

**Variation in Trace Element Geochemistry of Freshwater Mussels
Lampsilis, *Lasmigona complanata*, and *Potamilns alatus* from the
Cannon River, Faribault, MN**

**Keith Christianson, Cicely Miltich, Louise Miltich, Selena Pang and Grant Rozier
Carleton College, Northfield, MN**

ABSTRACT

Both marine and freshwater molluscs have been the focus of study because of their ability to record, in their shell layers, some signature of the changing conditions of the environments in which they live. By observing variation in the amount of certain trace elements incorporated into successive layers of shell growth, workers have been able to derive important information about temperature variability, changes in productivity levels in surrounding water and alterations in climatic conditions.

This study focuses on variations in the amount of strontium, barium and manganese incorporated into the successively deposited layers of carbonate that make up the shells of freshwater molluscs collected from the Cannon River near Faribault, South-central Minnesota. By combining bulk chemical analysis and electron-microprobe data, fluctuations across time that may indicate some systematic connection between biological changes, environmental conditions (such as seasonality) and the trace element chemical composition of the shell material can be identified. Although certain variability is visible in the data, the ability to attribute these patterns to specific environmental or biological constraints is limited by a variety of technical and sampling limitations. The results of this study, however, indicate a strong, systematic variability in the trace element composition of freshwater molluscs (*Lampsilis*, *Lasmigona complanata*, and *Potamilns alatus*).

INTRODUCTION

The shells of accretionary organisms, such as bivalves, whose skeletons are made up of successively deposited layers of carbonate that accumulate over the organism's lifetime, can be used as proxies for variations in the living conditions of these organisms. Growth layers can be grouped into discrete bands with distinct thickness, color and chemical composition. This banding occurs on both macroscopic and microscopic levels revealing different details about the organism and its environment (figure 1). Alternating light and dark layering, visible to the naked eye occurs on a seasonal time scale (Jones and Quitmyer, 1996). Changes in isotope and trace element composition across microscopic layers and within seasonal growth banding reflect changing environmental parameters on a more detailed scale over the life span of a given mollusc (Crisp, 1983; Kaandorp et al., 2003; Rodland et al., 2003; Yurko et al., 1998). Although compositional patterns can reflect a mix of environmental and biological factors (Putten et al., 2000), high resolution studies of compositional changes offer a preliminary understanding of how these two factors are recorded in freshwater molluscs.

This study uses bulk chemical analysis and electron microprobe analysis to examine compositional changes across growth bands in freshwater mollusc species including *Lampsilis*, *Lasmigona complanata*, and *Potamilns alatus* collected from the Cannon River, a tributary of the Mississippi River, between Northfield and Faribault, Minnesota. Systematic patterns in the trace element geochemistry across growth banding in these molluscs is used, along with well documented observations of similar trends in other species of both marine and freshwater bivalves, to draw correlations between seasonal changes in water chemistry, ontogenetic trends, and trace element variability.

Figure 1

GEOLOGIC SETTING

The Cannon River begins in Shields Lake and enters the Mississippi River 120 miles downstream and has a 1462 square mile watershed (Anderson, 2000). The watershed located in Blue Earth, Dakota, Freeborn, Goodhue, Le Sueur, Rice, Scott, Steele, and Waseca Counties is composed primarily of cropland and also contains deciduous forests and four types of prairie: dry prairie, mesic prairie, wet prairie, and sand prairie. Glaciers shaped the watershed during the Pleistocene period. The elevation of the sample area is approximately 290 meters. The Cannon River experiences its highest flow of water during the months of March and April, due to snow melt and rain. Reduced flow occurs during the summer, fall, and winter. The Cannon River contains 9 concrete dams. Dams can have significant effects on the organisms that live in rivers by hindering their movement patterns, and ultimately changing migration and breeding behaviors (Carlson, 2004).

The molluscs used in this study were collected from a death assemblage near the Faribault dam during a period of drought between 1998 and 1999 (Figure 2). The shells are composed of calcium carbonate in the form of aragonite and calcite and incorporate trace amounts of strontium, barium, cesium, iron and magnesium. Freshwater mussels of these species undergo a larval period during which they travel attached to the gills of a host fish followed by a transformation into a bottom dwelling juvenile phase ((Seddon, 2003)For further information see <http://www.dams.org/>). During shell deposition in the mature phase, seasonal changes in light and temperature as well as the abundance of food and chemical composition of the waters that the molluscs inhabit are known to affect the

Figure 2

growth rate and the particular features, such as thickness and frequency of dark/light alternation, of growth banding (Jones and Quitmyer, 1996).

METHODS

Samples were collected from the Cannon River near the Faribault Dam. Two samples of the *Lampsilis species* were designated for use in the microprobe analysis (CRML5 and CRML1A). Three samples, one of each species present in the study area, (*Lampsilis*, *Lasmigona complanata*, and *Potamilns alatus*) were designated for use in the bulk analysis portion of the study (CRML5, CRMP3 and CRMW2A) (figure 3). The bulk chemical composition of the *Lampsilis* sample (CRML5) was analyzed in order to identify trace elements of interest that would later be analyzed in greater resolution for this same sample during the microprobe portion of the study.

Bulk chemical analysis was conducted by ACTLabs in Ontario, Canada. Samples were prepared by grinding whole shells or portions of whole shells into a fine powder. After grinding, samples were packaged and shipped away to be analyzed. Results of bulk chemical analysis were examined and trace elements appearing in consistently measurable amounts were designated for further study under the microprobe.

Thin sections for this study were made using cross sections cut perpendicular to growth banding in the two samples of *Lampsilis*. Thin sections were prepared and polished by professor Bereket Haileab. All microprobe analyses were done on April 29 and April 30, 2005 at the University of Utah Electron Microprobe Laboratory using a Cameca SX-50 Electron Microprobe. Thin sections were carbon coated before analysis using vacuum evaporator. The microprobe was calibrated for calcium and oxygen using

Figure 3

a calcite standard, strontium using a strontianite standard, barium using a barite standard, iron using a hematite standard and manganese using a rhodonite standard. During analysis, an accelerating voltage of 15 keV was used with a beam current of 25nA. The beam diameter used in the analysis was 10 microns and analyses were taken at 100 micron intervals along each sample transect. Three transects were analyzed for sample CRLM5 running more or less perpendicular to growth banding along the length of the thin section of shell from the outer (older) edge of the shell to the inner (younger edge of the shell) see figure 4. Two transects were analyzed for sample CRML1A, again running perpendicular to growth banding with one shorter transect across older banding and a longer transect across a wider range of banding see figure 4.

Microprobe data are presented as weight percent for each chemical group CaCO_3 , BaCO_3 , MnCO_3 and SrCO_3 . Points for which the group totals were less than 60% were discarded and the remaining points were used for analysis. Due to the porosity of the sample and some difficulties in sample preparation this low total value was deemed a reasonable threshold for accepting data points in the initial phases of data analysis. In the more detailed phases of data analysis only the points with group totals greater than 90% were accepted.

Figure 4, Transects

RESULTS

Table 1. Data points analyzed for CRM-L5

	CRM-L5	CRM-L1A
Transect 1	381 data points	411 data points
Transect 2	398 data points	149 data points
Transect 3	400 data points	--
Total	1179 data points	560 data points

The raw data consists of a collection of 1739 data points divided between two samples and five transects. CaO, SrO, BaO and MnO are measured at each sample point and are reported as an un-normalized percent weight. The intensity of the return signal is also measured at each sample point and is reported as the percent of the original signal intensity. Each sample point is described by an x, y and z coordinate, (see data appendix). The x and y coordinates of each transect vary linearly, and the z coordinate varies at each point according to the thickness of the sample.

CRM-L5 has three transects of approximately equal length originating from the same point but with different orientations. However, all three of the CRM-L5 transects are elongated along the x axis (figure 4). Therefore, for the purpose of simplicity, weight percent data along each transect are coupled with **the x coordinate of the associated sample point alone** (without reference to the y or z coordinate).

In all CRM-L5 transects, the orientation of the sample in the microprobe chamber assigns “young” material (meaning material accreted early in the mussel’s life) negative x coordinates and assigns older material positive coordinates (figure 4). Also, because

some transects are at an angle to the growth axis, a single growth band is represented by a different range of x coordinates in each transect. This is important to remember when comparing the weight percent data from different CRM-L5 transects.

CRM-L1A has two transects that also originate from the same point, but have different lengths and different orientations (figure 4). Again, for simplicity, weight percent data from each transect are coupled with the x coordinate. Again, young material (accreted when the clam was young) is assigned negative x values and old material is assigned positive x values.

The raw and un-normalized weight percent CaO, SrO, BaO and MnO of CRM-L5 are now reported. In transect 1, CaO counts for about 95% weight at negative x values (“young” material). From $x=-13100$ to $x=7000$, CaO is fairly steady around 97% (with 6 outlying points between 69% and 87% CaO). Beyond $x=7000$, both CaO percentage and the intensity of the return signal (not shown) begin to drop rapidly. At $x=17000$, the CaO is 65%. SrO varies between 0.2% and 0.5%. BaO varies from 0% to 0.1%. MnO also varies from 0% to 0.1% (figure 5).

CRM-L5 transect 2 is transect down the middle of the sample. It has the highest intensity of return of all the transects from both samples (figure 5). In general, the trace element oxides have returns 3-4 times as strong as the other four transects. CaO does not show a drop off in return intensity of the same magnitude as the other CRM-L5 transects. CaO varies between 95% and 100% across the entire transect, except for a short section with values above 100% near $x=-19000$. SrO varies between 0% and 2% SrO. BaO varies between 0% and 0.4. MnO varies between 0% and 0.4%.

Figure 5

The CaO weight percent in CRM-L5 transect 3 varies from 90% to 95% from $x=-20100$ to $x=14000$ (figure 5). From $x=14000$ to $x=20000$, both the weight percent CaO and the intensity of return (not shown) drop sharply as in CRM-L5 transect 1. CaO at $x=20000$ is 62%. SrO varies from 0.2% to 0.5%. BaO varies from 0% to 0.1%. MnO varies from 0% to 0.1%.

The raw and un-normalized weight percent CaO, SrO, BaO and MnO of CRM-L1A are now reported. In transect 1, CaO accounts for about 95% weight in “mature” material with x coordinates greater than $x=-5400$, although there are numerous outliers. Both the CaO weight percent and intensity of return (not shown) drop to 65% as the x coordinates proceed from $x=-5400$ to $x=-20400$. Weight percent SrO varies from 0% to 0.7%, and also appears to diminish as the x coordinate changes from $x=-5400$ to $x=-20400$. BaO varies from 0 % to 0.1 %. MnO varies from 0% to 0.08%.

CRM-L1A transect 2 is the shortest transect with only 149 sample points. Weight percent CaO varies consistently between 90% and 97% across the entire transect. SrO varies from 0% to 0.7%. BaO varies from 0% to 0.1%. MnO varies from 0% to 0.1%.

There are data points in all the transects that, for whatever reason, returned unacceptably low weight percents of CaO. If the weight percent CaO at these points is unacceptable, then so are the weight percents of SrO, BaO and MnO. For each transect, any sample point with weight percent CaO less than 90% is removed. The remaining sample points are replotted in the same way as the raw data before. SrO, BaO and MnO are plotted together (figures 6, 7, 8).

Figure 6

Figure 7

Figure 8

The results of this grooming are presented in the following table.

Table 2. Data points removed for CRM-L5 and CRM-L1A

	CRM-L5	CRM-L1A
Transect 1	73 data points removed	150 data points removed
Transect 2	4 data points removed	9 data points removed
Transect 3	80 data points removed	--

DISCUSSION

The data show variability in trace element chemistry that is visible on a 100 μm scale. Fluctuations in the Sr, Br and Mn data are large enough and consistent enough for us to reasonably infer that some factor is influencing the mollusc to regularly incorporate more or less of each of the trace elements into its shell. A variety of previous studies of a similar nature have suggested that these sorts of observable trends exist and can be correlated to a number of environmental and biological factors (Crisp, 1983; Dettman and Lohmann, 1994; Putten et al., 2000; Strecher et al., 1996; Yurko and C; Rollins, 1998). In order to draw such correlations from our study, however, certain environmental or biological constraints specific to this study area and the particular species being studied must be identified.

Two important points should be considered before any broad conclusions are drawn from the data correlating peaks and valleys to specific biological or environmental changes. First, our measuring technique had some limitations due to sample porosity and the consistency of the polish on the thin sections that often caused the total percent

returned from points analyzed to be lower than expected. In order to draw reliable conclusions about the significance of observed patterns in the data more than half of the data points had to be excluded because they reflected the un-reliability of the sampling method more strongly than any geologically significant trend in trace element chemistry across the shell. Second, our ability to interpret the data is somewhat limited by our inability to index quantitative microprobe data to shell growth patterns, specifically pairs of dark and light annual growth bands. If we could correlate each point to a specific band (light or dark) we could potentially relate seasonality to changes in trace element chemistry. Although some of the points can be roughly assigned to visible banding, these assignments are speculative at best. Because the assignments took place after the microprobe analysis was complete and were made by looking at a similar (but different) thin section, estimating where the transects lay, and broadly assigning groups of points to certain bands, the reliability of interpretations derived by this method are questionable.

Sr data shows a wide range of variability across the transect. While a variety of high and low values are present, there is no overall trend of increase or decrease over the lifetime of the clam. The data shows some trends that are arguably peaks and valleys, however, these trends do not seem to occur at regular intervals, nor do the widths of the peaks and valleys seem to be consistent.

The observed trends in Sr variability across samples examined in this study should be interpreted with caution. It is possible that Sr/Ca ratios are affected by seasonal changes in the organic nature of the water in which the clams are growing. Because we are unable to link Sr values to known seasonal banding on the mussel shell, we are unable to relate the fluctuations in strontium content that we observe to seasonal

environmental changes. However, because changes in Sr/Ca ratios are relatively small in most freshwater environments but appear to be quite pronounced in some mussel shells, it has been reasoned that changes in Sr values observed over a transect are controlled by factors other than variations in water chemistry and temperature. It has been suggested that the changes in Sr values across growth banding in mussel species that have a high amount of mantle metabolic activity is affected by the rate at which Ca is pumped across the mantle (Putten et al., 2000). Therefore, species with lower mantle metabolic activity exhibit Sr values which more closely mirror the Sr values found in the surrounding environment, whereas, growth banding in species with more mantle metabolic activity exhibits variations in Sr that does not necessarily reflect any environmental trend. Since we are unable to observe the growth rate or measure mantle metabolic activity for this specific species, we cannot draw any strong conclusions about the role of biological factors versus environmental factors in controlling the incorporation of Sr. Interpretation of the Sr data is further complicated by the fact that the ability of a mussel to incorporate Sr into the shell might also be influenced by the presence of Mg. It is possible that when a Mg cation is incorporated into the shell, it disrupts the existing pattern of Ca cations, thus creating spaces that can be filled by Sr, which has a larger ionic radius than Ca (Putten et al., 2000). Because our microprobe analysis did not include Mg, we are unable to make observations that might verify the existence of this sort of relationship.

Mn data show variation over the transect but no systematic pattern of peaks and valleys is observable. A relatively random distribution of high and low values is present across each transect. The majority of Mn values are measured at or near zero, though no

broad, uninterrupted series of zero values exists. Because high and low values are interspersed, no intervals of consistently high or low values can be grouped to produce broad, robust peaks or valleys that might be forgeable to seasonal or biological variables. Since Mn values do not display any significant increase or decrease across the transect, it appears that over the life span of the mussel, the amount of Mn incorporated into the shell remains fairly consistent. Additionally, Mn values do not appear to be systematically correlated to either Ba or Sr values, indicating that the factors governing changes in each of these trace elements are most likely distinct and independent of one another.

Ba data also display variation over the transect. While a distribution of high and low values exist, there is no overall trend of increase or decrease across the transects. A majority of the Ba values also fall at or near zero. However, the zero values are sporadically separated by higher values. Similar to the Mn values, Ba values do not appear to be related to Sr data.

In marine molluscs, Ba and Mn peaks tend to correlate with the spring phytoplankton bloom, which generally occurs in April. Decaying diatoms precipitate a larger amount of barite into the water. Since many mussels are filter-feeding bivalves, the barium is potentially taken in as food, metabolized, and sequestered into the shell. Differences in the concentrations of Ba found among individuals and species may be a result of the presence of varying species of algae (Putten et al., 2000). While barium production in the ocean is not a good analog for freshwater barium production, this information can still provide us with general insight as to how Ba is incorporated into a mollusc shell.

Concentrations of Ba in freshwater clams has been known in to reflect the level of dissolved Barium in the given environment, however, in other cases, in which different freshwater species were sampled, no correlation exists (Fritz et al., 1990). No specific seasonal pattern in the amount of dissolved Barium in freshwater environments has been identified. Instead, Barium concentration has been tentatively linked to exogenous factors. High levels of Barium, for example, are often associated with input from heavy industrial activity, particularly glass and ceramics manufacturing (Fritz et al., 1990).

Our data does not suggest major or systematic fluctuation in Ba and Mn levels across time, which is to be expected since no major change in industrial activity has been recorded during the period of study. Since it is likely that Ba and Mn values in a shell are directly related to the amount of these trace elements in the surrounding environment, the relatively consistent values we received for both elements can be used to explain a constant level of Ba and Mn in the environment.

