Recent and Glacial Age Organic Carbon and Biogenic Silica Accumulation in Marine Sediments

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RECENT AND GLACIAL AGE ORGANIC CARBON AND BIOGENIC SILICA ACCUMULATION IN MARINE SEDIMENTS

BY

DOUGLAS S. CWIENK

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN OCEANOGRAPHY (GEOLOGICAL)

UNIVERSITY OF RHODE ISLAND

1986
MASTER OF SCIENCE THESIS

OF

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APPROVED:

Thesis Committee

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DEAN OF THE GRADUATE SCHOOL
Sedimentation rate data for the late Pleistocene and Holocene was compiled and mapped along with bulk sediment accumulation rate data estimated from the surface calcium carbonate concentration. This data was combined with surface organic carbon and opal (biogenic silica) concentration data in order to calculate the recent rate of accumulation of these biogenically derived sedimentary components. The maps of organic carbon and opal accumulation rates showed similar trends, being highest in known regions of upwelling and high productivity. Annual organic carbon burial was estimated by multiplying the accumulation rates by the areas between the contours and found to be $0.21 \times 10^{14}$ gC/yr for the deep-sea (pelagic and hemipelagic) and $0.04 \times 10^{14}$ gC/yr for the shelves exclusive of deltaic sediments. Burial of organic carbon in deltaic sediments is very large, however the necessary data is not available to calculate the burial of organic carbon in all the world's major river deltas. For this reason an estimate of $1.04 \times 10^{14}$ gC/yr from Berner (1982) is assumed to be correct for delta deposits, yielding a global organic carbon burial rate of $1.29 \times 10^{14}$ gC/yr. Organic carbon burial in the most recent Mediterranean sapropel is $0.016 \times 10^{14}$ and therefore had little or no affect on the global carbon cycle. Glacial versus interglacial organic carbon accumulation is compared at 10 sites, showing glacial rates higher in areas of present upwelling. Organic carbon
accumulation rates and organic carbon accumulation rates divided by productivity are plotted versus sedimentation. While correlations were fairly good ($r^2=0.81$ and $r^2=0.66$, respectively), sedimentation rate data alone is insufficient for estimating organic carbon accumulation.

All available quartz and opal concentrations from deep-sea surface sediments were intercalibrated, plotted, and contoured on a calcium carbonate-free basis. The maps show highest concentrations of opal along the west coast of Africa, along equatorial divergences in all oceans, and at the Polar Front in the southern Indian Ocean. These are all areas where upwelling is strong and there is high biological productivity. Quartz in pelagic sediments deposited far from land is generally eolian in origin. Its distribution reflects dominant wind systems in the Pacific, but in much of the Atlantic and Indian oceans the distribution pattern is strongly modified by turbidite deposition and bottom current processes.
ACKNOWLEDGEMENTS

Support for this work came from National Science Foundation grants ATM 81-16301, OCE 82-00388, and OCE 85-11896 to M. Leinen and also through the award of the URI Industrial Associates Fellowship in 1985 from Exxon. I thank the many technicians and students who generated the data used in this compilation, most of whom I do not know, but including Patricia Price, formerly of Oregon State University, and Tammy King Walsh, University of Rhode Island. I also thank Ray Cranston of the Atlantic Geoscience Centre, Bedford Institute of Oceanography and J.H.F. Jansen of the Netherlands Institute for Sea Research for providing me with unpublished data.

I would like to thank Richard Burroughs for once again being an outside committee member for a defending graduate student at GSO, and for his insight into the problem from outside the immediate area of my work. I would like to thank Mike Arthur for his suggestions and many long discussions of my work. I would especially like to thank my major professor Margaret Leinen for her help in defining the direction my work was to take, pointing me in the right direction to find what was needed, for showing me how to write scientific works, and for consistently providing funding for me, so that I could complete my work. I would also like to thank Ken Hinga for his help and his insight into the workings of GSO.

On a more personal note I would like to thank my friends
at GSO, the girls in the lab who listened to me complain when things went wrong, the other students who drank, laughed and enjoyed life beyond work with me, especially Frank Hall and the intramural football team, White Noise, who helped me blow off steam both on the field and in the bar. Above all I would like to thank my parents for their constant love and support regardless of what I chose to do with my life and my wife Eileen, who supported, comforted, and loved me through the many ups and downs that my work and my moods created.
This thesis is presented in the form of one manuscript, in accordance with the guidelines of the University of Rhode Island Graduate School of Oceanography. The manuscript is to be submitted to the journal, Biogeochemical Cycles. Appendix I consists of an article previously published under the authorship of Margaret Leinen, Douglas Cwienk, G. Ross Heath, Pierre Biscaye, V. Kolla, Jorn Thiede, and J. Paul Dauphin. Much of the plotting and contouring was done by me as was the writing of the initial draft of the text, however the text was heavily revised and the unpublished data used, had been obtained prior to my beginning work on that project. Appendix I, while not an integral part of this thesis, provided data and experience in plotting and handling large data sets, used in the preparation of this thesis. Appendix 2 and 3 contain all of the raw data used to generate both the maps for my thesis and the maps of Leinen, et al, 1986. Appendix 4 contains the calculated values used to generate the sedimentation rate, bulk sediment, organic carbon and opal accumulation rate maps.
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INTRODUCTION

Organic carbon is usually a minor constituent of marine sediments, however its burial plays a very important role in biogeochemical cycles. Marine sediments represent a significant sink for carbon in the marine carbon cycle that has been estimated by many researchers (e.g. Garrels and Perry, 1974; Kempe, 1979; Berner, 1982), but has not yet been studied in great detail. In this study we combine maps of the global distribution of organic carbon in deep sea sediments (Premuzic, et al., 1982; Cwienk and Leinen, 1986) with sedimentation and mass accumulation rates to make a quantitative estimate of recent and glacial age organic carbon accumulation in marine sediments.

The main sources of organic carbon to marine sediments are terrestrial organic matter transported to the ocean via rivers and photosynthetic production of marine phytoplanktic organic matter. Chemosynthetic production of organic carbon compounds occurs in hydrothermal vent communities (Corliss, et al., 1979). The net carbon production of these unique areas is probably small and will be ignored for the purposes of this study.

The amount of marine autochthonous organic carbon fixed in near-surface waters by photosynthesis is dependent, in part, on nutrient availability in surface waters. During
respiration a large proportion of this photosynthetic organic carbon is metabolically oxidized and a smaller fraction of it is reformed into different organic carbon compounds. Carbon (CO$_2$) is cycled through this system of photosynthetic fixation and metabolic liberation. A portion of the organic carbon in this cycle survives oxidation in the water column and is transported to the sediments where most of it is recycled by benthic faunal respiration. A similarly small fraction (ca. 0.5% of the primary production) of the organic carbon reaching the sediments is preserved by burial (Müller and Suess, 1979). Previous studies suggest that on a regional and local basis (e.g. Lisitzin, 1972; Suess, 1980) the rate of organic carbon burial reflects primary productivity in spite of the many processes which diminish carbon fluxes to sediments. Such a relationship between sedimentary organic carbon accumulation and primary productivity (photosynthesis) would allow us to make inferences about surface productivity in the past from sediment accumulation, despite the fact that only 0.01% to 20% (typically 0.5%) of the organic carbon produced is preserved in the sediments (Müller and Suess, 1979).

Whereas river input and primary production (photosynthesis) in surface waters control the amount of organic carbon supplied to the seafloor, many factors modify the concentration of organic carbon buried in the sediments. For example, because organic carbon fluxes may be modified by oxidation in the water column and at the sediment water
interface organic carbon distribution can be altered by
depth-dependent oxygen concentrations. In areas where the
midwater oxygen-minimum zone intersects the seafloor along
continental margins, organic carbon is preferentially
preserved in surface sediments (e.g. the Peru margin,
Froelich, 1979; Demaison and Moore, 1980). Organic carbon
concentrations and accumulation rates may also be influenced
by varying burial rates. Higher sedimentation rates remove
organic carbon from the zone of oxic benthic metabolism
(reduced residence time at the sediment/water interface).
The relationship between the rate of organic carbon burial
and sedimentation rate is quantitative for specific areas
(eg. northeast Pacific, Heath et al, 1977; West Africa,
Jansen, et al, 1984). Müller and Suess (1979) have
suggested that the relationship between the rate of organic
carbon burial and sedimentation rate varies in a systematic
fashion in all sediments.

Organic carbon distribution may also be affected by the
grain size and mineralogy of the accompanying sediments.
Some organic carbon compounds are sorbed onto clays (Weiss,
1969; Morris and Calvert, 1975), thereby apparently
increasing organic carbon preservation in the fine fraction.
Fine-grained sediments have been found to be higher in
organic carbon (Emery and Uchupi, 1972; Bordovskiy, 1965;
and others). Of course, this relationship may be the result
of depositional energy and higher organic carbon fluxes to
the seafloor over the continental slope where finer grained
sediments preferentially accumulate. Müller and Suess (1977) suggested that organic carbon preservation is also related to calcium carbonate concentration, due to sorption of dissolved organic matter onto the surface of calcium carbonate grains. Direct evidence for these effects is lacking.

It has been proposed that primary production in many low latitude oceanic regions was higher during glacial periods than during interglacial periods (e.g. Müller, et al, 1983; CLIMAP Project Members, 1976, and Broecker, 1982). Such changes in productivity and the amount of carbon buried would also have affected the CO$_2$ content of the atmosphere. Evidence from Antarctic ice cores suggests that the CO$_2$ content of the atmosphere was approximately 90 ppm lower during the last glacial maximum (18 ka) (Neftel, et al, 1982). It has been shown that increasing the concentration of CO$_2$ in the atmosphere would cause a warming of the atmosphere due to the retention of short wave radiation being back-radiated by the earth (Schneider and Kellogg, 1973). This phenomenon is known as the "greenhouse effect". Its possible consequences have caused much concern because of the progressive increase in atmospheric CO$_2$ concentrations since the industrial revolution, as the result of the burning of fossil fuels.

Any attempt to study changes in the carbon cycle through time or to assess possible responses to anthropogenic influences (e.g. Garrels and Perry, 1974; Kempe, 1979;
Arthur, 1982; etc.) must include an estimate of changes in the rate of removal of organic carbon from the system by sedimentation on the sea floor so that a baseline is available against which to compare estimates for older time periods. Organic carbon accumulation rates are related to productivity, the rates determined here also provide data with which such a relationship can be quantified for estimation of rates of productivity during other time intervals may be made.

Other approaches to estimating rates of organic carbon burial and its role in the carbon cycle are based on net flux measurements at a few localities, which are calculated from surface carbon flux measured by sediment traps and benthic flux measured by benthic respiration and pore water studies. Such studies are necessarily short term and therefore are influenced by seasonal and short-term events, such as organic floc falls (Honjo, 1982). Surface flux minus benthic flux equals the burial flux or accumulation rate. The average organic carbon accumulation rate in sediments integrates the burial flux over longer periods of time (a few kyrs.) and mediates the effects of seasonality, short-term and localized phenomena. By mapping the distribution of organic carbon accumulation on the sea floor, local studies of fluxes may be placed into the context of global or regional trends. In this way such flux studies can be extrapolated globally without having to study fluxes everywhere in the world for extended periods of time.
Biogenic silica (opal) is often a major constituent of marine sediments and its importance has long been recognized. Opal consists primarily of the tests of siliceous marine phytoplankton and zooplankton, which are most abundant in zones of high nutrient availability and therefore it is another possible indicator of surface water biological productivity. Its distribution in ancient sediments has been used by many authors to infer paleoproductivity and paleocirculation (e.g. Pisias, 1974; Molina-Cruz, 1976; Pisias and Leinen, 1984). Like organic carbon, opal produced in the surface waters does not reach the seafloor without dissolution. Opal is subject to dissolution both in the water column and on the seafloor because seawater is everywhere undersaturated with respect to opaline silica (Miskell, et al, 1985). For deep water masses it is a general rule that older water masses (i.e. ones which have been separated from the surface water longer) are less undersaturated (Berger, 1970; Edmond, 1974). This is because dissolved silica is added to the bottom waters by progressive dissolution of opal falling from surface waters and a net upward flux of dissolved silica from sediments to deepwater masses. Unlike calcium carbonate, which is subject to differential dissolution with depth, preservation of opal is largely independent of depth. Opal and organic carbon are similar in that preservation is partially dependent on sedimentation rate, however since other factors may affect the preservation of either or both
to varying degrees, any major differences in their distribution should distinguish areas in which variations are due to preservation rather than to actual variations in productivity.

A global map of recent sedimentation rate and bulk sediment accumulation are presented in this study along with maps previously published which explain the pattern of global sedimentation. Maps of global opal and organic carbon accumulation are presented to show the pattern of accumulation of two organically derived sedimentary components that are not as strongly controlled by water depth as calcium carbonate. With the exception of the opal accumulation map which was generated to contrast with the organic carbon accumulation map, the generation of the maps was done with the ultimate goal of calculating the recent burial rate of organic carbon in submarine sediments.

METHODS

Organic Carbon

There are several techniques for determining carbon in deep sea sediments. Sediment geochemists analyze marine carbon in three categories: 1) carbonate carbon, which in deep-sea sediments is generally the remains of calcareous organisms, 2) organic carbon, which is the remains of living tissue, and 3) total carbon, the carbonate plus the organic carbon. Because these three components are related, only two need to be determined, and the third can be calculated. Some investigators measure both the organic carbon and the
carbonate carbon (Weliky, et al, 1983), while others measure the total carbon and either organic carbon or carbonate and find the third value by difference (Kolpack and Bell, 1968). Carbonate carbon is measured by adding a strong acid such as hydrochloric or phosphoric acid, which dissolves the carbonate, generating carbon dioxide (Weliky, et al, 1983). The amount of CO$_2$ generated is measured and the results are compared to standards to determine the concentration. Measurements of carbonate carbon using a carbonate bomb have an accuracy of ca. ±5% (Dunn, 1980), while measurements made with a coulometer are dependent on the accuracy of the sample weight, (Engleman, et al, 1985).

Organic carbon is generally measured by heating the sample to extremely high temperatures and measuring either the weight loss (for samples with high concentrations) or measuring the CO$_2$ generated by the oxidation of the organic carbon (for samples with low organic carbon concentrations, e.g. LECO, CHN and coulometry techniques) (Gibbs, 1977). Weliky, et al (1983) used a slightly different technique for measuring organic carbon, which consisted of measuring the CO$_2$ generated by dichromate oxidation of the sample. Carbon of various types is usually measured by instruments such as the LECO Carbon Analyzer or automated CHN (carbon-hydrogen-nitrogen) analyzer, which determine carbon by combusting the sample at high temperatures with purified O$_2$ and measuring the CO$_2$ generated (Kolpack and Bell, 1968). The determinations of organic carbon concentration in the
literature generally have an accuracy of ±0.02 weight percent. High precision and accuracy are required in partitioning total carbon into carbonate and organic carbon because organic carbon is found in concentrations of only 5% to <0.1% in open ocean sediments (Heath et al, 1977). Concentrations are somewhat higher on the continental shelves and slopes (Premuzic, et al, 1982).

There are some problems with the analytical techniques for carbon, which cause inaccuracies in the measurements. When a sample is acidified in order to measure the carbonate content, some of the volatile/soluble portion of the organic carbon can be dissolved by the acid and measured with the carbonate. Similarly when a sample is ashed at high temperatures in order to measure the organic carbon, some of the carbonate carbon is oxidized by the extreme heat (Lyle, written communication). Attempts to reduce the error due to these effects by using a weaker acid or lower temperature may result in incomplete dissolution or oxidation of the desired form of carbon (Froelich, 1980; Weliky et al, 1983). For these reasons the measured organic carbon and carbonate carbon rarely add up to 100% of the total carbon when all three are measured. Froelich (1980) attempted to solve this problem by acidifying samples to remove the carbonate, then analyzing the insoluble residue with a CHN analyzer. The acid-dissolved solution (filtrate) was also analyzed using a modified dissolved organic carbon (DOC) method (Menzel and Vaccaro, 1964; Kerr, 1977). The two values were summed to
obtain the organic carbon percentage. Because of its relative difficulty and time-consuming nature this technique has not been used by many authors. Due to problems in accurately determining the dry bulk density and sedimentation rate, values with errors of less than ±10% of the true value are acceptable.

For this study we used organic carbon and carbonate carbon data from various literature sources. Additional unpublished data for sediments from North Pacific basin, analyzed at Oregon State University, were provided by M. Lyle (written communication). Additional new analyses of organic carbon concentrations in Indian and Atlantic Ocean samples were performed for this study using a Coulombmetrics, Inc. coulometer. Samples were dried, weighed, and a split of the sample was placed in coulometer, where they were acidified with phosphoric acid. The CO$_2$ generated was then automatically titrated by the coulometer to provide the percentage of calcium carbonate. A second split was placed in an oven at 980°C where the CO$_2$ generated was swept by a constant flow of ultrapure O$_2$ into the same automated titrator to determine the total carbon (Huffman, 1977). Standards of pure calcium carbonate were run to ensure that all carbonate carbon was being dissolved or combusted during each of the analyses. The organic carbon was calculated by subtraction.

**Biogenic Silica**

Opal concentrations used in this study are from the
compilation of Leinen and others (1986). Most of the opal values reported were determined by x-ray diffractometry using alumina as an internal standard (Calvert, 1966; Ellis and Moore, 1973). Although the absolute values indicated by opal determinations have been suspect, recent work (Leinen and King, 1981a, b; Leinen, 1985) shows that the relative abundances indicated by x-ray diffractometry are valid. Leinen and others (1986) also used several techniques to intercalibrate the x-ray diffraction data with other data sets, including 1) comparison of samples analyzed by more than one author, 2) normative partitioning of sediment geochemistry, and 3) standard additions. Their results indicate that the accuracy of uncalibrated x-ray opal determinations is <±10 wt%.

**Sedimentation Rates**

Sedimentation rates were calculated by dividing the depth to a given stratigraphic marker (in centimeters) by the age of that marker (in thousands of years). This yielded the sedimentation rate in centimeters per thousands of years. In the absence of data to the contrary, it was assumed that sedimentation was continuous during the interval between the surface and the stratigraphic datums.

The most reliable stratigraphic markers for determining Holocene and glacial sedimentation rates are the last glacial maximum (at 18 ka) and the end of the last glacial (at 12 ka) as determined from the oxygen isotopic composition of planktonic or benthonic foraminifera (Imbrie,
et al., 1984), and $^{14}$C age determinations. Many cores were available for which oxygen isotope stratigraphies had been determined by CLIMAP, a study of the Holocene and glacial global ocean (Moore, et al., 1980; Prell, et al., 1980; CLIMAP Project Members, 1976). Additional sedimentation rates were also available or calculated based on carbon-14 dating of recent sediments, ash layer datums, biostratigraphy and magnetostratigraphy (the Brunhes/Matuyama (B/M) magnetic reversal at 690 ka (Goodel and Watkins, 1968)). The sedimentation rate estimates for the North Pacific Ocean are based primarily on 18 ka oxygen isotopic determinations and magnetostratigraphy (B/M) with ash layer datums in the eastern equatorial region. All stratigraphy in the southern South Pacific is based on magnetic reversal stratigraphy (B/M Boundary). The Atlantic and Indian Ocean sedimentation rates are based mainly on oxygen isotope stratigraphy with some magnetostratigraphy, carbon-14, and biostratigraphy, particularly on the margins.

