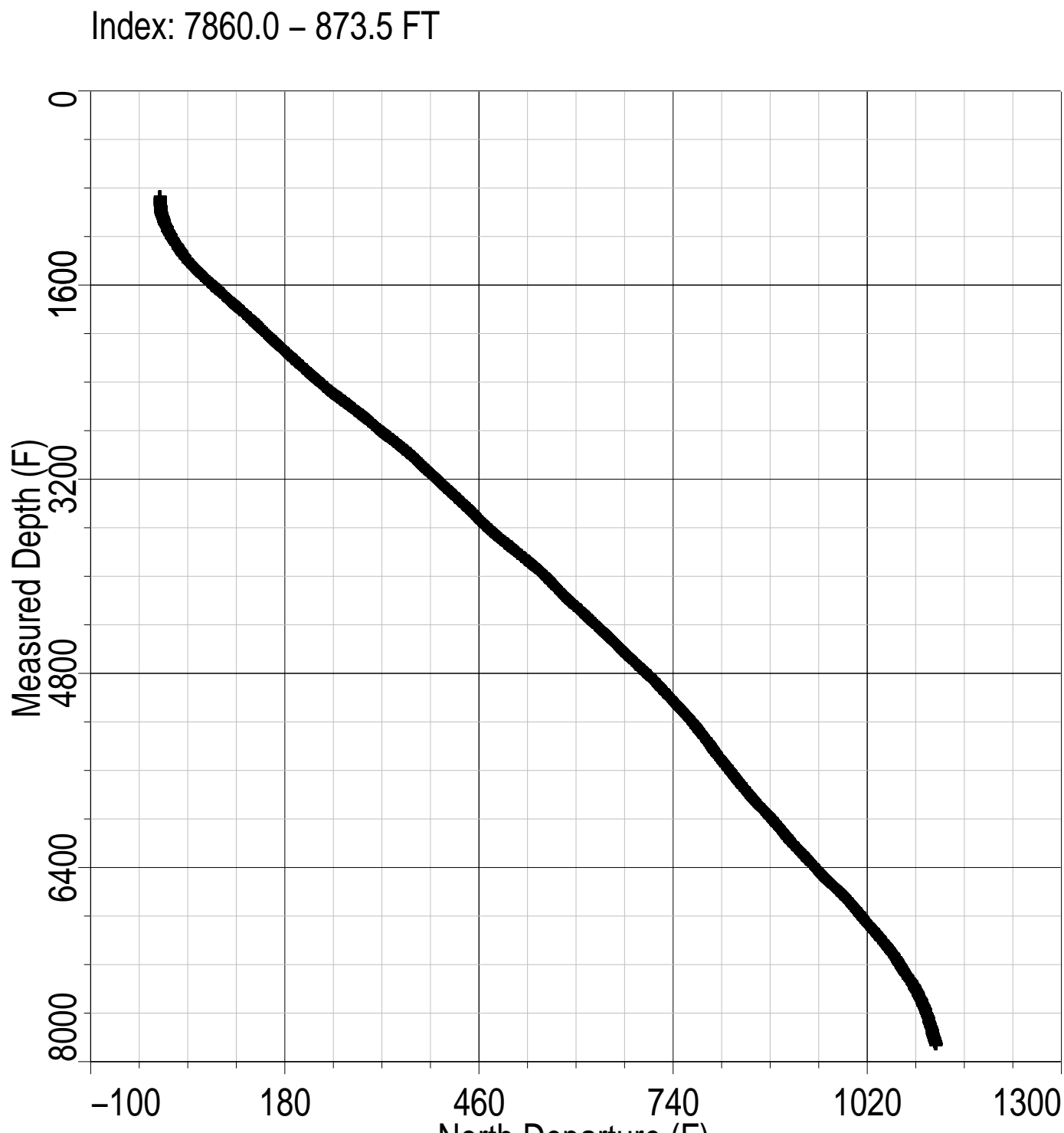
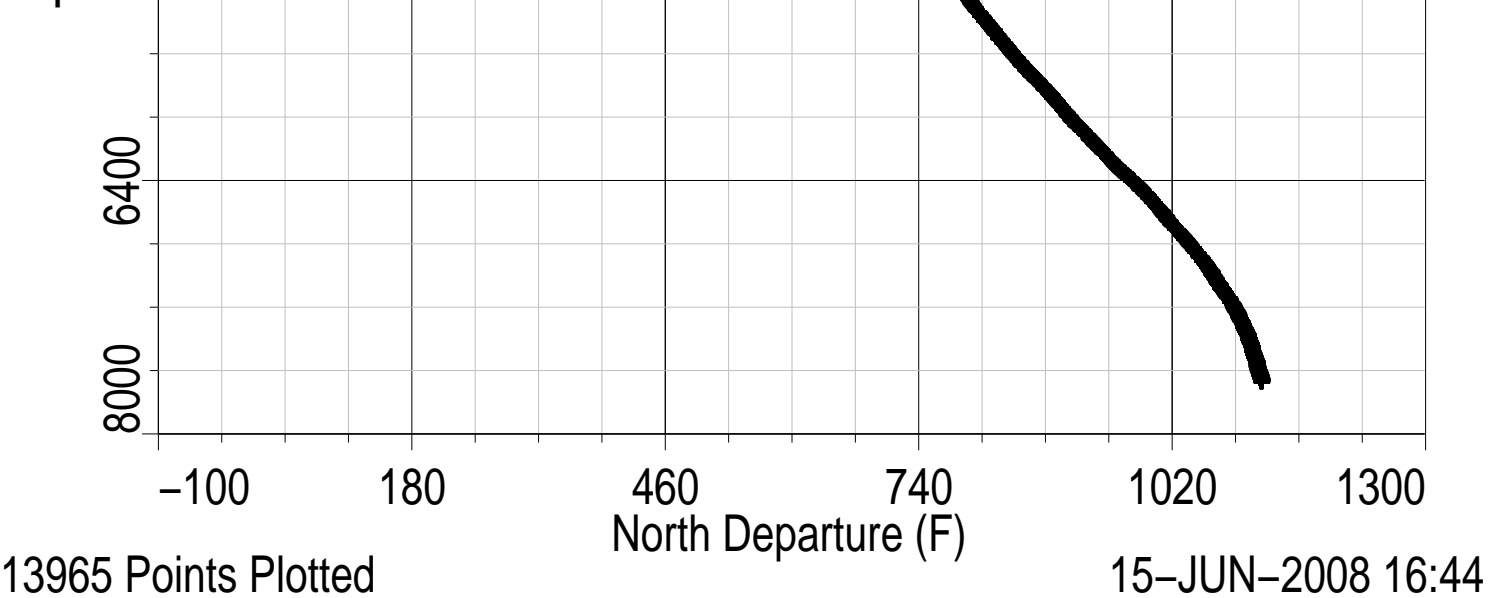
Production String	(in)		(ft)	Well Schematic	(ft)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	8.625		Casing String
					824.0	8.625		Casing Shoe
					824.0	7.875		Borehole Segment



All depths are driller's depths

Index: 7860.0 – 873.5 FT



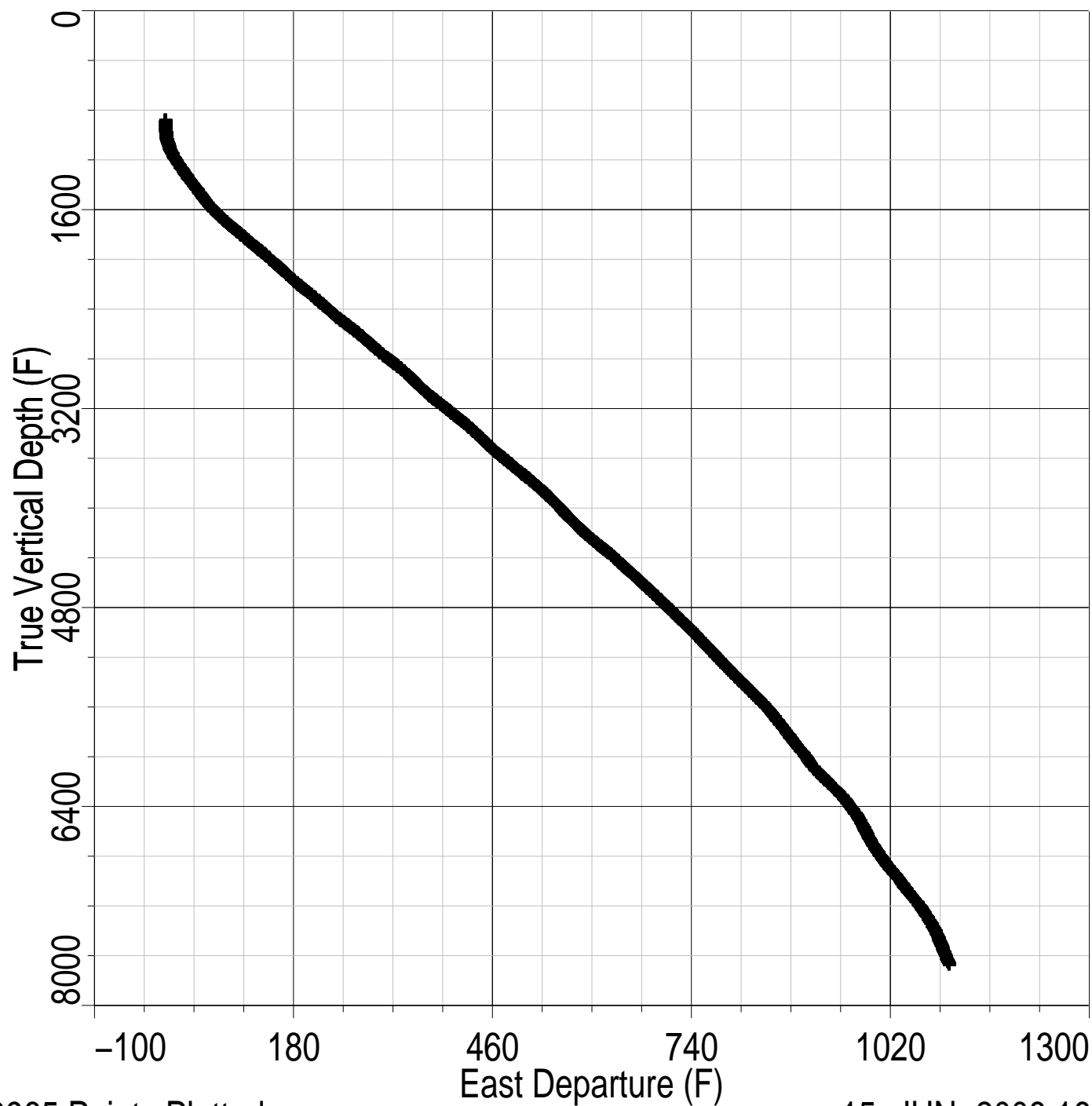


13974 Points Plotted

North Departure (F)