CONCLUSIONS

Freshwater mollusc (*Lampsilis*) shells from the Cannon River record variation at the 100 μ m in the levels of Sr, Ba, and Mn. However, this variation does not appear to follow any clear, systematic trend. Peaks and valleys in the data do not occur at regular intervals and are not of consistent duration or extremity. While other studies of a similar nature have drawn some conclusions about what causes these fluctuations, and point to various environmental and biological factors as controls over trace element chemistry, our study was too limited to draw similar conclusions. While variations observed in our data could be interpreted as indicators of seasonality or as indicators of stability in

exogenous factors (such as industrial activity), additional research is needed in order to verify these relationships for our data.

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Data Appendix
CRWL5
Transect #1

X axis Value	CaCO3	BaCO3	MnCO3	SrCO3	Sum
-18065	88.919932	0	0.0125538	0.2224068	89.1548926
-17965	92.1015304	0	0	0.2291464	92.3306768
-17864	90.0137625	0.041673	0	0.2999122	90.3553477
-17764	92.3637501	0.02874	0	0.1651202	92.5576103
-17663	87.8535721	0	0.0271999	0.1465863	88.0273583
-17563	91.4147647	0	0.0564921	0.0994091	91.5706659
-17462	92.8432374	0	0.0271999	0.1870239	93.0574612
-17362	86.3701581	0.015807	0	0.185339	86.5713041
-17261	94.7736735	0.02874	0.0292922	0.1415316	94.9732373
-17161	95.0458825	0.068976	0.0606767	0.101094	95.2766292
-17060	93.180377	0.011496	0	0.16849	93.360363
-16960	95.7751028	0.001437	0.0020923	0.2999122	96.0785443
-16859	95.7176642	0.001437	0	0.1280524	95.8471536
-16759	96.0647931	0	0.0523075	0.2392558	96.3563564
-16658	93.642383	0	0	0.0606564	93.7030394
-16558	92.7283602	0	0	0.1162581	92.8446183
-16457	92.6384564	0.053169	0	0.3757327	93.0673581
-16357	92.6759163	0.015807	0	0.3117065	93.0034298
-16256	93.929576	0.012933	0.0251076	0.1752296	94.1428462
-16156	93.2228316	0	0	0.2881179	93.5109495
-16055	92.9681039	0	0	0.3235008	93.2916047
-15955	93.2103449	0	0	0.1583806	93.3687255
-15854	95.8350388	0	0.041846	0.4532381	96.3301229
-15753	94.1743143	0.012933	0.0020923	0.4313344	94.620674
-15653	95.2356796	0.031614	0	0.1297373	95.3970309
-15553	94.0244745	0	0.0167384	0.387527	94.4287399
-15452	94.1318597	0	0	0.2948575	94.4267172
-15352	86.5374792	0	0.0146461	0.3555139	86.9076392
-15251	92.7708148	0	0	0.1769145	92.9477293
-15151	93.7972175	0.037362	0.0313845	0.101094	93.967058
-15051	93.8097041	0.037362	0.0355691	0.3167612	94.1993964
-14950	94.5838764	0.033051	0.0146461	0.269584	94.9011575
-14850	94.369106	0	0	0.252735	94.621841
-14749	94.3865874	0.051732	0	0.3133914	94.7517108
-14649	94.171817	0.02874	0	0.2746387	94.4751957
-14548	94.5813791	0.04311	0	0.353829	94.9783181
-14448	94.6762776	0	0	0.2156672	94.8919448
-14347	95.0184118	0.063228	0	0.3639384	95.4455782

-14247	94.5938657	0.067539	0.0062769	0.4936757	95.1613573
-14146	94.7387109	0.008622	0	0.2224068	94.9697397
-14046	94.5489138	0.010059	0	0.4178552	94.976828
-13945	95.1083157	0	0.0104615	0.2746387	95.3934159
-13845	94.8211228	0	0	0.353829	95.1749518
-13744	95.0259038	0.070413	0.0020923	0.4582928	95.5567019
-13644	95.0733531	0	0.041846	0.2780085	95.3932076
-13543	95.4529473	0	0	0.2881179	95.7410652
-13443	94.936	0	0	0.084245	95.020245
-13342	95.1357864	0	0	0.1769145	95.3127009
-13242	94.8810587	0	0.0104615	0.5644415	95.4559617
-13141	94.4689992	0	0	0.1499561	94.6189553
-13041	94.9335026	0.04311	0	0.3285555	95.3051681
-12940	95.0234065	0	0	0.0994091	95.1228156
-12841	95.5253698	0.097716	0	0.3504592	95.973545
-12739	95.0533745	0.050295	0	0.2948575	95.398527
-12639	95.9474186	0.004311	0.0041846	0.2780085	96.2339227
-12538	95.0883371	0	0	0.1752296	95.2635667
-12438	94.7437055	0.020118	0	0.1297373	94.8935608
-12337	95.7576215	0.040236	0.0271999	0.134792	95.9598494
-12237	95.7076749	0.033051	0	0.3268706	96.0675965
-12136	96.1122424	0.080472	0.0271999	0.1954484	96.4153627
-12036	95.5128832	0	0	0.1634353	95.6763185
-11936	95.7476322	0	0	0.2847481	96.0323803
-11834	96.4993285	0.050295	0	0.0859299	96.6355534
-11735	95.8999693	0	0.0041846	0.2375709	96.1417248
-11634	95.1208024	0.034488	0.0230153	0.3689931	95.5472988
-11534	95.685199	0.027303	0.0732305	0.2106125	95.996345
-11433	95.6802043	0	0	0.2122974	95.8925017
-11333	95.2381769	0	0.0251076	0.4464985	95.709783
-11233	95.0783478	0.008622	0.0041846	0.3605686	95.451723
-11132	95.2981128	0	0.0167384	0.1533259	95.4681771
-11031	95.4005033	0.058917	0	0.3521441	95.8115644
-10931	94.868572	0.02874	0	0.3605686	95.2578806
-10830	96.2620822	0.054606	0	0.5088398	96.825528
-10730	94.9734599	0.020118	0	0.5088398	95.5024177
-10629	95.655231	0.041673	0	0.1415316	95.8384356
-10529	95.7251562	0	0.0083692	0.2072427	95.9407681
-10428	95.0358932	0	0	0.2510501	95.2869433
-10328	94.7911548	0.037362	0.0690459	0.2763236	95.1738863
-10227	95.8774934	0.002874	0	0.6318375	96.5122049
-10127	96.3569807	0.02874	0	0.3976364	96.7833571

-10026	95.8000761	0	0	0.3892119	96.189288
-9926	95.5778138	0	0.0146461	0.2257766	95.8182365
-9825	94.2392449	0.02874	0.0083692	0.3723629	94.648717
-9725	95.7501295	0.063228	0	0.1802843	95.9936418
-9624	95.6302577	0	0	0.3622535	95.9925112
-9524	96.4144193	0	0.0125538	0.2948575	96.7218306
-9423	95.7726055	0	0	0.4296495	96.202255
-9323	95.7176642	0	0.0188307	0.370678	96.1071729
-9222	96.147205	0.004311	0	0.3336102	96.4851262
-9122	95.7626162	0	0.0564921	0	95.8191083
-9022	94.8411014	0.027303	0.0271999	0.4161703	95.3117746
-8921	95.4754232	0.021555	0	0.0977242	95.5947024
-8821	95.5803111	0	0	0.3757327	95.9560438
-8720	96.381954	0.020118	0	0.1752296	96.5773016
-8620	95.5553378	0.010059	0	0.151641	95.7170378
-8519	95.8600121	0.031614	0.0104615	0.4330193	96.3351069
-8419	96.147205	0	0.0062769	0.2914877	96.4449696
-8318	95.3555514	0.058917	0	0.4330193	95.8474877
-8218	95.9449213	0	0	0.4464985	96.3914198
-8117	95.5128832	0	0	0.6166734	96.1295566
-8017	95.7626162	0.031614	0	0.2999122	96.0941424
-7916	95.9099587	0	0	0.3622535	96.2722122
-7816	96.1946543	0.020118	0.0083692	0.2881179	96.5112594
-7715	95.7626162	0	0.0251076	0.0522319	95.8399557
-7615	95.1982196	0	0	0.5307435	95.7289631
-7514	96.2021463	0.002874	0.020923	0.1415316	96.3674749
-7414	96.2221249	0	0.0230153	0.1583806	96.4035208
-7313	95.8250494	0.008622	0	0.0724507	95.9061221
-7213	96.5193072	0.041673	0	0.2122974	96.7732776
-7112	95.5078885	0.015807	0	0.4178552	95.9415507
-7012	95.7850922	0	0.041846	0.3049669	96.1319051
-6911	95.5878031	0	0.0188307	0.252735	95.8593688
-6811	95.9898732	0.025866	0	0.2207219	96.2364611
-6710	94.906032	0	0	0.3622535	95.2682855
-6610	95.435466	0	0	0.2375709	95.6730369
-6509	95.4829152	0.051732	0.0251076	0.2813783	95.8411331
-6409	95.7526269	0	0	0.2089276	95.9615545
-6308	95.5952951	0	0	0.1920786	95.7873737
-6208	95.6727123	0.001437	0.020923	0.3689931	96.0640654
-6108	95.9374293	0	0	0.1988182	96.1362475
-6007	95.125797	0.022992	0	0.4128005	95.5615895
-5907	96.4843446	0	0	0.1988182	96.6831628

-5806	95.4005033	0.076161	0	0.3588837	95.835548
-5706	95.3031075	0	0.020923	0.2005031	95.5245336
-5605	95.1882303	0.007185	0	0.1903937	95.385809
-5505	96.3544834	0.020118	0	0.3942666	96.768868
-5404	95.4679312	0	0	0.2055578	95.673489
-5304	96.7365749	0.045984	0	0.471772	97.2543309
-5203	96.0997557	0.041673	0.0271999	0.2274615	96.3960901
-5103	96.3245154	0.02874	0.041846	0.1617504	96.5568518
-5002	95.6002897	0.033051	0.020923	0.5105247	96.1647884
-4902	95.6727123	0	0	0.1668051	95.8395174
-4801	94.3965767	0	0.0188307	0.2881179	94.7035253
-4701	96.2970448	0.024429	0	0.2308313	96.5523051
-4600	96.1896596	0.038799	0.0271999	0.3892119	96.6448704
-4500	95.5103859	0	0.020923	0.3251857	95.8564946
-4399	96.2470982	0.017244	0.0125538	0.4818814	96.7587774
-4299	95.5728191	0	0.0125538	0.3049669	95.8903398
-4198	95.7800975	0.07185	0.0920612	0.3925817	96.3365904
-4098	95.1432783	0.034488	0	0.3622535	95.5400198
-3997	96.5068205	0.011496	0.0795074	0.1314222	96.7292461
-3897	94.9584759	0	0.041846	0.3723629	95.3726848
-3796	96.5842378	0.020118	0.0230153	0.3925817	97.0199528
-3696	96.2820608	0	0.0062769	0.2729538	96.5612915
-3595	96.132221	0.001437	0	0.3386649	96.4723229
-3495	95.3205888	0	0.0815997	0.2780085	95.680197
-3394	96.0523065	0	0.0104615	0.219037	96.281805
-3294	95.0134172	0.011496	0.041846	0.7666295	95.8333887
-3193	95.5528405	0	0	0.2476803	95.8005208
-3093	95.2781342	0.063228	0	0.1415316	95.4828938
-2993	95.919948	0	0	0.1735447	96.0934927
-2893	95.5453485	0.017244	0.0062769	0.1718598	95.7407292
-2792	95.4104927	0	0	0.2342011	95.6446938
-2691	94.5089565	0.002874	0.0292922	0.421225	94.9623477
-2591	95.1058184	0.034488	0	0.3571988	95.4975052
-2490	93.4550833	0	0.0062769	0.5593868	94.020747
-2390	94.8435987	0.020118	0	0.3336102	95.1973269
-2290	95.3455621	0	0.0251076	0.2493652	95.6200349
-2189	93.1254357	0	0	0.1583806	93.2838163
-2088	95.1732463	0.011496	0	0.2796934	95.4644357
-1988	95.2506635	0.02874	0	0.1364769	95.4158804
-1887	96.1197344	0	0.0251076	0.3791025	96.5239445
-1787	95.8700014	0.030177	0.0251076	0.2914877	96.2167737
-1686	94.9659679	0.051732	0.041846	0.3571988	95.4167447

-1586	94.9509839	0	0.0313845	0.454923	95.4372914
-1485	95.4904072	0.054606	0	0.4347042	95.9797174
-1385	93.9095973	0	0.0460306	0.2342011	94.189829
-1284	95.4104927	0.041673	0	0.2089276	95.6610933
-1184	95.7426375	0	0	0.1280524	95.8706899
-1083	95.6827016	0	0	0.0084245	95.6911261
-983	94.9459893	0.020118	0.0230153	0.2594746	95.2485972
-882	81.5902684	0.005748	0.0188307	0.2898028	81.9046499
-782	95.0358932	0.02874	0.0230153	0.4987304	95.5863789
-681	94.8061388	0	0	0.5105247	95.3166635
-581	95.3505567	0	0	0.2308313	95.581388
-480	96.0473118	0.054606	0.0062769	0.4498683	96.558063
-380	95.670215	0	0.020923	0.5138945	96.2050325
-279	95.8250494	0.056043	0	0.1887088	96.0698012
-179	96.616703	0.033051	0	0.2561048	96.9058588
-79	96.0223385	0	0.0062769	0.4431287	96.4717441
21	96.4319006	0.084783	0.0167384	0.3723629	96.9057849
121	95.3930113	0	0	0.3083367	95.701348
222	95.5378565	0.015807	0	0.2106125	95.764276
322	95.0983264	0	0.0397537	0.2780085	95.4160886
423	95.8025735	0.051732	0.0523075	0.1465863	96.0531993
523	94.1293624	0.010059	0	0.2308313	94.3702527
624	96.8339708	0.033051	0.0146461	0.3942666	97.2759345
724	95.5128832	0.066102	0.0334768	0.5947697	96.2072317
825	95.4554446	0.011496	0	0.4768267	95.9437673
925	94.8236201	0	0.0230153	0.2392558	95.0858912
1026	96.2021463	0.033051	0.0564921	0.269584	96.5612734
1126	95.9424239	0	0.041846	0.3689931	96.353263
1228	96.5717511	0.041673	0	0.1617504	96.7751745
1327	95.8225521	0.021555	0	0.4566079	96.300715
1428	96.6991149	0.024429	0	0.4684022	97.1919461
1528	95.8400334	0	0	0.2308313	96.0708647
1629	95.4579419	0	0	0.6689053	96.1268472
1729	96.9088907	0	0.0188307	0.4633475	97.3910689
1830	96.4443873	0.011496	0	0.0589715	96.5148548
1930	95.1932249	0	0.0104615	0.2796934	95.4833798
2031	96.1521997	0.024429	0.0334768	0.1769145	96.38702
2131	96.2645795	0.001437	0.0188307	0.3150763	96.5999235
2232	96.5243018	0	0	0.3420347	96.8663365
2332	94.7487002	0	0.0271999	0	94.7759001
2433	94.9384973	0.002874	0	0.4785116	95.4198829
2533	94.7112403	0	0.0230153	0.3807874	95.115043

2634	95.7501295	0	0	0.4903059	96.2404354
2734	95.3031075	0	0	0.3858421	95.6889496
2834	96.2121356	0.004311	0	0.4077458	96.6241924
2935	95.6926909	0.007185	0.0020923	0.3352951	96.0372633
3035	95.6901936	0	0	0.0758205	95.7660141
3136	95.3355728	0.048858	0	0.2409407	95.6253715
3236	94.2242609	0	0.0062769	0.3976364	94.6281742
3337	95.5828084	0.02874	0	0.2577897	95.8693381
3437	94.9459893	0	0.0041846	0.3892119	95.3393858
3538	95.647739	0	0.0376614	0.1887088	95.8741092
3638	95.8375361	0.002874	0.0230153	0.3117065	96.1751319
3739	95.2606529	0.037362	0.0188307	0.1836541	95.5004997
3839	95.2931181	0.011496	0.0439383	0.3336102	95.6821626
3940	96.4144193	0	0.020923	0.4094307	96.844773
4040	96.132221	0.02874	0	0.2493652	96.4103262
4141	95.5703218	0	0.0230153	0.2931726	95.8865097
4241	94.9509839	0	0	0.2291464	95.1801303
4342	95.9424239	0.037362	0.0460306	0.2847481	96.3105646
4442	95.8175574	0	0.0376614	0.2561048	96.1113236
4543	96.4543766	0.007185	0.0481229	0.1213128	96.6309973
4643	95.1682516	0.084783	0.020923	0.3740478	95.6480054
4744	86.9545333	0	0.0125538	0.4397589	87.406846
4844	94.1168757	0.007185	0.0188307	0.3892119	94.5321033
4945	93.9195866	0	0	0.2156672	94.1352538
5045	94.8286148	0	0.0083692	0.303282	95.140266
5146	94.7661815	0.047421	0	0.3774176	95.1910201
5246	94.6887643	0.004311	0.0062769	0.2746387	94.9739909
5347	93.9595439	0	0.0146461	0.2510501	94.2252401
5447	94.7811655	0.001437	0	0.2274615	95.010064
5548	96.0073545	0	0.0062769	0.3588837	96.3725151
5648	94.7586895	0	0	0.3083367	95.0670262
5749	95.2356796	0.011496	0	0.4650324	95.712208
5849	95.2406742	0.056043	0	0.252735	95.5494522
5949	93.7772388	0	0.0376614	0.370678	94.1855782
6051	94.928508	0	0.0460306	0.5459076	95.5204462
6149	93.7597575	0	0.0334768	0.4734569	94.2666912
6251	95.2681448	0	0	0.1314222	95.399567
6351	94.8510907	0.018681	0.0251076	0.3184461	95.2133254
6452	95.1232997	0.018681	0.0711382	0	95.2131189
6552	93.2577942	0	0.0188307	0.2510501	93.527675
6653	93.8471641	0	0	0.3268706	94.1740347
6753	94.2342502	0.001437	0.0125538	0.3673082	94.6155492