Because this study was designed to investigate the accumulation rates of organic carbon for the Holocene (12 ka to present) and for the last glacial maximum, stratigraphies based on oxygen isotope determinations or carbon-14 ages are preferable because no pre-stage 2 sedimentation is included in the rate. The oxygen isotopic stratigraphy is very accurate and allows resolution of the desired interval (Prell, et al., 1986). In some cases the oxygen isotopic stratigraphy is detailed enough to identify the end of the
last glacial at 12 ka. In this case both glacial and interglacial accumulation rates can be determined. In other cases the resolution of the oxygen isotopic stratigraphy was not sufficient to identify the end of the last glacial periods accurately. In this case, if there have been changes in sedimentation rate since the last glacial maximum the differences will be averaged. Average sedimentation rates determined using only the Bruhnes/Matuyama datum represent longer averages and include possible changes that occurred over a number of glacials and interglacials (i.e. average late Pleistocene sedimentation). Carbon-14 dates based on organic carbon provide absolute ages, however the accuracy of these ages is altered by reworking and redeposition of the carbon and to some extent by diagenesis (Erlenkeuser, 1980). Most C-14 ages are too old by 1 to 2 kyrs. Sedimentation rates based on ash layer dates are precise and the ages of many of the ash layer datums are very accurate, but in general they are only useful in small areas.

**Accumulation Rates**

The bulk sediment accumulation rate is the mass burial flux of sediments. It is calculated by multiplying the dry bulk density (in g/cm³) and the sedimentation rate. When the bulk accumulation rate is multiplied by the concentration of any sedimentary component (expressed as a fraction of the sediment dry weight) the resulting value is the accumulation rate of that particular component.
regardless of dilution by other components or by lithification or compaction by burial.

In this study, accumulation rates, $A$, were calculated by multiplying the dry bulk density, $B_d$ (in g/cm$^3$), by the sedimentation rate, $S$ (in cm/kyr), and the concentration of the sedimentary component being studied, $C$, giving units of g/cm$^2$/1000yr:

$$A = B_d S C$$

Dry bulk density is defined as the weight of dry sediment per wet volume of sediment. This value was not available for all cores. Lyle and Dymond (1976) developed a set of equations to estimate the dry bulk density from calcium carbonate concentrations applicable to the North Pacific sediments that are relatively free of biogenic opal. Lyle and Dymond’s (1976) reasoning was that because the CaCO$_3$ is the only major sedimentary component that is significantly different in density from the others in unlithified opal-free deep-sea sediments, its concentration would control the changes in bulk density. Their data for the Pacific Ocean suggested that:

$$B_d = P_t (1 - X_w);$$

$$X_w = 0.83 - 0.36C;$$

and $$1/P_t = 0.88 - 0.22C - 0.03C^2$$

where, $B_d$ is the uncompressed dry bulk density, $P_t$ is the wet bulk density, $X_w$ is the water content, and $C$ is the calcium carbonate concentration. Whereas estimates based on this technique appear to be reasonable in the regional
examples cited by Lyle and Dymond, the technique is less reliable for estimating downcore variations in bulk density within a single core (Curry, 1986). Such uncertainty introduces some error into the accumulation rate calculations, but this error is generally smaller than errors in estimating absolute ages for various levels in the cores.

Kominz and others (1977) compared GRAPE (Gamma Ray Attenuation Porosity Evaluator) bulk density measurements from selected cores to the results obtained with the Lyle and Dymond (1976) equations and found good agreement. They used stepwise regression analysis and considered variations in dry bulk density due to age and depth in core to try to improve the equations but could not get significantly better results. Therefore, the Lyle and Dymond equations were used in this study to estimate the dry bulk density when measurements by GRAPE or other direct determinations were not available.

For calculating global organic carbon burial, areas within basins and between contour lines were determined by planimetering the area with a planimeter that had been calibrated by planimetering several known areas at varying latitudes (to ensure that the map was a true equal area projection) on an equal area map.
DISCUSSION

Maps were constructed for the global distribution of sedimentation rates, bulk sediment accumulation rates, organic carbon accumulation rates and opal accumulation rates. Organic carbon concentrations compiled from a literature search and new determinations made for this study were used as the data base for the organic carbon accumulation rate map. A map of global surface sediment opal distribution (Leinen et al, 1986) was used to generate the opal accumulation rate map. A map of bulk density was not generated because in most areas the bulk density was estimated from the CaCO$_3$ concentration as discussed above. More complete maps of CaCO$_3$ concentration in surface sediments than could be drawn from this data set have been published (Lisitzin, 1972, Berger, et al, 1976, Biscaye, et al, 1976, Kolla, et al, 1976).

SEDIMENTATION RATE MAP

One of the most important controls on the thickness of sediment accumulating on the sea-floor per unit time (Fig. 1) is the proximity to land and therefore the amount of terrigenous input. Terrigenous sources are dominant on the continental shelves but are also important in deep-sea areas where turbidity currents have deposited sediments, such as in the northeast Pacific and the western North Atlantic. A second important control on sedimentation rates is the varying rate of primary productivity in the surface waters. Major biogenic sedimentary components, carbonate which is
highly depth dependent and opal which is less dependent on water depth, are most important in areas with high nutrient inputs to surface waters, usually nearshore or in areas of upwelling, like the equatorial oceans (Figs. 2 & 3). Another factor controlling sedimentation rate is the relative rate of preservation of sedimentary components that dissolve in seawater, which is in part related to water depth. For example, CaCO₃ dissolves less rapidly in shallower waters than at abyssal depths and results in higher sedimentation rates on oceanic ridges such as the East Pacific Rise in the South Pacific Ocean and on oceanic plateaus, such as the Ontong-Java Plateau in the western equatorial Pacific and the Rockall Plateau west of Great Britain (Fig. 2). The eolian or windblown input in areas beneath major wind belts, such as the westerlies belt east of Japan, which has desert sources in southeast Asia or the eastern North Atlantic off Northwest Africa, which has sources in the desert Sahara, will also increase the sedimentation rate (e.g., Fig. 4). The lowest sedimentation rates are in areas which receive little eolian and biogenic sediments, and no terrigenous material from downslope transport. These areas, such as the central South Pacific have the lowest accumulation rates in the deep sea and accumulate little other than hydrogenous and hydrothermal sediment (Lyle, in press). The Pacific Ocean has lower overall sedimentation rates than the Atlantic Ocean for two reasons. The Pacific Ocean
has a ring of trenches circling the deep ocean basin which trap the terrigenous material transported downslope from the continents into the basin. Most of the sea-floor in the Pacific Ocean is also below the calcium carbonate compensation depth (CCD), thereby preventing the accumulation of CaCO$_3$ on much of the sea-floor, except along the East Pacific Rise and the various seamounts and plateaus.

In the Indian Ocean high sedimentation rates occur southwest and southeast of India, where the Indus Cone and Bengal Fan, respectively, accumulate great quantities of terrigenous material being eroded from the Himalayas. East of Southern Africa preservation of CaCO$_3$ on the shallow mid-ocean ridges and biogenic silica from the productive convergence at the polar front accounts for the higher sedimentation rate.

**BULK SEDIMENT ACCUMULATION RATE**

Figure 5 is the map of bulk sediment accumulation rates generated from the bulk densities estimated from CaCO$_3$ concentration using the equation of Lyle and Dymond (1976) and sedimentation rates. Measured bulk densities were available for a small number of sites in the South Pacific. For many cores sedimentation rate data were available but CaCO$_3$ concentrations were not. Because there were detailed maps of CaCO$_3$ available (Berger, et al., 1976, Biscaye, et al., 1976, Kolla, et al., 1976) and we had CaCO$_3$ data from cores near the sedimentation rate data, we estimated the
CaCO$_3$ concentration for cores for which such data were not available. The error introduced by such an estimation is at most about 20% which is small compared to the variation in sedimentation rate. The map of bulk sediment accumulation rate (Fig.5) shows the same general features as the sedimentation rate map (Fig.1). This confirms that bulk density, does not vary greatly compared to sedimentation rate and that the latter is the dominant control on mass accumulation rates.

**ORGANIC CARBON ACCUMULATION**

Organic carbon accumulation rates (Fig. 6) are highest in the equatorial Pacific, along the coasts (particularly the west coast of the United States), south of the Aleutian Islands and in a region extending east of Japan. Along the coasts, the organic carbon accumulation is high as a result of high primary and secondary biological production due to the input of nutrients and as a result of the accumulation of terrestrial organic carbon from the land. The organic carbon accumulation rate is high in the equatorial Pacific because of high primary production in the zone of upwelling (Koblenz-Mishke, et al, 1970). The lobe extending eastward from Japan is a reflection of the high productivity in that area due to upwelling at the confluence of the Kuroshio and Oyashio currents (Koblenz-Mishke, et al, 1970). The high values south of the Aleutian Islands is due to the cumulative effects of slightly higher productivity and high burial rates of terrigenous carbon in turbidites (Koblenz-
Mishke, et al, 1970).

The available data is adequate in the Pacific Ocean but is very sparse, elsewhere. Nonetheless, it is unlikely that any significant areas of high organic carbon accumulation were missed. Some areas that have better sample coverage may have been emphasized compared to regions having comparable values but a fewer number of data points. Data for organic carbon concentration is lacking in much of the Atlantic, Indian and Southern Ocean, therefore estimates of organic carbon accumulation are based on a small number of data points, thought to be representative.

**OPAL ACCUMULATION RATES**

The opal accumulation rate map (Fig.7) shows highest accumulation rates in the equatorial Pacific, east of Japan, off the northwest coast of Africa, around Antarctica, in the Caribbean and south of India. Aside from the Caribbean which is rather shallow, all of the regions mentioned are known areas of strong mixing and/or upwelling.

In most of the areas where organic carbon is accumulating rapidly, opal is also accumulating rapidly (see Fig. 8). This suggests that early work calling attention to the relationship between organic carbon accumulation, opal accumulation and primary productivity (Lisitzin, 1972; Heath, 1974) over broad areas, is reasonable, although this relationship may not hold for individual sites. This agreement can be seen between a map of estimated primary productivity (Fig.8) generated by Berger and others (1986).
for the Pacific Ocean and the organic carbon accumulation rate for that ocean basin (Fig. 6).

**GLOBAL ORGANIC CARBON DEPOSITION**

One of the major objectives of this study was to determine the total amount of organic carbon being deposited in sediments during the Holocene. For the Pacific Ocean, we estimated the rate of organic carbon deposition by multiplying the areas between contours of organic carbon accumulation by the mean value within that area (Table 1). This procedure could not be used for the Atlantic and Indian Oceans because of the poor data coverage for organic carbon contents. Atlantic and Indian Ocean sedimentation is controlled to a large degree by the bottom topography (e.g. Fig. 1). We therefore divided the Atlantic and Indian deep sea floor into sedimentary and topographic provinces and made new analyses of representative samples from each province in order to determine its average organic carbon accumulation rate (Fig. 10). The organic carbon burial rate was then determined as for that in the Pacific Ocean (Table 1).

The organic carbon accumulation rate on the continental shelves is difficult to estimate. Although organic carbon data for the shelves are not extensive, an estimate was made using DeMaster's (1981) technique for estimating the accumulation rate of biogenic silica on the continental shelves. He chose representative areas of the continental shelves and calculated accumulation rates for them. The
rest of the shelves were assumed to have the same accumulation rates as the area that they most closely resembled oceanographically. Estimates of annual organic carbon burial for the continental shelves and Arctic Ocean were made in this way.

Estimates of organic carbon accumulation for the highly siliceous sediment province of the Antarctic were made using the paleo-productivity equation developed by Sarnthein and others (in press)

\[ P = 15.9 \, C^{0.66} \, S_B^{0.66} \, (\rho (1-\phi)^{0.66}) \, S_{B-C}^{-0.71} \, Z^{0.32} \]

in which, \( P \) is productivity in gC/m\(^2\)/yr, \( C \) is organic carbon concentration in weight percent, \( S_B \) is the sedimentation rate in cm/kyr, \( \rho (1-\phi) \) is the dry bulk density in g/cm\(^3\), \( S_{B-C} \) is the sedimentation rate for the organic carbon-free fraction and \( Z \) is the water depth in meters.

Average productivity for the Antarctic was estimated at 85 gC/m\(^2\)/yr based on Berger and others (1986), this is similar to what would be estimated using Koblenz-Mishke and others (1970). The average sedimentation rate of 5.9 cm/kyr was determined from Cooke and Hays (1981). The average water depth is 4000 meters and the dry bulk density 0.4 g/cm\(^2\). This yielded

\[
C = \frac{85}{15.9} \, (5.9)^{0.66} \, (0.4)^{0.66} \, (5.86)^{-0.71} \, (4000)^{0.32} \times 1.515
\]

\[ C = 0.65\% \]

Therefore, \((0.0065)(0.4)(5.9)(1000)=15.34\) mgC/cm\(^2\)/ky Using this value, an annual organic carbon burial of 0.03x10\(^{14}\) mg/cm\(^2\)/ky (Table 1) was estimated for the circum-Antarctic
highly siliceous sediment belt. A much lower organic carbon accumulation rate was calculated for the remainder of the Antarctic region because it has a slower sedimentation rate (therefore, less effect on preservation), lower productivity and it is subject to erosion over much of its area. Whereas it may seem inappropriate to use the productivity equation in this way, the estimate that it yielded for the circum-Antarctic appears reasonable.

The annual organic carbon burial for the continental shelves \(0.04 \times 10^{14}\) grams C and the deep-sea \(0.21 \times 10^{14}\) grams C total \(0.25 \times 10^{14}\) grams carbon (Table 1). This value agrees well with that of Berner (1982) if one excludes the deltaic-shelf sediments, which account for 83% of his estimate of sedimentary organic carbon burial rates (Table 2). We gave no special consideration to deltaic sediments in this study. Berner (1982) determined organic carbon burial in deltaic deposits by multiplying the suspended sediment transport from rivers by the average organic carbon content of the deltaic sediments. Arthur and others (1985) arrived at a global organic carbon burial value comparable to Berner's (Table 2) by balancing the carbon reservoirs with the global \(\delta^{13}C\).

Mopper and Degens (1979) pointed out that organic flocculation in estuaries (and presumably deltas) may control the amount of organic carbon reaching the deep-sea from rivers. This together with Berner's (1982) estimate suggest that delta deposits are an important component of
the carbon burial. We therefore tried to make an estimate of carbon burial in deltas based on sediment accumulation rates that could be compared with the Berner estimate.

Kuehl and others (1982) found that sediments accumulate on the Amazon Delta at a rate of 2 cm/yr over an area of approximately 46,000 km\(^2\) and 0.5 cm/yr over an area of 30,000 km\(^2\) and that the sediments have a dry bulk density of 0.7425 gr/cm\(^3\) for a total of \(8 \times 10^{14}\) grams of sediment accumulating annually on the Amazon Delta. This quantity is twice the suspended sediment transport \((3.63 \times 10^{14})\) used by Berner (1982) for his calculations and suggests that Berner's carbon burial could be less than half of the actual amount for this delta.

Trefry and Presley (1982) found that sediments are accumulating at a rate of 2 cm/yr on the Mississippi Delta and that approximately 1% of the sediment is organic carbon. The area of the delta is 2000 km\(^2\). If the dry bulk density is similar to that for the Amazon Delta (0.75), then the annual carbon burial is \(0.3 \times 10^{12}\) grams. The inclusion of Mississippi Fan sediments \((2 \times 10^{10}\) gC/yr) calculated from DSDP Leg 96 data (Wetzel and Kohl, 1986; Whelan and Tarafa, 1986) does not significantly change this value. This value is approximately one tenth of Berner's (1982) value for the Mississippi Delta, based on the suspended sediment transport. Thus Berner's (1982) value could be as much as ten times higher than the actual value for the Mississippi Delta.
These examples demonstrate that deltas are very important areas of organic carbon burial but that the organic carbon burial estimated by Berner (1982) from river transport for deltas may be in error by up to an order of magnitude. These discrepancies probably result from differences in the processes acting on organic carbon in estuaries and the nearshore environment before it is deposited. It is clear from our examples, however, that estimates of organic carbon burial in deltas based on the suspended river flux are not consistently greater than or less than estimates of burial flux based on sediment composition and sedimentation rate. Because Berner's total carbon burial is comparable to that of Arthur and others (1985) and because there is insufficient data to estimate the true burial rate of organic carbon in all of the world's major river deltas, we have used Berner's estimate for deltaic organic carbon burial, knowing that it may incorporate non-systematic errors of up to an order of magnitude for individual deltas.

The addition of 1.04x10^{14} g organic carbon, buried in river deltas to the 0.21x10^{14} g organic carbon buried in deep sea sediments and 0.04x10^{14} g carbon buried on shelves (exclusive of deltas) yields a total of 1.29x10^{14} g organic carbon buried annually in marine sediments. This value is very similar to that estimated by Berner (1982) and about 10% higher than the Arthur and others organic carbon burial estimated from a mass balance of δ^{13}C.
Having defined the present (since the last glacial maximum, 18 ka) organic carbon burial rate, it would be a useful exercise to see how this would be affected by a major change in organic carbon deposition such as a sapropel and how glacial organic carbon deposition compares to interglacial deposition.

**ORGANIC CARBON BURIAL IN SAPROPELS**

Sapropels are organic-rich mud layers commonly found in deep-sea cores from the eastern Mediterranean Sea. The organic carbon content of these layers can be as great as 7% by weight. The origin of these layers is quite controversial, but all mechanisms attribute the increased organic carbon burial to stagnation of bottom waters due to an increase in the vertical stratification. For example, the eastern Mediterranean became well stratified after a rapid influx of freshwater (at 12 to 8 ka) from melting of the Eurasian ice-sheet (Ryan, 1972), or as the result of intensified monsoonal rainfall in regions of North Africa which ultimately drain into the Mediterranean (Rossingnol-Strick, et al, 1982). The increased vertical stability, possibly coupled with higher than normal organic carbon production (Jenkins and Williams, 1984) caused rapid depletion of oxygen in bottom waters and enhanced preservation of organic matter to form the organic-rich sediments (Cita, et al, 1973). Because the rapid deposition of organic-rich layers over a large area could have a significant effect on the global marine organic carbon
budget we have estimated the total organic carbon burial resulting from the deposition of this sapropel.