15-JUN-2008 16:44

Index: 7860.0 – 873.5 FT

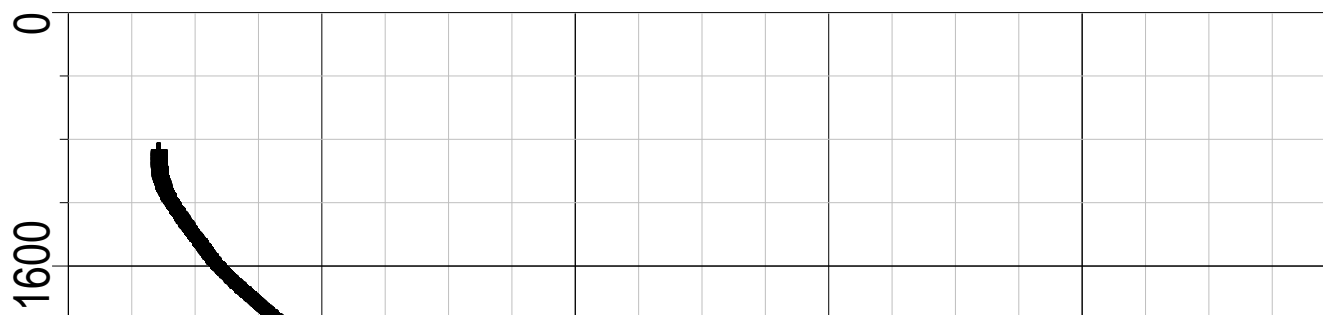


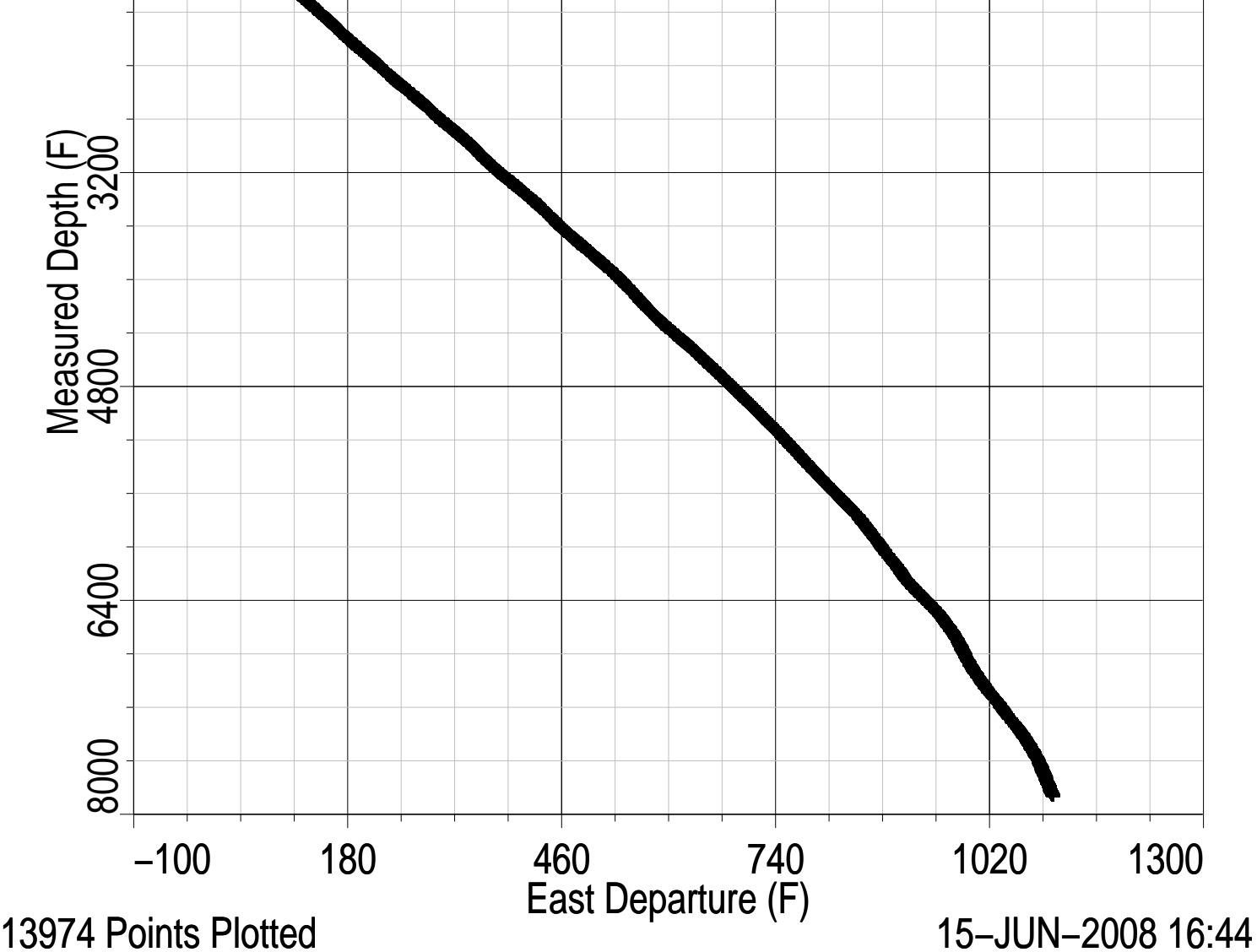
13965 Points Plotted

East Departure (F)

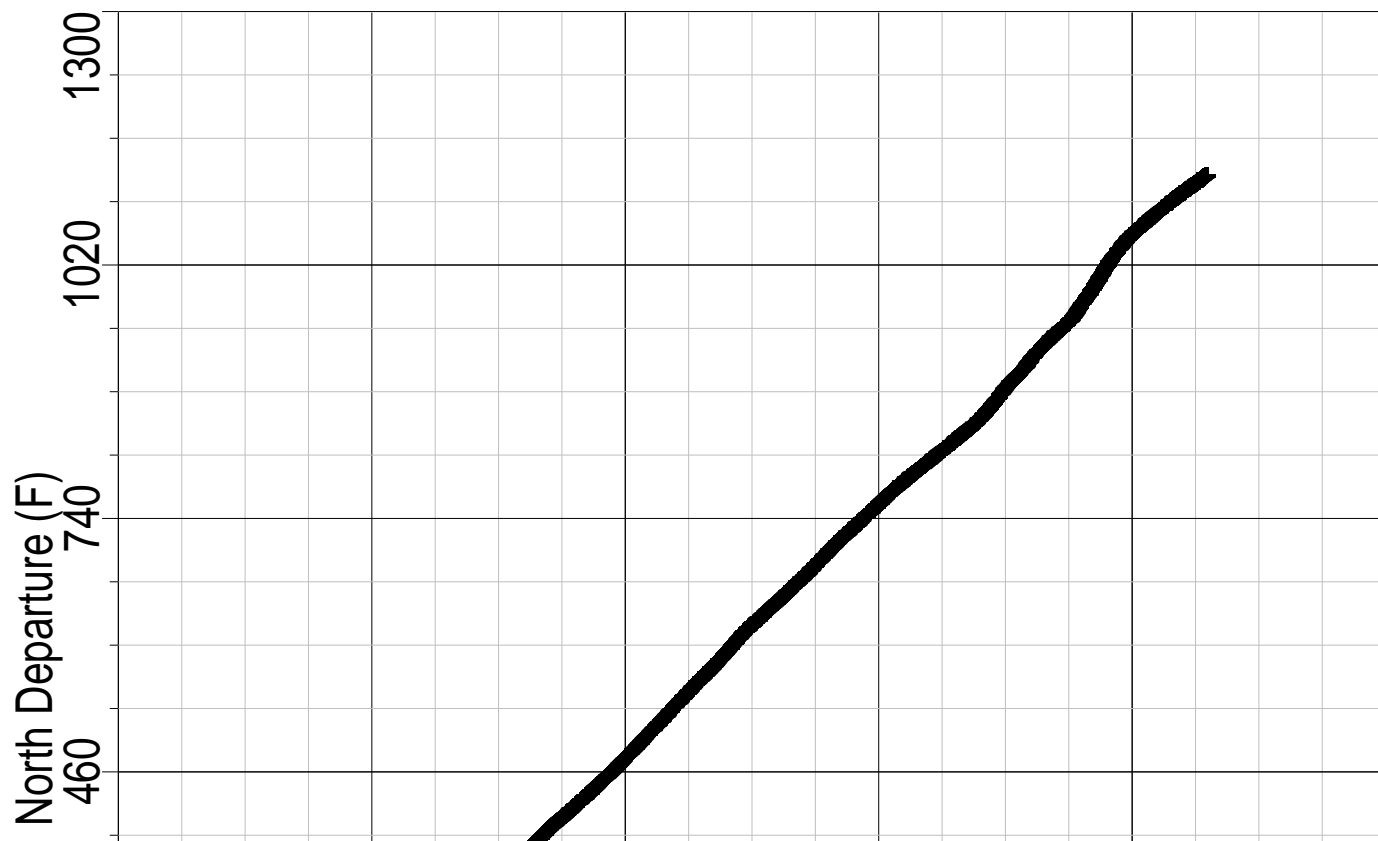
15-JUN-2008 16:44

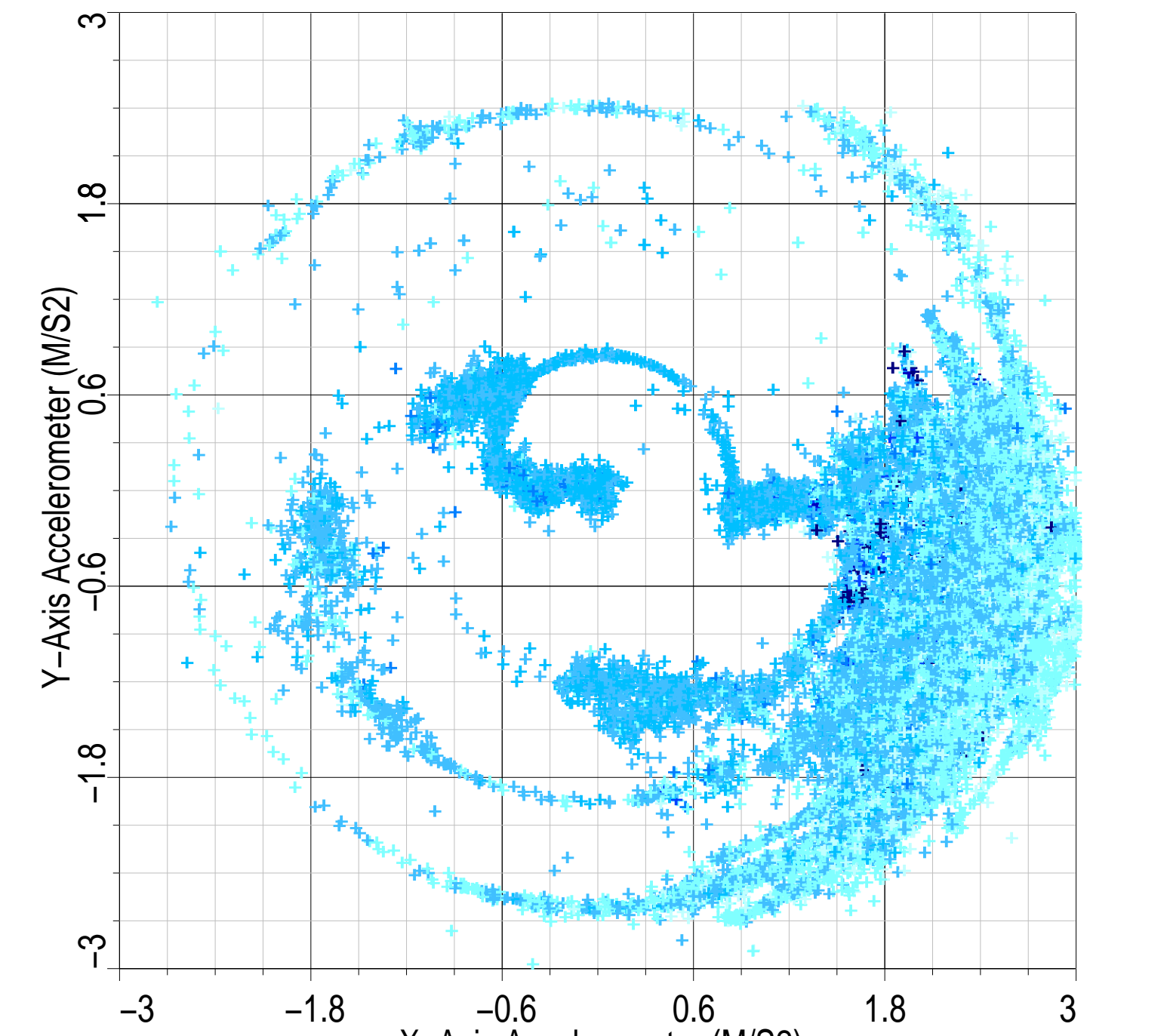
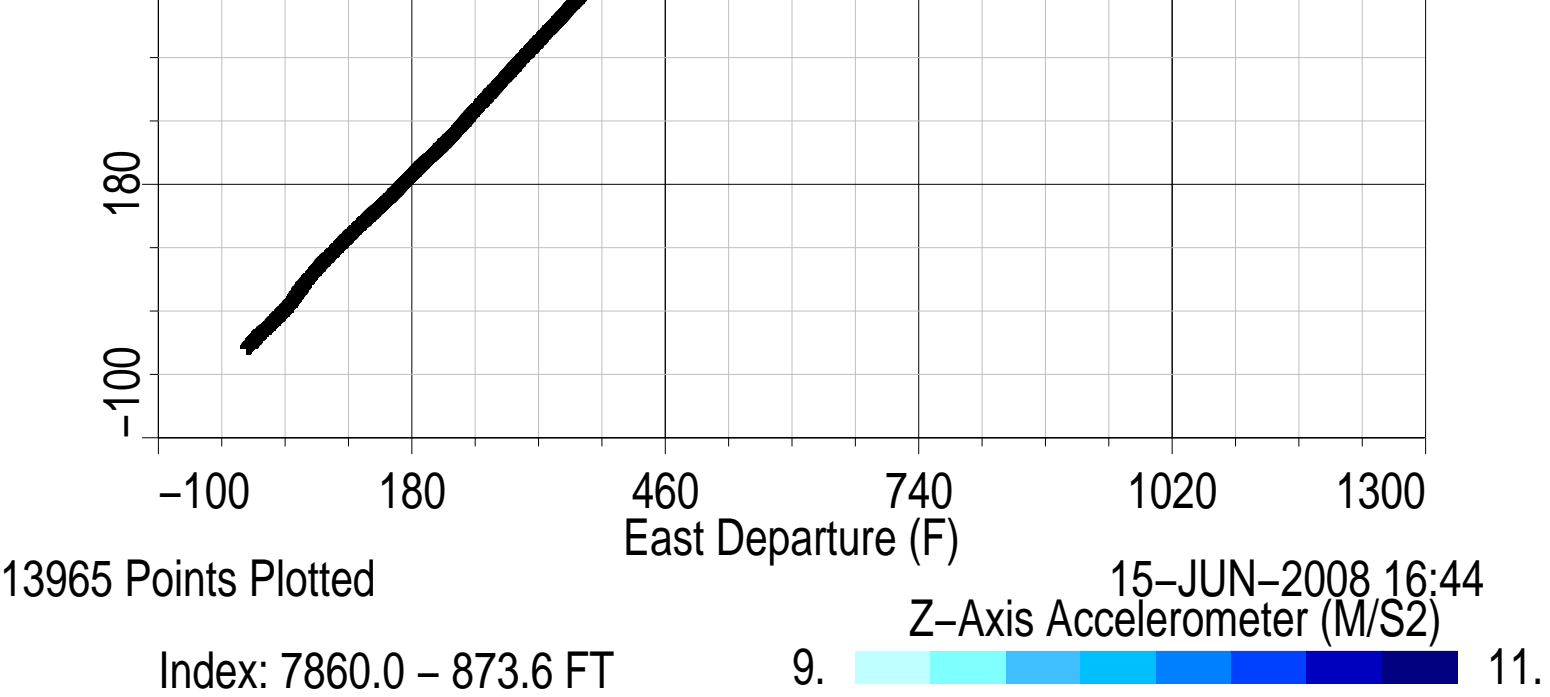
Index: 7860.0 – 873.5 FT