6854	69.2334796	0.011496	0	0.0808752	69.3258508
6954	93.0829811	0.024429	0	0.2291464	93.3365565
7055	94.686267	0	0	0.3673082	95.0535752
7155	94.7911548	0	0.0271999	0.3184461	95.1368008
7256	94.8960427	0	0	0.3218159	95.2178586
7356	94.6113471	0.002874	0	0.2780085	94.8922296
7457	94.7536949	0	0.0292922	0.370678	95.1536651
7557	94.921016	0.044547	0.041846	0.4818814	95.4892904
7658	94.6612937	0.080472	0.0062769	0.2291464	94.977189
7758	93.9495546	0.002874	0.0230153	0.4599777	94.4354216
7859	94.913524	0.041673	0.0292922	0.2561048	95.240594
7959	94.8261174	0.020118	0	0.4987304	95.3449658
8060	95.1158077	0.01437	0.0481229	0.2830632	95.4613638
8160	94.6388177	0.020118	0	0.3386649	94.9976006
8261	94.391582	0.067539	0.0292922	0.3100216	94.7984348
8361	94.7786682	0	0	0.4650324	95.2437006
8462	94.868572	0.054606	0.0125538	0.0404376	94.9761694
8562	94.7661815	0.012933	0.0062769	0.0657111	94.8511025
8663	94.9659679	0.058917	0	0.3470894	95.3719743
8763	94.633823	0	0	0.3319253	94.9657483
8863	94.4390313	0.02874	0	0.269584	94.7373553
8964	94.8011441	0.024429	0	0.3959515	95.2215246
9064	94.9110267	0.007185	0	0.2493652	95.1675769
9165	77.1200477	0.018681	0	0.0084245	77.1471532
9265	93.6448803	0.030177	0.020923	0.2510501	93.9470304
9366	94.0219772	0.031614	0	0.3689931	94.4225843
9466	94.2267582	0.033051	0	0.0926695	94.3524787
9567	93.937068	0	0	0.0943544	94.0314224
9667	93.0030665	0	0.0062769	0.3942666	93.40361
9768	93.679843	0.041673	0	0.2072427	93.9287587
9868	92.9706012	0.011496	0	0.3454045	93.3275017
9969	92.4686379	0	0.0167384	0.3841572	92.8695335
10069	92.3462687	0.024429	0.0167384	0.3740478	92.7614839
10170	93.3352114	0	0	0.2948575	93.6300689
10270	90.93278	0.011496	0	0.3167612	91.2610372
10371	91.5171552	0	0.062769	0.5425378	92.122462
10471	91.9516906	0.041673	0.0125538	0.3774176	92.383335
10572	92.628467	0.024429	0.0083692	0.2847481	92.9460133
10672	92.6134831	0	0.0355691	0.4448136	93.0938658
10773	92.8557241	0.045984	0	0.3555139	93.257222
10873	93.3476981	0	0	0.3437196	93.6914177
10974	91.9192253	0	0	0.2207219	92.1399472

11074	93.1903663	0	0	0.3437196	93.5340859
11175	92.6184777	0	0	0.5155794	93.1340571
11275	92.7458415	0.033051	0	0.0775054	92.8563979
11376	93.2977515	0.045984	0.0397537	0.2072427	93.5907319
11476	92.8881894	0.030177	0	0.3959515	93.3143179
11577	88.9249266	0.007185	0	0.2493652	89.1814768
11677	79.6398537	0.030177	0	0.0101094	79.6801401
11777	87.3516087	0	0	0.1887088	87.5403175
11878	76.6080951	0	0	0.3521441	76.9602392
11978	89.9663133	0.008622	0.0062769	0.2999122	90.2811244
12079	91.4846899	0.045984	0	0.3049669	91.8356408
12179	91.9666746	0	0	0.0556017	92.0222763
12280	55.2109716	0	0.0041846	0.2072427	55.4223989
12380	91.2474435	0.027303	0	0.1533259	91.4280724
12481	91.4821926	0	0	0.3487743	91.8309669
12581	92.4886166	0.050295	0	0.3673082	92.9062198
12682	91.1550423	0	0.020923	0.2207219	91.3966872
12782	91.9292146	0	0	0.3639384	92.293153
12883	91.8093428	0.037362	0	0.219037	92.0657418
12983	91.7568989	0.024429	0.0355691	0.3437196	92.1606166
13084	92.3462687	0.064665	0.0104615	0.3824723	92.8038675
13184	89.6116924	0.015807	0	0.286433	89.9139324
13285	91.9367066	0	0	0.2898028	92.2265094
13385	91.2874008	0.008622	0	0.5324284	91.8284512
13486	90.8204001	0	0.0376614	0.2796934	91.1377549
13586	92.431178	0	0	0.2224068	92.6535848
13687	91.9891506	0	0	0.3083367	92.2974873
13787	89.3444781	0.01437	0.0083692	0.3942666	89.7614839
13888	88.8375201	0.011496	0.0062769	0.3959515	89.2512445
13988	90.161105	0.068976	0	0.4818814	90.7119624
14089	87.3216408	0.01437	0	0.4010062	87.737017
14189	90.3459074	0.018681	0.0188307	0.1566957	90.5401148
14290	89.7015963	0	0.0313845	0.1752296	89.9082104
14390	88.4978832	0	0.0188307	0.2426256	88.7593395
14491	90.1211477	0	0	0.3622535	90.4834012
14591	89.7565375	0	0.0125538	0.4616626	90.2307539
14692	91.2799088	0	0.0271999	0.2780085	91.5851172
14792	89.5367725	0	0.0230153	0.2577897	89.8175775
14892	90.2609982	0	0.062769	0.0353829	90.3591501
14993	89.3220021	0	0.0230153	0.2780085	89.6230259
15093	89.5717351	0.050295	0.0167384	0.2931726	89.9319411
15194	88.9998465	0.005748	0	0.3235008	89.3290953

15294	89.6066977	0	0.0125538	0	89.6192515
15395	87.9884279	0.024429	0	0.4094307	88.4222876
15495	89.881404	0.074724	0.0355691	0.0488621	90.0405592
15596	86.8196775	0	0.0062769	0	86.8259544
15696	88.4629206	0.011496	0.0271999	0.0219037	88.5235202
15797	87.9234973	0	0	0.33698	88.2604773
15897	86.8721214	0	0.0292922	0.1920786	87.0934922
15998	87.3091541	0.054606	0.020923	0.3841572	87.7688403
16098	88.1307757	0.008622	0.020923	0.0926695	88.2529902
16199	85.9680879	0	0.0355691	0.1752296	86.1788866
16299	88.3130808	0.020118	0	0.286433	88.6196318
16400	86.3202115	0.007185	0	0.6149885	86.942385
16500	87.0494318	0.04311	0.0502152	0.4128005	87.5555575
16601	87.40655	0.015807	0	0.235886	87.658243
16701	86.2178209	0.020118	0	0.3184461	86.556385
16802	87.3940634	0	0	0.3285555	87.7226189
16902	85.7558149	0.010059	0	0.2443105	86.0101844
17003	86.6173937	0	0	0.3470894	86.9644831
17102	84.3173528	0.07185	0	0.3892119	84.7784147
17204	79.3301848	0	0	0.3571988	79.6873836
17304	84.894236	0.070413	0.0020923	0.2982273	85.2649686
17405	84.0026892	0	0	0.2999122	84.3026014
17505	83.4607686	0.008622	0.0502152	0.4128005	83.9324063
17606	83.3533834	0	0	0.067396	83.4207794
17706	81.8574827	0	0.0083692	0.2999122	82.1657641
17806	79.9819879	0.025866	0	0.4111156	80.4189695
17907	82.8988694	0.061791	0	0.2224068	83.1830672
18007	81.1032891	0	0.0690459	0.3908968	81.5632318
18108	81.5777818	0.021555	0.0041846	0.3555139	81.9590353
18208	79.8721054	0	0	0.202188	80.0742934
18309	80.8760321	0.040236	0.0251076	0.2224068	81.1637825
18409	80.2691809	0.050295	0.0083692	0.3521441	80.6799892
18510	78.0440598	0.02874	0	0.2055578	78.2783576
18610	79.2702489	0.011496	0	0.3959515	79.6776964
18711	79.2852328	0	0	0.3689931	79.6542259
18811	79.2128103	0.033051	0.0481229	0.33698	79.6309642
18912	78.431146	0.033051	0	0.1566957	78.6208927
19012	74.4304233	0	0	0.1887088	74.6191321
19113	72.7547149	0	0.0083692	0.4431287	73.2062128
19213	73.9734119	0.011496	0.0083692	0.4010062	74.3942833
19314	74.9149053	0.037362	0.0732305	0.1044638	75.1299616
19414	74.7925362	0.01437	0.0313845	0.640262	75.4785527

19515	72.8571054	0.025866	0.0167384	0.3605686	73.2602784
19615	72.0754411	0.058917	0	0.0977242	72.2320823
19716	70.6719417	0.018681	0.0125538	0.387527	71.0907035
19816	69.6005871	0	0	0.3555139	69.956101
19917	69.6355497	0.005748	0.0481229	0.303282	69.9927026
20017	66.4264807	0.027303	0.0062769	0.0808752	66.5409358
20118	64.0615092	0	0.0062769	0.202188	64.2699741
20218	64.218841	0.033051	0.0020923	0.1634353	64.4174196
20319	40.1945264	0.002874	0	0.0758205	40.2732209
20419	19.1295478	0	0	0	19.1295478
20520	4.75991098	0	0	0.0050547	4.76496568
20620	0.71923104	0	0	0	0.71923104

CRWL5
Transect #2

X axis value	CaCO3	BaCO3	MnCO3	SrCO3	Sum
-19860	6.30326092	0	0.0146461	0	6.31790702
-19759	90.8628547	0	0.2615375	0.2207219	91.3451141
-19659	98.4447486	0	0	0	98.4447486
-19559	92.9830879	0	0	0.3723629	93.3554508
-19458	100.465089	0	0.2029531	0.6301526	101.298194
-19358	99.0790704	0.089094	0	0.4128005	99.5809649
-19257	105.122609	0	0.0585844	0.2594746	105.440668
-19157	102.365557	0	0.2594452	0.0825601	102.707562
-19056	43.8805854	0.408108	0	0	44.2886934
-18956	99.2963381	0.07185	0.1443687	0.1769145	99.6894713
-18856	103.282077	0.196869	0	0.2746387	103.753585
-18755	103.936377	0	0	0	103.936377
-18655	99.7783228	0	0	0.7026033	100.480926
-18554	100.88464	0.214113	0	0	101.098753
-18454	99.1190277	0.089094	0	0.741356	99.9494777
-18353	99.3412901	0.125019	0.1736609	1.3226465	100.962616
-18253	101.861096	0	0	0.3824723	102.243568
-18152	100.84718	0.214113	0	0	101.061293
-18052	99.7833175	0	0.3473218	0	100.130639
-17951	96.9363613	0	0	0.1920786	97.1284399
-17851	97.183597	0.250038	0	0	97.433635
-17751	96.0622958	0	0.376614	0	96.4389098
-17650	99.2463915	0	0	1.4405895	100.686981
-17550	98.6170644	0	0	1.1676357	99.7847001
-17449	99.3762527	0	0	0	99.3762527
-17349	99.0391131	0	0	1.3175918	100.356705
-17248	98.8443214	0.160944	0.0585844	1.2400864	100.303936
-17148	86.3476821	0	0	0.0269584	86.3746405
-17047	97.2759982	0	0	0	97.2759982
-16947	96.661655	0.125019	0	0.1246826	96.9113566
-16847	96.1422103	0	0	0.3319253	96.4741356
-16746	98.4072887	0.035925	0.0878766	1.0884454	99.6195357
-16646	96.0348252	0.179625	0	0.3689931	96.5834433
-16545	97.3284421	0	0	0	97.3284421
-16445	96.0223385	0.035925	0	0.9047913	96.9630548
-16345	98.5870964	0	0.0585844	1.617504	100.263185

-16244	97.8828494	0	0	0.3942666	98.277116
-16143	96.7915161	0	0.2322453	0.4128005	97.4365619
-16043	98.4847059	0.017244	0.0878766	0.3723629	98.9621894
-15942	97.2410355	0.017244	0	0.3976364	97.6559159
-15843	98.5621231	0	0.1736609	0.7834785	99.5192625
-15742	99.9531359	0	0	0.7480956	100.701232
-15641	97.932796	0.035925	0	0.6048791	98.5736001
-15541	96.9388586	0.017244	0	0	96.9561026
-15440	97.2984741	0.017244	0.0292922	0.67396	98.0189703
-15340	98.5146738	0	0	0.4919908	99.0066646
-15239	98.4372566	0	0.0585844	0.7396711	99.2355121
-15139	95.8849854	0.321888	0.1736609	0	96.3805343
-15038	101.164341	0.07185	0	0.3302404	101.566431
-14938	97.3334368	0.214113	0	0.9081611	98.4557109
-14838	97.6106404	0	0.0292922	0.589715	98.2296476
-14737	99.3063275	0	0	0.1785994	99.4849269
-14637	96.646671	0	0	0.876148	97.522819
-14536	95.6277604	0	0.0878766	0.2207219	95.9363589
-14436	90.2085543	0	0	0	90.2085543
-14335	98.4547379	0.250038	0.0292922	0.6756449	99.409713
-14235	96.9013987	0.107775	0	0	97.0091737
-14134	98.4347593	0	0.0585844	0.0825601	98.5759038
-14034	98.182529	0	0.0878766	0.2746387	98.5450443
-13933	96.91888	0.339132	0.2029531	0	97.4609651
-13833	98.8368294	0	0	1.1423622	99.9791916
-13733	98.2974061	0	0	0.3841572	98.6815633
-13632	99.4586646	0	0.2322453	0.3976364	100.088546
-13532	98.0701491	0.178188	0.2322453	1.2653599	99.7459423
-13431	98.6270537	0.339132	0	0	98.9661857
-13331	97.0512385	0.1437	0	0	97.1949385
-13230	98.8293374	0.089094	0	0.1095185	99.0279499
-13130	98.3748234	0	0.2615375	0.3993213	99.0356822
-13029	98.5746098	0.250038	0	0.3723629	99.1970107
-12929	97.8229134	0.089094	0	0	97.9120074
-12829	99.5735418	0	0	0	99.5735418
-12728	96.411922	0.017244	0.0292922	0.2476803	96.7061385
-12628	98.6869896	0	0.1736609	0.0134792	98.8741297
-12527	97.4558059	0	0	0	97.4558059
-12427	101.056956	0	0.2887374	0.4936757	101.839369
-12326	96.2221249	0.125019	0	0	96.3471439

-12226	98.3173848	0	0	0.3993213	98.7167061
-12125	97.9302986	0	0	0.1095185	98.0398171
-12025	97.6356137	0	0	0.8222312	98.4578449
-11925	94.8311121	0	0	1.0025155	95.8336276
-11824	98.7669042	0.107775	0.1150765	1.1929092	100.182665
-11724	97.638111	0.053169	0	0	97.69128
-11623	99.2588782	0	0	0.1651202	99.4239984
-11523	98.1175984	0	0	0.4801965	98.5977949
-11422	98.3273741	0.160944	0	0	98.4883181
-11322	97.8004375	0	0.1736609	0	97.9740984
-11221	97.2685062	0.125019	0.2594452	0	97.6529704
-11122	97.902828	0.125019	0	0.0556017	98.0834487
-11020	99.2438942	0.107775	0.0857843	0	99.4374535
-10920	98.0276945	0.017244	0.0878766	0.8272859	98.960101
-10820	96.6441737	0.107775	0.1443687	0.4818814	97.3781988
-10719	99.6959109	0	0	0.6301526	100.326064
-10619	87.6213204	0.125019	0	0.2898028	88.0361422
-10518	97.7729668	0.160944	0.2029531	0.5088398	98.6457037
-10418	97.8104268	0	0	0	97.8104268
-10317	97.6730736	0	0	0.4414438	98.1145174
-10217	97.7330096	0.017244	0.1150765	0	97.8653301
-10116	95.7326482	0	0.3494141	0.0825601	96.1646224
-10016	98.0027212	0.125019	0	0.5644415	98.6921817
-9916	99.6159964	0	0	0	99.6159964
-9815	101.793668	0	0	0.1095185	101.903187
-9715	100.18289	0.178188	0	0.9738722	101.33495
-9614	101.094416	0.107775	0	0.0960393	101.29823
-9514	97.1436397	0	0	0.7278768	97.8715165
-9413	96.4443873	0.07185	0	0.5088398	97.0250771
-9313	97.5756778	0	0	0.892997	98.4686748
-9212	98.9467119	0.035925	0.2322453	0	99.2148822
-9112	97.7679722	0.107775	0	0	97.8757472
-9011	97.1661156	0	0.2322453	0	97.3983609
-8911	98.622059	0.089094	0.1736609	0.3437196	99.2285335
-8811	100.115462	0	0	0	100.115462
-8710	95.5178778	0	0	0	95.5178778
-8610	98.4522406	0.125019	0	0	98.5772596
-8509	101.831128	0.160944	0	0.9587081	102.95078
-8409	101.139368	0.089094	0	0.808752	102.037214
-8308	97.638111	0.017244	0	0.5644415	98.2197965