Stanley (1978) showed that the deposition of sapropelic sediments occurred over much of the Mediterranean, but probably no more than 1.5 million square kilometers. Sapropels usually represent a period of 2000 years and have a rate of deposition of 2 cm/kyr (Dominik and Mangini, 1979). Sapropels have an organic carbon concentration of 2 to 7% (Anastasakis and Stanley, 1984). If we assume a dry bulk density of 0.75 g/cm³, comparable to organic-rich deltaic sediments and an organic carbon concentration of 7%, then we can calculate a maximum contribution to the burial flux of $0.016 \times 10^{14}$ grams carbon buried annually during Mediterranean sapropel deposition. This is much less than 0.1% of the total annual burial of organic carbon in marine sediments today and 5% of the total deep-sea burial. Therefore, the sapropel had an insignificant effect on the global organic carbon burial rate and the global carbon cycle, which includes $7.02 \times 10^{17}$ grams of carbon readily available in the form of CO₂ in the atmosphere (Freyer, 1979).

**GLACIAL vs INTERGLACIAL ORGANIC CARBON ACCUMULATION**

It has been proposed by many authors, that primary productivity in the surface oceans was higher during glacials then interglacials (Müller et al, 1983; CLIMAP Project Members, 1976). In order to estimate the difference in glacial versus interglacial organic carbon deposition, we
determined rates for all CLIMAP cores which had oxygen isotopic stratigraphies and organic carbon analyses of glacial and interglacial sediments. There are only 10 such cores in the Pacific Ocean. The depth to the glacial/interglacial transition (at 12ka) was picked from oxygen or carbon isotope data, thereby allowing the determination of the glacial (18 to 12ka) and interglacial (12ka to present) organic carbon accumulation rates (Table 3).

Glacial organic carbon rates were higher in 6 of the 10 cores (Fig 11). These data are inadequate to support or refute the proposal that organic carbon accumulation was higher during glacial, as it would be expected to be if primary productivity had been high—particularly 2 to 3 times higher as proposed by Müller and others (1983). The data do suggest that glacial primary production is higher in areas in which upwelling is presently strong, while it is lower in other areas (Fig. 11). This would agree with Muller and others (1983), who found that glacial primary production increased significantly in areas of present upwelling.

ESTIMATING ORGANIC CARBON ACCUMULATION

It has been proposed (Heath et al, 1977) that there is a correlation between organic carbon accumulation and sedimentation rate ($C_A = 0.01 * \text{Sed}^{1.4}$), which occurs because high sedimentation rates sequester organic carbon from degradation at the sediment surface. Using all of the data points for which organic carbon accumulation rates were
calculated (Pacific Ocean), the sedimentation rate versus the organic carbon accumulation rate was plotted (Fig. 12). These two variables are well correlated ($r^2=0.81$).

Müller and Suess (1979) refined this idea by including surface water productivity as an additional variable controlling organic carbon accumulation ($C_A/PP*100=Sed^{1.30}$). In order to test Müller and Suess's (1979) hypothesis, the same data points were plotted but with the organic carbon accumulation rate divided by the primary productivity, as estimated from the Berger and others (1986) primary production map (Fig. 13). The correlation of these points is relatively good ($r^2=0.66$). The data were also divided into regions to determine whether the correlation is better within regions of similar sedimentation (the Australian/New Zealand high productivity region, the Kuroshio/Oyashio confluence region, the Peru/Equatorial high productivity region, the Pacific Coast of North America shelf region, and the Central Gyral regions). The correlation within each of the regions was significantly worse than that for all of the data combined ($r^2$ between 0.32 and 0.11) except the North American Shelf region ($r^2=0.67$). Our inability to estimate the primary productivity precisely enough may have caused sufficient error to mask the correlation in the regional sets (due to a lower number of observations) while the broader trend was still apparent in the larger data set.

CONCLUSIONS

Organic carbon burial in marine sediments is an
important mechanism for removing carbon from the ocean-atmosphere carbon reservoir. Burial of organic carbon in marine sediments exclusive of deltaic sediments accounts for $0.25 \times 10^{14}$ grams carbon per year. Organic carbon burial is twice as large in the Pacific Ocean as either the Atlantic or Indian Oceans (Fig. 14). Burial on the shelves and around Antarctica is similar in magnitude to the Atlantic and Indian Oceans, while the semi-enclosed basins of the Mediterranean and Caribbean Seas account for much less. Burial in the Arctic Basin is extremely low. Burial of organic carbon in deltaic sediments is less easily quantified, but the estimate made by Berner on the basis of suspended sediment transport ($1.04 \times 10^{14}$ gC/yr) appears to be reasonable.

Organic carbon burial in Holocene sapropels of the eastern Mediterranean represents an insignificant (less than 0.1%) increase in the global burial of organic carbon.

Organic carbon accumulation in marine sediments is sufficiently independent of sedimentation rate that sedimentation rate alone cannot be used for predicting organic carbon accumulation.
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### Table 1. Regional Distribution of Organic Carbon Burial

| REGION                          | AREA MILLIONS SQ.KM | ORG C ACCUM RATE g/cm²/ky | Total gC/yr |
|--------------------------------|---------------------|---------------------------|-------------|
| 1 Pacific >25 contour          | 2.2                 | 40.0                      | 8.9x10¹¹    |
| 1 Pacific 10-25 contour        | 25.6                | 17.5                      | 4.5x10¹²    |
| 1 Pacific 5-10 contour         | 33.5                | 7.5                       | 2.5x10¹²    |
| 1 Pacific 2.5-5 contour        | 18.7                | 3.5                       | 6.5x10¹¹    |
| 1 Pacific 1-2.5 contour        | 32.9                | 1.5                       | 4.9x10¹¹    |
| 1 Pacific <1 contour           | 28.8                | 0.4                       | 1.2x10¹¹    |
| 2 N. Atlantic MAR              | 5.6                 | 11.0                      | 6.2x10¹¹    |
| 2 N. Atlantic AP               | 6.3                 | 4.0                       | 2.5x10¹²    |
| 2 N. Atlantic Deep Basins      | 20.6                | 5.0                       | 1.0x10¹²    |
| 2 Argentine AP                 | 4.1                 | 1.5                       | 6.2x10¹¹    |
| 2 African Hi Sed Region        | 1.9                 | 8.0                       | 1.5x10¹¹    |
| 2 Angolan AP                   | 2.1                 | 12.0                      | 2.5x10¹¹    |
| 2 S. Atlantic MAR              | 8.0                 | 11.0                      | 8.8x10¹¹    |
| 2 S. Atlantic Deep Basins      | 17.6                | 5.0                       | 8.8x10¹¹    |
| 2 Indian Southern Basins       | 10.9                | 6.0                       | 6.5x10¹¹    |
| 2 Indian Central Basins        | 3.1                 | 4.5                       | 1.4x10¹¹    |
| 2 Ninety East Ridge            | 1.4                 | 4.0                       | 5.8x10¹¹    |
| 2 Indian Western Basins        | 10.5                | 4.5                       | 4.7x10¹²    |
| 2 Indian Ocean MIR             | 18.2                | 11.0                      | 2.0x10¹¹    |
| 2 Indus Fan                    | 2.0                 | 4.5                       | 8.8x10¹⁰    |
| 2 Indian Eastern Basins        | 1.0                 | 3.5                       | 3.4x10⁹     |
| 2 Bengal Fan                   | 3.1                 | 15.0                      | 4.6x10¹⁰    |
| 2 Mediterranean                | 2.3                 | 2.5                       | 5.9x10¹⁰    |
| 2 Caribbean & Gulf             | 4.8                 | 12.0                      | 5.7x10¹¹    |
| 2 Arctic Ocean                 | 12.1                | 1.5                       | 1.8x10¹¹    |
| 2 Shelf E. Coast N. America    | 1.0                 | 15.0                      | 1.5x10¹¹    |
| 2 Shelf Australia & NZ         | 4.7                 | 10.0                      | 4.7x10¹¹    |
| 2 Shelf Indonesia              | 7.3                 | 12.0                      | 8.8x10¹⁰    |
| 2 Shelf and North Sea          | 1.1                 | 8.0                       | 8.8x10¹¹    |
| 2 Shelf E. Coast S. America    | 2.7                 | 15.0                      | 4.1x10¹¹    |
| 2 Shelf W. Coast N. America    | 2.4                 | 20.0                      | 4.9x10¹¹    |
| 2 Shelf W. Coast Africa        | 1.7                 | 20.0                      | 3.3x10¹¹    |
| 2 Shelf S. Coast Asia          | 2.1                 | 20.0                      | 4.2x10¹¹    |
| 2 Shelf E. Coast Africa        | 0.8                 | 20.0                      | 1.6x10¹¹    |
| 2 Shelf E. Coast Asia          | 3.0                 | 17.0                      | 5.1x10¹¹    |
| 2 Shelf W. Coast S. America    | 1.1                 | 10.0                      | 1.1x10¹²    |
| 3 Antarctica Hi-Siliceous      | 18.9                | 15.3                      | 2.9x10¹¹    |
| 2 Antarctica Lo-Siliceous      | 18.5                | 2.5                       | 4.6x10¹³    |
| **TOTALS**                     | **342.6**           |                           | **2.5x10¹³**|

1 represents values obtained from areas with comprehensive data coverage where contours were drawn, 2 represents values obtained from representative samples within oceanographically similar areas, 3 represents values estimated from paleo-productivity equation (see text).
Table 2. Comparison of Organic Carbon Burial Estimates

| SOURCE              | REGION                  | ORG C BURIAL X10^14 G/yr |
|---------------------|-------------------------|--------------------------|
| Berner, 1982        | Pelagic Sediments       | 0.21                     |
|                     | Deltaic-Shelf           | 1.04                     |
|                     | Total                   | 1.25                     |
| Arthur, et al, 1985 | Global                  | 1.15                     |
| This study          | Pelagic Sediments       | 0.21                     |
|                     | Shelf (exc. deltas)     | 0.04                     |
|                     | Deltaic Deposits        | 1.04                     |
|                     | (from Berner, 1982)     |                          |
|                     | Total                   | 1.29                     |
Table 3. Comparison of Glacial vs. Interglacial Organic Carbon Accumulation Rates

| LAT   | LONG   | CORE   | DEPTH meters | AGE ky | SED R cm/ky | DRY BULK DENSITY % | ORG C g/cm^2/ky | ORG C ACC |
|-------|--------|--------|--------------|--------|-------------|-------------------|----------------|-----------|
| -11.11| -162.55| rc10-114| 2791         | 12-0   | 1.00        | 0.7560           | 0.17           | 1.26      |
|       |        |        |              | 18-12  | 0.92        | 0.7560           | 0.17           | 1.18      |
| 3.39  | -140.04| rc11-209| 4400         | 10-0   | 1.00        | 0.6216           | 1.40           | 8.73      |
|       |        |        |              | 18-10  | 2.88        | 0.6216           | 0.65           | 11.62     |
| -27.17| -102.05| rc8-94  | 3074         | 12-0   | 1.00        | 0.7280           | 0.62           | 4.49      |
|       |        |        |              | 18-12  | 0.75        | 0.7280           | 0.62           | 3.39      |
| 14.31 | -96.18  | v18-337 | 3891         | 12.5-0 | 7.20        | 0.2040           | 3.73           | 54.75     |
| -17.00| -114.11| v19-55  | 3177         | 12-0   | 23.73       | 0.2040           | 2.91           | 140.88    |
| 47.57 | 168.47  | v20-119 | 2739         | 12-0   | 0.92        | 0.5186           | 1.40           | 6.67      |
|       |        |        |              | 18-12  | 1.42        | 0.5186           | 1.04           | 7.64      |
| -5.27 | 160.29  | v28-235 | 1746         | 12-0   | 1.33        | 0.1963           | 0.25           | 0.65      |
|       |        |        |              | 18-12  | 0.92        | 0.1963           | 1.19           | 2.14      |
| 20.06 | 142.27  | v28-255 | 3261         | 12-0   | 1.67        | 0.4281           | 4.30           | 30.70     |
|       |        |        |              | 18-12  | 2.58        | 0.4281           | 0.81           | 8.96      |
| 43.34 | -126.28 | y66095  | 2978         | 12.5-0 | 8.32        | 0.1991           | 1.84           | 30.49     |
|       |        |        |              | 18-12.5| 44.73       | 0.1991           | 0.68           | 60.66     |
| -16.26| -77.34  | y71612p | 2734         | 12-0   | 1.00        | 0.2063           | 8.41           | 17.35     |
|       |        |        |              | 18-12  | 2.08        | 0.2063           | 2.57           | 11.05     |
Figure 1: Sedimentation rates in cm/ky. Symbols mark location of core and type of stratigraphic feature used to determine sedimentation rate. ○ indicates oxygen isotope pick, △ indicates magnetostratigraphic pick, ▽ indicates ash layer datum, ▼ indicates biostratigraphic datum, ● indicates C date, and ♦ indicates lithologic determination of age.
Figure 2a: Distribution of CaCO$_3$ in surface sediments (wt.%) for the Pacific Ocean (Berger, et al, 1976).
Figure 2b: Distribution of CaCO$_3$ in surface sediments (wt.%) for the Atlantic Ocean (Biscaye and Kolla, 1976).
Figure 2c: Distribution of CaCO$_3$ in surface sediments (wt.%) for the Indian Ocean (Kolia, et al., 1976).
Figure 3: Distribution of opal in surface sediments (carbonate-free wt.%) (Leinen, et al, 1986).
Figure 4: Distribution of quartz in surface sediments (carbonate-free wt.%) (Leinen, et al, 1986)
**Figure 5**: Bulk sediment accumulation rates (g/cm$^2$/h/ky). Symbols mark location of core and type of stratigraphic feature used to determine sedimentation rate. ○ indicates oxygen isotope pick, △ indicates magnetostratigraphic pick, ▽ indicates ash layer datum, ▼ indicates biostratigraphic datum, ● indicates $^{14}$C date, and ◆ indicates lithologic determination of age.
**Figure 6:** Organic carbon accumulation rates (mg/cm$^2$/ky). Symbols mark location of core and type of stratigraphic feature used to determine sedimentation rate. O indicates oxygen isotope pick, △ indicates magnetostratigraphic pick, ▼ indicates ash layer datum, ▽ indicates biostratigraphic datum, ▪ indicates $^{14}$C date, and ◆ indicates lithologic determination of age.
Figure 7: Opal accumulation rates (mg/cm$^2$/ky).
**Figure 8:** Organic carbon accumulation rate data plotted against opal accumulation rates for all cores containing both.
$y = 0.3422 \times x^{0.7857}$  \( R = 0.86 \)
Figure 9: Distribution of primary production in surface waters (gC/m²/yr) (Berger, et al, 1986).
SYNTHETIC PRIMARY PRODUCTIVITY

W.H. Berger, K. Fischer, C. Lai and G. Wu
"Primary Production and Organic Carbon Flux in the World Ocean"
AGU, Jan. 13-17, 1986. New Orleans.

\[ \text{flux, gC m}^{-2} = \frac{PP}{25}. \]
Figure 10: Equal area projection of organic carbon accumulation rates (mg/cm²/ky). Regions without data points shown have values estimated from the average of the available data within that region.
Figure 11: Percent change of organic carbon accumulation during glacial time (18 to 12ka) relative to interglacial time (12ka to present). Using the equation (glacial - interglacial) / interglacial.
Figure 12: Organic carbon accumulation rate data plotted against sedimentation rate data for all cores in the Pacific Ocean containing both.
$y = 2.2561 \times x^{1.4059}$  \( R = 0.90 \)
Figure 13: Organic carbon accumulation rate data divided by primary productivity above that site plotted against the sedimentation rate data at that site for all cores containing both in the Pacific Ocean.
$y = 0.0368 \times x^{1.0825} \quad R = 0.81$
Figure 14: Regional annual organic carbon accumulation (gC/yr), exclusive of deltaic sediments.
ANNUAL ORGANIC CARBON ACCUMULATION

0.10

0.08

0.06

0.04

0.02

0.00

0.10

0.08

0.06

0.04

0.02

0.00

Grams Carbon (x10^4)

Pacific  Atlantic  Indian  Caribbean & Mediterranean  Arctic  Shelves  Antarctic

Paciic IndiaC Indian Caribbean & Mediterranean Arctic Shelves Antarctic
Appendix I: The Distribution of Quartz and Biogenic Silica in Recent Deep Sea Sediments
THE DISTRIBUTION OF QUARTZ AND BIOGENIC SILICA IN RECENT DEEP SEA SEDIMENTS

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THE DISTRIBUTION OF QUARTZ AND BIOGENIC SILICA IN RECENT DEEP SEA SEDIMENTS

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ABSTRACT
All available quartz and biogenic silica concentrations from deep-sea surface sediments were intercalibrated, plotted, and contoured on a calcium carbonate-free basis. Quartz in pelagic sediments deposited far from land is generally eolian in origin. The distribution reflects dominant wind systems in the Pacific, but in much of the Atlantic and Indian Oceans the distribution pattern is strongly modified by turbidite deposition and bottom current processes. The surface sediment maps show highest concentrations of biogenic silica (opal) along the west African coast, along equatorial divergences in all oceans, and at the Polar Front in the southern Indian Ocean. These are all areas where upwelling is strong and there is high biological productivity.

INTRODUCTION
Although quartz is often a small component of deep-sea sediments, its abundance and distribution pattern can be very useful for the interpretation of sediment source areas, sedimentation processes and paleoclimate. The siliceous remains of plankton are generally a major component of deep-sea sediments; the abundance and distribution of this biogenic silica (opal) have been used to infer the paleoproductivity and paleocirculation of the oceans (e.g. Molina-Cruz, 1977; Pisias, 1979; Pisias and Leinen, 1984). While detailed maps of the other major biological component of sediments, calcium carbonate, have been published (Berger, 1976; Biscaye et al., 1976), world maps of similar detail for quartz or opal, which have been analyzed by many investigators over the years, have not been published. We have compiled all of the published quartz
and opal data determined by the X-ray diffraction technique and have included all of our unpublished analyses as well.

QUARTZ

Since 1955 a great many quantitative analyses of the quartz content of deep-sea sediments have been made by X-ray diffractometry. After Till and Spears (1969) refined the X-ray technique for quartz determination using alumina as an internal standard, it was used routinely for sediment analyses by many oceanographic laboratories. Detailed maps of the quartz distribution in the Atlantic Ocean (Kolla, et al., 1979), Indian Ocean (Kolla and Biscaye, 1977) and North Pacific Ocean (Moore and Heath, 1978; Heath, et al., 1983) are available, but maps of similar data density for the entire Pacific have not been made, although many data are available. In addition, the various data sets have not been intercalibrated.

Quartz is stable at ocean bottom conditions and does not form authigenically in recent sediments. Therefore its source is, with rare exception (Peterson and Goldberg, 1982), continental. Being resistant to abrasion and dissolution, quartz arrives at the sea floor in much the same condition that it reached the sea surface (Rex, 1958). Most quartz in pelagic sediments occurs as chips and shards and although the grain size varies with its origin and transport mechanism, most grains are in the 5-10 \( \mu \)m range (Rex and Goldberg, 1958). The flux of fluvial and hemipelagic sediments decreases rapidly with distance from land. Such sediments are not sources of quartz far from the continents. For these reasons, quartz in pelagic sediment far from land and in locations protected from turbidity current deposition has been inferred to be eolian (Rex and Goldberg, 1958).