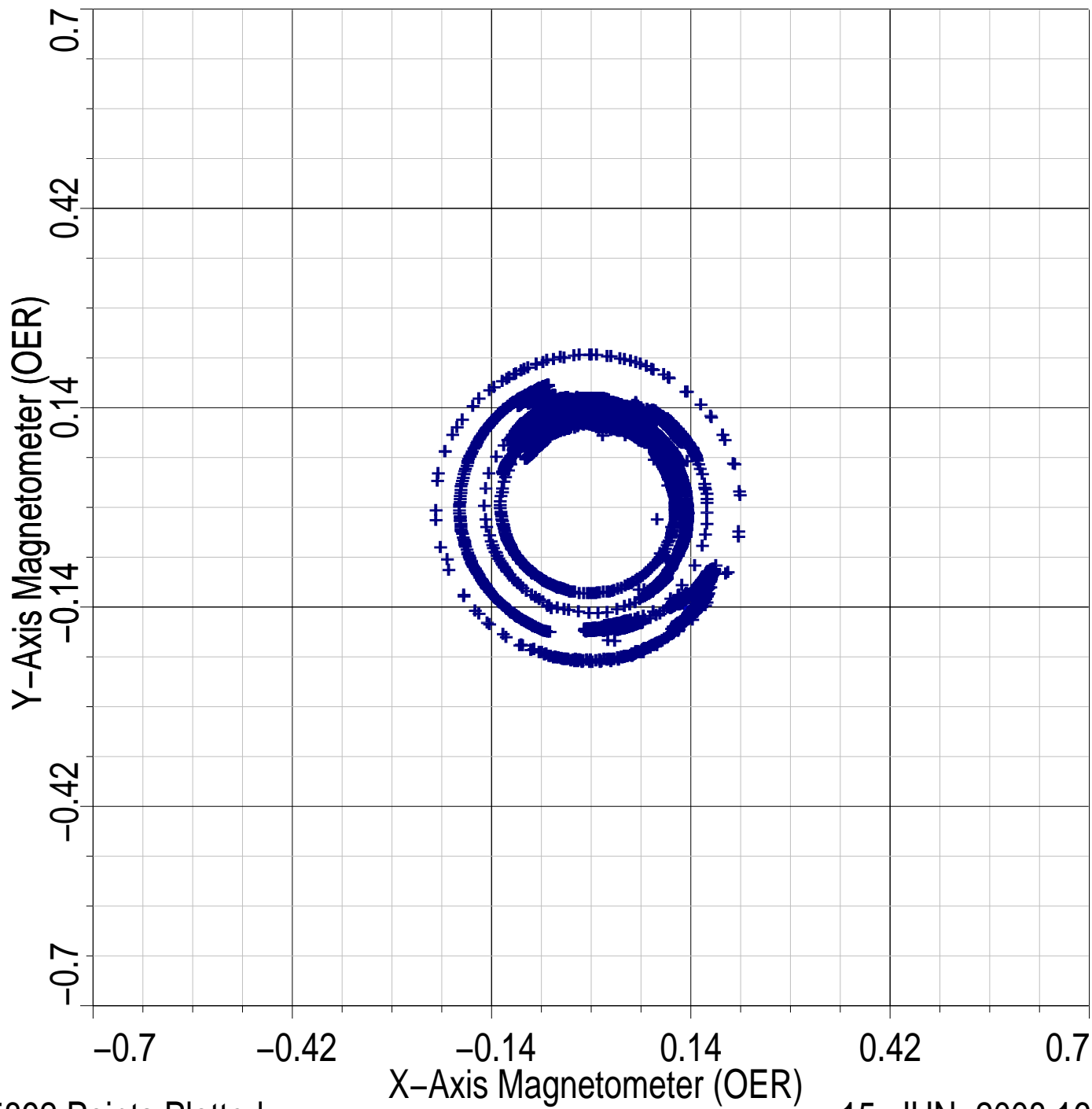




Index: 7860.0 – 873.5 FT







~VERSION INFORMAT

VERS. 2.0 :CWLS Log ASCII Standard – VERSION 2.0

WRAP. NO :One Line per depth step

PROD. Schlumberger :LAS Producer

PROG. DLIS to ASCII 13C0–300 :LAS Program name and ver

sion

CREA. 2008/06/15 16:56 :LAS Creation date {YYYY/

MM/DD hh:mmr

SOURCE. 11989810_Orr_Lakes_31–32D_Main_TVD.DLIS :DLIS File Name

FILE-ID. AIT_TLD_MCFL_CNL_008PUP :File Identification Numb

er

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~WELL INFORMATI

#	MNEM	UNIT	DATA	DESCRIPTION
STRT	.F	880.0	:START DEPTH	
STOP	.F	7860.0	:STOP DEPTH	
STEP	.F	10.0	:STEP	
NULL	.	-999.25	:NULL VALUE	
COMP	.	Orr Energy, LLC		:COMPANY
WELL	.	Lakes 31-32D		:WELL

LOC .	Sec 31 T6N R66W	:FIELD	
PROV .	Weld	:PROVINCE	
UWI .	SURF: 2172' FSL X 2561' FWL NESW	:UNIQUE WELL ID	
LIC .	05-123-25689-0000	:LICENSE NUMBER	
CTRY .	CA	:COUNTRY (WWW code)	
DATE .	15-Jun-2008	:LOG DATE {DD-MMM-YYYY}	
SRVC .	Schlumberger	:SERVICE COMPANY	
LATI.DEG	104.82329 W	:LATITUDE	
LONG.DEG	40.44271 N	:LONGITUDE	
GDAT .		:GeoDetic Datum	
SECT .	31	:Section	
RANG .	66W	:Range	
TOWN .	6N	:Township	

~PARAMETER INFORMA

#	MNEM.	UNIT	VALUE	DESCRIPTION
CN	.		Orr Energy LLC	:Company Name
WN	.		Lakes 31-32D	:Well Name
FN	.		Sep-21-Ten-R66W	:Field Location
COUN	.		Weld	:County or Rig Name
STAT	.		Colorado	:State or Province
NATI	.			:Nation
DATE	.		15-Jun-2008	:Date as Month-Day-Year
APIN	.		05-123-25689-0000	:API Serial Number
UWID	.			:Unique Well Identification Number
RUN	.		1	:RUN NUMBER
PDAT	.		Ground Level	:Permanent Datum
EPD	.F		4717.000000	:Elevation of Permanent Datum above Mean Sea Level
EREF	.F		4729.000000	:Elevation of tool zero above Mean Sea Level
DREF	.		Kelly Bushing	:Logging Measured From (Name of Logging Elevation Reference)
APD	.F		12.000000	:Elevation of Depth Reference (LMF) above Permanent Datum

~CURVE INFORMAT

#MNEM.UNIT	API CODE	DESCRIPTION
#-----	-----	-----
DEPT .F		:DEPTH (BOREHOLE) {F10.1}
TVDE .F		:True Vertical Depth {F13.4}
SDEV .DEG		:Sonde Deviation {F13.4}
ED .F		:East Departure {F13.4}
ND .F		:North Departure {F13.4}
HAZI .DEG		:Hole Azimuth {F13.4}
VSEC .F		:Vertical Section {F13.4}

#

# ~A	DEPT VSEC	TVDE	SDEV	ED	ND	HAZI
880.0 -0.0876	885.2543	0.2553	-0.1868	-0.0570	348.0413	
890.0 -0.0219	895.2540	0.2359	-0.1733	0.0132	8.3886	
900.0 0.0530	905.2537	0.2992	-0.1573	0.0906	10.4113	
910.0 0.1329	915.2533	0.3437	-0.1407	0.1745	11.1876	
920.0 0.2233	925.2527	0.3821	-0.1094	0.2789	9.9982	
930.0 0.3489	935.2513	0.4365	-0.0312	0.4251	10.4583	
940.0 0.5152	945.2489	0.4660	0.0916	0.6086	11.7385	
950.0 0.7184	955.2452	0.5267	0.2517	0.8272	10.3512	
960.0 0.9527	965.2403	0.7745	0.4405	1.0739	14.9608	
970.0 1.2101	975.2346	1.1136	0.6480	1.3400	28.9240	
980.0 1.4899	985.2274	1.4206	0.8814	1.6393	33.8260	
990.0 1.8122	995.2179	1.6732	1.1495	1.9833	36.3543	
1000.0 2.1798	1005.2059	1.8649	1.4474	2.3709	37.2732	
1010.0 2.5900	1015.1911	2.0294	1.7742	2.8044	37.6985	
1020.0 3.0502	1025.1728	2.3329	2.1375	3.2868	37.8996	
1030.0 3.5566	1035.1509	2.6604	2.5354	3.8156	38.1204	
1040.0 4.1133	1045.1242	2.9445	2.9721	4.4004	37.5734	
1050.0 4.7259	1055.0925	3.2912	3.4554	5.0313	37.1549	
1060.0 5.3759	1065.0563	3.6278	3.9804	5.6994	37.2181	
1070.0 6.0621	1075.0160	3.9751	4.5401	6.3996	37.2921	
1080.0 6.7756	1084.9722	4.3881	5.1356	7.1211	36.4264	
1090.0 7.5060	1094.9249	4.7214	5.7658	7.8599	37.3673	
1100.0 8.2524	1104.8742	5.0128	6.4355	8.6096	37.8131	
1110.0 9.0070	1114.8191	5.2653	7.1576	9.3693	38.6006	
1120.0 9.7707	1124.7591	5.4722	7.9395	10.1342	39.4711	
1130.0 10.5376	1134.6945	5.6708	8.7627	10.9149	40.3872	
1140.0 11.3455	1144.6232	5.8821	9.6168	11.7457	41.7839	
1150.0 12.1892	1154.5478	6.1595	10.5094	12.5860	43.4105	
1160.0 12.9882	1164.4700	6.3852	11.4356	13.4172	45.8238	