-8208	95.0009305	0.214113	0	0	95.2150435
-8107	93.687335	0.428226	0.2029531	0.1246826	94.4431967
-8007	98.6919843	0	0.376614	0	99.0685983
-7907	97.0936931	0	0	0.0134792	97.1071723
-7806	98.2624435	0.214113	0	1.2047035	99.68126
-7706	99.5210978	0	0	0.5088398	100.029938
-7605	95.9748892	0	0	0.3858421	96.3607313
-7505	98.9367226	0.214113	0	0	99.1508356
-7404	94.4590099	0.160944	0	0.6200432	95.2399971
-7304	96.5542698	0	0	0.8390802	97.39335
-7203	98.0476731	0	0.2029531	0.3302404	98.5808666
-7103	97.1935863	0	0.0878766	0	97.2814629
-7003	96.434398	0.017244	0.1443687	0	96.5960107
-6902	97.373394	0.035925	0	0.8946819	98.3040009
-6802	96.6916229	0.321888	0	0.1920786	97.2055895
-6701	99.7908095	0	0	0.741356	100.532165
-6601	97.8703627	0	0	0.6048791	98.4752418
-6500	98.1500637	0.232794	0	0	98.3828577
-6400	98.7044709	0.053169	0.0292922	0.438074	99.2250061
-6299	97.9352933	0.107775	0	0	98.0430683
-6199	95.7526269	0.053169	0.0292922	0.2476803	96.0827684
-6098	97.138645	0.089094	0.2322453	0	97.4599843
-5998	97.0187732	0.07185	0	0.151641	97.2422642
-5898	97.1036824	0.179625	0	0	97.2833074
-5797	96.2495955	0.07185	0	0.0690809	96.3905264
-5697	101.306689	0.179625	0	0.1095185	101.595832
-5596	98.0276945	0	0.2322453	0.151641	98.4115808
-5496	97.3858807	0.035925	0	0.3993213	97.821127
-5395	99.1240224	0	0	1.0311588	100.155181
-5295	97.0387518	0	0	1.1945941	98.2333459
-5194	98.637043	0	0.2029531	0.3993213	99.2393174
-5094	99.9106813	0	0	0.9334346	100.844116
-4994	96.7140989	0	0.0585844	0	96.7726833
-4893	98.6245564	0	0	0.522319	99.1468754
-4793	96.434398	0.1437	0	0	96.578098
-4692	95.6052844	0	0	0.6470016	96.252286
-4592	99.3362954	0.017244	0	0	99.3535394
-4491	98.1775343	0	0	0.5509623	98.7284966
-4391	97.7130309	0	0.0585844	0	97.7716153
-4290	96.4693606	0.017244	0.1736609	1.263675	97.9239405

-4190	93.627399	0.179625	0	0	93.807024
-4089	98.2774275	0.178188	0	0.8491896	99.3048051
-3989	99.181461	0	0	0.1095185	99.2909795
-3889	97.8553787	0	0.1150765	1.196279	99.1667342
-3788	97.5606938	0.07185	0	0	97.6325438
-3688	97.5706831	0.053169	0.1443687	0	97.7682208
-3587	98.5821018	0	0	0.8946819	99.4767837
-3487	97.8104268	0.089094	0.2908297	0	98.1903505
-3386	93.5349978	0.053169	0.376614	0	93.9647808
-3286	99.1864556	0	0.3180296	1.2771542	100.781639
-3185	98.1875236	0	0.1150765	0	98.3026001
-3085	97.4208433	0.160944	0	0	97.5817873
-2985	97.7030416	0.089094	0	0.8677235	98.6598591
-2883	99.386242	0.232794	0	0	99.619036
-2784	97.3559127	0.07185	0.2322453	0.9485987	98.6086067
-2683	99.7908095	0.035925	0	0	99.8267345
-2583	97.9228066	0.035925	0	0.0960393	98.0547709
-2482	98.3348661	0.089094	0.2322453	0	98.6562054
-2382	98.2624435	0.1437	0.3180296	0	98.7241731
-2281	100.682356	0	0	0	100.682356
-2181	97.1211637	0.107775	0	0	97.2289387
-2080	97.7579829	0	0.0585844	0.4953606	98.3119279
-1980	98.394802	0.232794	0	0	98.627596
-1880	98.3698287	0.107775	0	0.454923	98.9325267
-1779	98.8618027	0.392301	0	0.2342011	99.4883048
-1679	98.1800316	0.035925	0.1150765	0	98.3310331
-1578	94.8460961	0	0	0.5509623	95.3970584
-1478	96.4219113	0.035925	0	0	96.4578363
-1377	99.1864556	0.089094	0.0585844	0.3571988	99.6913328
-1276	96.7215909	0.125019	0.1443687	1.5956003	98.5865789
-1177	96.5842378	0.160944	0	0.9047913	97.6499731
-1076	97.5981537	0	0.1443687	0.370678	98.1132004
-976	96.896404	0.285963	0	0	97.182367
-875	97.8004375	0	0.2322453	0.7969577	98.8296405
-775	96.8839174	0	0	2.055578	98.9394954
-674	99.0416105	0	0.2322453	0	99.2738558
-574	99.7883121	0.07185	0	0	99.8601621
-473	99.0191345	0.160944	0	0	99.1800785
-373	100.784747	0	0	1.3563445	102.141091
-272	99.3313008	0.232794	0	1.0294739	100.593569

-172	98.622059	0	0	0	98.622059
-73	97.5282285	0.232794	0	0.6200432	98.3810657
28	95.4104927	0	0.3473218	0	95.7578145
128	99.0191345	0	0	0.3841572	99.4032917
229	96.0972584	0.07185	0	0.6200432	96.7891516
329	101.206796	0.053169	0	0.9216403	102.181605
430	95.4854126	0.07185	0	1.0867605	96.6440231
530	96.3769594	0	0	0.522319	96.8992784
631	98.5821018	0.268719	0	0.0269584	98.8777792
731	98.8468187	0	0	1.0058853	99.852704
832	95.8500227	0	0	0.7986426	96.6486653
932	101.471513	0.035925	0	0.2207219	101.728159
1032	95.8200548	0.339132	0.2029531	1.3900425	97.7521824
1133	100.242826	0.035925	0	0.6604808	100.939232
1233	96.9313666	0	0	0.6874392	97.6188058
1334	98.7619095	0	0	0	98.7619095
1434	99.3612687	0.07185	0.2029531	0.2746387	99.9107105
1535	97.8603734	0.232794	0.4059062	0.2898028	98.7888764
1635	99.628483	0.179625	0.2322453	0.5627566	100.60311
1736	100.899624	0.285963	0.1736609	0.3302404	101.689488
1836	96.9538426	0	0.0292922	0.9738722	97.957007
1936	98.0052185	0	0.0878766	0.3723629	98.465458
2037	98.7219522	0	0.1150765	0	98.8370287
2137	95.7626162	0	0	0.7699993	96.5326155
2238	97.7305122	0.053169	0	0	97.7836812
2338	96.4918365	0	0.0585844	0	96.5504209
2439	96.1796703	0.125019	0.1736609	0.7834785	97.2618287
2539	99.5585578	0.053169	0	0	99.6117268
2640	99.3387927	0.196869	0.2594452	0	99.7951069
2740	98.1900209	0.125019	0.2029531	1.2367166	99.7547096
2841	96.2845582	0.268719	0	0.2476803	96.8009575
2941	96.8714307	0.232794	0.2322453	0	97.33647
3041	100.392666	0.053169	0	0.0269584	100.472793
3142	95.9174506	0.214113	0.4331061	1.4304801	97.9951498
3242	98.2774275	0.017244	0.0292922	0	98.3239637
3343	101.908545	0	0.4351984	1.0850756	103.428819
3443	99.8082908	0	0.0292922	0	99.837583
3544	96.4968312	0.089094	0	0	96.5859252
3644	98.7419309	0.160944	0.2615375	0	99.1644124
3745	99.6684403	0	0	0.1381618	99.8066021

3845	100.100478	0	0	0.3167612	100.41724
3945	95.9948679	0	0.1736609	0	96.1685288
4046	97.3059661	0.017244	0.3473218	1.0749662	98.7454981
4146	98.364834	0.232794	0	0.3571988	98.9548268
4247	99.0965517	0	0	0	99.0965517
4347	98.5646204	0	0	0	98.5646204
4448	98.7594122	0.285963	0	0	99.0453752
4548	101.189314	0	0.1736609	0.9351195	102.298095
4649	96.1821676	0.107775	0	0.5644415	96.8543841
4749	98.8593054	0	0	1.0311588	99.8904642
4850	100.40765	0	0.0292922	0.3083367	100.745279
4950	98.5321552	0	0.0585844	0.0421225	98.6328621
5050	99.0341185	0.107775	0.0585844	0	99.2004779
5151	99.5510658	0.1437	0	0.1785994	99.8733652
5251	98.5321552	0.1437	0.0878766	0	98.7637318
5352	98.9567013	0.089094	0.0878766	0.4684022	99.6020741
5452	100.23034	0.07185	0	0	100.30219
5553	96.654163	0	0.376614	1.2940032	98.3247802
5653	97.3009715	0	0	0.5071549	97.8081264
5754	99.2438942	0	0.0585844	0.9755571	100.278036
5854	99.173969	0.017244	0	1.9308954	101.122108
5954	94.4315393	0.07185	0	0	94.5033893
6055	99.7458575	0	0	0	99.7458575
6155	98.7444282	0.303207	0.0585844	0	99.1062196
6256	98.8068615	0.160944	0	0	98.9678055
6356	95.8150601	0.125019	0.1736609	0	96.11374
6457	96.9438533	0	0	0	96.9438533
6557	99.3113221	0	0	0.7143976	100.02572
6658	99.1964449	0	0	0.522319	99.7187639
6758	100.2678	0	0.2908297	0	100.558629
6858	98.1950156	0.250038	0.1736609	0.8525594	99.4712739
6959	100.337725	0.053169	0.0878766	0.2476803	100.726451
7059	94.4590099	0.07185	0	0	94.5308599
7160	99.7708308	0.160944	0.0292922	0.8525594	100.813626
7260	101.886069	0.07185	0.0292922	1.1541565	103.141368
7361	96.0173438	0.142263	0	1.4591234	97.6187302
7461	99.6859216	0	0	0	99.6859216
7562	99.386242	0.107775	0.1443687	0.0421225	99.6805082
7662	97.623127	0	0	1.4843969	99.1075239
7763	96.162189	0	0	0.1381618	96.3003508

7863	99.4761459	0	0.0292922	0.3167612	99.8221993
7963	97.410854	0.178188	0.0292922	0.8121218	98.430456
8064	98.6195617	0.285963	0.0292922	0.3993213	99.3341382
8164	97.2060729	0.035925	0.2887374	1.2249223	98.7556576
8265	98.3898073	0	0	0.7548352	99.1446425
8365	95.0134172	0.053169	0	0.9637628	96.030349
8466	99.863232	0	0.4623983	0.8525594	101.17819
8566	97.6505977	0.125019	0	0.5357982	98.3114149
8667	98.5046845	0.053169	0	0.2072427	98.7650962
8767	97.3559127	0.1437	0	0.2476803	97.747293
8867	97.1061797	0	0.0585844	0	97.1647641
8968	97.1486343	0.053169	0	0.1651202	97.3669235
9068	99.6909163	0	0.2615375	0.7986426	100.751096
9169	97.1261584	0	0	0.1095185	97.2356769
9269	97.7579829	0	0	0.606564	98.3645469
9370	94.648807	0.142263	0	0.4262797	95.2173497
9470	99.5460711	0.089094	0.2322453	0.9907212	100.858132
9571	96.7190936	0	0.0585844	0	96.777678
9671	98.0127105	0.089094	0.0292922	0	98.1310967
9772	99.3662634	0.340569	0	0	99.7068324
9872	98.4397539	0.232794	0.0292922	0.2207219	98.922562
9972	97.7554855	0	0	0.5374831	98.2929686
10073	98.2949088	0.304644	0.0292922	0.606564	99.235409
10173	100.242826	0.017244	0.2029531	0.5088398	100.971863
10274	98.7319416	0.125019	0.0878766	0.2342011	99.1790383
10374	96.4443873	0	0	0.303282	96.7476693
10475	96.4493819	0.018681	0	0.589715	97.0577779
10575	95.6277604	0	0	0.5240039	96.1517643
10676	98.38731	0	0	0	98.38731
10776	97.8179188	0.107775	0	0.0690809	97.9947747
10876	102.085856	0.1437	0.1736609	0.2072427	102.610459
10977	97.7629775	0.410982	0	0.1937635	98.367723
11077	98.4747166	0	0	1.2232374	99.697954
11178	99.8032961	0.035925	0.0585844	0.1651202	100.062926
11278	98.5646204	0	0	0.5779207	99.1425411
11379	99.5061139	0	0	0.6874392	100.193553
11479	98.871792	0.017244	0	0.4953606	99.3843966
11580	97.0212705	0.125019	0.1171688	0	97.2634583
11680	96.6941203	0	0.0292922	0	96.7234125
11780	97.7579829	0	0	0	97.7579829

11881	97.9552719	0	0.1736609	0.0960393	98.2249721
11981	101.241758	0	0.0292922	0	101.27105
12082	94.7786682	0.160944	0.1736609	1.3074824	96.4207555
12182	96.6516657	0.07185	0.1443687	0.5526472	97.4205316
12283	97.4133513	0	0.3494141	0	97.7627654
12383	96.7290829	0	0	0.1651202	96.8942031
12484	96.2171302	0.125019	0.2615375	0.0960393	96.699726
12584	98.4647272	0	0	0.1246826	98.5894098
12685	96.9363613	0.178188	0	1.0884454	98.2029947
12785	98.9567013	0	0.0878766	0	99.0445779
12885	96.6566603	0	0	0	96.6566603
12986	97.1211637	0	0	0	97.1211637
13086	98.6969789	0.07185	0.2029531	0	98.971782
13187	98.0601598	0	0	0.1499561	98.2101159
13287	98.2874168	0.196869	0.1150765	0.1095185	98.7088808
13388	88.9249266	0	0.0585844	0.8154916	89.7990026
13488	101.079432	0.089094	0	0.3302404	101.498766
13589	99.3088248	0	0	0.6048791	99.9137039
13689	95.3780274	0.142263	0.1443687	0.7716842	96.4363433
13789	96.888912	0	0.1736609	0	97.0625729
13890	97.5082499	0	0	0	97.5082499
13990	97.1810996	0	0.0292922	1.1844847	98.3948765
14091	98.614567	0	0.2029531	0	98.8175201
14191	97.8453894	0	0	0	97.8453894
14292	100.492559	0.053169	0	0.2342011	100.779929
14392	100.170404	0.125019	0.1171688	0.0269584	100.43955
14493	97.6356137	0.125019	0	0.5779207	98.3385534
14593	96.5992217	0	0	0.5661264	97.1653481
14694	94.891048	0	0	0.8390802	95.7301282
14794	96.4219113	0.107775	0	0.7868483	97.3165346
14894	100.112965	0	0	1.1895394	101.302504
14995	98.7544175	0	0.1736609	0.7295617	99.6576401
15095	99.5285898	0	0	0.67396	100.20255
15196	97.683063	0.017244	0	0.7986426	98.4989496
15296	99.6984083	0	0	0	99.6984083
15397	99.4611619	0	0	0.2207219	99.6818838
15497	99.3662634	0	0.2908297	0.2493652	99.9064583
15598	100.120457	0	0	0.3976364	100.518093
15698	96.8389654	0.07185	0	0.909846	97.8206614
15798	99.9431466	0.428226	0.2887374	0.8795178	101.539628