Quartz is common in the mineral aerosol transported by wind (Prospero and Bonatti, 1969; Prospero and Carlson, 1972; Blank, et al., 1985). Recent studies have shown that the proportion of quartz in aerosols matches that in sediments accumulating
beneath the aerosol collection site (e.g. Blank, et al., 1985), further supporting its inferred eolian origin in pelagic sediments.

**Methods.**

We collected all available published and unpublished X-ray diffraction determinations of quartz. Because the X-ray diffraction technique for quartz and opal analysis requires calcium carbonate removal, all data are on a calcium carbonate-free basis and do not reflect influence by this important diluent. (The data sources are listed in Table 1; core identifications, locations, quartz, opal, and carbonate concentrations are listed in Appendix 1*.) A few areas have some overlap in data and one, the South Atlantic, has been studied in detail by two sets of investigators (Ellis and Moore, 1973; Kolla et al., 1979). The two independent studies showed the same distribution pattern. The analysis of several samples by both sets of investigators allowed us to intercalibrate the quartz analyses done at Lamont-Doherty Geological Observatory (Biscaye, Kolla) with those done at Oregon State University (Ellis, Heath, Molina-Cruz, Thiede, Dauphin) and the University of Rhode Island (Leinen). A comparison of the samples that had been analyzed by both Kolla, et al. (1979) and Ellis and Moore (1973) indicated that the Ellis and Moore values were systematically greater by 5.8 wt% quartz \((r^2 = 0.68)\). The Ellis and Moore samples were calibrated to a standard curve of varying percents of quartz in a clay matrix and the details of the conversion factors were reported in Ellis (1972). This curve was used for all subsequent Oregon State University analyses. The exact factors for

*Note to Reviewers: We are including the data Appendix in the manuscript sent out for review. We will request that the appendix not be published, but be included in a data archive that is available by mail request from the Society.*
converting peak area ratios to weight percent quartz were not given by Kolla et al. (1979), and they did not publish a standard curve. As a result, we chose to increase the Kolla et al. (1979) quartz values for the Atlantic Ocean and the Kolla and Biscaye (1977) quartz values for the Indian Ocean by 5.8 wt% to match the Oregon State data. The University of Rhode Island data were also intercalibrated with the Oregon State University data (Pisias and Leinen, 1984). The calibrated data were plotted and contoured.

Distribution.

The distribution of quartz in pelagic sediments of eolian origin should reflect dominant wind systems and major arid regions (Griffin, et al., 1968; Kolla and Biscaye, 1977; Moore and Heath, 1978; Kolla et al., 1979; Thiede, 1979). If quartz particles settled to the seafloor by Stokesian settling, the fine grain size of the material would lead to slow settling rates. This action by currents would smear or obliterate any pattern of distribution by wind transport. Such is not the case; quartz distributions reflect wind patterns in many regions. Sediment trap research suggests that filter-feeding plankton concentrate inorganic particles from the surface water into fecal pellets causing them to sink rapidly (Honjo, et al., 1982). Large organic aggregates ("marine snow") also increase the sinking rate (Honjo, et al., 1982).

There is a strong latitudinal pattern of quartz distribution in the North Pacific (Fig. 1) that has been related to the mean position of the westerly wind system over this region (Rex and Goldberg, 1958; Griffin, et al., 1968; Moore and Heath, 1978). Numerous sediment and aerosol studies have demonstrated that this sediment is derived from Asia (Rex and Goldberg, 1958; Griffin, et al., 1968; Windom, 1969; Duce, et al., 1980, 1983; Shaw, 1980; Parrington, 1981). The South Pacific has low quartz concentrations reflecting smaller input from continental sediment sources (Thiede, 1979; Dymond, 1981; Schramm and Leinen, in press; Bloomstine and Rea, in press). Although the influence of Australia as a source region for quartz in the southwest Pacific has been
documented by Thiede (1979), this material does not extend across the entire South Pacific.

The Sahara is an important source of eolian sediment in the eastern Atlantic (Kolla and Biscaye, 1977; Sarnthein, 1979). Its relative influence on deep-sea sedimentation drops off markedly to the west, however, and does not extend across the sub-equatorial Atlantic. In the equatorial Atlantic Ocean there is some suggestion of latitudinal banding, but the quartz distribution has been strongly modified by turbidite deposition and bottom processes which are discussed in detail by Kolla, et al. (1979).

Quartz is diluted by opal in areas of strong upwelling and along the equatorial divergences. This is very apparent in the eastern equatorial Pacific where carbonate-free sediments are dominated by biogenic silica (Molina-Cruz and Price, 1977, Heath, et al., 1983).

**OPAL**

Biogenic silica (opal) in deep-sea sediments is dominated by the remains of marine plankton, and is closely related to surface productivity (Pisias, 1974; Molina-Cruz, 1977) because siliceous sediments are not affected by differential dissolution with depth, as are calcareous sediments. Earlier maps of opal distribution in pelagic sediments (Lisitzin, 1972; Heath, et al., 1983) focussed on the Antarctic and the North Pacific. The remainder of the world ocean was highly generalized. Unfortunately, no data points were shown on the Lisitzin map and the data have not been published. The importance of biogenic silica has long been recognized, but its surface distribution has not be mapped in detail previously because of the great difficulty of analyzing opal quantitatively in deep-sea sediments (Leinen, 1977; Eggiman, et al., 1980; DeMaster, 1980).

**Methods**

Opal can be determined by X-ray diffractometry using alumina as an internal standard (Calvert, 1966; Ellis and Moore, 1973), and in fact most of the investigators
who have analyzed quartz in sediments also determined the opal contents of their samples by the X-ray diffraction technique (e.g. Molina-Cruz and Price, 1977). Most of these regional data sets have never been published, however, because the absolute value of the opal concentrations were suspect. Recent work (Leinen and King, 1981; Leinen, in press) suggests that the relative abundances indicated by the X-ray diffraction analyses are valid. After compiling and contouring the opal data for this study (all data are listed in Appendix I), it was clear that the regional patterns of opal distribution determined by X-ray diffractometry did indeed make sense oceanographically, but needed calibration.

X-ray opal values were calibrated using data from other techniques. These calibrations yielded results that were very consistent for individual deep-sea regions. Data for the equatorial Pacific were calibrated by comparing opal values determined by Heath using X-ray diffractometry with those determined by normative partitioning of sediment geochemistry (Leinen, 1977). Several subtropical South Pacific samples analyzed by Molina-Cruz and Price (1977) also had bulk sediment geochemical analyses. Data for this area were calibrated by comparison with estimates of opal content from geochemical partitioning (Dymond, 1981; Leinen and Pisias, 1984). Central North and South Pacific data (Moore and Heath, 1978) and Indian Ocean data (Kolla and Biscaye, 1977; Moll, et al., in press) were calibrated by the standard additions technique of Leinen and King (1981). Northwest Pacific data were also calibrated by the standard additions technique and by comparison with quantitative microfossil counts (Leinen, in press). Finally, the overlapping analyses of South Atlantic samples (Kolla, et al., 1979; Ellis and Moore, 1973) allowed a direct comparison. Because the Ellis and Moore (1973) data were calibrated using a standard curve and microfossil counts, they were accepted and the Kolla, et al. (1979) data were multiplied by a factor of 1.2 to bring them into agreement with the Ellis and Moore data. We did have to adjust the opal values by up to ±5 wt% in areas of overlap between regions calibrated by different techniques. Because the concentration of opal in the sediments was generally large, this adjustment
introduced an error of <10% of measured value. At the 10 wt% contour interval used on
the map, such error would move contours to one side or the other of a point, but would
not affect the pattern of the contours. We chose not to include the contours published by
Lisitzin (1972) because we could not obtain the core locations or calibrate the data to our
x-ray opal analyses.

Distribution

Although the opal data are not ideal and there is certainly room for improvement
in the calibration of different data sets, the distribution pattern of the opal data and the
good agreement between the X-ray diffraction data and other indicators of biogenic
silica concentration (such as microfossil counts and geochemical partitioning) suggest that
the data reflect real differences in opal concentration in deep-sea sediments (Fig. 2). The
carbonate-free concentrations follow the observed patterns of surface water biological
productivity. The equatorial productivity zones in all oceans show up clearly, as do other
zones of strong upwelling, such as those off southwest Africa and those associated with
the Kuroshio-Oyashio confluence in the northwest Pacific. Siliceous productivity
associated with the Polar Front in the Indian Ocean is clearer than that in the southwest
Pacific and south Atlantic where there are fewer data. In the equatorial Indian Ocean opal
is diluted by terrigenous sediment in the Bengal Fan east of India and west of the central
Indian Ridge. In the western equatorial Atlantic it is diluted by terrigenous material from
South America.

DISCUSSION

Using the opal concentrations indicated by the intercalibrated data, we were also
able to correct the quartz concentrations for dilution by biogenic silica. The resulting map
(Fig. 3) reflects the amount of quartz in the non-biogenic sediment. This fraction
includes sediments of terrigenous, hydrogenous, and hydrothermal origin as well as trace
amounts of sediment of biological origin (e.g. organic carbon, barite, phosphatic fish
debris, etc.). Differences in the quantity of quartz in the carbonate- and opal-free
sediment therefore reflect the overall importance of terrigenous material in the sediment as well as the quartz content of specific terrigenous source areas. For example, Dymond (1981) has demonstrated that the non-biogenic sediments of the South Pacific deposited west of the East Pacific Rise crest are dominated by hydrogenous and hydrothermal phases. Thus, it is not surprising that the quartz contents are low. The non-biogenic sediments of the North Pacific are dominated by terrigenous material, however (Griffin, et al., 1968; Windom, 1969; Leinen and Heath, 1981). The distribution pattern in the North Pacific reflects both eolian transport by the major wind systems and differences in the quartz content of terrigenous sources. The latitudinal patterns are much clearer in the opal-free data. In the North Pacific the opal-free data also show a lobe of higher quartz concentrations in the eastern North Pacific at about 20°N which has been attributed to eolian transport from the arid desert regions of Central America and southwestern North America (Moore and Heath, 1978). The map suggests that eolian material transported across the North Pacific from Asia by the westerlies has a similar quartz content to that supplied to subtropical northeast Pacific sediments from the desert regions of North America by the trade winds. The concentration of quartz (calculated on an opal-free basis) also is influenced by the weathering style on the continent. For example, deep-sea sediments contain high concentrations of quartz downwind of major deserts like the Sahara (Sarnthein, 1979; Dauphin, 1982).

Eolian processes are not the only processes controlling quartz distribution in the ocean, however, and in some areas they are not the dominant processes. In the Atlantic Ocean any eolian pattern of latitudinal banding is strongly modified by turbidite deposition on abyssal plains and by contour current winnowing. It is obvious from our results that great care must be taken when choosing where quartz determinations can be used as reliable indicators of eolian transport.

The gross pattern of opal distribution mirrors the surface primary productivity (Koblentz-Mishke, et al., 1970; Heath, et al., 1983) even in areas like the equatorial and
northwest Pacific, where the siliceous sediment is dominated by the skeletal remains of radiolarians which are not primary producers. The similarity between primary productivity and opal distribution is strongest in the Pacific where sediments are dominantly pelagic. Absolute concentrations must be used with care because of problems in calibrating opal techniques discussed earlier, however the map clearly reflects first-order features like the equatorial high productivity belts and some second-order features like the productivity associated with the confluence of the Kuroshio and Oyashio currents in the northwest Pacific.

ACKNOWLEDGEMENTS

We would like to thank the many technicians and students who contributed to the data sets which are combined in this paper. These individuals are acknowledged in the papers which have been published. Patricia Price, formerly of Oregon State University and Tammy King Walsh, URI, performed most of the new, unpublished analyses. The intercalibration work and the summarization work was supported by National Science Foundation grants #ATM - and #OCE - to M. Leinen.
| AREA      | SOURCE         | REFERENCE                             | PREVIOUS MAPS |
|-----------|----------------|---------------------------------------|---------------|
| A. Indian | Kolla & Biscaye| Kolla and Biscaye (1977) + unpublished data | Kolla and Biscaye (1977) |
| Atlantic  | Kolla & Biscaye| Kolla et al., (1979) + unpublished data | Kolla, et al. (1979) |
| B. Indian | Dauphin        | unpublished                           |               |
| Pacific   | Dauphin        | unpublished                           |               |
| C. South Pacific | Thiede   | Thiede (1979) + unpublished data       | Thiede (1979) |
| D. North Pacific | Pisias   | Pisias (1974)                          |               |
| E. North Pacific | Wenkam    | Wenkam (1976)                          |               |
| F. North Pacific | Peterson | Peterson (1969)                        |               |
| G. Pacific | CLIMAP        | unpublished data                      |               |
| H. South Atlantic | Ellis    | Ellis (1972)                           | Ellis (1972)  |
| I. Indian | Leinen        | unpublished data                      | Moore and Heath (1979) (partial) |
| J. Pacific | Heath        | unpublished data                      | Molina-Cruz (1976) |
| K. Pacific | Molina-Cruz   | Molina-Cruz (1976)                     | Molina-Cruz (1977) |
| L. Pacific | Rex          | Rex (1958)                            | Rex and Goldberg (1958) |
|           |               | Rex and Goldberg (1958)               |               |
FIGURE CAPTIONS

Figure 1. Distribution of quartz in deep sea sediments. All data are corrected for dilution by calcium carbonate. Contours are in weight percent.

Figure 2. Distribution of biogenic silica (opal) in deep sea sediments. All data are corrected for dilution by calcium carbonate. Contours are in weight percent.

Figure 3. Distribution of quartz in the non-biogenic fraction of deep sea sediments. All data are corrected for calcium carbonate and biogenic silica. Contours are in weight percent.
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Appendix II: Core Information and Concentration of Sedimentary Components
The following is a list of the table headings and their definitions:
LONG = longitude (D is degrees, M is minutes, + is east, and - is west).
LAT = latitude (+ is north and - is south).
CORE ID = the standard core designations (explained on the following page).
ACCESS = sample number used by analyzing laboratory.
DEPTH = water depth above core site (in meters).
SAMP DEPTH = depth in core from which sample was taken (in centimeters).
QTZ % = quartz concentration (in carbonate-free sample).
OPAL % = opal concentration (in carbonate-free sample).
CACO3 % = calcium carbonate concentration.
SOURCE = data source listed on a following page.
Key for Core Identification Codes:
Cores are identified by standard codes used in the literature or the code used by the author from which the data was obtained. These include the following ship codes.
- RC = Robert Conrad
- V or VM = Vema
- AII = Atlantis II
- EN = Endeavor
- E = Eltanin
- TR or TRI = Trident
- A = Atlantis
- S = Shelf cores from USGS
- T = Tyro
- X = Data from Tiedemann, 1985 with no ship designation
Data Source Designations:

1. Data from Kolla and Biscaye, 1977; Kolla et al, 1979: and Kolla and Biscaye unpublished.
2. Data from Dauphin unpublished.
3. Data from Thiede, 1979; and unpublished.
4. Data from Pisias, 1974.
5. Data from Wenkam, 1976.
6. Data from Peterson, 1969.
7. Data from CLIMAP, unpublished.
8. Data from Ellis, 1972.
9. Data from Leinen, unpublished.
10. Data from Heath, unpublished.
11. Data from Molina-Cruz, 1976.
12. Data from Rex, 1958: and Rex and Goldberg, 1958.