13.0203	1170.0	1174.3853	6.6709	12.4001	14.2864	47.2808
13.8635	1180.0	1184.2902	6.9798	13.4183	15.2111	45.6752
14.7641	1190.0	1194.1877	7.0874	14.4782	16.1690	46.6338
15.7106	1200.0	1204.0805	7.2560	15.5656	17.1431	48.3519
16.6786	1210.0	1213.9693	7.6908	16.6670	18.1424	48.0465
17.6621	1220.0	1223.8580	8.0899	17.7546	19.1576	47.7495
18.6739	1230.0	1233.7414	8.3131	18.8609	20.2034	47.9824
19.6980	1240.0	1243.6117	8.4804	20.0233	21.3097	48.2370
20.7738	1250.0	1253.4727	8.5838	21.2166	22.4663	47.6503
21.9115	1260.0	1263.3320	8.5711	22.4024	23.6439	46.9339
23.0831	1270.0	1273.1929	8.9968	23.5826	24.8147	46.5772
24.2598	1280.0	1283.0556	9.4465	24.7544	25.9780	46.3749
25.4278	1290.0	1292.9221	9.6285	25.9010	27.1348	45.9148
26.5836	1300.0	1302.7822	9.5936	27.0731	28.3191	45.1004
27.7504	1310.0	1312.6284	9.5542	28.3034	29.5589	45.4153
28.9564	1320.0	1322.4664	9.4237	29.5663	30.8312	45.2856
30.2320	1330.0	1332.3061	9.4079	30.8341	32.0857	44.7132
31.4891	1340.0	1342.1458	9.8033	32.0987	33.3430	44.7247
32.7467	1350.0	1351.9872	10.2944	33.3487	34.6016	44.7504
34.0019	1360.0	1361.8237	10.2889	34.6083	35.8886	44.7602
35.2690	1370.0	1371.6444	10.2840	35.9243	37.2378	45.3228
36.5866	1380.0	1381.4509	10.2382	37.2887	38.6416	45.1087
37.9685	1390.0	1391.2536	10.2301	38.6555	40.0694	44.8049
39.3869	1400.0	1401.0547	10.6018	39.9959	41.5327	44.3119
40.8322	1410.0	1410.8555	11.1021	41.3180	43.0144	44.4084
42.3097	1420.0	1420.6556	11.4059	42.6155	44.5225	44.0752
43.7969	1430.0	1430.4451	11.3985	43.9064	46.1029	43.9341
45.3378	1440.0	1440.2234	11.4798	45.1893	47.7580	42.2101
46.9621	1450.0	1449.9964	11.4244	46.4495	49.4607	41.7867
48.6479	1460.0	1459.7669	11.5879	47.6915	51.1915	40.7203
50.3623	1470.0	1469.5357	11.9650	48.9008	52.9481	39.2404

1470.0	1469.5357	11.9650	48.9098	52.9481	39.2404
52.1117					
1480.0	1479.3038	12.1873	50.1089	54.7216	37.6670
53.8744					
1490.0	1489.0596	12.2496	51.3467	56.5357	36.2974
55.6676					
1500.0	1498.7976	12.3499	52.6600	58.3921	35.6287
57.5019					
1510.0	1508.5262	12.3237	54.0096	60.2717	34.7299
59.3800					
1520.0	1518.2536	12.4746	55.3704	62.1494	33.9573
61.2568					
1530.0	1527.9790	12.9098	56.7307	64.0376	34.1949
63.1393					
1540.0	1537.7071	13.3370	58.0845	65.9169	35.3829
65.0275					
1550.0	1547.4296	13.3867	59.4808	67.7936	35.6422
66.8991					
1560.0	1557.1361	13.4445	60.9548	69.6938	35.9570
68.7874					
1570.0	1566.8317	13.4366	62.4801	71.6093	35.6577
70.6994					
1580.0	1576.5248	13.3851	64.0248	73.5216	35.7362
72.6141					
1590.0	1586.2164	13.7245	65.5753	75.4368	36.6459
74.5256					
1600.0	1595.9104	14.0817	67.1101	77.3529	37.9341
76.4425					
1610.0	1605.5978	14.2209	68.6738	79.2786	38.5626
78.3615					
1620.0	1615.2672	14.2489	70.3194	81.2262	39.0219
80.2952					
1630.0	1624.9215	14.2514	72.0284	83.1941	39.0018
82.2599					
1640.0	1634.5729	14.2152	73.7613	85.1559	38.6820
84.2255					
1650.0	1644.2227	14.5562	75.5007	87.1193	39.0050
86.1846					
1660.0	1653.8729	14.9853	77.2308	89.0893	40.3348
88.1540					
1670.0	1663.5240	15.1735	78.9776	91.0396	41.0338
90.1191					
1680.0	1673.1667	15.1779	80.8025	92.9596	41.4199
92.0513					
1690.0	1682.7980	15.2265	82.6980	94.8688	41.5703
93.9621					
1700.0	1692.4262	15.1634	84.6202	96.7669	41.2186
95.8689					
1710.0	1702.0536	15.2368	86.5592	98.6518	41.7220
97.7560					
1720.0	1711.6788	15.5009	88.4983	100.5482	43.5896
99.6460					
1730.0	1721.3019	15.6743	90.4360	102.4565	44.9118
101.5459					
1740.0	1730.9085	15.6652	92.4070	104.4129	45.4078
103.4724					
1750.0	1740.4919	15.7264	94.4155	106.4431	45.9352
105.4653					
1760.0	1750.0647	15.7288	96.4342	108.5134	45.5956
107.5312					
1770.0	1759.6391	15.9038	98.4463	110.5828	45.4271
109.5003					

109.3993	1780.0	1769.2161	16.3553	100.4571	112.6414	45.2359
111.6678	1790.0	1778.7980	16.7957	102.4646	114.6806	44.6872
113.7142	1800.0	1788.3813	16.7729	104.4747	116.7102	44.2500
115.7470	1810.0	1797.9710	16.7764	106.4681	118.7261	44.1021
117.7724	1820.0	1807.5659	16.6648	108.4484	120.7301	44.3735
119.7779	1830.0	1817.1575	16.6076	110.4434	122.7353	44.5016
121.7844	1840.0	1826.7533	16.5623	112.4534	124.7053	44.7247
123.7791	1850.0	1836.3548	16.3830	114.4709	126.6392	44.6338
125.7222	1860.0	1845.9584	16.3875	116.4848	128.5668	44.7108
127.6524	1870.0	1855.5622	16.4336	118.5076	130.4836	44.8853
129.5756	1880.0	1865.1711	16.2610	120.5227	132.3833	45.5968
131.4845	1890.0	1874.7851	16.2034	122.5294	134.2659	46.3673
133.3727	1900.0	1884.3983	16.1862	124.5431	136.1451	46.1955
135.2536	1910.0	1894.0158	16.1484	126.5534	138.0056	46.5893
137.1266	1920.0	1903.6381	16.0032	128.5597	139.8459	46.6667
138.9719	1930.0	1913.2590	15.9765	130.5662	141.6933	46.8069
140.8146	1940.0	1922.8834	15.9674	132.5637	143.5318	47.0241
142.6621	1950.0	1932.5131	15.8243	134.5501	145.3549	47.2507
144.4898	1960.0	1942.1428	15.8040	136.5320	147.1827	47.5070
146.3132	1970.0	1951.7758	15.8244	138.5036	149.0040	47.3250
148.1419	1980.0	1961.4135	15.6748	140.4640	150.8128	47.3813
149.9546	1990.0	1971.0501	15.6388	142.4259	152.6256	47.4848
151.7631	2000.0	1980.6847	15.6214	144.3932	154.4433	47.2566
153.5769	2010.0	1990.3187	15.5089	146.3539	156.2713	47.2668
155.4038	2020.0	1999.9533	15.4641	148.3089	158.1022	47.2208
157.2300	2030.0	2009.5876	15.5121	150.2546	159.9450	47.2133
159.0690	2040.0	2019.2236	15.5627	152.1886	161.7909	47.3009
160.9125	2050.0	2028.8587	15.5288	154.1015	163.6631	46.9224
162.7674	2060.0	2038.4924	15.5527	155.9941	165.5629	46.9298
164.6588	2070.0	2048.1285	15.5246	157.8775	167.4599	46.5290
166.5606	2080.0	2057.7648	15.4988	159.7612	169.3554	46.4241

168.4532					
2090.0	2067.4008	15.5615	161.6316	171.2659	45.5976
170.3562					
2100.0	2077.0414	15.5252	163.4736	173.1803	44.8271
172.2712					
2110.0	2086.6861	15.4939	165.3017	175.0875	44.8122
174.1843					
2120.0	2096.3270	15.5149	167.1492	176.9950	44.8693
176.0868					
2130.0	2105.9611	15.4700	169.0185	178.9163	44.3701
178.0018					
2140.0	2115.5992	15.3531	170.8718	180.8325	43.9072
179.9248					
2150.0	2125.2409	15.3185	172.7094	182.7456	43.7647
181.8363					
2160.0	2134.8852	15.4912	174.5364	184.6562	44.1169
183.7504					
2170.0	2144.5353	15.5481	176.3492	186.5509	44.2222
185.6540					
2180.0	2154.1815	15.3973	178.1754	188.4520	44.0578
187.5452					
2190.0	2163.8090	15.3660	180.0704	190.3805	43.8517
189.4580					
2200.0	2173.4176	15.2739	182.0303	192.3384	43.7147
191.4067					
2210.0	2183.0262	15.1730	184.0007	194.2856	43.7602
193.3639					
2220.0	2192.6377	15.4465	185.9640	196.2257	43.7678
195.3043					
2230.0	2202.2519	15.9396	187.9246	198.1555	44.5710
197.2420					
2240.0	2211.8632	16.1315	189.9120	200.0716	45.0974
199.1625					
2250.0	2221.4607	16.0393	191.9606	201.9929	45.3875
201.0780					
2260.0	2231.0451	16.0022	194.0537	203.9312	45.3113
203.0066					
2270.0	2240.6259	15.9515	196.1576	205.8761	45.4255
204.9536					
2280.0	2250.2066	16.1495	198.2572	207.8264	46.0392
206.8968					
2290.0	2259.7880	16.4614	200.3411	209.7892	46.8681
208.8559					
2300.0	2269.3702	16.6525	202.4118	211.7623	47.2429
210.8227					
2310.0	2278.9503	16.6433	204.4774	213.7510	47.2899
212.8049					
2320.0	2288.5325	16.6540	206.5379	215.7351	47.1122
214.7939					
2330.0	2298.1176	16.6176	208.5867	217.7170	46.7002
216.7748					
2340.0	2307.7036	16.6380	210.6201	219.7106	46.3791
218.7614					
2350.0	2317.2959	16.6617	212.6229	221.7045	46.0121
220.7589					
2360.0	2326.8918	16.5808	214.6101	223.6972	46.1383
222.7490					
2370.0	2336.4858	16.5610	216.5829	225.7127	45.9955
224.7506					
2380.0	2346.0858	16.4982	218.5171	227.7371	45.5511
226.7774					