15899	97.6406083	0	0.2322453	0.2055578	98.0784114
15999	97.3908753	0.017244	0.1150765	0.9502836	98.4734794
16100	97.8079295	0.053169	0.2908297	0.5913999	98.7433281
16200	97.4083567	0.160944	0	0	97.5693007
16301	97.887844	0	0	0	97.887844
16401	98.3448554	0.198306	0	0	98.5431614
16502	97.8054321	0.053169	0	0	97.8586011
16602	99.8557401	0	0	0	99.8557401
16703	95.4429579	0	0.0292922	0.4785116	95.9507617
16803	98.4397539	0.107775	0.2029531	0.5357982	99.2862802
16903	91.3423421	0	0	0	91.3423421
17004	93.8271854	0	0.146461	0	93.9736464
17104	97.4083567	0	0	0	97.4083567
17205	96.7715375	0	0	0	96.7715375
17305	96.9937999	0.07185	0	0	97.0656499
17406	95.3630434	0	0.0878766	0.3588837	95.8098037
17506	98.8992627	0	0.0292922	0.9132158	99.8417707
17607	96.7615482	0	0	0.1381618	96.89971
17707	97.5556991	0	0	0	97.5556991
17807	93.0255425	0.196869	0.3180296	0.151641	93.6920821
17908	95.3805247	0	0.0857843	1.0665417	96.5328507
18008	94.0844104	0.07185	0	1.8230618	95.9793222
18109	93.8296828	0.018681	0	0.8778329	94.7261967
18209	95.5828084	0.07185	0	0	95.6546584
18310	94.3666087	0	0.2029531	1.0817058	95.6512676
18410	93.5999284	0	0.0292922	0.303282	93.9325026
18511	95.3280808	0	0	0.4144854	95.7425662
18611	95.3955087	0.196869	0	0.7026033	96.294981
18710	98.1975129	0.107775	0	0.9789269	99.2842148
18812	95.2082089	0.198306	0	0	95.4065149
18912	94.663791	0	0.2615375	0.6756449	95.6009734
19013	95.8949747	0.035925	0.2887374	1.5972852	97.8169223
19113	96.6192004	0	0.1987685	0.5037851	97.321754
19214	98.0601598	0.196869	0	0.7834785	99.0405073
19314	95.3630434	0	0.0585844	0.6773298	96.0989576
19415	95.4529473	0	0	0.7716842	96.2246315
19515	96.2595849	0	0.0292922	0	96.2888771
19616	95.4379633	0.107775	0	0.5593868	96.1051251
19716	91.5246472	0	0	0.6924939	92.2171411
19816	95.632755	0	0.3494141	0.3049669	96.287136

19917	87.9459733	0.250038	0.0292922	0	88.2253035
20017	94.1093837	0	0	0.7295617	94.8389454
20118	90.8753414	0	0	0	90.8753414
20218	91.0851171	0.433974	0	0	91.5190911

CRWL5

Transect #3

X Axis Value	CaCO3	BaCO3	MnCO3	SrCO3	Sum
-20417	0	0.034488	0.1485533	0	0.1830413
-20317	0	0.053169	0.1778455	0.4532381	0.6842526
-20216	0	0.034488	0.0292922	0	0.0637802
-20116	8.99538266	0.018681	0	0.5341133	9.54817696
-20016	96.7640455	0.012933	0.0543998	0.269584	97.1009623
-19915	97.4383246	0.005748	0.0167384	0.3251857	97.7859967
-19815	97.7854535	0.024429	0	0.1566957	97.9665782
-19715	96.5317938	0	0	0.3555139	96.8873077
-19614	96.7340776	0	0	0.3117065	97.0457841
-19514	96.8015055	0.022992	0	0.4077458	97.2322433
-19414	95.4079953	0.015807	0	0.1280524	95.5518547
-19313	97.0462438	0.015807	0.0251076	0.3437196	97.430878
-19213	96.9413559	0.031614	0.0083692	0.2898028	97.2711419
-19113	97.6505977	0.018681	0	0	97.6692787
-19012	94.0794158	0.04311	0.0020923	0.370678	94.4952961
-18912	92.9681039	0.05748	0.0146461	0.3049669	93.3451969
-18812	94.8960427	0.033051	0.0041846	0.2459954	95.1792737
-18711	94.1942929	0.035925	0.0376614	0.3504592	94.6183385
-18611	94.9809519	0	0	0.4144854	95.3954373
-18512	95.5328618	0.037362	0.0062769	0.2561048	95.8326055
-18410	93.5674631	0	0.0188307	0	93.5862938
-18310	93.6448803	0.007185	0	0.3521441	94.0042094
-18210	94.5464165	0.040236	0	0.6604808	95.2471333
-18108	94.6288284	0	0	0.3689931	94.9978215
-18009	94.678775	0	0.0125538	0.0387527	94.7300815
-17909	96.1896596	0.035925	0	0.235886	96.4614706
-17808	94.6013577	0.024429	0	0.4026911	95.0284778
-17708	97.1211637	0	0.0125538	0.219037	97.3527545
-17608	95.6976856	0	0.0376614	0.4684022	96.2037492
-17507	95.8150601	0.010059	0.0062769	0.1668051	95.9982011
-17407	94.5089565	0.002874	0	0.2914877	94.8033182
-17307	94.9110267	0	0.0125538	0.2645293	95.1881098
-17206	94.8036415	0.011496	0	0.4734569	95.2885944
-17105	93.9195866	0	0.0606767	0.1263675	94.1066308
-17006	92.665927	0	0.0334768	0.0977242	92.797128
-16905	93.8097041	0.037362	0	0.1600655	94.0071316
-16805	95.2107063	0	0	0.235886	95.4465923
-16704	91.9641773	0	0.0585844	0.1566957	92.1794574
-16604	94.1917956	0.001437	0.0125538	0.4347042	94.6404906

-16504	93.9520519	0	0.0271999	0.3757327	94.3549845
-16403	93.8646454	0.011496	0.0271999	0.3757327	94.279074
-16303	94.928508	0	0.0251076	0.3757327	95.3293483
-16203	93.9071	0.018681	0.0502152	0.2005031	94.1764993
-16102	94.4515179	0.007185	0	0.2308313	94.6895342
-16002	91.0576465	0.012933	0.0251076	0.2207219	91.316409
-15902	92.9681039	0.001437	0	0.2746387	93.2441796
-15801	95.4429579	0	0.0041846	0.219037	95.6661795
-15701	94.9509839	0	0	0.2459954	95.1969793
-15601	94.5289352	0.067539	0.020923	0.4229099	95.0403071
-15500	94.8610801	0	0	0.2763236	95.1374037
-15400	93.9395653	0	0	0.4852512	94.4248165
-15300	94.671283	0.020118	0.0481229	0.404376	95.1438999
-15199	95.1083157	0	0	0.3386649	95.4469806
-15099	94.5688924	0	0	0.5930848	95.1619772
-14999	94.8336094	0.038799	0.0146461	0	94.8870545
-14898	93.0580078	0.01437	0	0.2999122	93.37229
-14798	95.170749	0.020118	0	0.16849	95.359357
-14698	94.648807	0	0.020923	0.1213128	94.7910428
-14597	95.2381769	0.030177	0.0104615	0.2409407	95.5197561
-14497	95.0983264	0	0	0.1263675	95.2246939
-14397	95.1657543	0.058917	0	0.2780085	95.5026798
-14296	96.1896596	0	0	0.2493652	96.4390248
-14196	96.6366817	0.005748	0.0062769	0.2375709	96.8862775
-14096	96.1996489	0.051732	0.0083692	0.2763236	96.5360737
-13995	96.434398	0.045984	0.0334768	0.1128883	96.6267471
-13895	95.2082089	0.021555	0	0.2561048	95.4858687
-13795	93.9895119	0.033051	0	0.3757327	94.3982956
-13694	93.899608	0.020118	0.0167384	0.2982273	94.2346917
-13594	92.9181573	0	0	0.3268706	93.2450279
-13494	96.4968312	0	0.0146461	0.5475925	97.0590698
-13393	93.9745279	0.01437	0	0.4532381	94.442136
-13293	93.4675699	0.04311	0	0.16849	93.6791699
-13193	93.899608	0	0.0271999	0.3892119	94.3160198
-13092	94.8710694	0.024429	0	0.3150763	95.2105747
-12991	95.8225521	0.033051	0.0167384	0.0623413	95.9346828
-12892	95.3730327	0.033051	0.0167384	0.3319253	95.7547474
-12791	96.0872691	0.033051	0	0.2881179	96.408438
-12691	95.4754232	0.067539	0	0.2544199	95.7973821
-12591	96.624195	0	0	0.2678991	96.8920941
-12490	96.1447077	0.002874	0.0062769	0.3673082	96.5211668
-12390	96.1796703	0	0.0564921	0.5796056	96.815768

-12290	95.7451349	0	0.0502152	0.3521441	96.1474942
-12189	94.0993944	0	0	0.1937635	94.2931579
-12089	94.5564058	0	0.0020923	0.2240917	94.7825898
-11989	95.3880167	0	0	0.3352951	95.7233118
-11888	93.5999284	0	0.0711382	0.4818814	94.152948
-11788	96.5317938	0.060354	0	0.1785994	96.7707472
-11688	95.6527337	0	0.0062769	0.3167612	95.9757718
-11587	94.9784546	0.031614	0.0146461	0.488621	95.5133357
-11487	94.9160213	0	0	0.2224068	95.1384281
-11387	95.2581555	0.007185	0.0271999	0.2005031	95.4930435
-11286	78.8482001	0.025866	0	0.0050547	78.8791208
-11186	94.3666087	0	0.0020923	0.3386649	94.7073659
-11086	94.4465233	0.063228	0	0.454923	94.9646743
-10985	94.7861602	0	0	0.4818814	95.2680416
-10885	96.3370021	0.047421	0.0041846	0.0741356	96.4627433
-10785	94.7187322	0	0	0.2476803	94.9664125
-10684	96.4893392	0	0	0.2881179	96.7774571
-10584	94.8361068	0.104901	0.0020923	0.3673082	95.3104083
-10484	96.3245154	0.010059	0	0.1903937	96.5249681
-10383	96.2071409	0.037362	0.0271999	0.5442227	96.8159255
-10283	95.1757436	0	0.0020923	0.1566957	95.3345316
-10183	95.4479526	0.067539	0.0585844	0.2325162	95.8065922
-10082	95.368038	0.068976	0.0502152	0.2426256	95.7298548
-9982	96.0647931	0.002874	0	0.1246826	96.1923497
-9882	94.5838764	0	0	0.1196279	94.7035043
-9780	95.8550174	0.015807	0	0.1617504	96.0325748
-9681	95.1158077	0.093405	0	0.2459954	95.4552081
-9581	94.7212296	0	0.0125538	0.2594746	94.993258
-9480	94.7911548	0.081909	0	0.2443105	95.1173743
-9380	95.1732463	0.067539	0	0.134792	95.3755773
-9279	94.6987536	0	0	0.3841572	95.0829108
-9179	95.3056048	0.035925	0.0062769	0.3235008	95.6713075
-9079	82.676607	0	0	0.0758205	82.7524275
-8978	94.6987536	0	0.0271999	0.1297373	94.8556908
-8878	95.5653271	0	0.0188307	0.1061487	95.6903065
-8778	94.6363204	0	0	0.3251857	94.9615061
-8677	95.6052844	0	0	0.4616626	96.066947
-8577	95.3006101	0	0	0.1162581	95.4168682
-8477	95.8425307	0	0	0.1449014	95.9874321
-8376	95.155765	0.021555	0.0292922	0.5779207	95.7845329
-8276	95.1108131	0.047421	0	0.2796934	95.4379275
-8176	95.8724987	0	0.0062769	0.1735447	96.0523203

-8075	93.9945065	0.058917	0.0271999	0.2931726	94.373796
-7975	94.2417422	0.073287	0	0.3807874	94.6958166
-7875	95.6302577	0.017244	0	0.2982273	95.945729
-7774	95.148273	0	0	0.185339	95.333612
-7674	95.125797	0.004311	0	0.2982273	95.4283353
-7574	94.5963631	0	0.0878766	0.0758205	94.7600602
-7473	96.5792431	0.01437	0	0.2830632	96.8766763
-7373	94.633823	0	0.0648613	0.269584	94.9682683
-7273	95.9449213	0.020118	0.0334768	0.50547	96.5039861
-7172	95.5653271	0.015807	0	0.2594746	95.8406087
-7072	96.7016123	0	0.0292922	0.3167612	97.0476657
-6972	96.6591577	0	0.0083692	0.1735447	96.8410716
-6871	95.8500227	0	0.0062769	0.2493652	96.1056648
-6771	96.4968312	0.018681	0	0.3403498	96.855862
-6671	95.7601189	0.054606	0	0.2544199	96.0691448
-6570	94.9310053	0	0	0.4869361	95.4179414
-6470	94.6113471	0	0.0376614	0.2662142	94.9152227
-6370	95.6577283	0	0	0.1583806	95.8161089
-6269	95.3855194	0	0.0397537	0.303282	95.7285551
-6169	94.5489138	0.04311	0	0.404376	94.9963998
-6069	95.7900868	0.024429	0	0.2207219	96.0352377
-5968	95.5228725	0	0	0.4347042	95.9575767
-5868	95.5628298	0.015807	0	0.0657111	95.6443479
-5768	95.670215	0	0	0	95.670215
-5667	95.8999693	0.007185	0.0460306	0.3403498	96.2935347
-5567	95.427974	0	0.0188307	0.2510501	95.6978548
-5467	95.2406742	0.035925	0	0.0101094	95.2867086
-5366	96.0997557	0	0	0.252735	96.3524907
-5266	95.9698946	0.005748	0	0.3184461	96.2940887
-5166	95.8475254	0.07185	0.0146461	0.1988182	96.1328397
-5065	93.922084	0.050295	0	0.387527	94.359906
-4965	94.3366408	0.002874	0	0.2678991	94.6074139
-4865	96.147205	0	0.0041846	0.2426256	96.3940152
-4764	95.2856262	0.037362	0	0.2712689	95.5942571
-4664	96.1646863	0	0.0230153	0.1802843	96.3679859
-4564	95.9374293	0.037362	0.0188307	0.1229977	96.1166197
-4463	95.7751028	0	0	0.117943	95.8930458
-4363	95.0109199	0.097716	0.020923	0.3403498	95.4699087
-4263	96.3220181	0	0.0020923	0.252735	96.5768454
-4162	94.8510907	0.01437	0.0251076	0.3100216	95.2005899
-4062	95.4404606	0.022992	0.0167384	0.4060609	95.8862519
-3962	96.2146329	0.024429	0	0.2055578	96.4446197

-3861	95.5078885	0	0	0.3268706	95.8347591
-3761	96.2720715	0.070413	0.0104615	0.353829	96.706775
-3661	95.0483798	0.010059	0.0062769	0.4919908	95.5567065
-3560	95.685199	0	0	0.1027789	95.7879779
-3460	53.3904181	0.030177	0.0167384	0.1482712	53.5856047
-3360	95.7076749	0.010059	0.0041846	0.2493652	95.9712837
-3259	96.2071409	0.058917	0	0.4313344	96.6973923
-3159	95.92744	0	0	0.0994091	96.0268491
-3059	95.9773866	0	0.0167384	0.3184461	96.3125711
-2958	95.3805247	0	0	0.1381618	95.5186865
-2858	94.8510907	0	0.0523075	0.1752296	95.0786278
-2758	94.7462029	0.024429	0	0.2881179	95.0587498
-2657	95.4654339	0.034488	0	0.3184461	95.818368
-2557	95.133289	0.033051	0	0.2409407	95.4072807
-2457	95.4479526	0	0.0041846	0.4835663	95.9357035
-2356	96.0947611	0	0.0020923	0.3976364	96.4944898
-2256	95.8625094	0.025866	0.0376614	0.3639384	96.2899752
-2156	95.5803111	0	0.0125538	0.2274615	95.8203264
-2055	95.7326482	0	0	0.252735	95.9853832
-1955	94.7536949	0.058917	0	0.3167612	95.1293731
-1855	94.921016	0.050295	0	0.3336102	95.3049212
-1754	96.3070341	0.021555	0.0230153	0.1920786	96.543683
-1654	95.6802043	0.004311	0	0.2813783	95.9658936
-1554	94.5963631	0.010059	0.0376614	0.2005031	94.8445866
-1453	95.0408878	0	0	0.0994091	95.1402969
-1353	93.1229384	0	0	0.3184461	93.4413845
-1252	94.0894051	0.020118	0.0376614	0.320131	94.4673155
-1152	95.3530541	0.041673	0.0167384	0.4010062	95.8124717
-1052	94.7012509	0.008622	0	0.3959515	95.1058244
-951	94.3066728	0.025866	0	0.3959515	94.7284903
-851	94.3166621	0	0	0.2847481	94.6014102
-751	95.0783478	0	0.0125538	0.4161703	95.5070719
-650	94.3566194	0	0	0.2493652	94.6059846
-550	93.86964	0.020118	0.0020923	0.3184461	94.2102964
-450	94.149341	0.058917	0	0.5071549	94.7154129
-349	93.6099177	0	0	0.2948575	93.9047752
-249	92.908168	0	0.0104615	0.1566957	93.0753252
-149	93.2977515	0	0	0.2274615	93.525213
-48	95.4454553	0.017244	0.0585844	0.4684022	95.9896859
51	92.2888302	0	0.0376614	0.556017	92.8825086
151	94.1218704	0.033051	0.0271999	0.1432165	94.3253378
252	95.7201616	0.044547	0	0.7497805	96.5144891