1. Data from Prell, et al, 1980.
2. Data from Borole, et al, 1982.
3. Data from Hays, et al, 1976.
4. Data from Streeter, et al, 1982.
5. Data from Balsam, 1981.
6. Data from CLIMAP, 1976.
7. Data from Curry and Lohman, 1982.
8. Data from Hathaway, 1971.
9. Data from Opdyke and Foster, 1970.
0. Data from Tiedemann, 1985.
1. Data from Jansen, et al, 1984; and Jansen personal communication.
2. Data from Goodell and Watkins, 1968.
3. Data from Huang and Watkins, 1977.
4. Data from Prell, 1980; and Peterson and Prell, 1985.
5. Data from Mix and Ruddiman, 1985.
6. Data from Leinen and Graybeal, 1986.
7. Data from Mix and Fairbanks, 1985.
8. Data from Moore, et al, 1980.
9. Data from Sanders, et al, 1965.
0. Data from Honjo, et al, 1982.
1. Data from Yingst and Aller, 1982.
2. Data from Smith, 1978.
3. Data from Tietjen, 1971.
4. Data from van Vleet and Quinn, 1979.
5. Data from Winters et al, 1984a and b, and Cranston, personal communication.
6. Data from Ledbetter, 1985.
7. Data from Ninkovitch and Shackleton, 1975.
8. Data from this study.
9. Data from Gardner, 1982.
0. Data with no source designation is from unpublished organic carbon and calcium carbonate data from Oregon State University.
| LONG | LAT | CORE | ACCESS | DEPTH | SAMP | QTZ | OPAL | CACO3 | SOURCE |
|------|-----|------|--------|-------|------|-----|------|-------|--------|
| 55.45 | -2.40 | 119-195 | 16812 | 4206 | 0 | 2.76 | 42.98 | 1.1 |
| 51.44 | 8.59 | al5558 | 21115 | 3985 | 1- 3 | 4.91 | 41.87 | 0.2 |
| 69.30 | 19.03 | arb-52 | 2240 | 2240 | 1- 3 | 1.79 | 46.29 | 0.2 |
| 69.30 | 19.03 | arb-52 | 2240 | 2240 | 1- 3 | 1.79 | 46.29 | 0.2 |
| 70.09 | 81.47 | arb-54 | 800 | 800 | 1- 3 | 1.74 | 54.59 | 0.2 |
| 70.09 | 81.47 | arb-54 | 800 | 800 | 1- 3 | 1.74 | 54.59 | 0.2 |
| 105.33 | -43.19 | e4527 | 2111 | 3779 | 1- 3 | 1.91 | 59.11 | 1.1 |
| 114.21 | -45.02 | e4528 | 2112 | 4032 | 1- 3 | 1.73 | 62.65 | 1.1 |
| 97.32 | -29.40 | e4811 | 2114 | 3462 | 1- 3 | 5.40 | 22.48 | 1.1 |
| 85.25 | -39.54 | e4822 | 2115 | 3380 | 1- 3 | 1.79 | 46.29 | 1.1 |
| 83.43 | -39.31 | e4823 | 2116 | 3517 | 1- 3 | 1.83 | 54.59 | 1.1 |
| 79.54 | -38.33 | e4827 | 2117 | 3285 | 1- 3 | 1.74 | 58.14 | 1.1 |
| 100.01 | -41.01 | e483 | 2113 | 3933 | 1- 3 | 2.63 | 44.52 | 1.1 |
| 51.19 | -43.49 | md73025 | 3284 | 3284 | 1- 3 | 2.63 | 44.52 | 0.08 |
| 59.50 | -44.04 | rcll-101 | 18812 | 4806 | 3- 5 | 5.83 | 12.98 | 19.9087 | 1.0001 |
| 54.13 | -34.20 | rcll-106 | 1857 | 4212 | 3- 6 | 3.03 | 62.55 | 1.1 |
| 52.30 | -31.25 | rcll-107 | 1858 | 4799 | 0- 5 | 4.63 | 19.81 | 1.1 |
| 55.53 | -27.30 | rcll-108 | 1859 | 5057 | 4- 8 | 4.18 | 15.30 | 1.1 |
| 57.57 | -24.29 | rcll-110 | 18813 | 4960 | 5- 8 | 2.80 | 20.38 | 1.1 |
| 63.04 | -30.57 | rcll-113 | 18814 | 5136 | 10-12 | 3.85 | 22.67 | 1.1 |
| 66.46 | -34.17 | rcll-115 | 18815 | 4663 | 4- 6 | 2.79 | 22.43 | 1.1 |
| 69.33 | -36.29 | rcll-117 | 18510 | 4367 | 5- 7 | 4.53 | 45.55 | 1.1 |
| 71.32 | -37.48 | rcll-118 | 1494 | 4354 | 4- 8 | 2.74 | 37.45 | 1.1 |
| 74.34 | -40.18 | rcll-119 | 1495 | 3709 | 6-11 | 1.69 | 68.31 | 1.1 |
| 79.52 | -34.31 | rcll-120 | 1423 | 3193 | 0- 5 | 0.51 | 28.49 | 1.1 |
| 79.52 | -34.31 | rcll-120 | 1496 | 3193 | 5- 9 | 0.45 | 11.85 | 1.1 |
| 82.15 | -39.43 | rcll-121 | 1405 | 3426 | 0- 5 | 2.21 | 60.63 | 90.7970 | 1.1001 |
| 86.39 | -37.59 | rcll-123 | 1424 | 3766 | 0- 5 | 0.00 | 59.79 | 89.4642 | 1.0001 |
| 90.13 | -36.06 | rcll-124 | 1425 | 3775 | 0- 5 | 0.86 | 52.56 | 1.1 |
| 91.56 | -33.38 | rcll-125 | 1406 | 4305 | 0- 5 | 3.94 | 31.02 | 1.1 |
| 94.25 | -30.04 | rcll-126 | 1407 | 2336 | 0- 5 | 4.85 | 26.50 | 1.1 |
| 100.05 | -27.49 | rcll-130 | 1426 | 4508 | 0- 5 | 3.32 | 27.72 | 1.1 |
| 105.42 | -33.03 | rcll-133 | 1408 | 5367 | 6- 9 | 4.99 | 15.00 | 1.1 |
| 110.33 | -34.04 | rcll-134 | 1427 | 2345 | 0- 5 | 7.12 | 35.83 | 1.1 |
| 111.90 | -35.15 | rcll-135 | 1409 | 32767 | 6- 8 | 10.43 | 18.42 | 1.1 |
| 112.46 | -33.47 | rcll-137 | 14010 | 3043 | 0 | 8.25 | 61.79 | 1.1 |
| 112.59 | -33.48 | rcll-139 | 14011 | 3157 | 0 | 8.70 | 53.57 | 1.1 |
| 114.07 | -31.34 | rcll-141 | 1428 | 4347 | 0- 5 | 4.87 | 88.16 | 1.1 |
| 110.01 | -25.29 | rcll-145 | 14012 | 3869 | 3- 5 | 3.83 | 53.00 | 1.1 |
| 110.01 | -25.29 | rcll-145 | 3868 | 15.03 | 27.65 | 1.1 |
| 112.48 | -21.25 | rcll-146 | 3869 | 16.09 | 6.58 | 1.1 |
| 112.48 | -21.25 | rcll-146 | 1429 | 2371 | 0- 5 | 5.35 | 31.22 | 1.1 |
| 112.45 | -19.04 | rcll-147 | 14013 | 1953 | 3- 5 | 2.80 | 55.21 | 1.1 |
| 119.00 | -6.01 | rcll-150 | 14014 | 633 | 0- 5 | 0.00 | 15.31 | 1.1 |
| 23.15 | -52.03 | rcll-89 | 1851 | 3010 | 0 | 0.50 | 49.58 | 1.1 |
| 25.43 | -56.38 | rcll-90 | 1852 | 5334 | 3- 6 | 3.10 | 46.08 | 1.1 |
| 34.11 | -56.34 | rcll-91 | 1853 | 5373 | 3- 6 | 2.90 | 72.87 | 1.1 |
| 39.57 | -52.29 | rcll-92 | 1854 | 5093 | 3- 6 | 1.59 | 81.63 | 1.1 |
51.58 -56.18 rcl1-93 1855 5373 0 0.37 37.05 1
54.05 -52.48 rcl1-95 1856 4585 3- 6 3.13 57.59 1
61.12 -50.19 rcl1-97 18810 4638 8-10 0.60 41.14 1
61.02 -46.31 rcl1-99 18811 4449 5- 8 2.64 30.11 1
34.02 -30.18 rcl1-305 18515 2794 4- 6 17.26 11.68 1
37.00 -26.56 rcl1-306 21614 2501 3- 5 10.39 8.83 1
40.27 -22.24 rcl1-308 21615 2361 0 4.60 4.30 1
41.21 -21.41 rcl1-309 21616 3537 3- 5 29.66 5.93 1
41.55 -19.45 rcl1-310 2171 2895 0- 5 7.31 7.08 2
47.48 -6.36 rcl1-320 18512 4784 4- 6 5.32 27.59 1
50.25 0.18 rcl1-322 18513 5077 3- 6 2.80 29.44 1
51.13 4.29 rcl1-324 18514 4954 3- 5 6.41 20.10 1
55.00 0.47 rcl1-326 18515 4795 3- 5 3.50 25.69 1
57.50 1.41 rcl1-327 18516 4446 3- 7 2.44 53.40 1
60.36 3.57 rcl1-328 1861 3087 2- 6 2.31 81.58 1
65.12 2.59 rcl1-329 18816 3864 3- 5 3.91 23.48 1
76.10 0.48 rcl1-333 1862 4233 0- 5 4.81 41.58 1
81.57 6.05 rcl1-336 1863 4067 0- 5 5.04 8.46 0.0250 1.0001
86.27 7.45 rcl1-338 1864 3830 0- 5 5.93 26.70 1
90.02 9.08 rcl1-339 1644 3010 0- 5 7.25 7.09 1.1
88.38 15.03 rcl1-342 1865 2840 0- 5 9.09 5.75 1
36.49 -32.33 rcl1-405 2172 4784 0- 5 7.73 8.22 1
37.36 -32.35 rcl1-406 2173 5057 4- 6 6.98 16.38 1
44.45 -35.31 rcl1-407 2174 3288 0 6.31 15.99 1.1
47.53 -39.01 rcl1-409 2692 0.1
47.53 -39.01 rcl1-409 2692 0.3
51.11 -38.00 rcl1-411 1502 3268 3- 8 4.01 73.30 1.3
59.18 -38.45 rcl1-412 1503 5271 9-10 1.43 53.67 79.8847 1.3001
49.51 -23.41 rcl1-418 1868 3844 0- 5 5.64 20.81 67.1398 1.0001
63.33 -17.34 rcl1-419 1869 3568 0- 5 1.60 67.77 1
68.05 -14.52 rcl1-420 18817 3568 4- 8 0.99 75.55 1
71.53 -12.28 rcl1-421 18610 4462 3- 7 1.96 48.76 1
76.45 -9.11 rcl1-423 18818 5376 5- 8 3.69 11.99 1
88.19 -10.55 rcl1-429 1649 2869 3- 5 1.25 67.91 1.1
88.47 -11.18 rcl1-430 14015 1573 0 2.25 40.71 1
88.34 -9.02 rcl1-431 14016 3862 0- 5 1.45 1.05 1
90.01 -2.00 rcl1-433 14210 3813 3- 6 4.46 37.98 1
89.57 -0.50 rcl1-435 16411 3021 3- 6 5.06 25.56 83.8831 1.1001
90.10 -1.28 rcl1-437 20816 2226 0 6.74 11.30 1.1
90.10 -1.28 rcl1-437 24211 2226 0- 5 4.27 38.34 1
92.26 3.45 rcl1-438 14212 4199 0 4.25 1.29 1
90.31 5.51 rcl1-439 14213 2952 0 20.02 4.73 1
92.44 6.09 rcl1-440 14214 4167 0 5.43 25.75 1
100.00 -7.49 rcl1-446 14215 5566 0 3.90 39.51 1
100.12 -9.03 rcl1-448 14216 5874 0- 5 4.94 14.76 1
103.40 -12.53 rcl1-53 1431 4544 6- 9 1.49 67.25 1
99.32 -19.54 rcl1-56 1432 5890 0- 5 2.15 25.27 1
99.58 -21.59 rcl1-57 1411 5879 0- 4 4.39 22.90 1
102.48 -21.12 rcl1-58 1433 4962 2- 5 2.38 14.51 1
106.20 -20.15 rcl1-59 1412 5550 0- 5 4.95 27.32 1
112.55 -18.04 rcl1-61 2798 15.65 18.88 9
119.27 -15.12 rcl1-63 2838 23.38 15.88 9
44.48 -36.52 rcl1-8 1866 2736 0 7.04 21.25 92.1298 1.0001
47.53 -39.01 rcl1-9 1501 2692 4- 6 1.48 93.66 1
| 47.53 | -39.01 | rc14-9 | 1867 | 2692 | 4-6 | 6.08 | 33.58 | 1 |
| 66.06 | 15.02 | rc17-113 | 3874 | 0.1 |
| 36.53 | -36.00 | rc17-67 | 2175 | 5260 | 0 | 7.99 | 6.69 | 1 |
| 35.57 | -35.05 | rc17-68 | 2176 | 4390 | 0-5 | 10.02 | 12.10 | 1 |
| 32.36 | -31.30 | rc17-69 | 20818 | 3380 | 1-3 | 10.54 | 3.41 | 1.1 |
| 36.01 | -32.07 | rc17-73 | 20820 | 2120 | 0 | 11.77 | 4.96 | 1.1 |
| 37.39 | -31.32 | rc17-74 | 2177 | 5096 | 3-6 | 9.54 | 5.88 | 1 |
| 40.22 | -30.28 | rc17-75 | 2178 | 4922 | 0 | 9.68 | 5.45 | 1 |
| 43.56 | -29.17 | rc17-76 | 2179 | 2284 | 0-5 | 5.93 | 22.83 | 1 |
| 44.37 | -39.57 | rc17-78 | 21710 | 2398 | 0-5 | 2.86 | 8.60 | 1 |
| 45.47 | -32.16 | rc17-80 | 21711 | 1860 | 0-5 | 8.20 | 21.10 | 1 |
| 65.37 | -13.13 | rc17-98 | 3409 | 0.1 |
| 112.55 | -18.04 | rc19-61 | 1434 | 2798 | 0-5 | 3.07 | 50.86 | 1 |
| 37.49 | -41.53 | rc8-38 | 1888 | 3784 | 2-5 | 4.96 | 41.34 | 1 |
| 42.21 | -42.53 | rc8-39 | 1637 | 4330 | 4-6 | 2.62 | 59.98 | 74.2203 | 1.3001 |
| 51.16 | -43.38 | rc8-41 | 1721 | 2897 | 2-5 | 6.25 | 58.84 | 1 |
| 57.22 | -48.41 | rc8-43 | 1492 | 4319 | 4-8 | 0.88 | 1.00 | 1.3 |
| 62.33 | -53.02 | rc8-45 | 1722 | 4546 | 0 | 1.29 | 25.25 | 1 |
| 65.28 | -55.20 | rc8-46 | 1889 | 2761 | 0-5 | 0.34 | 8.15 | 1 |
| 71.47 | -55.03 | rc8-47 | 1723 | 3502 | 5-8 | 0.48 | 22.40 | 1 |
| 86.55 | -53.16 | rc8-48 | 1724 | 1099 | 4-6 | 0.24 | 11.86 | 1 |
| 81.33 | -51.04 | rc8-49 | 1725 | 3908 | 0 | 1.55 | 30.87 | 1 |
| 92.25 | -44.46 | rc8-50 | 2819 | 0-5 | 1.10 | 74.09 | 1 |
| 93.53 | -44.02 | rc8-51 | 1421 | 2736 | 0-5 | 0.72 | 61.42 | 1 |
| 101.25 | -41.00 | rc8-52 | 1402 | 4393 | 0-5 | 0.88 | 51.29 | 90.5471 | 1.0001 |
| 104.22 | -39.23 | rc8-53 | 1422 | 4429 | 0-5 | 1.18 | 45.26 | 1 |
| 109.57 | -35.49 | rc8-55 | 1403 | 5435 | 3-8 | 3.62 | 2.79 | 1 |
| 114.31 | -31.17 | rc9-150 | 16310 | 2703 | 0 | 4.34 | 71.44 | 1.1 |
| 114.23 | -30.46 | rc9-151 | 1404 | 2543 | 0 | 4.80 | 87.27 | 1 |
| 66.35 | 5.47 | rc9-157 | 1726 | 4111 | 0 | 6.25 | 4.46 | 1 |
| 63.00 | 8.44 | rc9-159 | 1727 | 4576 | 0-5 | 8.90 | 3.84 | 1 |
| 63.09 | 12.03 | rc9-160 | 1728 | 4268 | 0-5 | 9.46 | 2.54 | 47.2311 | 1.0001 |
| 59.36 | 19.34 | rc9-161 | 1729 | 3332 | 4-8 | 12.60 | 8.55 | 1.1 |
| 60.25 | 19.05 | rc9-162 | 17210 | 3092 | 0-5 | 12.73 | 9.54 | 68.3893 | 1.0001 |
| 60.25 | 19.05 | rc9-162 | 18914 | 3092 | 5-7 | 13.72 | 5.94 | 68.3893 | 1.0001 |
| 58.05 | 17.53 | rc9-163 | 17211 | 3005 | 4-8 | 12.44 | 15.73 | 1 |
| 58.05 | 17.53 | rc9-163 | 1897 | 3005 | 10-12 | 12.63 | 10.91 | 1 |
| 49.48 | 13.21 | rc9-164 | 18910 | 3171 | 0-5 | 7.10 | 11.43 | 1 |
| 65.32 | 3.52 | vl14-100 | 1672 | 3682 | 5-8 | 5.91 | 12.80 | 1 |
| 59.50 | 7.31 | vl14-101a | 1673 | 2390 | 0-5 | 4.85 | 25.65 | 1.1 |
| 57.11 | 10.15 | vl14-102 | 1674 | 3915 | 0-5 | 4.34 | 67.88 | 1.1 |
| 56.14 | 11.27 | vl14-103 | 1675 | 4232 | 2-5 | 5.90 | 46.68 | 1 |
| 53.27 | 13.26 | vl14-104 | 1676 | 2670 | 3-6 | 6.57 | 41.98 | 1 |
| 32.52 | -29.39 | vl14-77 | 1818 | 0.1 |
| 37.14 | -29.50 | vl14-78 | 2151 | 4948 | 0-5 | 28.99 | 7.06 | 1 |
| 41.58 | -28.34 | vl14-80 | 2152 | 4603 | 0 | 55.96 | 2.79 | 1 |
| 43.47 | -28.26 | vl14-81 | 1621 | 3634 | 12-15 | 4.38 | 7.40 | 1.1 |
| 66.48 | -11.56 | vl14-92 | 1441 | 2986 | 0 | 1.54 | 1.09 | 1 |
| 64.49 | -4.18 | vl14-95 | 1671 | 4513 | 5-8 | 2.76 | 53.45 | 1 |
| 29.29 | -45.14 | vl16-57 | 1677 | 5289 | 3-5 | 12.62 | 3.74 | 1 |
| 41.58 | -47.19 | vl16-63 | 1678 | 3886 | 0 | 3.46 | 62.73 | 1 |
| 45.46 | -45.00 | vl16-65 | 1507 | 1618 | 3-8 | 1.45 | 36.90 | 1.3 |
| 43.30 | -37.09 | vl16-67 | 2153 | 3643 | 0-5 | 8.66 | 33.03 | 1 |
| Value | Unit | Value | Unit | Value | Unit |
|-------|------|-------|------|-------|------|
| 57.35 | -20.40 | 1679 | 2906 | 4-8 | 0.43 | 30.35 |
| 61.02 | -27.15 | 16710 | 5588 | 0 | 1.10 | 5.10 |
| 78.40 | -29.58 | 1443 | 2838 | 6-10 | 0.61 | 8.54 |
| 81.32 | -30.00 | 1444 | 3852 | 0 | 1.10 | 10.17 |
| 85.47 | -33.01 | 1415 | 3416 | 0-5 | 2.24 | 30.63 |
| 73.33 | -31.04 | 1414 | 3851 | 0-5 | 1.79 | 28.15 |
| 95.11 | -28.01 | 1416 | 4071 | 0-5 | 1.71 | 32.01 |
| 99.15 | -31.32 | 1437 | 2417 | 0-5 | 0.96 | 39.03 |
| 101.09 | -33.31 | 1436 | 5960 | 0-5 | 2.06 | 34.31 |
| 106.13 | -36.08 | 1413 | 6077 | 0 | 4.61 | 51.59 |
| 106.13 | -36.08 | 1442 | 6077 | 0-5 | 2.50 | 14.26 |
| 81.11 | 3.22 | v17-42 | ml12680 | 1814 | 0 | 8.50 | 28.38 | 57.0000 |
| 82.37 | 1.52 | v17-43 | ml12681 | 3147 | 0 | 6.29 | 37.75 | 37.5000 |
| 85.07 | -3.34 | v17-44 | ml12682 | 3358 | 0 | 7.78 | 35.16 |