2390.0	2355.6907	16.3471	220.4389	229.7502	45.0836
228.7954					
2400.0	2365.2955	16.3720	222.3651	231.7595	44.9644
230.8049					
2410.0	2374.9046	16.3499	224.2792	233.7599	44.4149
232.8118					
2420.0	2384.5177	16.1779	226.1714	235.7618	43.6248
234.8096					
2430.0	2394.1284	16.1624	228.0528	237.7854	43.6776
236.8172					
2440.0	2403.7274	16.1342	229.9423	239.8560	43.7758
238.8645					
2450.0	2413.3121	16.0204	231.8541	241.9724	43.7675
240.9612					
2460.0	2422.8898	15.9783	233.7700	244.1163	43.3005
243.0935					
2470.0	2432.4595	16.1406	235.6934	246.2895	42.8906
245.2525					
2480.0	2442.0221	16.4366	237.6240	248.4869	42.3486
247.4392					
2490.0	2451.5677	16.6523	239.5977	250.7198	42.1113
249.6516					
2500.0	2461.0875	16.7910	241.6405	252.9997	41.7821
251.9086					
2510.0	2470.5909	16.9367	243.7195	255.3155	41.5075
254.2128					
2520.0	2480.0882	17.1156	245.8140	257.6423	41.2925
256.5353					
2530.0	2489.5777	17.5890	247.9296	259.9822	41.4590
258.8685					
2540.0	2499.0619	18.0354	250.0637	262.3263	41.8983
261.2140					
2550.0	2508.5466	18.1858	252.2052	264.6617	41.9162
263.5547					
2560.0	2518.0307	18.3155	254.3530	266.9936	42.0206
265.8839					
2570.0	2527.5119	18.4556	256.5014	269.3368	42.0894
268.2229					
2580.0	2536.9940	18.4856	258.6449	271.6814	42.3693
270.5680					
2590.0	2546.4781	18.4622	260.7803	274.0248	42.5186
272.9120					
2600.0	2555.9646	18.5173	262.9078	276.3656	42.7005
275.2545					
2610.0	2565.4540	18.5384	265.0304	278.6993	42.5073
277.5921					
2620.0	2574.9454	18.5062	267.1499	281.0275	42.4518
279.9231					
2630.0	2584.4456	18.4602	269.2486	283.3387	42.3537
282.2445					
2640.0	2593.9557	18.4153	271.3280	285.6265	42.2555
284.5432					
2650.0	2603.4702	18.3759	273.4003	287.9025	42.3040
286.8231					
2660.0	2612.9965	18.2903	275.4513	290.1478	42.3565
289.0893					
2670.0	2622.5407	18.0913	277.4628	292.3531	42.2234
291.3097					
2680.0	2632.0924	17.9537	279.4577	294.5406	42.2700
293.5052					
2690.0	2641.6612	17.8718	281.4201	296.6818	42.2990

295.6747					
2700.0	2651.2469	17.5073	283.3444	298.7824	42.4919
297.7882					
2710.0	2660.8401	17.2795	285.2444	300.8704	42.3678
299.8802					
2720.0	2670.4432	17.1068	287.1178	302.9370	42.3189
301.9598					
2730.0	2680.0617	16.6752	288.9525	304.9663	42.5357
304.0116					
2740.0	2689.6918	16.4636	290.7659	306.9594	42.4759
306.0138					
2750.0	2699.3063	16.3118	292.6332	308.9774	42.2931
308.0098					
2760.0	2708.8934	16.0765	294.5735	311.0562	42.2416
310.0598					
2770.0	2718.4713	15.6691	296.5394	313.1536	42.1029
312.1594					
2780.0	2728.0505	15.7094	298.5079	315.2427	42.2736
314.2498					
2790.0	2737.6294	16.2577	300.4739	317.3353	42.7803
316.3415					
2800.0	2747.2071	16.6951	302.4425	319.4309	43.0169
318.4324					
2810.0	2756.7640	16.6828	304.4562	321.5777	43.1358
320.5446					
2820.0	2766.2859	16.6954	306.5395	323.8118	43.2921
322.7361					
2830.0	2775.7830	16.6634	308.6714	326.1054	43.1638
325.0113					
2840.0	2785.2715	16.8413	310.8248	328.4142	43.1911
327.3161					
2850.0	2794.7571	17.4396	312.9858	330.7279	43.1564
329.6290					
2860.0	2804.2435	18.0895	315.1492	333.0362	43.0249
331.9413					
2870.0	2813.7333	18.3555	317.3081	335.3346	42.8759
334.2449					
2880.0	2823.2283	18.4374	319.4571	337.6209	43.0472
336.5366					
2890.0	2832.7299	18.4655	321.5911	339.8934	43.0306
338.8170					
2900.0	2842.2375	18.4176	323.7129	342.1528	43.1374
341.0808					
2910.0	2851.7516	18.3326	325.8202	344.3982	43.1973
343.3361					
2920.0	2861.2772	18.2396	327.9047	346.6155	43.2223
345.5662					
2930.0	2870.8110	18.0908	329.9688	348.8168	43.2160
347.7733					
2940.0	2880.3567	18.0212	332.0075	350.9900	43.2145
349.9644					
2950.0	2889.9196	17.8270	334.0072	353.1233	43.1486
352.1158					
2960.0	2899.4947	17.6260	335.9768	355.2303	43.2797
354.2322					
2970.0	2909.0809	17.4844	337.9193	357.3112	43.1157
356.3293					
2980.0	2918.6847	17.1669	339.8226	359.3466	43.1447
358.3888					
2990.0	2928.3048	16.8548	341.6886	361.3396	43.1585
360.3969					

3000.0	2937.9360	16.6816	343.5270	363.3043	43.0260
362.3783					
3010.0	2947.5881	16.3748	345.3076	365.2187	42.9919
364.3175					
3020.0	2957.2545	15.9736	347.0498	367.0964	43.1007
366.2083					
3030.0	2966.9270	15.7581	348.7712	368.9615	43.0923
368.0776					
3040.0	2976.6114	15.3907	350.4600	370.7943	43.1213
369.9330					
3050.0	2986.3107	14.9663	352.1222	372.5720	42.8646
371.7343					
3060.0	2996.0053	14.7535	353.8150	374.3468	42.8901
373.4989					
3070.0	3005.6812	14.6179	355.5668	376.1650	42.7178
375.2917					
3080.0	3015.3435	14.2158	357.3509	378.0244	42.6160
377.1394					
3090.0	3025.0074	14.0569	359.1313	379.8790	43.1019
378.9995					
3100.0	3034.6736	14.3893	360.9026	381.7302	43.6381
380.8516					
3110.0	3044.3422	14.8438	362.6689	383.5738	44.0214
382.6986					
3120.0	3054.0006	14.9426	364.4707	385.4356	43.7679
384.5451					
3130.0	3063.6360	14.8678	366.3512	387.3388	43.8535
386.4271					
3140.0	3073.2541	14.8070	368.2948	389.2658	43.7022
388.3517					
3150.0	3082.8706	14.8383	370.2535	391.1858	43.7594
390.2744					
3160.0	3092.4895	15.2400	372.2073	393.0993	44.0290
392.1914					
3170.0	3102.1119	15.7778	374.1501	395.0055	44.6801
394.1013					
3180.0	3111.7313	15.9275	376.1143	396.9051	45.2057
396.0029					
3190.0	3121.3341	15.8957	378.1598	398.8027	45.5674
397.9018					
3200.0	3130.9250	15.8406	380.2776	400.6810	45.6105
399.7969					
3210.0	3140.5178	15.7694	382.4167	402.5255	45.4898
401.6505					
3220.0	3150.1079	16.0009	384.5670	404.3712	45.9535
403.4936					
3230.0	3159.6962	16.3996	386.7237	406.2189	47.1902
405.3420					
3240.0	3169.2861	16.4165	388.8758	408.0633	48.4496
407.1868					
3250.0	3178.8724	16.4249	391.0295	409.9243	49.3063
409.0353					
3260.0	3188.4501	16.4980	393.1927	411.8187	49.3483
410.9125					
3270.0	3198.0239	16.4771	395.3633	413.7244	49.4528
412.8224					
3280.0	3207.6029	16.4799	397.5190	415.6203	49.4322
414.7191					
3290.0	3217.1853	16.6074	399.6575	417.5187	49.1617
416.6175					
3300.0	3226.7738	16.8067	401.7791	419.4056	48.7621

418.5125	3236.3634	16.7276	403.9011	421.2863	48.7402
3310.0					
420.3916	3245.9501	16.6571	406.0228	423.1815	48.6755
3320.0					
422.2782	3255.5391	16.5592	408.1303	425.0817	48.3993
3330.0					
424.1802	3265.1310	16.4532	410.2251	426.9807	48.3260
3340.0					
426.0775	3274.7269	16.5042	412.3011	428.8806	48.4955
3350.0					
427.9802	3284.3328	16.5293	414.3432	430.7662	48.2251
3360.0					
429.8725	3293.9400	16.4384	416.3833	432.6477	47.9959
3370.0					
431.7529	3303.5390	16.4162	418.4472	434.5447	47.8288
3380.0					
433.6400	3313.1347	16.2360	420.5195	436.4498	47.5074
3390.0					
435.5473	3322.7383	16.0760	422.5737	438.3341	47.2189
3400.0					
437.4414	3332.3470	16.1874	424.6090	440.2129	47.3094
3410.0					
439.3219	3341.9673	16.3639	426.6108	442.0681	47.4384
3420.0					
441.1922	3351.5955	16.2702	428.5913	443.9058	47.4024
3430.0					
443.0333	3361.2290	16.1362	430.5530	445.7349	47.5246
3440.0					
444.8692	3370.8776	15.9830	432.4683	447.5335	47.2304
3450.0					
446.6854	3380.5403	15.7182	434.3393	449.3033	47.1469
3460.0					
448.4657	3390.2111	15.6447	436.1798	451.0605	47.1377
3470.0					
450.2277	3399.8926	15.4218	437.9799	452.8007	47.0263
3480.0					
451.9776	3409.5829	15.0521	439.7455	454.5269	46.8272
3490.0					
453.7087	3419.2755	14.8286	441.5018	456.2504	46.5787
3500.0					
455.4314	3428.9676	14.6311	443.2562	457.9777	46.3385
3510.0					
457.1556	3438.6601	14.3805	445.0028	459.7112	45.9641
3520.0					
458.8895	3448.3561	14.2422	446.7338	461.4408	45.5889
3530.0					
460.6183	3458.0550	14.2463	448.4539	463.1648	45.5363
3540.0					
462.3483	3467.7553	14.2736	450.1715	464.8835	45.5152
3550.0					
464.0664	3477.4534	14.1897	451.8893	466.6146	45.1728
3560.0					
465.7891	3487.1368	14.1409	453.6458	468.3878	45.0028
3570.0					
467.5351	3496.7987	14.0626	455.4590	470.2208	44.9217
3580.0					
469.3412	3506.4462	14.0669	457.3130	472.0885	45.0572
3590.0					
471.1976	3516.0857	14.2248	459.1822	473.9823	44.7131
3600.0					
473.0778					

3610.0	3525.7164	14.7017	461.0675	475.9045	44.7286
474.9872					
3620.0	3535.3396	15.1498	462.9600	477.8566	44.6465
476.9230					
3630.0	3544.9473	15.3388	464.8809	479.8571	44.8571
478.8980					
3640.0	3554.5347	15.5340	466.8456	481.9117	44.6056
480.9266					
3650.0	3564.1076	15.6909	468.8396	484.0055	44.4628
483.0071					
3660.0	3573.6732	15.9033	470.8467	486.1197	44.1069
485.1122					
3670.0	3583.2316	16.3066	472.8727	488.2484	43.8211
487.2359					
3680.0	3592.7873	16.7065	474.9083	490.3802	43.6761
489.3676					
3690.0	3602.3410	16.8768	476.9486	492.5167	43.5910
491.5003					
3700.0	3611.8911	17.0286	478.9969	494.6618	43.4848
493.6419					
3710.0	3621.4401	17.1299	481.0474	496.8091	43.6093
495.7893					
3720.0	3630.9904	17.1561	483.0950	498.9536	43.6928
497.9362					
3730.0	3640.5414	17.2190	485.1402	501.0975	43.6765
500.0777					
3740.0	3650.0909	17.2741	487.1859	503.2474	43.6919
502.2258					
3750.0	3659.6395	17.2664	489.2336	505.3991	43.6819
504.3767					
3760.0	3669.1883	17.2255	491.2801	507.5514	43.6591
506.5294					
3770.0	3678.7385	17.2564	493.3218	509.7023	43.6352
508.6804					
3780.0	3688.2889	17.2685	495.3617	511.8534	43.5609
510.8316					
3790.0	3697.8410	17.2866	497.3977	514.0014	43.5858
512.9819					
3800.0	3707.3957	17.2602	499.4264	516.1443	43.5388
515.1267					
3810.0	3716.9496	17.2479	501.4563	518.2894	43.4743
517.2697					
3820.0	3726.5019	17.2361	503.4899	520.4385	43.4699
519.4171					
3830.0	3736.0561	17.1868	505.5158	522.5863	43.4743
521.5676					
3840.0	3745.6144	17.1576	507.5316	524.7251	43.4323
523.7094					
3850.0	3755.1720	17.1996	509.5495	526.8654	43.3985
525.8489					
3860.0	3764.7318	17.2095	511.5602	529.0024	43.4121
527.9880					
3870.0	3774.2936	17.1169	513.5639	531.1375	43.3134
530.1232					
3880.0	3783.8562	17.1017	515.5648	533.2710	43.3026
532.2585					
3890.0	3793.4225	17.0921	517.5581	535.3954	43.3426
534.3881					
3900.0	3802.9940	17.0356	519.5380	537.5086	43.2657
536.5060					
3910.0	3812.5686	17.0207	521.5109	539.6149	43.1771
538.6125					