352	93.9970039	0.058917	0.0543998	0.3251857	94.4355064
452	93.172885	0.005748	0	0	93.178633
553	93.4950405	0.018681	0	0.4397589	93.9534804
653	93.8246881	0	0.0376614	0.2678991	94.1302486
753	94.921016	0.058917	0	0.0994091	95.0793421
854	93.2403129	0.002874	0	0.1331071	93.376294
954	94.9609733	0.047421	0	0.0775054	95.0858997
1054	95.5553378	0	0.0062769	0.1718598	95.7334745
1155	94.3940793	0.011496	0.0376614	0.3774176	94.8206543
1255	95.3330754	0.035925	0	0.1415316	95.510532
1355	95.170749	0	0	0.1432165	95.3139655
1456	95.6652203	0	0	0.2594746	95.9246949
1556	94.1618277	0	0.0083692	0.3673082	94.5375051
1656	96.2196276	0.024429	0.0230153	0.2476803	96.5147522
1757	95.5803111	0.051732	0	0.3858421	96.0178852
1857	94.7811655	0.002874	0.020923	0.3420347	95.1469972
1957	93.9995012	0.061791	0	0.4077458	94.469038
2058	95.5803111	0	0	0.1482712	95.7285823
2158	95.1682516	0.033051	0	0.3117065	95.5130091
2258	94.5763844	0.038799	0.041846	0.4195401	95.0765695
2359	94.9459893	0.007185	0	0.0859299	95.0391042
2459	95.0333958	0	0.0376614	0.3892119	95.4602691
2559	95.0159145	0	0.0502152	0.3235008	95.3896305
2660	95.4978992	0.007185	0.0146461	0.3824723	95.9022026
2760	94.2417422	0	0	0.4515532	94.6932954
2860	95.0433851	0.035925	0	0.2426256	95.3219357
2961	94.2042823	0	0.0230153	0.2257766	94.4530742
3062	94.2317529	0.011496	0.0753228	0.5796056	94.8981773
3160	94.8610801	0.024429	0.0292922	0.3386649	95.2534662
3262	94.5738871	0.025866	0	0.2914877	94.8912408
3362	94.4515179	0.002874	0.020923	0.1802843	94.6555992
3462	94.648807	0	0.0230153	0.2510501	94.9228724
3563	94.9260106	0	0.0376614	0.3133914	95.2770634
3663	94.9384973	0	0	0	94.9384973
3763	95.2806315	0	0	0.4599777	95.7406092
3864	94.2317529	0.080472	0.0125538	0.2611595	94.5859382
3964	91.7943588	0.002874	0.0857843	0.286433	92.1694501
4064	92.1190117	0	0	0.2830632	92.4020749
4165	94.3616141	0.005748	0.0167384	0.2729538	94.6570543
4265	92.5860124	0	0	0.3588837	92.9448961
4365	95.1732463	0.038799	0	0.2325162	95.4445615
4466	95.1982196	0	0	0.3184461	95.5166657

4566	93.7747415	0	0	0.3083367	94.0830782
4666	93.892116	0.037362	0	0.3100216	94.2394996
4767	96.2246222	0.01437	0	0.2106125	96.4496047
4867	96.7390722	0	0	0.3167612	97.0558334
4967	92.7882962	0.024429	0	0.320131	93.1328562
5068	92.4211886	0.005748	0	0.3319253	92.7588619
5168	92.9755959	0	0	0.3639384	93.3395343
5268	93.8821267	0.007185	0	0.4161703	94.305482
5369	94.0769184	0.007185	0	0.1196279	94.2037313
5469	94.4590099	0.007185	0	0.3959515	94.8621464
5569	93.8371748	0	0	0.2409407	94.0781155
5670	95.1208024	0	0	0.2005031	95.3213055
5770	91.1075931	0	0.0062769	0.2510501	91.3649201
5869	94.3815927	0	0	0.3959515	94.7775442
5971	94.2217636	0	0	0.2982273	94.5199909
6071	92.8532267	0	0	0.4178552	93.2710819
6171	93.1104517	0.05748	0	0.219037	93.3869687
6272	94.3441327	0.007185	0	0.3976364	94.7489541
6372	93.5849444	0.044547	0.0062769	0.3235008	93.9592691
6472	94.5464165	0.048858	0	0.4262797	95.0215542
6573	94.2367476	0.011496	0.0251076	0.219037	94.4923882
6673	95.4579419	0.002874	0	0.3302404	95.7910563
6773	94.1967903	0	0.0230153	0.3824723	94.6022779
6874	95.2506635	0.123582	0	0.1415316	95.5157771
6974	95.4079953	0.044547	0	0.0926695	95.5452118
7075	94.5414218	0	0.0125538	0.2965424	94.850518
7175	95.2157009	0	0.0460306	0.370678	95.6324095
7275	94.0569398	0	0	0.4801965	94.5371363
7376	92.9706012	0	0	0.5796056	93.5502068
7476	94.7661815	0	0.0188307	0.1769145	94.9619267
7576	94.7936521	0.063228	0	0.5256888	95.3825689
7677	93.4550833	0	0	0.3639384	93.8190217
7777	94.4939725	0	0.0815997	0.4734569	95.0490291
7877	93.9520519	0	0.0564921	0.3487743	94.3573183
7978	93.4276126	0.067539	0	0.5475925	94.0427441
8078	93.7198002	0	0	0.4751418	94.194942
8178	92.8207614	0.011496	0.0376614	0.4919908	93.3619096
8279	93.135425	0	0.0083692	0.3976364	93.5414306
8379	93.8196934	0.011496	0.0460306	0.1314222	94.0086422
8479	92.885692	0.044547	0	0.0909846	93.0212236
8580	93.1054571	0	0	0.4128005	93.5182576
8680	94.141849	0	0	0.3150763	94.4569253

8780	93.3377088	0	0.0543998	0.1701749	93.5622835
8881	94.7362136	0.061791	0.0439383	0.471772	95.3137149
8981	94.3391381	0	0	0.387527	94.7266651
9081	93.5025325	0	0.0564921	0.4144854	93.97351
9182	94.678775	0.037362	0.0523075	0.3588837	95.1273282
9282	94.1843036	0	0	0.3740478	94.5583514
9382	93.0155532	0.012933	0	0.4161703	93.4446565
9483	92.9980719	0.031614	0.0564921	0.2375709	93.3237489
9583	94.4490206	0	0	0.1920786	94.6410992
9683	93.6548697	0	0.0062769	0.1246826	93.7858292
9784	93.9845172	0.038799	0	0.6840694	94.7073856
9884	94.1068864	0	0	0.4296495	94.5365359
9984	94.3741007	0	0.0690459	0.0909846	94.5341312
10085	95.4329686	0	0	0.2729538	95.7059224
10185	93.3651794	0.024429	0	0.286433	93.6760414
10285	93.2278262	0	0	0.185339	93.4131652
10386	94.4440259	0.038799	0	0.2628444	94.7456693
10486	94.4839832	0.035925	0	0.1061487	94.6260569
10586	94.7137376	0.047421	0.0020923	0.4094307	95.1726816
10687	87.44401	0	0	0.1482712	87.5922812
10787	90.0237518	0.031614	0	0.3824723	90.4378381
10887	93.892116	0	0.0334768	0.3807874	94.3063802
10988	93.9195866	0.063228	0	0.3268706	94.3096852
11088	93.3102381	0.045984	0.062769	0.2746387	93.6936298
11188	92.1339957	0	0	0.1718598	92.3058555
11289	91.9766639	0.076161	0.0062769	0.4684022	92.527504
11389	92.5885098	0.020118	0	0.2325162	92.841144
11489	94.2866942	0	0	0.4785116	94.7652058
11590	95.4379633	0.007185	0.020923	0.4700871	95.9361584
11690	92.1140171	0.027303	0.0502152	0.3841572	92.5756925
11790	92.8582214	0.022992	0	0.202188	93.0834014
11891	92.6109857	0.002874	0.0481229	0.404376	93.0663586
11991	93.5100245	0.015807	0.0376614	0.4077458	93.9712387
12091	92.5960017	0.050295	0.0774151	0.4684022	93.192114
12192	92.0865464	0.015807	0	0.2931726	92.395526
12292	94.9085293	0.007185	0	0.4262797	95.341994
12392	94.7412082	0	0	0.7093429	95.4505511
12493	93.1953609	0.038799	0	0.4936757	93.7278356
12593	94.42155	0	0	0.2443105	94.6658605
12693	91.6095564	0	0	0.0876148	91.6971712
12794	91.5695991	0.037362	0	0.3336102	91.9405713
12895	93.5574738	0.030177	0.0376614	0.3689931	93.9943053

12994	92.9905799	0	0	0.2729538	93.2635337
13095	93.4400993	0.037362	0	0.2224068	93.6998681
13195	91.5895778	0.01437	0	0.3302404	91.9341882
13295	92.1140171	0	0	0.2999122	92.4139293
13396	92.930644	0.020118	0	0.3673082	93.3180702
13496	93.4351046	0	0	0.3285555	93.7636601
13595	94.414058	0	0.0167384	0.1213128	94.5521092
13697	92.7233656	0.041673	0.0125538	0.0758205	92.8534129
13797	93.3352114	0.018681	0	0.2746387	93.6285311
13897	93.0380292	0.033051	0.0271999	0.0556017	93.1538818
13998	94.436534	0.076161	0.0167384	0.438074	94.9675074
14098	91.0326732	0	0	0.404376	91.4370492
14198	94.141849	0.02874	0	0.084245	94.254834
14299	92.8382428	0	0.0062769	0.2830632	93.1275829
14399	90.3109448	0.010059	0.0271999	0.4650324	90.8132361
14500	92.923152	0.017244	0.0334768	0.1482712	93.122144
14600	93.4925432	0.037362	0.0104615	0.1331071	93.6734738
14700	92.4411673	0	0	0.2729538	92.7141211
14801	92.1939316	0	0.0439383	0.5442227	92.7820926
14901	93.8871214	0	0.0083692	0.3083367	94.2038273
15001	92.2813382	0.048858	0	0.3858421	92.7160383
15102	93.672351	0.030177	0.0523075	0.3403498	94.0951853
15202	88.7626002	0.07185	0	0.1398467	88.9742969
15302	93.0854784	0.037362	0	0.3184461	93.4412865
15403	92.8582214	0.064665	0.0041846	0.3942666	93.3213376
15503	93.3501954	0.011496	0.0083692	0.1954484	93.565509
15603	93.3601847	0.024429	0.0041846	0.3167612	93.7055595
15704	92.6484457	0.037362	0	0.5290586	93.2148663
15804	92.7183709	0.038799	0	0.4161703	93.1733402
15904	91.9591826	0.021555	0.0041846	0.2207219	92.2056441
16005	92.7258629	0.02874	0.0062769	0.4094307	93.1703105
16105	91.659503	0.033051	0.0376614	0.2308313	91.9610467
16205	91.4472299	0.020118	0	0.2780085	91.7453564
16306	92.0640705	0.084783	0.0460306	0.0926695	92.2875536
16406	90.4458006	0.035925	0	0.1701749	90.6519005
16506	92.4886166	0	0.0188307	0.1701749	92.6776222
16607	91.0126945	0.066102	0.0083692	0.2207219	91.3078876
16707	92.4136967	0	0.0083692	0.1398467	92.5619126
16807	89.5967084	0.001437	0.0502152	0.0960393	89.7443999
16908	90.2510089	0.011496	0.0648613	0.1903937	90.5177599
17008	91.1575397	0	0.0083692	0.0454923	91.2114012
17108	89.0872531	0.017244	0	0.1550108	89.2595079

17209	88.4079793	0.048858	0	0.3268706	88.7837079
17309	87.5139352	0	0.0543998	0.2342011	87.8025361
17409	88.0134012	0.067539	0.0230153	0.2830632	88.3870187
17510	85.4935952	0.011496	0	0.3437196	85.8488108
17610	86.6548537	0.01437	0.0041846	0.2072427	86.880651
17710	87.9684493	0.02874	0	0.3403498	88.3375391
17811	87.0069772	0	0.0271999	0.1229977	87.1571748
17911	83.675539	0.040236	0	0.3184461	84.0342211
18011	85.2838195	0	0	0.2881179	85.5719374
18112	86.5100085	0.018681	0.0104615	0.2830632	86.8222142
18212	83.91778	0	0	0.1364769	84.0542569
18312	82.684099	0.018681	0.0146461	0.1213128	82.8387389
18413	82.3644407	0	0.0334768	0.1145732	82.5124907
18513	83.3009395	0	0	0.3319253	83.6328648
18613	81.3754981	0	0	0.3015971	81.6770952
18714	80.9484546	0	0	0.2139823	81.1624369
18814	82.0972264	0	0	0.1971333	82.2943597
18914	81.1232677	0	0.041846	0.353829	81.5189427
19015	80.0718918	0.018681	0	0.4650324	80.5556052
19115	81.1881983	0.020118	0.0167384	0.3656233	81.590678
19214	75.4718099	0.041673	0	0.2914877	75.8049706
19316	75.6940723	0.004311	0.0167384	0.134792	75.8499137
19416	77.5745618	0.02874	0.0230153	0.4077458	78.0340629
19516	75.5791951	0	0.0292922	0.2746387	75.883126
19617	74.193177	0	0.0585844	0.3673082	74.6190696
19717	72.3026982	0.008622	0.0460306	0.3605686	72.7179194
19817	62.220977	0.040236	0.0104615	0.4363891	62.7080636
19918	71.1364451	0.027303	0	0.3167612	71.4805093
20018	69.0611638	0.002874	0	0.1364769	69.2005147
20118	67.9098947	0.002874	0	0.2240917	68.1368604
20319	40.676511	0	0	0.0067396	40.6832506
20419	0.12236917	0	0	0.0050547	0.12742387

CRWL1A
Transect #1

X axis value	CaCO3	BaCO3	MnCO3	SrCO3	Sum
20805	85.8432214	0.038799	0	0.0117943	85.8938147
20705	91.9941452	0	0.0167384	0.084245	92.0951286
20604	94.38409	0	0.0020923	0.2678991	94.6540814
20504	95.9474186	0.038799	0.0271999	0.2005031	96.2139206
20403	97.2060729	0.041673	0.0523075	0.269584	97.5696374
20303	96.4993285	0.002874	0	0.5577019	97.0599044
20203	96.6216977	0.002874	0	0.1920786	96.8166503
20102	94.2667155	0	0	0.3015971	94.5683126
20001	96.3569807	0.054606	0.0083692	0.084245	96.5042009
19902	96.0797771	0	0.0062769	0.3218159	96.4078699
19801	91.2799088	0	0.0062769	0.3420347	91.6282204
19701	96.4294033	0.021555	0	0.2999122	96.7508705
19600	94.1693196	0.033051	0.0104615	0.2645293	94.4773614
19501	96.5442805	0	0	0.3015971	96.8458776
19400	96.1147397	0	0.0104615	0.3807874	96.5059886
19299	95.8700014	0	0.0083692	0.2645293	96.1428999
19199	96.0947611	0	0	0.3437196	96.4384807
19099	82.7989762	0.033051	0.0125538	0.2931726	83.1377536
18998	93.5125219	0.001437	0	0.0623413	93.5763002
18898	96.2346116	0.022992	0.0376614	0	96.295265
18797	95.5703218	0	0	0.4195401	95.9898619
18697	95.0433851	0	0	0.2746387	95.3180238
18597	84.3598074	0	0.0502152	0.4667173	84.8767399
18497	91.7618935	0.024429	0	0.2561048	92.0424273
18396	93.4126287	0.030177	0.0083692	0.3066518	93.7578267
18296	92.5185845	0	0.0271999	0.0084245	92.5542089
18195	92.143985	0	0.0355691	0.269584	92.4491381
18095	93.7547629	0.011496	0.0376614	0.5492774	94.3531977
17994	93.3427034	0	0	0.2459954	93.5886988
17894	92.4037073	0.077598	0	0.2645293	92.7458346
17794	94.0019985	0	0	0.6587959	94.6607944
17693	92.4536539	0.056043	0	0.303282	92.8129789
17593	93.2253289	0.041673	0.0041846	0.1331071	93.4042936
17492	95.4729259	0.02874	0.0062769	0.1887088	95.6966516
17393	93.4201206	0.064665	0	0.5357982	94.0205838
17292	91.4597166	0.025866	0	0.4128005	91.8983831
17191	92.9730986	0.015807	0.0292922	0.3689931	93.3871909
17091	91.0151919	0.050295	0.0334768	0.2257766	91.3247403
16991	92.3462687	0.005748	0.0167384	0.2847481	92.6535032

16890	93.9095973	0.025866	0	0.2763236	94.2117869
16790	93.7547629	0.017244	0	0.2476803	94.0196872
16689	94.8510907	0.015807	0	0.1246826	94.9915803
16589	95.3930113	0.033051	0.0167384	0.3807874	95.8235881
16489	95.4529473	0.056043	0.020923	0.0825601	95.6124734
16388	94.1218704	0.047421	0.0146461	0	94.1839375
16288	93.9071	0.061791	0	0.2173521	94.1862431
16188	87.1967743	0	0	0.1903937	87.387168
16087	94.7087429	0.040236	0	0.2005031	94.949482
15987	94.6388177	0	0.0083692	0.4229099	95.0700968
15886	94.9934385	0	0	0.5492774	95.5427159
15786	94.406566	0	0	0.387527	94.794093
15686	93.679843	0	0.0460306	0.4751418	94.2010154
15585	94.7661815	0.001437	0	0.3757327	95.1433512
15485	94.4640046	0	0	0.2106125	94.6746171
15385	94.1593303	0	0	0.5172643	94.6765946
15284	94.7387109	0.074724	0	0.2763236	95.0897585
15184	91.4372406	0	0	0.2611595	91.6984001
15083	94.4340366	0	0	0.1920786	94.6261152
14983	95.7376429	0.021555	0.0104615	0.2577897	96.0274491
14883	95.9673972	0.012933	0	0.1870239	96.1673541
14783	93.8871214	0.040236	0.0397537	0.370678	94.3377891
14682	94.5688924	0	0.0543998	0.4448136	95.0681058
14581	94.2966835	0.067539	0	0.235886	94.6001085
14481	93.7397789	0	0.0669536	0.3336102	94.1403427
14381	94.0394585	0	0	0.3656233	94.4050818
14280	94.8935453	0	0.0543998	0.0690809	95.017026
14180	94.6438123	0	0.0062769	0.303282	94.9533712
14080	95.0658611	0.087657	0.0334768	0.1449014	95.3318963
13979	93.9870146	0.067539	0	0.3555139	94.4100675
13879	93.4525859	0	0	0.3841572	93.8367431
13778	84.7968402	0.058917	0.0334768	0.3218159	85.2110499
13678	93.5250085	0.040236	0	0.5088398	94.0740843
13578	92.9755959	0.017244	0	0.3083367	93.3011766
13477	93.914592	0	0.020923	0.0623413	93.9978563
13377	93.9595439	0	0.0439383	0.0859299	94.0894121
13277	96.4368953	0.077598	0.0711382	0.3235008	96.9091323
13176	95.6427443	0.037362	0	0.2308313	95.9109376
13076	95.2806315	0.018681	0.0104615	0.454923	95.764697
12975	94.6812723	0	0	0.1802843	94.8615566
12875	94.3016781	0.033051	0	0.0825601	94.4172892
12775	95.0009305	0.053169	0	0.0404376	95.0945371