| 29.56 | -38.59 | v18-186 | 1871 | 4204 | 3-6 | 13.76 | 16.53 |
| 33.55 | -38.29 | v18-187 | 2154 | 3680 | 0 | 6.53 | 3.47 |
| 37.52 | -37.38 | v18-188 | 16711 | 4960 | 0-6 | 5.50 | 14.26 |
| 41.51 | -36.07 | v18-189 | 16712 | 4923 | 3-5 | 4.44 | 12.40 |
| 46.34 | -32.26 | v18-191 | 2155 | 2946 | 0-5 | 8.43 | 6.41 |
| 48.05 | -31.12 | v18-192 | 16713 | 4396 | 0-5 | 3.80 | 26.78 |
| 51.37 | -21.26 | v18-196 | 16714 | 4965 | 3-5 | 0.66 | 13.70 |
| 52.51 | -18.28 | v18-197 | 16715 | 4931 | 0 | 1.98 | 17.79 |
| 63.32 | -20.35 | v18-200 | 17616 | 3305 | 0-5 | 1.08 | 50.77 |
| 74.22 | -22.23 | v18-203 | 1445 | 4014 | 0 | 2.04 | 27.26 |
| 87.07 | -25.38 | v18-207 | 1417 | 2434 | 0-5 | 0.76 | 29.34 |
| 93.43 | -25.47 | v18-209 | 1418 | 4449 | 5-8 | 3.11 | 21.52 |
| 95.58 | -25.46 | v18-210 | 1419 | 4967 | 5-10 | 3.06 | 19.29 |
| 99.04 | -25.41 | v18-211 | 14110 | 5343 | 5-8 | 6.21 | 5.87 |
| 100.12 | -25.43 | v18-212 | 14111 | 1942 | 0 | 4.56 | 38.91 |
| 101.56 | -25.41 | v18-213 | 14112 | 4720 | 0-5 | 6.29 | 1.05 |
| 108.40 | -27.59 | v18-244 | 14113 | 5147 | 0-5 | 8.39 | 31.63 |
| 96.18 | 14.31 | v18-337 | ml12685 | 3891 | 0 | 10.47 | 2.76 | 2.3600 |
| 96.18 | 14.31 | v18-337 | ml12685 | 3891 | 0 | 0.00 | 0.00 | 2.3597 |
| 101.40 | -11.41 | v19-154 | 14114 | 4964 | 0-5 | 1.44 | 33.90 |
| 101.32 | -12.24 | v19-155 | 4731 | 2.90 | 26.37 |
| 101.20 | -14.38 | v19-156 | 5363 | 26.36 | 4.82 |
| 101.20 | -14.38 | v19-156 | 14115 | 5363 | 0-5 | 1.83 | 71.31 |
| 100.33 | -16.20 | v19-157 | 5911 | 12.14 | 25.38 |
| 99.24 | -18.11 | v19-158 | 5759 | 21.26 | 24.26 |
| 88.27 | -20.48 | v19-162 | 14116 | 3085 | 5-8 | 1.52 | 36.13 |
| 82.12 | -20.28 | v19-164 | 1681 | 4784 | 5-8 | 3.80 | 7.10 |
| 82.06 | -16.11 | v19-166 | 1682 | 5400 | 5-8 | 4.47 | 22.63 |
| 82.01 | -12.44 | v19-168 | 1683 | 5138 | 0-5 | 1.70 | 44.44 |
| 81.37 | -10.13 | v19-169 | 1684 | 5110 | 0-5 | 1.76 | 84.08 |
| 81.25 | -7.54 | v19-170 | 1685 | 5218 | 0-5 | 2.87 | 14.65 |
| 80.30 | -5.32 | v19-172 | 1872 | 5167 | 0-5 | 6.30 | 4.44 |
| 80.35 | -3.15 | v19-173 | 1686 | 4964 | 3-5 | 4.55 | 12.23 |
| 80.37 | 0.27 | v19-174 | 1687 | 4616 | 5-8 | 5.60 | 4.89 |
| 80.44 | 4.07 | v19-175 | 1873 | 4343 | 3-6 | 9.58 | 7.94 |
| 73.15 | 8.07 | v19-178 | 1625 | 2188 | 0-5 | 5.19 | 22.03 |
| 73.15 | 8.07 | v19-178 | 2084 | 2188 | 0 | 7.77 | 16.18 |
| 69.15 | 8.09 | v19-180 | 1688 | 4651 | 0-5 | 5.96 | 14.89 |
| 66.57 | 8.14 | v19-181 | 1689 | 4610 | 0-5 | 7.85 | 2.63 |
| 59.20 | 6.42 | v19-185 | 1627 | 2867 | 2-7 | 5.54 | 4.18 |
| Value   | Description       | Value   | Description       |
|---------|-------------------|---------|-------------------|
| 60.40   | 6.52 v19-188      | 1628    | 3356 1- 5 5.04 7.20 |
| 60.40   | 6.52 v19-188      | 1881    | 3356 2- 5 3.06 7.83 |
| 55.04   | 5.58 v19-191      | 16810   | 5125 0- 4 4.08 31.40 |
| 51.28   | 2.59 v19-193      | 16811   | 5106 2- 5 3.63 21.81 |
| 51.51   | -3.34 v19-196     | 16813   | 5062 0- 6 2.78 38.18 |
| 48.46   | -3.24 v19-197     | 16814   | 4984 0- 5 3.69 23.59 |
| 45.49   | -3.11 v19-198     | 16815   | 4609 0- 5 3.38 29.94 |
| 40.26   | -5.20 v19-201     | 16210   | 1861 4- 6 3.40 10.04 |
| 41.11   | -6.59 v19-202     | 2086    | 2589 0- 5 5.34 7.85 |
| 43.49   | -10.14 v19-204    | 1874    | 3524 3- 6 2.72 36.21 |
| 41.06   | -16.56 v19-207    | 2156    | 2505 0- 5 7.52 23.40 |
| 39.30   | -17.54 v19-208    | 2157    | 2318 6- 9 9.00 8.01 |
| 41.36   | -19.55 v19-209    | 2158    | 2924 0- 5 9.49 5.29 |
| 37.09   | -32.32 v19-21     | 2162    | 5114 4- 6 18.20 7.29 |
| 43.41   | -20.39 v19-210    | 2159    | 3241 0- 5 5.63 5.91 |
| 42.10   | -22.51 v19-211    | 21510   | 3177 7-10 4.56 10.55 |
| 39.58   | -23.11 v19-213    | 21511   | 3347 0 8.60 8.60 |
| 38.51   | -23.22 v19-214    | 21512   | 3092 3- 5 6.82 12.36 |
| 37.51   | -23.31 v19-215    | 21513   | 2898 0- 5 7.04 8.77 |
| 36.47   | -25.20 v19-216    | 21514   | 2206 0 10.34 10.05 |
| 38.08   | -27.00 v19-217    | 21515   | 4836 0 4.57 2.20 |
| 39.45   | -29.27 v19-219    | 21516   | 4909 0-20 28.91 7.66 |
| 38.10   | -31.42 v19-220    | 2161    | 5019 7- 9 7.11 4.98 |
| 34.24   | -33.22 v19-222    | 16816   | 2005 0 9.72 20.34 |
| 31.25   | -34.24 v19-223    | 2163    | 4116 0- 5 13.96 14.84 |
| 81.42   | 2.28 v19-25       | burkle  | 2404 10-13 0.00 41.20 51.4000 |
| 81.42   | 2.28 v19-25       | plo0047 | 2404 10-13 0.00 71.00 56.1200 |
| 82.04   | -0.28 v19-27      | plo0049 | 1373 10-13 0.00 38.60 44.0600 |
| 82.04   | -0.28 v19-27      | burkle  | 1373 10-13 0.00 8.80 24.9000 |
| 84.39   | -2.22 v19-28      | m112686 | 2720 0 4.87 45.12 |
| 84.39   | -2.22 v19-28      | burkle  | 2720 0 0.00 0.00 62.7000 |
| 83.56   | -3.35 v19-29      | m107261 | 3157 2 0.00 0.00 31.1000 |
| 83.31   | -3.23 v19-30      | m108176 | 3091 0 9.48 23.56 20.0000 |
| 96.12   | -14.07 v19-41     | m112688 | 3248 0 7.12 21.81 |
| 121.12  | -16.56 v19-64     | m112691 | 3570 0 1.19 9.21 |
| 122.58  | -11.44 v20-153    | 1536    | 25.83 17.31 |
| 106.32  | -17.06 v20-158    | 14313   | 6048 0- 5 0.95 22.47 |
| 106.32  | -17.06 v20-158    | 6048    | 16.53 16.94 |
| 103.32  | -17.05 v20-159    | 5629    | 21.10 24.26 |
| 96.28   | -17.13 v20-161    | 1446    | 5482 0- 5 1.47 26.40 |
| 96.28   | -17.13 v20-161    | 5482    | 18.76 9.58 |
| 93.09   | -17.16 v20-162    | 1447    | 5645 0 0.17 2.19 |
| 88.41   | -17.12 v20-163    | 14117   | 2706 0 2.81 29.56 |
| 69.14   | -21.48 v20-170    | 16212   | 2479 2- 5 1.10 33.37 |
| 68.00   | -22.18 v20-175    | 2087    | 3526 0- 3 2.00 33.52 |
| 66.17   | -22.42 v20-176    | 1875    | 3946 0- 5 2.78 31.53 |
| 61.34   | -23.50 v20-179    | 17212   | 3568 0 1.76 7.00 |
| 55.23   | -24.07 v20-183    | 17213   | 4695 0 1.10 18.67 |
| 51.19   | -28.06 v20-186    | 17214   | 5037 0- 5 4.89 32.03 |
| 42.26   | -26.27 v20-189    | 2164    | 4244 0- 5 15.48 7.22 |
| 40.54   | -25.07 v20-190    | 2165    | 4016 5- 8 5.24 7.55 47.3144 1.0001 |
| 41.19   | -23.56 v20-191    | 2166    | 3620 0- 5 8.67 8.31 |
| 38.37   | -30.39 v20-197    | 1876    | 4982 2- 5 3.52 7.20 |
| 85.08   | 2.50 v21-212      | m112702 | 3338 0 3.35 37.85 |
| 85.08 | 2.50 v21-212 | m112703 3338 | 0 | 6.07 | 40.33 | 7 |
| 80.38 | 3.50 v21-214 | m112704 2246 | 0 | 8.95 | 24.30 | 7 |
| 80.38 | 3.50 v21-214 | burkle 2246 | 0 | 0.00 | 0.00 | 35.5000 | 7 |
| 89.41 | -1.31 v21-30 | m112695 617 | 0 | 0.00 | 0.00 | 70.1273 | 2 |
| 89.41 | -1.13 v21-30 | m112695 617 | 0 | 0.68 | 13.97 | 70.1300 | 7 |
| 92.05 | -3.48 v21-33 | thompson 3726 | 0 | 0.00 | 0.00 | 55.0000 | 7 |
| 92.05 | -3.48 v21-33 | m112696 3726 | 0 | 1.64 | 73.25 | 7 |
| 25.42 | -40.08 v22-130 | 1877 | 2428 | 0-3 | 9.95 | 26.03 | 1 |
| 119.19 | 18.47 v24-132 | 1897 | 2019 | 2 | 7.88 | 2.05 | 1 |
| 120.12 | -11.43 v24-187 | 4266 | 15.93 | 15.64 | 9 |
| 115.40 | -11.18 v24-188 | 6956 | 31.48 | 21.44 | 9 |
| 110.06 | -13.29 v24-191 | 5340 | 6.78 | 11.68 | 9 |
| 110.06 | -13.29 v24-191 | 1448 | 5340 | 0-5 | 1.69 | 39.67 | 1 |
| 108.08 | -16.02 v24-192 | 14118 | 5407 | 0-5 | 3.51 | 50.87 | 1 |
| 108.02 | -14.07 v24-193 | 4513 | 5.27 | 29.29 | 9 |
| 106.32 | -14.07 v24-193 | 14119 | 4513 | 0-5 | 2.26 | 50.27 | 1 |
| 104.21 | -11.09 v24-194 | 5256 | 8.17 | 24.67 | 9 |
| 108.08 | -16.02 v24-194 | 5407 | 16.14 | 18.57 | 9 |
| 58.10 | -30.55 v24-201 | 1878 | 2917 | 0-5 | 4.38 | 26.84 | 1 |
| 59.13 | -34.21 v24-202 | 1879 | 5512 | 3-6 | 2.50 | 49.12 | 1 |
| 59.59 | -36.59 v24-203 | 1509 | 4997 | 6-10 | 2.26 | 0.44 | 1.3 |
| 45.39 | -36.16 v24-208 | 2167 | 3231 | 0-5 | 8.09 | 21.83 | 1 |
| 39.44 | -34.45 v24-209 | 2168 | 5174 | 2-4 | 8.83 | 7.09 | 1 |
| 37.13 | -31.52 v24-210 | 2169 | 4960 | 3-5 | 10.02 | 7.09 | 1 |
| 38.05 | -32.37 v24-211 | 21610 | 4995 | 4-10 | 5.56 | 11.42 | 1 |
| 36.24 | -34.39 v24-212 | 17215 | 5145 | 3-5 | 6.87 | 4.68 | 1 |
| 120.30 | -14.06 v28-342 | 2730 | 21.60 | 16.97 | 9 |
| 117.58 | -14.38 v28-344 | 5658 | 8.18 | 15.01 | 9 |
| 96.54 | -17.45 v28-351 | 5678 | 10.45 | 10.21 | 9 |
| 96.50 | -15.08 v28-352 | 4722 | 4.12 | 5.88 | 9 |
| 97.05 | -8.18 v28-353 | 5297 | 7.91 | 32.04 | 9 |
| 98.39 | -14.42 v28-354 | 14410 | 5824 | 0-5 | 0.02 | 6.13 | 1 |
| 117.57 | -17.40 v28-345 | 1904 | 18.87 | 17.24 | 9 |
| 99.49 | -4.08 v29-02 | 14411 | 5893 | 0-5 | 11.04 | 4.09 | 1 |
| 98.21 | -3.25 v29-03 | 14412 | 4642 | 0-5 | 6.24 | 8.12 | 1 |
| 95.08 | -2.07 v29-04 | 14413 | 4347 | 0-5 | 4.24 | 14.18 | 1 |
| 92.59 | -4.37 v29-05 | 14414 | 4841 | 0-5 | 1.74 | 84.72 | 1 |
| 90.14 | -6.44 v29-06 | 14415 | 3906 | 0-5 | 2.73 | 59.37 | 1 |
| 88.01 | -5.05 v29-07 | 14416 | 5092 | 0-5 | 2.18 | 14.74 | 1 |
| 83.20 | 4.17 v29-12 | 17216 | 4160 | 0-5 | 10.56 | 5.07 | 1 |
| 85.58 | 6.14 v29-14 | 1731 | 3713 | 0-5 | 5.49 | 40.19 | 1 |
| 88.44 | 11.57 v29-15 | 1732 | 3173 | 0 | 7.78 | 24.15 | 1 |
| 88.05 | 14.09 v29-16 | 1733 | 1574 | 0 | 8.92 | 13.50 | 1 |
| 85.24 | 16.38 v29-17 | 1734 | 2813 | 0-5 | 6.81 | 8.74 | 1 |
| 83.35 | 14.42 v29-19 | 1735 | 3182 | 0-5 | 7.30 | 13.39 | 1 |
| 81.42 | 11.52 v29-20 | 1736 | 3557 | 0-5 | 7.92 | 8.28 | 1 |
| 73.15 | 5.02 v29-27 | 1737 | 461 | 0 | 4.08 | 5.50 | 1 |
| 77.35 | 5.07 v29-29 | 16215 | 2673 | 0-5 | 3.28 | 24.56 | 1 |
| 76.15 | 3.05 v29-30 | 1738 | 3651 | 0-5 | 5.43 | 42.24 | 1.1001 |
| 76.19 | -1.34 v29-32 | 1739 | 4755 | 0-5 | 5.82 | 27.91 | 1 |
| 78.39 | -5.43 v29-38 | 18710 | 5167 | 5-8 | 3.98 | 7.68 | 1 |
| 79.33 | -11.46 v29-41 | 18711 | 5383 | 7-10 | 2.43 | 49.53 | 1 |
| 69.49 | -6.00 v29-45 | 1631 | 2860 | 0-5 | 2.21 | 1.10 | 73.7205 1.0001 |
| 66.35 | -8.02 v29-46 | 1883 | 4027 | 3-6 | 1.38 | 1.10 | 1 |
| Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|---------|---------|---------|---------|---------|
| 63.26   | -6.16   | 1633    | 3882    | 0-5     | 1.07   | 1.10   | 1.1 |
| 63.33   | -10.00  | 17310   | 3630    | 0-5     | 3.16   | 91.22  | 1   |
| 63.23   | -13.17  | 17311   | 3966    | 0-5     | 1.38   | 82.36  | 1   |
| 70.14   | -18.53  | 1884    | 3729    | 3-5     | 1.86   | 47.16  | 1   |
| 76.35   | -18.45  | 1885    | 4984    | 9-10    | 3.44   | 11.22  | 1   |
| 74.52   | -27.17  | 17312   | 3404    | 0-5     | 2.32   | 29.57  | 1   |
| 66.03   | -31.02  | 17313   | 4967    | 0-5     | 2.32   | 29.57  | 1   |
| 67.26   | -29.25  | 1886    | 4393    | 4-6     | 4.04   | 18.16  | 1   |
| 54.37   | -18.04  | 1887    | 4731    | 5-8     | 0.56   | 2.34   | 1   |
| 51.32   | -19.43  | 17314   | 4938    | 0-5     | 8.71   | 10.30  | 1   |
| 53.09   | 8.38    | 13910   | 3446    | 0-3     | 5.89   | 3.69   | 1   |
| 48.46   | -27.09  | 17315   | 2362    | 0       | 6.22   | 22.95  | 1   |
| 43.03   | -31.04  | 17316   | 1626    | 0       | 9.15   | 13.89  | 1   |
| 40.13   | -30.47  | 21611   | 5092    | 0-5     | 6.58   | 4.92   | 1   |
| 38.16   | -34.40  | 21612   | 5264    | 2-7     | 6.35   | 15.54  | 1   |
| 35.31   | -37.22  | 21613   | 4834    | 0-5     | 10.57  | 9.64   | 1   |
| 30.57   | -41.32  | 17317   | 5059    | 0-5     | 15.24  | 29.26  | 1   |
| 27.36   | -43.51  | 15010   | 5451    | 7-10    | 3.20   | 62.61  | 1.3 |
| 27.23   | -49.06  | 15012   | 5314    | 4-9     | 2.59   | 5.78   | 1   |
| 27.23   | -49.06  | 15013   | 5314    | 9-10    | 2.61   | 56.32  | 1.3 |
| 25.39   | -45.44  | 15014   | 5945    | 4-8     | 4.63   | 27.86  | 1.3 |
| 25.44   | -43.42  | 15015   | 5148    | 14      | 4.49   | 19.53  | 1.3 |
| 111.43  | -20.55  | 980     | 17.61   | 8.97    | 9      |        |
| 112.35  | -22.44  | 0       | 27.85   | 12.84   | 9      |        |
| 97.04   | -11.26  | 0       | 8.75    | 30.74   | 9      |        |
| 109.35  | -20.33  | 0       | 15.37   | 21.84   | 9      |        |
| 111.41  | -20.56  | 1118    | 16.01   | 22.12   | 9      |        |
| 111.45  | -20.55  | 958     | 12.46   | 10.97   | 9      |        |
| 89.35   | -6.07   | 3812    | 0.05    |        |        |        |
| 59.45   | 16.32   | 2000    | 0.05    |        |        |        |
| 104.50  | -6.14   | 1554    | 3.94    | 35.34   | 1      |        |