538.6165	3920.0	3822.1497	16.9830	523.4726	541.7014	43.1447
540.7150	3930.0	3831.7404	16.8811	525.4112	543.7651	43.1750
542.7884	3940.0	3841.3402	16.8024	527.3335	545.8018	43.1372
544.8416	3950.0	3850.9530	16.7320	529.2344	547.7972	43.1091
546.8573	3960.0	3860.5800	16.5393	531.1082	549.7487	43.2475
548.8275	3970.0	3870.2160	16.3678	532.9648	551.6726	43.1676
550.7637	3980.0	3879.8640	16.1440	534.7993	553.5569	43.3629
552.6679	3990.0	3889.5236	15.8308	536.6074	555.4068	43.6032
554.5329	4000.0	3899.1922	15.5924	538.3940	557.2303	43.8774
556.3674	4010.0	3908.8706	15.3906	540.1594	559.0222	43.8593
558.1785	4020.0	3918.5640	15.1146	541.8910	560.7659	44.2421
559.9439	4030.0	3928.2674	14.8770	543.5968	562.4789	44.3414
561.6692	4040.0	3937.9803	14.7087	545.2750	564.1646	44.3821
563.3693	4050.0	3947.7040	14.3907	546.9192	565.8221	44.5990
565.0388	4060.0	3957.4354	14.0957	548.5328	567.4641	44.8975
566.6857	4070.0	3967.1729	13.8859	550.1194	569.0956	44.8720
568.3232	4080.0	3976.9124	13.6266	551.7065	570.7158	44.8925
569.9463	4090.0	3986.6457	13.3896	553.3182	572.3480	44.7628
571.5701	4100.0	3996.3783	13.2309	554.9354	573.9790	44.5501
573.2062	4110.0	4006.1112	13.0950	556.5525	575.6087	44.0945
574.8328	4120.0	4015.8434	13.1694	558.1627	577.2495	44.4347
576.4686	4130.0	4025.5788	13.3118	559.7439	578.8993	44.6206
578.1137	4140.0	4035.3095	13.2506	561.3209	580.5798	44.7676
579.7725	4150.0	4045.0236	13.3026	562.9322	582.3234	44.8376
581.4847	4160.0	4054.7287	13.2496	564.5658	584.0958	44.5081
583.2551	4170.0	4064.4359	13.2063	566.1934	585.8627	43.7376
585.0209	4180.0	4074.1408	13.5062	567.8008	587.6599	43.1526
586.7999	4190.0	4083.8381	13.9205	569.4047	589.5012	42.6798
588.6181	4200.0	4093.5140	13.9127	571.0677	591.4010	42.6221
590.4872	4210.0	4103.1639	13.9273	572.7965	593.3734	42.7572
592.4249	4220.0	4112.8010	13.9887	574.5448	595.3864	41.7650

4220.0	4112.8019	13.9887	574.5448	595.3884	41.7650
594.4284					
4230.0	4122.4392	14.3381	576.2799	597.4136	40.9490
596.4473					
4240.0	4132.0783	14.9331	577.9920	599.4525	41.2374
598.4837					
4250.0	4141.7225	15.4124	579.6963	601.4734	41.2831
600.5201					
4260.0	4151.3712	15.4745	581.4255	603.4516	40.9543
602.5185					
4270.0	4161.0209	15.4707	583.1786	605.4034	40.5597
604.4782					
4280.0	4170.6707	15.3964	584.9415	607.3458	39.9650
606.4266					
4290.0	4180.3216	15.2678	586.7251	609.2638	40.0465
608.3560					
4300.0	4189.9708	15.2087	588.5327	611.1680	41.2101
610.2655					
4310.0	4199.6203	15.2230	590.3584	613.0535	42.0091
612.1621					
4320.0	4209.2665	15.1756	592.2368	614.9028	42.1292
614.0313					
4330.0	4218.9090	15.2131	594.1627	616.7230	42.9746
615.8615					
4340.0	4228.5486	15.2136	596.1106	618.5353	43.5319
617.6755					
4350.0	4238.1880	15.2386	598.0713	620.3343	44.0038
619.4822					
4360.0	4247.8269	15.3311	600.0457	622.1219	45.5682
621.2737					
4370.0	4257.4635	15.4058	602.0309	623.9083	46.6807
623.0585					
4380.0	4267.0864	15.4329	604.0507	625.7310	47.0474
624.8549					
4390.0	4276.6864	15.4369	606.1210	627.6154	47.4926
626.7097					
4400.0	4286.2711	15.4547	608.2244	629.5418	47.8742
628.6251					
4410.0	4295.8521	15.5785	610.3361	631.4766	48.0164
630.5557					
4420.0	4305.4311	16.0185	612.4524	633.4171	47.8940
632.4954					
4430.0	4315.0119	16.4808	614.5664	635.3505	47.7198
634.4343					
4440.0	4324.5965	16.6085	616.6744	637.2719	47.4994
636.3609					
4450.0	4334.1859	16.6779	618.7695	639.1837	47.4944
638.2769					
4460.0	4343.7824	16.6801	620.8415	641.0843	47.4614
640.1840					
4470.0	4353.3853	16.6075	622.8956	642.9729	47.5694
642.0773					
4480.0	4362.9958	16.5357	624.9268	644.8468	47.6660
643.9601					
4490.0	4372.6165	16.4082	626.9299	646.6986	47.6303
645.8226					
4500.0	4382.2461	16.2580	628.9057	648.5331	47.4530
647.6635					
4510.0	4391.8853	16.1376	630.8513	650.3501	47.4257
649.4911					
4520.0	4401.5387	15.9408	632.7555	652.1343	47.3068
651.2020					

651.2929	4530.0	4411.2038	15.7227	634.6234	653.8943	47.2430
653.0602	4540.0	4420.8751	15.5612	636.4713	655.6413	47.1257
654.8148	4550.0	4430.5531	15.2935	638.3049	657.3656	46.9348
656.5505	4560.0	4440.2358	14.9704	640.1316	659.0710	46.8783
658.2625	4570.0	4449.9150	14.7961	641.9639	660.7905	46.7033
659.9675	4580.0	4459.5808	14.6588	643.8209	662.5578	46.5810
661.7098	4590.0	4469.2401	14.5083	645.6885	664.3490	46.7528
663.4991	4600.0	4478.9022	14.4657	647.5448	666.1373	47.0290
665.2880	4610.0	4488.5665	14.6882	649.3917	667.9238	46.8087
667.0753	4620.0	4498.2329	14.9875	651.2323	669.7051	46.4202
668.8602	4630.0	4507.8995	14.9655	653.0724	671.4855	46.2246
670.6378	4640.0	4517.5584	14.9111	654.9347	673.2848	46.0115
672.4263	4650.0	4527.2094	14.8712	656.8197	675.1027	45.8847
674.2384	4660.0	4536.8637	14.8098	658.6926	676.9154	45.9487
676.0539	4670.0	4546.5200	14.9024	660.5581	678.7255	45.9602
677.8666	4680.0	4556.1794	15.1232	662.4122	680.5304	45.9354
679.6732	4690.0	4565.8409	15.1576	664.2516	682.3397	45.9859
681.4778	4700.0	4575.4957	15.0918	666.0855	684.1896	45.8620
683.3009	4710.0	4585.1420	15.0335	667.9155	686.0866	45.8237
685.1802	4720.0	4594.7856	14.9624	669.7440	687.9989	45.7657
687.0901	4730.0	4604.4287	14.9856	671.5693	689.9171	45.5346
689.0052	4740.0	4614.0722	15.2104	673.3934	691.8342	44.7410
690.9243	4750.0	4623.7170	15.3345	675.2162	693.7458	43.8835
692.8386	4760.0	4633.3632	15.3447	677.0361	695.6538	43.7499
694.7476	4770.0	4643.0118	15.3566	678.8435	697.5607	43.5397
696.6558	4780.0	4652.6652	15.3307	680.6298	699.4638	43.5862
698.5599	4790.0	4662.3209	15.3012	682.4017	701.3682	43.6355
700.4636	4800.0	4671.9821	15.2739	684.1600	703.2573	43.6835
702.3654	4810.0	4681.6511	15.1766	685.9213	705.1037	43.4550
704.2344	4820.0	4691.3225	15.0992	687.7169	706.9033	43.1648
706.0574	4830.0	4700.9954	15.0392	689.5384	708.6689	42.9134

707.8337	4710.6735	14.8603	691.3500	710.4159	42.8864
4840.0	4720.3540	14.7402	693.1628	712.1488	43.6441
709.5887	4730.0360	14.7225	694.9806	713.8675	45.0384
4850.0	4739.7218	14.6355	696.7942	715.5687	45.9402
711.3279	4749.4102	14.5395	698.6047	717.2594	46.0000
4860.0	4759.1023	14.5116	700.4093	718.9346	46.3026
713.0540	4768.7995	14.4442	702.2032	720.5919	46.6058
4870.0	4778.4994	14.3699	703.9913	722.2394	46.8237
714.7628	4788.2028	14.3062	705.7732	723.8735	46.9536
4880.0	4797.9110	14.1937	707.5424	725.4922	47.1509
716.4583	4807.6238	14.0932	709.2967	727.0994	47.2822
4890.0	4817.3386	14.0434	711.0472	728.6991	47.3206
718.1420	4827.0506	13.9291	712.8058	730.3064	47.4950
4900.0	4836.7617	13.8245	714.5677	731.9158	47.5589
719.8071	4846.4760	13.7199	716.3192	733.5176	47.4877
4910.0	4856.1961	13.7321	718.0498	735.1061	47.6157
721.4581	4865.9231	13.8278	719.7576	736.6773	47.6120
723.1000	4875.6491	13.7609	721.4690	738.2502	47.5746
4930.0	4885.3650	13.6571	723.2083	739.8556	47.2909
724.7250	4895.0740	13.5229	724.9580	741.4907	47.3929
4940.0	4904.7855	13.3763	726.6984	743.1211	47.3846
726.3384	4914.4985	13.5429	728.4342	744.7479	47.4161
4950.0	4924.2113	13.8240	730.1621	746.3828	47.3050
727.9390	4933.9154	13.8335	731.9080	748.0513	46.9027
4960.0	4943.6039	13.7786	733.6983	749.7619	46.8586
729.5408	4953.2889	13.7480	735.5068	751.4736	46.8907
4970.0	4962.9801	13.8132	737.2986	753.1677	46.5776
731.1537	4972.6772	14.1664	739.0763	754.8425	46.2897
4980.0	4982.3834	14.4510	740.8321	756.4884	46.2197
732.7569	4992.1004	14.3485	742.5565	758.1024	46.6203
4990.0					
734.3511					
5000.0					
735.9340					
5010.0					
737.5004					
5020.0					
739.0855					
5030.0					
740.7129					
5040.0					
742.3477					
5050.0					
743.9753					
5060.0					
745.6031					
5070.0					
747.2509					
5080.0					
748.9448					
5090.0					
750.6635					
5100.0					
752.3659					
5110.0					
754.0507					
5120.0					
755.7117					
5130.0					
757.3419					