12674	93.9320733	0	0	0.1617504	94.0938237
12574	94.8860534	0	0.0502152	0.1297373	95.0660059
12474	94.5039619	0	0.0313845	0.0926695	94.6280159
12373	95.0883371	0.024429	0	0.2729538	95.3857199
12273	93.4850512	0	0	0.219037	93.7040882
12172	93.1703876	0.045984	0	0.3639384	93.58031
12072	93.627399	0	0.0376614	0.5189492	94.1840096
11972	91.3673154	0.008622	0.0334768	0.4650324	91.8744466
11871	94.4240473	0.033051	0	0.4397589	94.8968572
11771	96.669147	0	0.0062769	0.0926695	96.7680934
11670	82.3369701	0.008622	0	0	82.3455921
11570	93.5424898	0	0	0.4481834	93.9906732
11470	96.0548038	0	0	0.2645293	96.3193331
11369	81.9748573	0	0	0.1583806	82.1332379
11269	93.7747415	0	0	0.3133914	94.0881329
11169	93.1953609	0.050295	0.0104615	0.1735447	93.4296621
11068	93.9870146	0	0.0146461	0.1971333	94.198794
10968	95.7126696	0	0	0.2122974	95.924967
10867	90.9527586	0	0.0020923	0.084245	91.0390959
10767	90.8603574	0	0	0.353829	91.2141864
10667	89.9713079	0	0.0062769	0.4953606	90.4729454
10566	88.904948	0.061791	0	0.2038729	89.1706119
10466	90.5282125	0	0.0167384	0.3049669	90.8499178
10366	93.8072068	0.005748	0.0083692	0.3403498	94.1616738
10265	93.627399	0.007185	0	0.1566957	93.7912797
10165	92.9131627	0	0.0439383	0.320131	93.277232
10064	92.3687447	0	0.0815997	0.3959515	92.8462959
9964	94.0894051	0.021555	0.0041846	0.4431287	94.5582734
9864	89.5417672	0.067539	0.0397537	0.4448136	90.0938735
9763	90.0087679	0.007185	0.0062769	0.6133036	90.6355334
9664	94.1518383	0.020118	0	0.1263675	94.2983238
9562	93.929576	0.058917	0.0167384	0.3336102	94.3388416
9462	95.0508771	0	0	0.2106125	95.2614896
9362	91.6070591	0.037362	0.0271999	0.3487743	92.0203953
9261	93.7972175	0	0	0.1061487	93.9033662
9161	95.3255834	0	0.0585844	0.5189492	95.903117
9061	77.6045298	0	0	0.1735447	77.7780745
8960	93.2752755	0	0.0146461	0.3673082	93.6572298
8860	93.157901	0	0.0125538	0.5442227	93.7146775
8759	96.0098519	0.063228	0.0104615	0.3942666	96.477808
8659	94.8261174	0	0	0.0994091	94.9255265
8559	94.6987536	0.020118	0.0020923	0.1718598	94.8928237

8458	94.3790954	0.038799	0	0.2780085	94.6959029
8358	95.383022	0.002874	0	0.1752296	95.5611256
8258	94.7437055	0.067539	0	0.4144854	95.2257299
8157	95.7576215	0	0.0062769	0.2072427	95.9711411
8057	92.4661406	0.02874	0	0.0657111	92.5605917
7956	92.7808042	0	0	0.1785994	92.9594036
7856	88.0233905	0.037362	0	0.2729538	88.3337063
7756	90.8978173	0.090531	0	0.5324284	91.5207767
7655	91.9292146	0	0.0355691	0.151641	92.1164247
7555	93.3002488	0	0	0.3723629	93.6726117
7454	87.7761548	0.002874	0.0397537	0.4970455	88.315828
7354	86.7172869	0	0.0020923	0.2291464	86.9485256
7254	89.0048412	0	0.0167384	0.2055578	89.2271374
7153	94.4939725	0.027303	0.0292922	0.2611595	94.8117272
7053	94.9634706	0	0	0.2055578	95.1690284
6952	94.8510907	0.020118	0.0062769	0.2224068	95.0998924
6852	95.7401402	0	0.0502152	0.3723629	96.1627183
6752	93.9970039	0.038799	0	0.2459954	94.2817983
6651	94.4615073	0.01437	0.0230153	0.2072427	94.7061353
6551	92.5036005	0	0	0.421225	92.9248255
6451	92.2988195	0.021555	0.0020923	0.2611595	92.5836263
6350	93.4425966	0.008622	0	0.2055578	93.6567764
6250	87.2267422	0.020118	0.0167384	0.3824723	87.6460709
6150	93.922084	0.002874	0	0.3622535	94.2872115
6049	93.5549765	0.001437	0.0062769	0.7211372	94.2838276
5948	89.9313506	0	0	0.3167612	90.2481118
5848	89.9388426	0	0.0125538	0.4279646	90.379361
5748	94.656299	0	0	0.4010062	95.0573052
5648	93.9820199	0	0	0.4414438	94.4234637
5547	94.4240473	0.007185	0.0564921	0.3386649	94.8263893
5448	95.5503431	0	0.041846	0.2325162	95.8247053
5347	94.0694264	0.030177	0.0313845	0.33698	94.4679679
5246	94.8136308	0	0.0334768	0.3302404	95.177348
5146	95.3380701	0.044547	0.0125538	0.3487743	95.7439452
5045	94.2642182	0.021555	0	0.4431287	94.7289019
4945	93.7747415	0.012933	0	0.6183583	94.4060328
4845	93.7497682	0	0.0062769	0	93.7560451
4744	94.8860534	0.063228	0.020923	0.2055578	95.1757622
4644	94.5938657	0.047421	0	0.1651202	94.8064069
4544	94.0194798	0.031614	0	0.4245948	94.4756886
4443	93.3102381	0.053169	0	0.202188	93.5655951
4343	92.431178	0.025866	0	0.3908968	92.8479408

4242	76.7154803	0	0	0.4448136	77.1602939
4142	91.5720964	0.015807	0.0334768	0.2173521	91.8387323
4042	87.5688765	0.024429	0.0502152	0.2594746	87.9029953
3941	94.156833	0	0.0083692	0.3470894	94.5122916
3841	94.7162349	0.010059	0	0.2628444	94.9891383
3740	89.1496863	0.04311	0.0062769	0.0353829	89.2344561
3640	88.5802951	0	0.0523075	0.3117065	88.9443091
3540	67.6276964	0.004311	0	0.1246826	67.75669
3439	90.9852239	0	0.0062769	0.4111156	91.4026164
3339	91.6145511	0	0	0.2308313	91.8453824
3239	91.2874008	0.050295	0	0.2459954	91.5836912
3138	93.0130559	0	0	0.2898028	93.3028587
3038	93.4051367	0	0.0271999	0.2156672	93.6480038
2937	93.2253289	0.048858	0	0.3959515	93.6701384
2837	94.149341	0.021555	0	0.6689053	94.8398013
2737	93.5349978	0.047421	0	0.3285555	93.9109743
2636	93.7048163	0.018681	0	0.5021002	94.2255975
2536	92.7857988	0.048858	0.0167384	0.2426256	93.0940208
2436	92.7408469	0	0	0.2847481	93.025595
2335	93.7697468	0.018681	0	0.2375709	94.0259987
2235	76.5906138	0.018681	0	0	76.6092948
2134	93.5524791	0.053169	0.0167384	0.1802843	93.8026708
2034	93.2702808	0	0	0.3791025	93.6493833
1934	93.2228316	0	0	0.1651202	93.3879518
1833	89.631671	0	0.0125538	0.1937635	89.8379883
1733	89.0223225	0	0	0.4700871	89.4924096
1633	91.8617867	0	0	0.2510501	92.1128368
1532	92.0490865	0.001437	0	0.4060609	92.4565844
1432	92.6709216	0.01437	0	0.4347042	93.1199958
1331	93.8346774	0	0	0.1583806	93.993058
1231	93.3526927	0.008622	0	0.2274615	93.5887762
1131	93.5749551	0	0.0104615	0.3285555	93.9139721
1030	94.5264378	0.033051	0	0.3386649	94.8981537
930	94.7437055	0	0	0.2139823	94.9576878
829	91.8018508	0.018681	0	0.0909846	91.9115164
729	92.5535471	0.020118	0.0543998	0.2763236	92.9043885
629	93.1079544	0	0	0.4700871	93.5780415
528	92.9681039	0.008622	0.0146461	0.2207219	93.2120939
428	92.0915411	0.011496	0	0.4128005	92.5158376
328	93.8971107	0	0	0.2830632	94.1801739
227	92.908168	0	0.062769	0.4734569	93.4443939
127	94.6513043	0.012933	0.0523075	0.3049669	95.0215117

26	90.7205069	0.007185	0	0.2662142	90.9939061
-73	90.7105176	0.037362	0	0.1331071	90.8809867
-173	90.9752346	0.047421	0	0.4633475	91.4860031
-274	90.3933567	0	0	0.1449014	90.5382581
-374	93.5674631	0.02874	0.0062769	0.0134792	93.6159592
-474	88.7026643	0.011496	0	0.5627566	89.2769169
-575	92.5485525	0.02874	0.0041846	0.1617504	92.7432275
-675	93.0030665	0	0	0.3352951	93.3383616
-776	94.3566194	0.021555	0	0.0892997	94.4674741
-876	94.2067796	0.067539	0	0	94.2743186
-976	93.5949337	0	0	0.4734569	94.0683906
-1077	91.644519	0.025866	0.0795074	0.4161703	92.1660627
-1177	90.2185436	0.01437	0.0355691	0.4633475	90.7318302
-1277	91.8343161	0	0.0020923	0.5122096	92.348618
-1378	94.0993944	0.005748	0	0.2746387	94.3797811
-1478	92.3587554	0.091968	0.0041846	0.1229977	92.5779057
-1579	91.402278	0.012933	0.0041846	0.2325162	91.6519118
-1679	90.2110516	0	0	0.2931726	90.5042242
-1779	89.0248198	0	0	0.1836541	89.2084739
-1881	94.0494478	0.053169	0.0041846	0.0960393	94.2028407
-1980	93.5999284	0.015807	0.0669536	0.3184461	94.0011351
-2081	92.893184	0	0.0020923	0.1718598	93.0671361
-2181	93.3277194	0	0	0.2493652	93.5770846
-2280	94.2192662	0	0	0.1095185	94.3287847
-2382	92.3887234	0	0.0104615	0.1297373	92.5289222
-2482	92.4736326	0	0	0.3184461	92.7920787
-2582	91.9342093	0.008622	0.0271999	0.1668051	92.1368363
-2683	86.0804678	0	0	0.4347042	86.515172
-2783	86.4825379	0.002874	0	0.2813783	86.7667902
-2884	90.0736984	0	0	0.3993213	90.4730197
-2984	92.5085952	0.005748	0.0020923	0.5021002	93.0185357
-3084	91.8817654	0	0.062769	0.2476803	92.1922147
-3185	90.3783727	0.020118	0.0732305	0.1162581	90.5879793
-3285	90.0062705	0.024429	0.0251076	0.2881179	90.343925
-3385	93.0355318	0.027303	0.0397537	0.2325162	93.3351047
-3486	92.8657134	0	0	0.4178552	93.2835686
-3586	91.5870804	0.005748	0	0.3015971	91.8944255
-3687	91.7519042	0.033051	0	0.2224068	92.007362
-3787	91.8742734	0.051732	0	0.5509623	92.4769677
-3887	90.2709875	0.001437	0.0271999	0.2274615	90.5270859
-3988	92.4461619	0.020118	0.0271999	0.0960393	92.5895191
-4088	91.7294282	0	0	0.2510501	91.9804783

-4189	91.2524382	0	0.0460306	0.185339	91.4838078
-4289	90.8328868	0	0	0.3352951	91.1681819
-4389	91.1175824	0	0.0481229	0.2965424	91.4622477
-4490	92.2588622	0	0	0.2207219	92.4795841
-4590	92.8357454	0.090531	0	0.1550108	93.0812872
-4690	90.2460142	0.001437	0.0104615	0	90.2579127
-4791	93.1379224	0.018681	0	0.0589715	93.2155749
-4891	93.7222976	0.027303	0	0.4869361	94.2365367
-4992	92.1939316	0.007185	0.0062769	0.3959515	92.603345
-5092	91.7918615	0.047421	0.0292922	0.4582928	92.3268675
-5192	91.9941452	0	0	0.1196279	92.1137731
-5293	93.7997148	0.004311	0	0.219037	94.0230628
-5393	93.8296828	0	0	0.3184461	94.1481289
-5493	92.5910071	0	0.0041846	0.1836541	92.7788458
-5594	93.6973243	0.007185	0.020923	0.5290586	94.2544909
-5694	92.8757027	0.010059	0.0230153	0.2224068	93.1311838
-5795	92.9506226	0.037362	0.0062769	0.2830632	93.2773247
-5895	93.0080612	0.038799	0	0.6436318	93.690492
-5995	93.0280398	0.073287	0	0.3892119	93.4905387
-6096	92.7533335	0.050295	0	0.2561048	93.0597333
-6196	92.680911	0.067539	0	0.033698	92.782148
-6296	92.5560445	0.030177	0	0.2813783	92.8675998
-6397	88.6577123	0	0.0355691	0.4599777	89.1532591
-6497	93.3277194	0	0	0.1920786	93.519798
-6598	92.0890438	0	0.0230153	0.2645293	92.3765884
-6698	93.3152328	0.035925	0	0.3521441	93.7033019
-6798	92.3237928	0.015807	0.0167384	0.1735447	92.5298829
-6899	91.3548287	0.001437	0	0.0320131	91.3882788
-6999	87.6962403	0.020118	0	0.5425378	88.2588961
-7100	92.1165144	0.015807	0	0.4077458	92.5400672
-7200	91.7319256	0	0	0.2156672	91.9475928
-7300	91.3123741	0.084783	0.0167384	0.0960393	91.5099348
-7401	89.38943	0	0.0146461	0.2409407	89.6450168
-7501	89.4693446	0.054606	0	0.4431287	89.9670793
-7601	90.1411264	0.015807	0.0104615	0.2240917	90.3914866
-7702	90.3059501	0	0	0.2089276	90.5148777
-7802	90.5581805	0.012933	0	0.3336102	90.9047237
-7903	90.7704535	0	0	0.0859299	90.8563834
-8003	92.0740598	0	0	0.3083367	92.3823965
-8103	90.1161531	0	0.0251076	0.1381618	90.2794225
-8204	84.7693695	0.035925	0.0062769	0.3689931	85.1805645
-8304	89.1821516	0	0.0230153	0.3319253	89.5370922

-8404	90.7030256	0	0	0	90.7030256
-8505	90.4707739	0.038799	0	0.2712689	90.7808418
-8605	91.5945724	0.020118	0	0.0387527	91.6534431
-8706	86.5499658	0.007185	0	0.3807874	86.9379382
-8806	90.2560035	0.031614	0	0.269584	90.5572015
-8906	86.2652702	0.02874	0.0083692	0.3555139	86.6578933
-9007	87.935984	0	0	0.2982273	88.2342113
-9107	90.4657793	0.024429	0.0146461	0.5206341	91.0254885
-9207	90.1111584	0	0	0.1651202	90.2762786
-9308	89.3519701	0	0	0.488621	89.8405911
-9408	86.6748323	0	0.0188307	0.606564	87.300227
-9509	89.0622798	0	0	0.2443105	89.3065903
-9609	88.6152577	0.008622	0	0.4347042	89.0585839
-9709	88.6052684	0.040236	0.0062769	0.4128005	89.0645818
-9810	82.3444621	0.073287	0	0.3908968	82.8086459
-9910	81.4753913	0.008622	0	0.5155794	81.9995927
-10011	88.7201456	0	0.0188307	0.0909846	88.8299609
-10111	88.7551082	0.001437	0.020923	0.3774176	89.1548858
-10211	88.6751936	0	0	0.4768267	89.1520203
-10312	87.9759412	0	0	0.2072427	88.1831839
-10412	89.1671677	0	0	0.1701749	89.3373426
-10512	89.4094087	0.022992	0	0.5543321	89.9867328
-10613	87.7511815	0.011496	0.0167384	0.3942666	88.1736825
-10714	89.646655	0	0	0.3251857	89.9718407
-10814	84.4222407	0	0	0.084245	84.5064857
-10914	86.0604891	0.035925	0	0.4262797	86.5226938
-11014	87.943476	0.005748	0	0.1381618	88.0873858
-11115	86.5674471	0	0.0397537	0.0825601	86.6897609
-11215	85.6933816	0	0	0.286433	85.9798146
-11315	85.9905639	0	0.0062769	0.2459954	86.2428362
-11416	82.3769274	0.07185	0.0251076	0.4852512	82.9591362
-11516	84.1650157	0.022992	0.0083692	0.1566957	84.3530726
-11617	87.1043731	0.010059	0	0.2763236	87.3907557
-11717	84.8218135	0.015807	0.0020923	0.4835663	85.3232791
-11817	86.8646294	0.007185	0	0.4026911	87.2745055
-11918	84.3023688	0.054606	0.0732305	0.3403498	84.7705551
-12018	86.6323777	0	0.0648613	0.2830632	86.9803022
-12118	85.93812	0	0.0104615	0.3268706	86.2754521
-12219	84.7269149	0.067539	0.0397537	0.2965424	85.13075
-12319	85.6534243	0	0.0062769	0.1078336	85.7675348
-12420	83.2060409	0.002874	0	0.2510501	83.459965
-12520	85.1115037	0.024429	0	0.3386649	85.4745976