| 104.15  | -8.27   | 5678    | 3.72    | 14.78   | 1      |        |
| 94.04   | -2.02   | 5159    | 2.71    | 22.70   | 1      |        |
| 91.12   | -20.56  | 4846    | 2.90    | 19.77   | 1      |        |
| 86.21   | -20.39  | 4169    | 2.39    | 34.57   | 1      |        |
| 103.32  | -17.05  | 5629    | 6.16    | 29.72   | 1      |        |
| 99.15   | -17.11  | 6328    | 2.05    | 44.86   | 1      |        |
| 86.33   | 2.59    | y69106p| 2870    | 0-1     | 2.41   | 20.64  | 1.0700|
| 86.29   | 0.06    | y6971p  | 2740    | 4-5     | 2.52   | 60.69  | 42.8900|
| 87.56   | 1.27    | y6973p  | 2707    | 0-2     | 0.00   | 0.00   | 72.0100|
| 77.34   | 16.27   | y71612p | 2734    | 0-1     | 0.00   | 0.00   | 8.4100 |
| 77.34   | 16.27   | y71612p | 2734    | 2-4     | 11.79  | 11.98  | 7.4400 |
| LONG D M | LAT D M | CORE ID | ACCESS DEPTH | DEPTH % | QTZ % | OPAL % | CACO3 % | SOURCE |
|---------|--------|--------|-------------|---------|-------|--------|---------|--------|
| -76.00  | 31.00  | a15-63 | 3220        | 16.75   | 5.22  | 0.5    |
| -74.41  | 34.49  | a15-64 | 1651 1300   | 0       | 12.75 | 5.33   | 1.6     |
| -73.37  | 37.07  | a15-65 | 1652 0      | 0       | 7.07  | 5.50   | 1.6     |
| -69.00  | 36.29  | a16-424| 1654 0      | 3329    | 7.48  | 4.54   | 1.6     |
| -71.15  | 37.46  | a16-45 | 1511 0      | 3330    | 12.44 | 4.21   | 1.6     |
| -69.62  | 38.08  | a16-46 | 1512 0      | 2725    | 19.36 | 4.37   | 1.5     |
| -68.47  | 39.33  | a16-461| 1513 0     | 2725    | 19.36 | 4.37   | 1.6     |
| -75.21  | 31.39  | a16-713| 1461 0      | 0       | 8.15  | 3.39   | 1.6     |
| -76.28  | 31.28  | a16-714| 1521 0      | 5       | 11.53 | 3.67   | 1.6     |
| -73.28  | 17.14  | a17-21 | 1462 0      | 2       | 5.77  | 35.88  | 1.6     |
| -72.19  | 16.12  | a17-22 | 1514 3149   | 10      | 8.17  | 7.63   | 1.6     |
| -68.51  | 14.59  | a17-26 | 1463 0      | 3       | 7.55  | 4.91   | 1.6     |
| -75.45  | 23.56  | a17-913| 1522 1847   | 0       | 7.23  | 16.15  | 1       |
| -75.56  | 24.48  | a17-915| 1465 0      | 5       | 6.73  | 5.69   | 1.6     |
| -74.48  | 16.36  | a17-94 | 1464 2965 2 | 0       | 6.54  | 18.49  | 1.6     |
| -36.42  | 39.16  | a18-015| 2062 4610   | 0       | 6.77  | 4.75   | 1       |
| -32.29  | 38.21  | a18-016| 1532 2270 10| 0       | 15.79 | 4.81   | 1.6     |
| -26.15  | 29.07  | a18-032| 1656 5029   | 0       | 9.67  | 6.57   | 1.6     |
| -19.18  | 25.50  | a18-039| 1658 3470   | 0       | 8.80  | 6.71   | 1.6     |
| -17.56  | 15.20  | a18-047| 1534 0 15   | 10.14  | 13.57 | 1.6     |
| -18.06  | 15.19  | a18-048| 1534 0 15   | 10.14  | 13.57 | 1.6     |
| -17.46  | 12.45  | a18-056| 1467 2597 2 | 9.01   | 21.51 | 1.6     |
| -21.47  | 0.36   | a18-072| 1468 3841 4 | 3.38   | 40.09 | 1.6     |
| -23.00  | 0.10   | a18-073| 1224 3750 0 | 6       | 4.13  | 5.81   | 1.6     |
| -24.10  | 0.03   | a18-074| 16510 3329 0| 4.90   | 23.75 | 1.6     |
| -45.57  | 39.27  | a18-09 | 3874 0      | 9.46   | 6.67  | 1.6     |
| -43.28  | 0.30   | a18-13 | 1227 3874 10| 9.46   | 6.67  | 1.6     |
| -45.52  | 3.32   | a18-14 | 1228 3655 10| 20.98  | 5.41  | 1       |
| -57.20  | 10.33  | a18-17 | 12313 3765 10| 5.77  | 30.43 | 1       |
| -17.56  | 15.20  | a18047| 1466 0 3    | 12.39  | 3.93  | 1       |
| -70.10  | 39.48  | ads    | 2750        |         |       | 0.004  |
| -64.42  | 32.11  | ber5   | 2000        |         |       | 97.500 | 0.001  |
| -64.42  | 32.14  | ber6   | 1500        |         |       | 99.160 | 0.001  |
| -64.33  | 32.15  | ber7   | 2500        |         |       | 96.030 | 0.001  |
| -70.47  | 40.21  | cl     | 97          |         |       | 3.170  | 0.001  |
| -70.35  | 39.55  | dl     | 487         |         |       | 5.2900 | 0.001  |
| -54.00  | 13.30  | demera-e| 5288        |         |       | 0.002  |
| -70.40  | 39.46  | dos1   | 1850        |         |       | 0.004  |
| -69.36  | 38.18  | dos2   | 3650        |         |       | 0.004  |
| -70.55  | 41.18  | dsl    | 40          |         |       | 0.004  |
| -79.23  | 11.30  | dsdp502| 48.5000     |         |       | 0.0002 |
| -72.31  | 38.50  | dwd    | 2200        |         |       | 0.004  |
| -70.35  | 39.51  | e3     | 824         |         |       | 6.9500 | 0.001  |
| -21.54  | 6.39   | en66-10g| 3527        |         |       | 0.06   |
| -70.45  | 39.47  | fl     | 1500        |         |       | 14.7800 | 0.001 |
| -76.40  | 33.34  | fbl    | 250         |         |       | 84.6000 | 0.005  |
| -76.25  | 33.32  | fb2    | 500         |         |       | 83.3000 | 0.005  |
| -76.10  | 33.27  | fb3    | 750         |         |       | 61.4000 | 0.005  |
| -76.54  | 33.37  | fcl    | 50          |         |       | 61.3000 | 0.005  |
| Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|--------|---------|---------|---------|---------|
| -76.51 | 33.36   | fc2     | 100     | 56.2000 |
| -76.06 | 33.27   | fs11    | 1000    | 52.5000 |
| -76.05 | 33.26   | fs12    | 1250    | 54.3000 |
| -76.02 | 33.26   | fs13    | 1500    | 56.5000 |
| -76.01 | 33.25   | fs14    | 1750    | 54.3000 |
| -75.59 | 33.25   | fs15    | 2000    | 63.3000 |
| -75.56 | 33.24   | fs16    | 2500    | 71.6000 |
| -70.39 | 39.42   | gl      | 2086    | 19.9500 |
| -70.35 | 39.26   | gh      | 2500    | 26.3700 |
| -25.24 | 31.17   | gme10-ave|   | 0.007   |
| -25.23 | 31.17   | gme2-ave|   | 0.007   |
| -24.49 | 31.27   | gme24-ave|   | 0.007   |
| -70.08 | 38.47   | hh3     | 2873    | 32.8700 |
| -69.32 | 37.59   | i1      | 3752    | 33.1500 |
| -68.41 | 37.15   | jj      | 4670    | 0.004   |
| -68.40 | 37.13   | jj3     | 4540    | 29.7100 |
| 1.36   | 71.47   | k-11    | 3900    | 0.4     |
| -23.45 | 50.00   | k708-1  | 4053    | 0.6     |
| -35.01 | 49.59   | k708-4  |   | 0.6     |
| -29.34 | 51.34   | k708-6  |   | 0.6     |
| -24.05 | 53.56   | k708-7  |   | 0.6     |
| -22.33 | 52.45   | k708-8  |   | 0.6     |
| -68.05 | 36.24   | kk      | 4830    | 0.004   |
| -63.10 | 40.24   | knorr78-14| 4617     | 0.003   |
| -76.05 | 34.07   | lb1     | 250     | 79.3000 |
| -76.01 | 34.06   | lb2     | 400     | 71.3000 |
| -75.55 | 33.59   | lb3     | 600     | 60.2000 |
| -75.51 | 33.58   | lb4     | 800     | 53.4000 |
| -76.14 | 34.11   | lc1     | 50      | 58.4000 |
| -76.11 | 34.08   | lc2     | 100     | 55.0000 |
| -67.25 | 35.35   | lll     | 4977    | 27.9500 |
| -75.50 | 33.57   | ls11    | 1000    | 51.3000 |
| -75.46 | 33.56   | ls12    | 1500    | 51.4000 |
| -75.45 | 33.50   | ls13    | 2000    | 61.4000 |
| -75.44 | 33.49   | ls14    | 2500    | 69.4000 |
| -16.51 | 25.10   | m-12392 | 2575    | 0.06    |
| -66.30 | 34.45   | mml     | 5001    | 39.5800 |
| -64.08 | 32.13   | nal     | 4245    | 0.007   |
| -63.33 | 22.44   | nal4    | 5840    | 0.007   |
| -63.33 | 22.44   | nal5    | 5840    | 0.007   |
| -63.29 | 22.54   | nal9    | 5845    | 0.007   |
| -61.30 | 25.23   | na5     | 5700    | 0.007   |
| -63.28 | 23.03   | na8     | 5850    | 0.007   |
| -63.27 | 22.47   | nap12   |   | 1.3000  |
| -63.21 | 22.50   | nap14-2 |   | 1.7000  |
| -63.23 | 22.50   | nap14-3 |   | 1.9000  |
| -63.24 | 22.50   | nap15   |   | 4.6000  |
| -63.26 | 22.53   | nap21   |   | 1.7000  |
| -63.28 | 22.54   | nap26   |   | 2.2000  |
| -63.27 | 22.55   | nap48-ave|   | 0.007   |
| -64.31 | 24.00   | nap56-ave|   | 0.007   |
| -63.32 | 23.35   | nap60-ave|   | 0.007   |
| -63.29 | 22.46   | nap8    |   | 1.2000  |
| Value  | Description       | Value  | Description       |
|--------|-------------------|--------|-------------------|
| -63.29 | 22.46 nap9        | 4.4000 | 0.007             |
| -65.49 | 33.57 nn          | 5080   |                   |
| -65.51 | 33.57 nn1         | 4950   | 50.7700            |
| -65.02 | 33.07 oo2         | 4667   | 0.0001            |
| -66.06 | 34.26 rc1-02 1538 | 5231   | 6.57              |
| -73.25 | 35.32 rc10-288    | 3678   | 5.5                |
| -81.06 | 11.46 rc10-50 1483 | 2072   | 19.22             |
| -74.47 | 15.51 rc13-151 14611 | 1484   | 15.23             |
| -75.27 | 16.43 rc13-152 14612 | 0      | 21.47             |
| -75.57 | 15.04 rc13-153 14613 | 1400   | 10.12             |
| -78.45 | 14.53 rc13-154 14614 | 2308   | 20.88             |
| -79.50 | 13.11 rc13-158 1481 | 715    | 20.06             |
| -77.10 | 14.42 rc13-159 1482 | 760    | 13.80             |
| -30.00 | 1.52 rc13-189     | 2333   |                   |
| -15.51 | 0.31 rc13-192 1311 | 1056   | 38.52             |
| -13.41 | 4.30 rc13-194 1515 | 4770   | 16.81             |
| -4.31  | 3.55 rc13-210 1958 | 1856   | 3.39              |
| -13.21 | 0.34 rc24-01      | 3850   |                   |
| -21.58 | 42.23 rc5-34 1524 | 3750   | 5.27              |
| -18.35 | 46.55 rc5-36 1535 | 4500   | 4.48              |
| -19.03 | 25.52 rc5-54 1536 | 3295   | 6.88              |
| -19.06 | 19.40 rc5-57 1537 | 2945   | 5.32              |
| -15.24 | 54.59 rc9-225     |        | 0.6               |
| -65.32 | 14.27 rc9-45 13014 | 4674   | 7.83              |
| -58.35 | 11.11 rc9-49 14610 | 1851   | 9.24              |
| 33.10  | 78.30 sl469       | 21     |                   |
| 33.10  | 78.50 sl470       | 22     |                   |
| 33.10  | 79.00 sl471       | 10     |                   |
| 32.60  | 78.60 sl472       | 16     |                   |
| 32.60  | 78.50 sl473       | 26     |                   |
| 32.50  | 78.40 sl474       | 32     |                   |
| 32.50  | 79.00 sl475       | 24     |                   |
| 32.50  | 79.10 sl476       | 13     |                   |
| 32.40  | 79.10 sl477       | 27     |                   |
| 32.40  | 79.30 sl478       | 12     |                   |
| 32.30  | 79.30 sl479       | 20     |                   |
| 32.30  | 79.50 sl480       | 20     |                   |
| 32.20  | 79.50 sl481       | 25     |                   |
| 32.20  | 80.00 sl482       | 16     |                   |
| 32.10  | 80.20 sl484       | 15     |                   |
| 31.60  | 80.10 sl485       | 21     |                   |
| 31.60  | 80.30 sl486       | 18     |                   |
| 31.50  | 80.30 sl487       | 18     |                   |
| 31.50  | 80.50 sl488       | 17     |                   |
| 31.40  | 80.50 sl489       | 17     |                   |
| 31.30  | 80.50 sl490       | 20     |                   |
| 31.30  | 80.60 sl491       | 13     |                   |
| 31.20  | 81.00 sl492       | 15     |                   |
| 31.10  | 81.00 sl493       | 14     |                   |
| 30.60  | 80.60 sl494       | 19     |                   |
| 30.60  | 81.10 sl495       | 16     |                   |
| 30.50  | 81.00 sl497       | 18     |                   |
| 30.40  | 81.00 sl498       | 20     |                   |
| 30.40  | 81.10 sl499       | 19     |                   |
| 30.30 | 81.20 | 81500 | 17 | 11.4100 | 0.8 |
| 30.30 | 81.00 | 81501 | 26 | 18.0900 | 0.8 |
| 30.20 | 80.60 | 81502 | 21 | 24.8300 | 0.8 |
| 30.20 | 81.20 | 81503 | 12 | 8.5900  | 0.8 |
| 30.20 | 81.20 | 81504 | 15 | 13.5000 | 0.8 |
| 30.10 | 81.10 | 81505 | 15 | 35.9000 | 0.8 |
| 30.10 | 81.00 | 81506 | 21 | 49.8900 | 0.8 |
| 29.60 | 81.00 | 81507 | 22 | 24.6500 | 0.8 |
| 29.50 | 81.10 | 81508 | 19 | 12.1100 | 0.8 |
| 29.50 | 80.60 | 81509 | 17 | 3.8400  | 0.8 |
| 29.50 | 80.50 | 81510 | 22 | 38.5400 | 0.8 |
| 29.40 | 80.50 | 81512 | 28 | 39.1100 | 0.8 |
| 29.40 | 81.00 | 81513 | 18 | 37.3300 | 0.8 |
| 29.50 | 81.10 | 81514 | 39 | 11.1000 | 0.8 |
| 29.40 | 81.10 | 81515 | 19 | 17.7400 | 0.8 |
| 29.30 | 81.10 | 81516 | 16 | 8.8700  | 0.8 |
| 29.30 | 81.00 | 81517 | 21 | 8.5100  | 0.8 |
| 29.20 | 81.00 | 81518 | 18 | 9.4400  | 0.8 |
| 29.00 | 80.50 | 81520 | 17 | 7.6200  | 0.8 |
| 29.00 | 80.40 | 81521 | 19 | 32.2400 | 0.8 |
| 28.60 | 80.30 | 81522 | 18 | 49.0400 | 0.8 |
| 28.00 | 80.20 | 81523 | 47 | 68.8700 | 0.8 |
| 28.50 | 80.10 | 81524 | 40 | 70.7300 | 0.8 |