5140.0	5001.8292	14.2103	744.2553	759.6716	46.5723
758.9344					
5150.0	5011.5741	14.0435	745.9057	761.1926	46.7116
760.4783					
5160.0	5021.3326	13.8030	747.5129	762.6717	46.8950
761.9746					
5170.0	5031.0987	13.5252	749.0952	764.1276	46.8647
763.4388					
5180.0	5040.8720	13.1844	750.6498	765.5647	47.4610
764.8842					
5190.0	5050.6510	12.7702	752.1752	766.9947	47.3228
766.3178					
5200.0	5060.4285	12.4947	753.7168	768.4171	47.4105
767.7392					
5210.0	5070.1905	12.3296	755.3258	769.8710	47.4043
769.1754					
5220.0	5079.9442	12.1309	756.9782	771.3319	47.3956
770.6413					
5230.0	5089.7020	12.0222	758.6196	772.7781	46.6969
772.0914					
5240.0	5099.4637	12.2906	760.2445	774.2161	47.3463
773.5344					
5250.0	5109.2283	12.7114	761.8611	775.6441	47.8107
774.9677					
5260.0	5118.9967	12.6949	763.4804	777.0425	48.5722
776.3854					
5270.0	5128.7654	12.5868	765.1179	778.4182	48.6208
777.7662					
5280.0	5138.5318	12.4900	766.7710	779.7912	48.4457
779.1382					
5290.0	5148.3002	12.4123	768.4177	781.1566	48.5312
780.5104					
5300.0	5158.0729	12.3246	770.0480	782.5118	49.1389
781.8726					
5310.0	5167.8519	12.3811	771.6529	783.8519	49.9690
783.2156					
5320.0	5177.6357	12.4083	773.2435	785.1734	50.3494
784.5516					
5330.0	5187.4166	12.3143	774.8665	786.4771	50.4182
785.8571					
5340.0	5197.1890	12.1324	776.5290	787.7948	50.2084
787.1656					
5350.0	5206.9628	12.0047	778.1898	789.1042	50.0800
788.4855					
5360.0	5216.7393	11.9118	779.8379	790.4096	50.1306
789.7905					
5370.0	5226.5219	12.1469	781.4648	791.6945	51.2391
791.0895					
5380.0	5236.3114	12.2833	783.0699	792.9562	51.6649
792.3596					
5390.0	5246.1044	12.1614	784.6597	794.2087	51.9417
793.6143					
5400.0	5255.8927	12.0782	786.2656	795.4779	51.5533
794.8694					
5410.0	5265.6750	11.8574	787.8894	796.7693	51.7315
796.1552					
5420.0	5275.4607	11.7055	789.5030	798.0488	51.8973
797.4437					
5430.0	5285.2487	11.7000	791.1099	799.3188	51.7210
798.7164					
5440.0	5295.0378	11.9257	792.7130	800.5846	51.7021

799.9838					
5450.0	5304.8215	11.9583	794.3340	801.8699	51.4875
801.2507					
5460.0	5314.5877	11.8367	796.0118	803.2131	51.6011
802.5658					
5470.0	5324.3370	11.7986	797.7523	804.5995	51.7806
803.9376					
5480.0	5334.0857	11.8008	799.4947	805.9878	51.7282
805.3300					
5490.0	5343.8374	12.1421	801.2219	807.3735	51.6855
806.7152					
5500.0	5353.5932	12.6910	802.9350	808.7479	51.2852
808.0992					
5510.0	5363.3518	12.9224	804.6386	810.1148	51.5117
809.4635					
5520.0	5373.1047	12.8187	806.3568	811.5033	51.5428
810.8394					
5530.0	5382.8483	12.7632	808.1035	812.9212	51.2066
812.2422					
5540.0	5392.5914	12.6095	809.8512	814.3425	51.2605
813.6706					
5550.0	5402.3398	12.6642	811.5774	815.7522	51.1800
815.0829					
5560.0	5412.0911	12.8754	813.2835	817.1668	50.9249
816.4947					
5570.0	5421.8494	13.0855	814.9686	818.5584	50.8765
817.9037					
5580.0	5431.6072	12.9270	816.6646	819.9392	50.9130
819.2823					
5590.0	5441.3606	12.8543	818.3815	821.3266	50.7896
820.6655					
5600.0	5451.1111	12.7150	820.1051	822.7255	50.2780
822.0595					
5610.0	5460.8641	12.5853	821.8138	824.1249	50.4737
823.4611					
5620.0	5470.6215	12.6859	823.5067	825.5135	50.8801
824.8560					
5630.0	5480.3831	12.8171	825.1784	826.8977	51.0690
826.2379					
5640.0	5490.1431	12.8031	826.8573	828.2841	50.9829
827.6204					
5650.0	5499.8891	12.7098	828.5968	829.6943	50.5920
829.0206					
5660.0	5509.6266	12.5683	830.3708	831.1208	50.5692
830.4448					
5670.0	5519.3680	12.5046	832.1314	832.5364	50.0553
831.8645					
5680.0	5529.1132	12.7510	833.8722	833.9516	50.5283
833.2800					
5690.0	5538.8644	13.1221	835.5849	835.3581	51.1823
834.6916					
5700.0	5548.6207	13.1090	837.2805	836.7516	51.1973
836.0909					
5710.0	5558.3781	13.0209	838.9654	838.1498	51.2343
837.4846					
5720.0	5568.1387	12.8867	840.6271	839.5523	50.8457
838.8853					
5730.0	5577.9041	12.7279	842.2592	840.9572	50.5971
840.2905					
5740.0	5587.6747	12.6589	843.8653	842.3551	50.6751
841.6919					

5750.0	5597.4523	12.6122	845.4336	843.7482	50.3122
843.0872					
5760.0	5607.2341	12.5081	846.9639	845.1532	49.8159
844.4795					
5770.0	5617.0119	12.3582	848.4749	846.6058	49.2349
845.9070					
5780.0	5626.7841	12.2183	849.9736	848.1086	49.0590
847.3880					
5790.0	5636.5574	12.0050	851.4456	849.6301	48.3693
848.9068					
5800.0	5646.3325	12.0291	852.8947	851.1622	47.4911
850.4318					
5810.0	5656.1117	12.1811	854.3167	852.6933	46.1130
851.9680					
5820.0	5665.8958	12.2776	855.7054	854.2241	44.8732
853.4972					
5830.0	5675.6831	12.1792	857.0661	855.7598	44.0402
855.0286					
5840.0	5685.4688	12.1486	858.4127	857.3178	43.4359
856.5733					
5850.0	5695.2517	11.9881	859.7542	858.8976	43.0138
858.1459					
5860.0	5705.0355	11.8669	861.0807	860.4836	42.2042
859.7275					
5870.0	5714.8111	11.8373	862.4312	862.0996	41.5445
861.3249					
5880.0	5724.5778	11.9430	863.7957	863.7582	40.7412
862.9648					
5890.0	5734.3423	11.9298	865.1444	865.4423	40.3371
864.6392					
5900.0	5744.1052	12.0068	866.4893	867.1382	39.7937
866.3323					
5910.0	5753.8709	12.3138	867.8257	868.8250	39.9640
868.0266					
5920.0	5763.6416	12.4404	869.1376	870.5017	39.4647
869.7064					
5930.0	5773.4162	12.4893	870.4236	872.1758	38.6074
871.3807					
5940.0	5783.1955	12.4884	871.6830	873.8432	38.3609
873.0533					
5950.0	5792.9794	12.3602	872.9300	875.4923	38.4863
874.7128					
5960.0	5802.7598	12.2335	874.2082	877.1384	38.0410
876.3563					
5970.0	5812.5299	12.1304	875.5498	878.7947	37.5935
878.0057					
5980.0	5822.3015	11.9903	876.8964	880.4394	37.0812
879.6659					
5990.0	5832.0820	11.9260	878.2196	882.0483	37.0474
881.2863					
6000.0	5841.8674	12.1632	879.5233	883.6444	37.8133
882.8878					
6010.0	5851.6576	12.3830	880.8239	885.2124	39.1956
884.4745					
6020.0	5861.4532	12.1175	882.1508	886.7241	39.1188
886.0157					
6030.0	5871.2493	11.9563	883.5167	888.1974	39.4673
887.5010					
6040.0	5881.0429	11.8258	884.9067	889.6646	39.2280
888.9664					
6050.0	5890.8398	11.6791	886.2937	891.1125	39.6569

890.4324	6060.0	5900.6426	11.5722	887.6622	892.5385	41.3681
891.8625	6070.0	5910.4494	11.6158	889.0187	893.9475	42.8967
893.2810	6080.0	5920.2604	11.6764	890.3698	895.3326	43.5623
894.6801	6090.0	5930.0689	11.4476	891.7379	896.7184	43.8606
896.0539	6100.0	5939.8677	11.3447	893.1276	898.1515	43.6753
897.4614	6110.0	5949.6633	11.2211	894.5168	899.6053	43.9086
898.9154	6120.0	5959.4583	11.1227	895.8892	901.0806	44.1804
900.3734	6130.0	5969.2538	11.3726	897.2382	902.5736	44.6324
901.8641	6140.0	5979.0535	11.6185	898.5561	904.0661	44.0985
903.3572	6150.0	5988.8574	11.5832	899.8370	905.5625	43.7852
904.8497	6160.0	5998.6617	11.6510	901.1009	907.0730	42.7792
906.3533	6170.0	6008.4649	11.5539	902.3583	908.5953	42.0921
907.8709	6180.0	6018.2690	11.4099	903.5970	910.1263	41.4672
909.3961	6190.0	6028.0704	11.3394	904.8259	911.6827	40.5460
910.9402	6200.0	6037.8675	11.3868	906.0714	913.2524	39.8982
912.5041	6210.0	6047.6566	11.3645	907.3459	914.8496	39.5888
914.0856	6220.0	6057.4319	11.3870	908.6677	916.4911	39.0316
915.7036	6230.0	6067.1970	11.4804	910.0171	918.1708	38.1504
917.3685	6240.0	6076.9559	11.6680	911.3899	919.8679	38.4732
919.0604	6250.0	6086.7048	11.9483	912.8147	921.5784	38.5790
920.7626	6260.0	6096.4481	12.3511	914.2778	923.2895	38.9046
922.4792	6270.0	6106.1924	12.5155	915.7705	924.9694	38.7202
924.1802	6280.0	6115.9407	12.7200	917.2984	926.5918	38.9011
925.8319	6290.0	6125.6871	12.9810	918.8933	928.1616	39.8653
927.4224	6300.0	6135.4251	13.0266	920.5367	929.7336	40.5838
928.9792	6310.0	6145.1519	12.9202	922.2082	931.3443	41.6355
930.5759	6320.0	6154.8674	12.8776	923.9139	932.9872	43.2065
932.1992	6330.0	6164.5722	13.0054	925.6516	934.6594	45.6268
933.8638	6340.0	6174.2706	13.2997	927.4091	936.3479	46.3872
935.5432	6350.0	6183.9607	13.5398	929.1925	938.0571	46.0463
937.2419	6360.0	6193.6508	13.8341	930.9800	939.7880	46.7046

6360.0	6193.6504	13.8697	930.9826	939.7622	46.0632
938.9573					
6370.0	6203.3468	14.0159	932.7765	941.4238	46.2064
940.6432					
6380.0	6213.0483	14.2015	934.5834	943.0407	46.1428
942.2781					
6390.0	6222.7540	14.3615	936.3909	944.6322	46.2240
943.8785					
6400.0	6232.4680	14.2416	938.1758	946.1980	46.3067
945.4615					
6410.0	6242.1938	14.0741	939.9352	947.7186	47.2089
947.0042					
6420.0	6251.9286	13.9913	941.6737	949.2063	48.3310
948.5017					
6430.0	6261.6683	13.8653	943.3826	950.6948	48.6869
949.9861					
6440.0	6271.4121	13.5925	945.0492	952.2054	48.6627
951.4819					
6450.0	6281.1534	13.3063	946.6843	953.7646	49.0700
953.0128					
6460.0	6290.8884	13.1719	948.2911	955.3922	49.4336
954.6099					
6470.0	6300.6148	13.0245	949.8744	957.0914	48.9664
956.2708					
6480.0	6310.3343	13.0014	951.4208	958.8633	47.7858
958.0088					
6490.0	6320.0465	13.1422	952.9450	960.6928	46.4253
959.8168					
6500.0	6329.7558	13.3133	954.4111	962.5849	44.4712
961.6748					
6510.0	6339.4606	13.5065	955.8357	964.5309	42.8647
963.6035					
6520.0	6349.1676	13.7376	957.2375	966.4825	40.9535
965.5535					
6530.0	6358.8769	13.7953	958.6011	968.4497	40.0275
967.5125					
6540.0	6368.5836	13.9200	959.9565	970.4347	37.6036
969.4880					
6550.0	6378.2926	13.9359	961.3160	972.4061	35.9416
971.4767					
6560.0	6388.0187	13.8771	962.6347	974.3201	35.8072
973.4244					
6570.0	6397.7587	13.8410	963.9209	976.1851	34.5105
975.3057					
6580.0	6407.5115	13.9636	965.1746	978.0045	34.2851
977.1472					
6590.0	6417.2732	13.6936	966.4058	979.7912	34.7567
978.9457					
6600.0	6427.0331	13.2152	967.6516	981.5784	34.5508
980.7237					
6610.0	6436.7889	12.9410	968.9063	983.3807	34.6329
982.5275					
6620.0	6446.5511	12.6070	970.1441	985.1608	34.5512
984.3167					
6630.0	6456.3192	12.5007	971.3645	986.9197	34.4272
986.0885					
6640.0	6466.0979	12.6982	972.5505	988.6434	34.9738
987.8340					
6650.0	6475.8924	12.5940	973.6833	990.3110	34.7258
989.5279					
6660.0	6485.7029	12.4683	974.7658	991.9178	34.7746
991.1252					