-12620	84.1275557	0.038799	0.0062769	0.1314222	84.3040538
-12721	85.0041185	0	0	0.252735	85.2568535
-12821	84.6869576	0.021555	0.0062769	0.2325162	84.9473057
-12922	84.5071499	0.012933	0.0271999	0.1903937	84.7376765
-13022	85.2888142	0.025866	0.0167384	0.2611595	85.5925781
-13122	84.5446098	0.07185	0	0.320131	84.9365908
-13223	82.41189	0.041673	0.0167384	0.2106125	82.6809139
-13323	80.883524	0.012933	0	0.2763236	81.1727806
-13423	82.6591257	0.051732	0	0.2729538	82.9838115
-13524	83.3508861	0	0.0376614	0.1196279	83.5081754
-13624	82.2770342	0.033051	0.0020923	0.5206341	82.8328116
-13725	81.5652951	0	0.0230153	0.0758205	81.6641309
-13825	83.2210249	0	0.041846	0.2594746	83.5223455
-13925	82.1721463	0	0.020923	0.2561048	82.4491741
-14026	81.7051456	0	0	0.2459954	81.951141
-14126	78.7333229	0	0.0062769	0.4279646	79.1675644
-14226	76.7904002	0.018681	0.0083692	0.2224068	77.0398572
-14327	82.0647611	0	0	0.1550108	82.2197719
-14427	80.2442076	0.038799	0.041846	0.2662142	80.5910668
-14528	80.6587643	0.01437	0.0125538	0.1499561	80.8356442
-14628	79.7797042	0	0	0.3015971	80.0813013
-14728	79.4425646	0	0	0.2780085	79.7205731
-14829	79.9769933	0.033051	0	0.1954484	80.2054927
-14929	78.2063863	0	0.0376614	0.067396	78.3114437
-15030	72.9395173	0	0	0.0219037	72.961421
-15130	78.6559057	0.018681	0.020923	0.2561048	78.9516145
-15230	79.8446348	0	0	0.2055578	80.0501926
-15330	81.1457437	0	0	0.3403498	81.4860935
-15431	81.0957971	0	0.0292922	0	81.1250893
-15531	74.2655995	0	0.0062769	0.4599777	74.7318541
-15632	77.0126625	0	0	0.2342011	77.2468636
-15732	74.677659	0	0	0.0859299	74.7635889
-15833	76.1261104	0	0	0.2999122	76.4260226
-15933	75.7040616	0	0	0.2594746	75.9635362
-16033	73.5014166	0.007185	0.0146461	0.1752296	73.6984773
-16134	72.3151848	0.002874	0.041846	0.3235008	72.6834056
-16234	71.9256013	0	0	0.2594746	72.1850759
-16334	75.1196864	0	0.0271999	0.0808752	75.2277615
-16435	71.3736914	0	0	0.1162581	71.4899495
-16535	73.391534	0.033051	0	0.1718598	73.5964448
-16636	69.9876733	0	0.0251076	0.1415316	70.1543125
-16736	69.6929883	0.051732	0.0104615	0.3100216	70.0652034

-16836	71.4660926	0.040236	0.0271999	0.1499561	71.6834846
-16937	70.0351225	0	0.0753228	0.2931726	70.4036179
-17037	66.905968	0	0.0062769	0.3892119	67.3014568
-17137	67.3954447	0.004311	0.0230153	0.2847481	67.7075191
-17238	67.3305141	0	0	0.1836541	67.5141682
-17338	66.4239833	0	0.0167384	0.1819692	66.6226909
-17439	67.6676537	0	0.0251076	0.3824723	68.0752336
-17539	66.6062884	0.037362	0.0606767	0.2914877	66.9958148
-17639	65.8246241	0.041673	0	0.2224068	66.0887039
-17740	63.681915	0.017244	0	0.0252735	63.7244325
-17840	64.41613	0	0.0062769	0.2780085	64.7004154
-17941	64.4585846	0.051732	0.0062769	0.0589715	64.575565
-18041	64.3387128	0	0.020923	0.4903059	64.8499417
-18141	66.1817423	0.015807	0	0.0825601	66.2801094
-18242	63.219909	0	0	0	63.219909
-18342	65.2552329	0.008622	0.0020923	0.3437196	65.6096668
-18442	67.4728619	0.033051	0	0.235886	67.7417989
-18543	65.7671856	0.010059	0	0.1196279	65.8968725
-18643	64.2862689	0.034488	0.0188307	0.0471772	64.3867648
-18744	63.90168	0	0	0.1802843	64.0819643
-18843	63.6194818	0	0	0.1112034	63.7306852
-18944	61.4018527	0.008622	0.0271999	0.1617504	61.599425
-19045	66.8784974	0	0	0	66.8784974
-19145	60.7700282	0	0.0292922	0.1785994	60.9779198
-19245	63.9416373	0.001437	0	0.4161703	64.3592446
-19346	66.209213	0	0.0292922	0.0185339	66.2570391
-19446	64.7432803	0.002874	0	0.2240917	64.970246
-19547	63.689407	0	0.0167384	0.2544199	63.9605653
-19647	62.3608274	0.010059	0	0.2409407	62.6118271
-19747	70.4796473	0.061791	0.083692	0	70.6251303
-19848	63.4047114	0	0.0041846	0.3942666	63.8031626
-19975	66.8135668	0	0	0.2796934	67.0932602
-20048	65.3626181	0	0	0.1819692	65.5445873
-20149	60.5977125	0	0	0.2342011	60.8319136
-20249	65.3026822	0	0.0104615	0	65.3131437
-20350	67.3604821	0	0	0.3925817	67.7530638

CRWL1A
Transect #2

X axis value	CaCO3	BaCO3	MnCO3	SrCO3	Sum
20603	93.3202274	0	0	0.2106125	93.5308399
20502	94.0919024	0.054606	0.0146461	0.1280524	94.2892069
20401	86.3052275	0	0	0.4498683	86.7550958
20300	94.6513043	0	0.0502152	0.4970455	95.198565
20199	92.7533335	0	0	0.2308313	92.9841648
20098	95.4804179	0	0	0.4768267	95.9572446
19997	95.2681448	0.041673	0.0292922	0.404376	95.743486
19896	95.9823812	0	0.0104615	0.4498683	96.442711
19794	87.9534653	0	0.0125538	0.286433	88.2524521
19693	93.937068	0.007185	0.0167384	0.2173521	94.1783435
19592	94.8860534	0	0.0397537	0.3049669	95.230774
19491	96.0772798	0.022992	0	0.1971333	96.2974051
19390	94.5039619	0.058917	0	0.1769145	94.7397934
19289	83.6655497	0	0	0.3386649	84.0042146
19188	92.4661406	0	0.0146461	0.3319253	92.812712
19087	94.2317529	0.025866	0.0397537	0.320131	94.6175036
18986	93.4475913	0.017244	0	0.2426256	93.7074609
18885	92.6834083	0.07185	0	0.0522319	92.8074902
18784	90.2984581	0.012933	0.0292922	0.421225	90.7619083
18683	92.4636433	0.005748	0.0334768	0.4060609	92.908929
18582	92.8232588	0.070413	0.0355691	0.5138945	93.4431354
18481	93.4525859	0	0	0.1785994	93.6311853
18380	90.8678494	0.080472	0.0125538	0.5577019	91.5185771
18279	94.7062456	0.037362	0.0251076	0.1617504	94.9304656
18178	94.0993944	0.04311	0	0.2544199	94.3969243
18077	93.7123083	0.034488	0	0.286433	94.0332293
17976	91.1850103	0	0	0.2156672	91.4006775
17874	94.9609733	0	0	0.3673082	95.3282815
17773	91.9916479	0	0.0397537	0.4801965	92.5115981
17672	93.9795226	0.010059	0	0.0859299	94.0755115
17571	93.3402061	0	0.0062769	0.5071549	93.8536379
17470	94.7836628	0.037362	0	0.1263675	94.9473923
17369	95.148273	0.018681	0.0292922	0.2257766	95.4220228
17268	93.7198002	0	0.041846	0.471772	94.2334182
17167	93.407634	0.089094	0.0125538	0.5122096	94.0214914
17066	93.892116	0.079035	0	0.2375709	94.2087219

16965	91.1775183	0.017244	0.0041846	0.4987304	91.6976773
16864	89.9488319	0.041673	0.0439383	0.4431287	90.4775719
16763	93.7123083	0	0.0920612	0.2948575	94.099227
16662	93.4326073	0	0.0271999	0.5206341	93.9804413
16561	93.2627889	0	0.0334768	0.2173521	93.5136178
16460	94.1368544	0	0.0732305	0.1533259	94.3634108
16359	93.6623617	0.022992	0	0.1583806	93.8437343
16258	95.5003965	0.012933	0	0.3504592	95.8637887
16157	92.3512634	0	0.0292922	0.6705902	93.0511458
16056	91.6844763	0.02874	0.0146461	0.1769145	91.9047769
15954	92.0815518	0	0	0.3470894	92.4286412
15853	93.8296828	0	0.0188307	0.5711811	94.4196946
15752	95.5853058	0.030177	0	0.3942666	96.0097494
15651	88.2556422	0.007185	0	0.5796056	88.8424328
15550	91.9741666	0	0	0.0876148	92.0617814
15449	92.8831947	0.041673	0	0.2729538	93.1978215
15347	94.7811655	0	0.0271999	0.3689931	95.1773585
15247	92.9980719	0.070413	0.0146461	0.4363891	93.5195201
15146	94.5938657	0.035925	0.0083692	0.4330193	95.0711792
15045	91.4946792	0.002874	0	0.4700871	91.9676403
14944	93.2602915	0.040236	0.0167384	0.2544199	93.5716858
14843	94.0919024	0.01437	0	0.2240917	94.3303641
14742	95.1982196	0.004311	0.020923	0.3925817	95.6160353
14641	94.7087429	0	0.0271999	0.2224068	94.9583496
14540	93.9021053	0	0.0585844	0.2628444	94.2235341
14439	95.2881235	0.077598	0	0.3150763	95.6807978
14338	90.8928227	0.047421	0	0.3521441	91.2923878
14237	95.0958291	0.018681	0.0376614	0.3251857	95.4773572
14136	94.0744211	0	0.0230153	0.3049669	94.4024033
14034	96.0148465	0	0.0983381	0.3268706	96.4400552
13933	92.9206546	0.024429	0	0.3066518	93.2517354
13832	95.4978992	0.015807	0.0313845	0.3571988	95.9022895
13731	93.5724578	0.044547	0.0292922	0.4448136	94.0911106
13630	94.3466301	0	0.0146461	0.3336102	94.6948864
13529	92.8532267	0.024429	0	0.3403498	93.2180055
13428	96.2695742	0.024429	0	0.2038729	96.4978761
13327	93.6523723	0.002874	0.0020923	0.2813783	93.9387169
13226	91.4272513	0	0.0376614	0.3959515	91.8608642
13125	94.9709626	0.064665	0	0.1887088	95.2243364
13024	93.5699604	0	0.0523075	0.2139823	93.8362502

12923	95.4504499	0	0.0167384	0.1095185	95.5767068
12822	94.2642182	0.080472	0	0.1718598	94.51655
12722	95.867504	0	0	0.320131	96.187635
12620	94.633823	0.015807	0.0292922	0.1314222	94.8103444
12519	95.4179846	0	0	0.1128883	95.5308729
12418	92.9905799	0	0	0.2729538	93.2635337
12317	93.2627889	0.02874	0.041846	0.3218159	93.6551908
12217	95.0758504	0.012933	0	0.0185339	95.1073173
12114	96.2046436	0	0	0.3420347	96.5466783
12013	92.2438782	0.001437	0.0062769	0.3588837	92.6104758
11912	94.1018917	0.096279	0.0062769	0.2847481	94.4891957
11811	94.0019985	0	0	0.1701749	94.1721734
11710	93.7272922	0	0.0041846	0.387527	94.1190038
11609	94.3865874	0	0.0062769	0.2342011	94.6270654
11508	95.8100655	0	0	0.5071549	96.3172204
11407	92.4886166	0.007185	0	0.3908968	92.8866984
11306	93.8571534	0.033051	0.0502152	0.2274615	94.1678811
11205	96.3594781	0	0	0.2274615	96.5869396
11104	94.1143784	0.054606	0.0334768	0.5475925	94.7500537
11003	93.9095973	0.034488	0	0.1971333	94.1412186
10902	93.4251153	0.010059	0	0.1634353	93.5986096
10801	93.9046027	0.021555	0	0.3791025	94.3052602
10700	95.3555514	0.030177	0	0.2072427	95.5929711
10599	95.155765	0.061791	0	0.3487743	95.5663303
10498	94.8111335	0	0.0167384	0.3555139	95.1833858
10397	93.2403129	0.015807	0	0.0977242	93.3538441
10296	92.8357454	0.025866	0.0062769	0.4582928	93.3261811
10194	94.0819131	0	0.0460306	0.2729538	94.4008975
10093	91.6270377	0.035925	0.0125538	0.2173521	91.8928686
9992	93.7372816	0.040236	0.041846	0.1128883	93.9322519
9891	94.3516247	0.008622	0.0292922	0.2628444	94.6523833
9790	93.672351	0.002874	0	0.2796934	93.9549184
9689	92.3762367	0.061791	0.0732305	0.5088398	93.020098
9588	95.4179846	0.045984	0.0083692	0.3319253	95.8042631
9487	93.3302168	0.022992	0.0292922	0.3942666	93.7767676
9386	93.120441	0.002874	0.0104615	0.4245948	93.5583713
9285	94.0194798	0.038799	0	0.2796934	94.3379722
9184	92.8732054	0.047421	0	0.3386649	93.2592913
9083	94.6887643	0	0.0125538	0.2325162	94.9338343
8982	92.7333549	0.017244	0.0104615	0.3117065	93.0727669

8881	91.6844763	0	0	0.4566079	92.1410842
8781	92.9281466	0	0.0104615	0.2561048	93.1947129
8679	90.3608914	0.001437	0.0271999	0.134792	90.5243203
8578	92.4661406	0.060354	0	0.2948575	92.8213521
8477	94.171817	0	0.0355691	0.2122974	94.4196835
8376	95.1882303	0.01437	0.0481229	0.4498683	95.7005915
8274	91.9267173	0.020118	0.0167384	0.0724507	92.0360244
8173	92.8632161	0	0	0.0033698	92.8665859
8072	94.6213364	0	0	0.2122974	94.8336338
7971	92.8782	0.021555	0	0.2291464	93.1289014
7870	93.3352114	0.002874	0	0.3403498	93.6784352
7769	96.4568739	0.005748	0.0439383	0.5509623	97.0575225
7667	91.909236	0.021555	0	0.16849	92.099281
7567	93.2677835	0	0	0.4195401	93.6873236
7466	94.6313257	0.02874	0.0041846	0.3858421	95.0500924
7365	89.918864	0.015807	0.0962458	0.2965424	90.3274592
7264	88.2531449	0	0.0083692	0.2106125	88.4721266
7163	93.5225112	0	0	0.4195401	93.9420513
7062	92.0415945	0	0.0397537	0.5206341	92.6019823
6961	93.884624	0	0.0062769	0.269584	94.1604849
6860	95.0533745	0.047421	0	0.1971333	95.2979288
6759	92.43867	0.02874	0.0397537	0.269584	92.7767477
6658	95.1307917	0.038799	0	0.3352951	95.5048858
6557	91.6120537	0.087657	0	0.2881179	91.9878286
6456	92.4486593	0.01437	0	0.320131	92.7831603
6354	92.3912207	0.002874	0.0125538	0.2544199	92.6610684
6253	91.8043481	0.037362	0.0020923	0.3588837	92.2026861
6152	92.8207614	0.040236	0	0	92.8609974
6051	93.142917	0.024429	0.0523075	0.3588837	93.5785372
5950	84.0326572	0.017244	0	0.404376	84.4542772
5849	90.8278921	0	0.0502152	0.4397589	91.3178662
5647	93.2503022	0	0	0.3841572	93.6344594
5546	88.647723	0.050295	0	0.269584	88.967602