991.1650	6670.0	6495.5349	12.2568	975.7715	993.4401	34.8522	
992.7307	6680.0	6505.3743	11.8496	976.7490	994.9337	34.5825	
994.2247	6690.0	6515.2199	11.4093	977.6971	996.4046	34.1264	
995.7141	6700.0	6525.0737	10.8742	978.6047	997.8468	34.0276	
997.1642	6710.0	6534.9311	10.2934	979.5003	999.2708	33.2861	
998.5955	6720.0	6544.7824	10.2442	980.4226	1000.7205	33.2496	1
000.0242	6730.0	6554.6241	9.8984	981.3954	1002.2016	32.8612	1
001.4911	6740.0	6564.4620	9.7299	982.3773	1003.7020	32.0337	1
002.9891	6750.0	6574.3045	9.7106	983.3405	1005.1845	32.1891	1
004.4870	6760.0	6584.1514	10.0706	984.2884	1006.6475	31.9924	1
005.9551	6770.0	6594.0034	10.3255	985.2105	1008.0920	33.4045	1
007.4082	6780.0	6603.8592	10.3002	986.0985	1009.5325	33.1863	1
008.8476	6790.0	6613.7126	10.0821	986.9894	1010.9868	32.9796	1
010.2896	6800.0	6623.5616	9.9688	987.8994	1012.4598	32.9406	1
011.7597	6810.0	6633.4100	9.7755	988.8120	1013.9353	32.6597	1
013.2368	6820.0	6643.2604	9.7378	989.7082	1015.4066	31.5088	1
014.7077	6830.0	6653.1136	9.9257	990.5794	1016.8746	31.5686	1
016.1780	6840.0	6662.9674	10.0102	991.4476	1018.3408	31.8043	1
017.6431	6850.0	6672.8122	9.9442	992.3744	1019.8301	31.8192	1
019.1153	6860.0	6682.6448	9.8844	993.3652	1021.3591	31.3484	1
020.6286	6870.0	6692.4743	9.7779	994.3755	1022.8960	30.6760	1
022.1674	6880.0	6702.3042	9.9059	995.3923	1024.4255	30.4908	1
023.6995	6890.0	6712.1352	10.3331	996.4086	1025.9480	31.9827	1
025.2262	6900.0	6721.9646	10.5948	997.4451	1027.4670	33.0830	1
026.7449	6910.0	6731.7849	10.5855	998.5407	1029.0034	33.3034	1
028.2676	6920.0	6741.5942	10.5748	999.6861	1030.5737	33.6776	1
029.8252	6930.0	6751.4014	10.5349	1000.8422	1032.1494	33.7283	1
031.4012	6940.0	6761.2109	10.7025	1001.9969	1033.7112	34.2835	1
032.9723	6950.0	6771.0259	11.0761	1003.1376	1035.2490	35.6059	1
034.5242	6960.0	6780.8471	11.2717	1004.2769	1036.7476	36.2074	1
036.0436	6970.0	6790.6664	11.2404	1005.4671	1038.2180	36.2205	1

037.5206	6790.8664	11.2494	1005.4671	1038.2189	36.2205	1
6980.0	6800.4781	11.1420	1006.7103	1039.6969	36.5790	1
038.9943						
6990.0	6810.2897	10.9235	1007.9736	1041.1580	36.5778	1
040.4701						
7000.0	6820.1060	10.8297	1009.2370	1042.5880	37.1006	1
041.9115						
7010.0	6829.9257	11.0249	1010.4975	1043.9962	39.1158	1
043.3324						
7020.0	6839.7500	11.1917	1011.7543	1045.3761	40.0652	1
044.7250						
7030.0	6849.5707	11.0549	1013.0444	1046.7505	40.8373	1
046.0940						
7040.0	6859.3790	10.9627	1014.3965	1048.1537	41.5320	1
047.4821						
7050.0	6869.1803	10.8123	1015.7883	1049.5667	41.8482	1
048.9001						
7060.0	6878.9854	10.7460	1017.1870	1050.9462	42.2420	1
050.2961						
7070.0	6888.7944	11.0398	1018.5813	1052.3028	43.2074	1
051.6619						
7080.0	6898.6089	11.4068	1019.9659	1053.6288	44.0696	1
053.0043						
7090.0	6908.4297	11.4044	1021.3430	1054.9150	44.4760	1
054.3123						
7100.0	6918.2500	11.2658	1022.7531	1056.1695	45.4385	1
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7110.0	6928.0653	11.1535	1024.1948	1057.4270	45.7186	1
056.8262						
7120.0	6937.8814	10.9465	1025.6339	1058.6804	46.3157	1
058.0894						
7130.0	6947.7010	10.8239	1027.0627	1059.9189	46.9099	1
059.3336						
7140.0	6957.5273	10.9485	1028.4707	1061.1277	48.3127	1
060.5587						
7150.0	6967.3610	11.0726	1029.8549	1062.3040	48.9609	1
061.7495						
7160.0	6977.2015	10.9446	1031.2143	1063.4511	48.9223	1
062.9120						
7170.0	6987.0491	10.8100	1032.5492	1064.5662	49.0677	1
064.0411						
7180.0	6996.9020	10.5788	1033.8646	1065.6575	49.3848	1
065.1425						
7190.0	7006.7590	10.3644	1035.1618	1066.7322	49.7399	1
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7210.0	7026.4777	9.9247	1037.7319	1068.8693	50.1665	1
068.3549						
7220.0	7036.3314	9.7634	1039.0358	1069.9660	50.3475	1
069.4415						
7230.0	7046.1762	9.6364	1040.3817	1071.0923	50.3588	1
070.5515						
7240.0	7056.0133	9.5832	1041.7607	1072.2462	50.3611	1
071.6963						
7250.0	7065.8504	9.7211	1043.1349	1073.4044	50.1498	1
072.8540						
7260.0	7075.6894	9.9337	1044.4980	1074.5605	49.8645	1
074.0122						
7270.0	7085.5317	10.2786	1045.8409	1075.7126	50.1550	1
075.1653						

073.1033	7280.0	7095.3729	10.3743	1047.1846	1076.8715	50.0877	1
076.3186	7290.0	7105.2045	10.3340	1048.5766	1078.0555	49.8559	1
077.4873	7300.0	7115.0285	10.2448	1050.0056	1079.2572	49.6958	1
078.6862	7310.0	7124.8530	10.1603	1051.4371	1080.4537	49.3579	1
079.8868	7320.0	7134.6799	10.3374	1052.8623	1081.6376	49.1848	1
081.0782	7330.0	7144.5125	10.7062	1054.2679	1082.7963	49.6389	1
082.2511	7340.0	7154.3515	10.7696	1055.6544	1083.9247	49.9991	1
083.3932	7350.0	7164.1958	10.7310	1057.0245	1085.0255	50.1155	1
084.5063	7360.0	7174.0440	10.6028	1058.3807	1086.1086	50.2731	1
085.5983	7370.0	7183.8981	10.3856	1059.7160	1087.1641	50.5224	1
086.6677	7380.0	7193.7581	10.2091	1061.0296	1088.1914	50.9211	1
087.7063	7390.0	7203.6224	10.0651	1062.3240	1089.2009	51.2458	1
088.7260	7400.0	7213.4922	9.8972	1063.5969	1090.1840	51.3744	1
089.7205	7410.0	7223.3666	9.6958	1064.8487	1091.1473	51.6594	1
090.6935	7420.0	7233.2481	9.5300	1066.0666	1092.0821	52.0405	1
091.6438	7430.0	7243.1356	9.3428	1067.2548	1092.9896	51.9998	1
092.5612	7440.0	7253.0283	9.1836	1068.4165	1093.8763	52.3362	1
093.4594	7450.0	7262.9273	8.9706	1069.5452	1094.7334	52.4338	1
094.3291	7460.0	7272.8291	8.6920	1070.6598	1095.5781	52.4707	1
095.1779	7470.0	7282.7317	8.5178	1071.7687	1096.4190	52.6262	1
096.0210	7480.0	7292.6387	8.2599	1072.8529	1097.2412	52.5904	1
096.8545	7490.0	7302.5503	8.0769	1073.9124	1098.0405	52.9617	1
097.6647	7500.0	7312.4659	8.0278	1074.9487	1098.8186	52.8745	1
098.4523	7510.0	7322.3852	7.9275	1075.9628	1099.5799	52.8357	1
099.2206	7520.0	7332.3072	7.7198	1076.9598	1100.3273	52.8424	1
099.9745	7530.0	7342.2317	7.5365	1077.9420	1101.0618	52.9603	1
100.7150	7540.0	7352.1591	7.3542	1078.9052	1101.7834	53.1015	1
101.4431	7550.0	7362.0892	7.2236	1079.8499	1102.4901	53.0943	1
102.1567	7560.0	7372.0224	7.0997	1080.7752	1103.1803	53.1490	1
102.8557	7570.0	7381.9585	6.9803	1081.6810	1103.8523	53.2681	1
103.5359	7580.0	7391.8981	6.8453	1082.5606	1104.5078	53.0983	1

104.1998	7590.0	7401.8413	6.7062	1083.4145	1105.1436	53.2133	1
104.8444	7600.0	7411.7874	6.5501	1084.2483	1105.7600	53.3037	1
105.4707	7610.0	7421.7358	6.3974	1085.0701	1106.3558	53.4901	1
106.0763	7620.0	7431.6858	6.1930	1085.8854	1106.9316	53.2128	1
106.6614	7630.0	7441.6372	6.0341	1086.6941	1107.4930	53.3179	1
107.2274	7640.0	7451.5904	5.8782	1087.4892	1108.0439	53.5536	1
107.7852	7650.0	7461.5457	5.7791	1088.2651	1108.5801	54.0291	1
108.3271	7660.0	7471.5027	5.6813	1089.0286	1109.1056	54.7753	1
108.8579	7670.0	7481.4610	5.6155	1089.7794	1109.6238	55.3215	1
109.3782	7680.0	7491.4200	5.4756	1090.5209	1110.1418	55.2690	1
109.8951	7690.0	7501.3794	5.3590	1091.2557	1110.6630	55.3628	1
110.4153	7700.0	7511.3392	5.2763	1091.9833	1111.1844	55.4973	1
110.9368	7710.0	7521.2992	5.2006	1092.7085	1111.7065	55.3606	1
111.4581	7720.0	7531.2595	5.1842	1093.4279	1112.2323	55.0820	1
111.9818	7730.0	7541.2198	5.1476	1094.1441	1112.7605	54.6162	1
112.5094	7740.0	7551.1802	5.1304	1094.8576	1113.2881	54.3470	1
113.0378	7750.0	7561.1411	5.1204	1095.5665	1113.8148	54.2821	1
113.5645	7760.0	7571.1022	5.1055	1096.2743	1114.3413	53.8307	1
114.0914	7770.0	7581.0636	5.1052	1096.9800	1114.8653	53.5642	1
114.6171	7780.0	7591.0254	5.0737	1097.6810	1115.3844	53.5365	1
115.1390	7790.0	7600.9879	5.0649	1098.3816	1115.8929	53.3669	1
115.6537	7800.0	7610.9502	5.0542	1099.0932	1116.3898	53.3668	1
116.1550	7810.0	7620.9129	5.0263	1099.8068	1116.8752	53.4009	1
116.6477	7820.0	7630.8767	4.9832	1100.5134	1117.3463	53.4208	1
117.1235	7830.0	7640.8408	4.9597	1101.2188	1117.8155	53.9978	1
117.5927	7840.0	7650.8048	4.9898	1101.9242	1118.2846	55.2294	1
118.0618	7850.0	7660.7689	4.9007	1102.6297	1118.7537	55.7384	1
118.5309	7860.0	7666.0000	4.8597	1103.0000	1119.0000	56.3750	1
119.0000							

Company: **Off Energy, LLC**

Schlumberger

Well: **Lakes 31-32D**
Field: **LaPoudre South**
County: **Weld**
State: **Colorado**

Platform Express
Directional Survey
True Vertical Depth