| 28.50 | 80.30 | 81525 | 22 | 51.9200 | 0.8 |
| 28.50 | 80.40 | 81526 | 18 | 26.7900 | 0.8 |
| 28.40 | 80.30 | 81527 | 19 | 61.6800 | 0.8 |
| 28.40 | 80.10 | 81528 | 36 | 68.6500 | 0.8 |
| 28.30 | 80.10 | 81529 | 40 | 69.4600 | 0.8 |
| 28.30 | 80.20 | 81530 | 12 | 53.4100 | 0.8 |
| 28.20 | 80.20 | 81531 | 17 | 54.0700 | 0.8 |
| 28.00 | 80.20 | 81539 | 22 | 86.7800 | 0.8 |
| 27.40 | 80.20 | 81545 | 11 | 74.8700 | 0.8 |
| 27.10 | 80.10 | 81550 | 17 | 69.7100 | 0.8 |
| 27.00 | 80.00 | 81551 | 20 | 52.7100 | 0.8 |
| 26.40 | 80.00 | 81553 | 37 | 57.0800 | 0.8 |
| 25.00 | 80.20 | 81565 | 85 | 95.8200 | 0.8 |
| 24.40 | 80.10 | 81570 | 88 | 93.1000 | 0.8 |
| 24.30 | 81.20 | 81571 | 89 | 93.2800 | 0.8 |
| 24.30 | 81.30 | 81572 | 97 | 92.3700 | 0.8 |
| 24.30 | 81.40 | 81573 | 107 | 92.9900 | 0.8 |
| 24.30 | 81.50 | 81574 | 126 | 91.3600 | 0.8 |
| 24.30 | 82.00 | 81575 | 74 | 93.5100 | 0.8 |
| 24.20 | 81.50 | 81576 | 228 | 86.9000 | 0.8 |
| 24.10 | 81.20 | 81580 | 681 | 85.7400 | 0.8 |
| 24.20 | 81.20 | 81581 | 199 | 93.4000 | 0.8 |
| 24.30 | 81.20 | 81583 | 188 | 93.9200 | 0.8 |
| 24.30 | 80.50 | 81584 | 204 | 90.7900 | 0.8 |
| 24.20 | 80.50 | 81585 | 216 | 93.8600 | 0.8 |
| 24.20 | 80.40 | 81586 | 707 | 84.3600 | 0.8 |
| 24.30 | 80.40 | 81587 | 248 | 93.7800 | 0.8 |
| 24.40 | 80.40 | 81588 | 207 | 94.3900 | 0.8 |
| 24.50 | 80.30 | 81589 | 149 | 90.4400 | 0.8 |
| 24.40 | 80.30 | 81590 | 284 | 90.7600 | 0.8 |
| 24.50 | 80.30 | s1591 | 199 | 90.9900 | 0.8 |
|-------|-------|-------|-----|---------|-----|
| 24.40 | 80.20 | s1592 | 757 | 86.2800 | 0.8 |
| 24.50 | 80.10 | s1593 | 295 | 91.0200 | 0.8 |
| 24.60 | 80.10 | s1594 | 220 | 89.4400 | 0.8 |
| 24.60 | 80.00 | s1595 | 500 | 88.3600 | 0.8 |
| 25.10 | 80.10 | s1596 | 256 | 88.3500 | 0.8 |
| 25.10 | 79.50 | s1597 | 598 | 88.4800 | 0.8 |
| 25.20 | 80.00 | s1598 | 484 | 89.7300 | 0.8 |
| 25.20 | 79.50 | s1599 | 656 | 87.9100 | 0.8 |
| 25.30 | 79.50 | s1600 | 456 | 87.9000 | 0.8 |
| 25.40 | 79.50 | s1601 | 295 | 91.0200 | 0.8 |
| 25.40 | 79.40 | s1602 | 792 | 92.6200 | 0.8 |
| 25.50 | 79.40 | s1603 | 769 | 92.1000 | 0.8 |
| 25.50 | 79.50 | s1604 | 797 | 89.4400 | 0.8 |
| 25.50 | 79.60 | s1605 | 331 | 85.8100 | 0.8 |
| 25.60 | 79.50 | s1606 | 465 | 89.4400 | 0.8 |
| 26.10 | 79.50 | s1607 | 266 | 89.4400 | 0.8 |
| 26.10 | 79.50 | s1608 | 584 | 89.4400 | 0.8 |
| 26.20 | 79.40 | s1609 | 777 | 89.5200 | 0.8 |
| 26.20 | 79.50 | s1610 | 494 | 76.1000 | 0.8 |
| 26.20 | 79.50 | s1611 | 307 | 47.3100 | 0.8 |
| 26.30 | 79.60 | s1612 | 239 | 52.8700 | 0.8 |
| 26.40 | 79.50 | s1613 | 382 | 77.9200 | 0.8 |
| 26.50 | 79.50 | s1614 | 342 | 74.0400 | 0.8 |
| 26.60 | 79.40 | s1615 | 669 | 82.7500 | 0.8 |
| 26.60 | 79.30 | s1616 | 742 | 84.5400 | 0.8 |
| 27.00 | 79.40 | s1617 | 549 | 86.4400 | 0.8 |
| 27.00 | 79.50 | s1618 | 321 | 54.9600 | 0.8 |
| 27.10 | 79.50 | s1619 | 258 | 74.1000 | 0.8 |
| 27.10 | 80.00 | s1620 | 72  | 90.2600 | 0.8 |
| 27.20 | 80.00 | s1621 | 69  | 64.5700 | 0.8 |
| 27.20 | 79.50 | s1622 | 303 | 56.4500 | 0.8 |
| 27.30 | 79.50 | s1623 | 286 | 57.6300 | 0.8 |
| 27.30 | 80.00 | s1624 | 56  | 39.3000 | 0.8 |
| 27.40 | 80.00 | s1625 | 54  | 46.7500 | 0.8 |
| 27.40 | 79.50 | s1626 | 229 | 48.3600 | 0.8 |
| 27.50 | 79.50 | s1627 | 229 | 81.9000 | 0.8 |
| 27.50 | 79.40 | s1628 | 529 | 92.7900 | 0.8 |
| 27.50 | 79.30 | s1629 | 678 | 87.7500 | 0.8 |
| 28.00 | 79.30 | s1630 | 783 | 75.6800 | 0.8 |
| 28.00 | 79.40 | s1631 | 782 | 75.3400 | 0.8 |
| 28.10 | 79.40 | s1632 | 479 | 56.9300 | 0.8 |
| 28.10 | 79.50 | s1633 | 301 | 57.9200 | 0.8 |
| 28.20 | 79.50 | s1634 | 313 | 60.7700 | 0.8 |
| 28.30 | 79.50 | s1635 | 348 | 71.5000 | 0.8 |
| 28.30 | 80.00 | s1636 | 134 | 57.9000 | 0.8 |
| 28.40 | 79.60 | s1637 | 167 | 61.6600 | 0.8 |
| 28.40 | 79.50 | s1638 | 406 | 61.7100 | 0.8 |
| 28.50 | 79.50 | s1639 | 435 | 92.7800 | 0.8 |
| 28.50 | 79.20 | s1641 | 777 | 93.6600 | 0.8 |
| 29.60 | 79.30 | s1642 | 752 | 86.5100 | 0.8 |
| 29.00 | 79.40 | s1643 | 822 | 84.4100 | 0.8 |
| 29.10 | 79.40 | s1644 | 802 | 86.6400 | 0.8 |
|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| 29.40 | 79.40 | s1647 | 727 | 82.9800 | 0.8 |
| 29.50 | 79.40 | s1648 | 722 | 85.1000 | 0.8 |
| 30.00 | 79.40 | s1649 | 871 | 87.1000 | 0.8 |
| 30.00 | 79.30 | s1650 | 779 | 91.9400 | 0.8 |
| 30.20 | 79.30 | s1653 | 835 | 88.0100 | 0.8 |
| 30.30 | 79.30 | s1654 | 752 | 91.7300 | 0.8 |
| 30.40 | 79.30 | s1655 | 797 | 88.6900 | 0.8 |
| 30.40 | 79.40 | s1656 | 579 | 88.3800 | 0.8 |
| 30.50 | 80.00 | s1658 | 146 | 37.9700 | 0.8 |
| 30.00 | 80.30 | s1695 | 38 | 75.3900 | 0.8 |
| 30.10 | 80.30 | s1696 | 36 | 69.9400 | 0.8 |
| 30.00 | 80.20 | s1714 | 86 | 57.0800 | 0.8 |
| 29.50 | 80.20 | s1715 | 77 | 77.6700 | 0.8 |
| 29.20 | 80.20 | s1718 | 57 | 66.6300 | 0.8 |
| 29.00 | 80.10 | s1720 | 111 | 88.1300 | 0.8 |
| 28.50 | 80.00 | s1721 | 169 | 57.8000 | 0.8 |
| 28.60 | 79.60 | s1722 | 424 | 58.8000 | 0.8 |
| 29.10 | 79.60 | s1723 | 494 | 67.1400 | 0.8 |
| 29.10 | 80.10 | s1724 | 202 | 68.6600 | 0.8 |
| 29.20 | 80.00 | s1725 | 460 | 70.6900 | 0.8 |
| 29.30 | 80.00 | s1726 | 494 | 77.8800 | 0.8 |
| 29.40 | 79.60 | s1727 | 528 | 76.0900 | 0.8 |
| 29.50 | 79.60 | s1728 | 533 | 78.3300 | 0.8 |
| 29.60 | 79.60 | s1729 | 504 | 75.9600 | 0.8 |
| 30.10 | 79.50 | s1731 | 534 | 85.8200 | 0.8 |
| 30.10 | 79.40 | s1732 | 802 | 78.1200 | 0.8 |
| 30.10 | 79.40 | s1733 | 861 | 88.1200 | 0.8 |
| 30.20 | 79.40 | s1734 | 664 | 83.3300 | 0.8 |
| 30.20 | 79.50 | s1735 | 534 | 65.0300 | 0.8 |
| 30.30 | 79.50 | s1738 | 480 | 66.3300 | 0.8 |
| 30.30 | 79.40 | s1739 | 639 | 86.0800 | 0.8 |
| 30.40 | 79.10 | s1741 | 792 | 93.7000 | 0.8 |
| 30.50 | 79.20 | s1742 | 752 | 93.8100 | 0.8 |
| 30.50 | 79.20 | s1743 | 802 | 94.1100 | 0.8 |
| 30.50 | 79.30 | s1744 | 787 | 88.6200 | 0.8 |
| 30.50 | 79.40 | s1745 | 461 | 73.5500 | 0.8 |
| 31.10 | 79.30 | s1748 | 524 | 94.6300 | 0.8 |
| 31.20 | 79.30 | s1749 | 484 | 94.2600 | 0.8 |
| 31.40 | 79.30 | s1753 | 166 | 70.6500 | 0.8 |
| 31.50 | 79.30 | s1756 | 69 | 69.5000 | 0.8 |
| 31.50 | 79.20 | s1763 | 259 | 65.5300 | 0.8 |
| 31.40 | 79.20 | s1764 | 504 | 91.3900 | 0.8 |
| 31.50 | 79.10 | s1765 | 550 | 93.0700 | 0.8 |
| 31.50 | 79.00 | s1766 | 450 | 94.9000 | 0.8 |
| 31.50 | 78.50 | s1767 | 455 | 93.8900 | 0.8 |
| 31.50 | 78.30 | s1768 | 534 | 90.8900 | 0.8 |
| 32.00 | 79.00 | s1770 | 406 | 84.4100 | 0.8 |
| 32.10 | 79.00 | s1771 | 181 | 65.8000 | 0.8 |
| 32.10 | 78.50 | s1772 | 406 | 82.5400 | 0.8 |
| 32.20 | 78.40 | s1773 | 347 | 45.6400 | 0.8 |
| 32.40 | 78.50 | s1781 | 38 | 16.6100 | 0.8 |
| 32.40 | 78.30 | s1782 | 69 | 58.7000 | 0.8 |
| 32.40 | 78.30 | s1783 | 176 | 52.9500 | 0.8 |
| 32.30 | 78.20 | s1784 | 244 | 51.5900 | 0.8 |
| 32.40 | 78.10 | s1785 | 190 | 59.7800 | 0.8 |
| 32.50 | 78.20 | s1786 | 117 | 61.7000 | 0.8 |
| 32.50 | 78.30 | s1787 | 41  | 16.1700 | 0.8 |
| 32.60 | 78.30 | s1788 | 34  | 7.6600  | 0.8 |
| 32.60 | 78.20 | s1789 | 38  | 9.4400  | 0.8 |
| 33.10 | 78.20 | s1790 | 33  | 11.3000 | 0.8 |
| 33.20 | 78.20 | s1791 | 28  | 7.2000  | 0.8 |
| 33.20 | 78.00 | s1792 | 28  | 2.6200  | 0.8 |
| 33.10 | 78.00 | s1793 | 38  | 10.2600 | 0.8 |
| 33.00 | 78.00 | s1794 | 56  | 55.7100 | 0.8 |
| 32.50 | 77.60 | s1795 | 185 | 33.2000 | 0.8 |
| 32.40 | 78.00 | s1796 | 248 | 42.3000 | 0.8 |
| 32.30 | 77.50 | s1798 | 396 | 44.4500 | 0.8 |
| 32.40 | 77.50 | s1799 | 309 | 35.6300 | 0.8 |
| 32.50 | 77.50 | s1800 | 266 | 33.3000 | 0.8 |
| 33.00 | 77.50 | s1801 | 151 | 34.5600 | 0.8 |
| 33.10 | 77.50 | s1802 | 43  | 10.8600 | 0.8 |
| 33.20 | 77.50 | s1803 | 29  | 24.2500 | 0.8 |
| 33.20 | 77.40 | s1804 | 22  | 19.3400 | 0.8 |
| 33.30 | 77.30 | s1805 | 22  | 33.5400 | 0.8 |
| 33.20 | 77.30 | s1806 | 25  | 51.4700 | 0.8 |
| 33.10 | 77.30 | s1807 | 48  | 30.3000 | 0.8 |
| 32.60 | 77.30 | s1808 | 245 | 12.2500 | 0.8 |
| 32.50 | 77.30 | s1809 | 310 | 71.3300 | 0.8 |
| 32.50 | 77.20 | s1810 | 416 | 65.3100 | 0.8 |
| 33.00 | 77.20 | s1811 | 320 | 65.1000 | 0.8 |
| 33.10 | 77.20 | s1812 | 241 | 21.2600 | 0.8 |
| 33.20 | 77.20 | s1813 | 54  | 29.4900 | 0.8 |
| 33.30 | 77.20 | s1814 | 39  | 26.3100 | 0.8 |
| 33.40 | 77.20 | s1815 | 35  | 38.3600 | 0.8 |
| 33.50 | 77.20 | s1816 | 35  | 37.6600 | 0.8 |
| 34.00 | 77.10 | s1817 | 28  | 14.6100 | 0.8 |
| 34.10 | 76.60 | s1818 | 33  | 33.2600 | 0.8 |
| 33.60 | 76.60 | s1819 | 33  | 36.8900 | 0.8 |
| 33.50 | 77.00 | s1820 | 38  | 58.9600 | 0.8 |
| 33.40 | 76.60 | s1821 | 38  | 53.5400 | 0.8 |
| 33.30 | 76.60 | s1822 | 46  | 47.9300 | 0.8 |
| 33.20 | 76.60 | s1823 | 244 | 15.8600 | 0.8 |
| 33.10 | 77.00 | s1824 | 339 | 63.5000 | 0.8 |
| 40.50 | 66.30 | s2194 | 2115| 7.1400  | 0.8 |
| 40.60 | 66.30 | s2195 | 1240| 7.3800  | 0.8 |
| 41.00 | 66.20 | s2196 | 720 | 4.9000  | 0.8 |
| 42.40 | 69.30 | s2197 | 282 | 1.8000  | 0.8 |
| 41.10 | 66.10 | s2200 | 941 | 5.6700  | 0.8 |
| 41.20 | 65.40 | s2201 | 2451| 7.2500  | 0.8 |
| 41.30 | 65.60 | s2202 | 617 | 3.4400  | 0.8 |
| 41.40 | 65.40 | s2203 | 1795| 8.7800  | 0.8 |
| 41.50 | 65.40 | s2204 | 1238| 4.3800  | 0.8 |
| 41.40 | 65.30 | s2205 | 1934| 7.6800  | 0.8 |
| 41.30 | 65.40 | s2206 | 2329| 9.3200  | 0.8 |
| 41.50 | 65.20 | s2209 | 1845| 8.9200  | 0.8 |
| 42.00 | 65.30 | s2210 | 801 | 4.3100  | 0.8 |
| 42.00 | 65.00 | s2211 | 1536| 10.8900 | 0.8 |
| 42.10 | 65.10 | s2212 | 1119| 7.3600  | 0.8 |
| X1  | Y1  | X2  | Y2  | Z1  | Z2  |
|-----|-----|-----|-----|-----|-----|
| 38.10 | 75.10 | s2217 | 10 | 0.1200 | 0.8 |
| 37.60 | 75.10 | s2218 | 10 | 0.1300 | 0.8 |
| 36.40 | 76.20 | s2219 | 4  | 0.2000 | 0.8 |
| 36.20 | 76.10 | s2220 | 4  | 0.1900 | 0.8 |
| 36.10 | 76.10 | s2221 | 6  | 0.1500 | 0.8 |
| 36.00 | 76.10 | s2222 | 7  | 0.1600 | 0.8 |
| 35.60 | 76.30 | s2223 | 7  | 0.2600 | 0.8 |
| 35.60 | 76.40 | s2224 | 6  | 0.2100 | 0.8 |
| 35.50 | 76.50 | s2225 | 3  | 0.2700 | 0.8 |
| 36.00 | 76.40 | s2226 | 6  | 0.1700 | 0.8 |
| 35.50 | 76.00 | s2227 | 4  | 0.0800 | 0.8 |
| 36.00 | 75.50 | s2228 | 6  | 0.1200 | 0.8 |
| 35.60 | 75.50 | s2229 | 4  | 0.1100 | 0.8 |
| 35.60 | 75.40 | s2230 | 3  | 0.3000 | 0.8 |
| 35.50 | 75.40 | s2231 | 4  | 0.1100 | 0.8 |
| 35.50 | 75.40 | s2232 | 4  | 0.1300 | 0.8 |
| 35.40 | 75.40 | s2233 | 5  | 0.1200 | 0.8 |
| 35.20 | 75.40 | s2234 | 7  | 1.2900 | 0.8 |
| 35.20 | 75.50 | s2235 | 5  | 0.3500 | 0.8 |
| 35.30 | 75.50 | s2236 | 6  | 1.4900 | 0.8 |
| 35.20 | 75.60 | s2237 | 6  | 0.6200 | 0.8 |
| 35.20 | 76.10 | s2238 | 6  | 0.2000 | 0.8 |
| 35.20 | 76.30 | s2239 | 7  | 0.2100 | 0.8 |
| 35.20 | 76.40 | s2240 | 6  | 0.4700 | 0.8 |
| 35.10 | 76.30 | s2241 | 6  | 0.2500 | 0.8 |
| 35.10 | 76.20 | s2242 | 7  | 0.3400 | 0.8 |
| 35.10 | 76.10 | s2243 | 6  | 1.4800 | 0.8 |
| 35.00 | 76.40 | s2244 | 7  | 0.8900 | 0.8 |
| 34.60 | 76.50 | s2245 | 5  | 1.5600 | 0.8 |
| 35.00 | 77.00 | s2246 | 4  | 0.1900 | 0.8 |
| 33.60 | 77.60 | s2247 | 5  | 3.2900 | 0.8 |
| 33.50 | 78.00 | s2248 | 12 | 49.0500 | 0.8 |
| 33.50 | 78.00 | s2249 | 14 | 3.7800 | 0.8 |
| 33.50 | 78.30 | s2250 | 13 | 3.2900 | 0.8 |
| 33.50 | 78.30 | s2250u | 12 | 4.5700 | 0.8 |
| 33.40 | 78.50 | s2251 | 12 | 11.7400 | 0.8 |
| 33.30 | 78.60 | s2252 | 8  | 9.9700 | 0.8 |
| 33.20 | 79.00 | s2253 | 12 | 7.7900 | 0.8 |
| 33.10 | 79.10 | s2254 | 10 | 9.0200 | 0.8 |
| 33.20 | 79.20 | s2255 | 6  | 0.2000 | 0.8 |
| 33.10 | 79.10 | s2256 | 5  | 1.3200 | 0.8 |
| 33.10 | 79.10 | s2257 | 8  | 2.3700 | 0.8 |
| 32.60 | 79.10 | s2258 | 13 | 1.3900 | 0.8 |
| 32.50 | 79.30 | s2261 | 4  | 5.3100 | 0.8 |
| 32.40 | 80.20 | s2263 | 6  | 1.7600 | 0.8 |
| 32.30 | 80.20 | s2264 | 9  | 4.2000 | 0.8 |
| 32.30 | 80.20 | s2265 | 9  | 12.3900 | 0.8 |
| 32.30 | 80.30 | s2266 | 12 | 0.5300 | 0.8 |
| 32.30 | 80.40 | s2267 | 5  | 17.2500 | 0.8 |
| 32.20 | 80.40 | s2268 | 11 | 0.7700 | 0.8 |
| 32.00 | 80.60 | s2270 | 8  | 0.3000 | 0.8 |
| 31.50 | 81.00 | s2271 | 9  | 0.7000 | 0.8 |
| 31.50 | 81.10 | s2272 | 7  | 0.5100 | 0.8 |
| 31.40 | 81.10 | s2273u | 10 | 1.1900 | 0.8 |
| X | Y | Z | W | V | U |
|---|---|---|---|---|---|
| 31.20 | 81.20 | s2277 | 6 | 1.0300 | 0.8 |
| 30.50 | 81.20 | s2282 | 8 | 2.6700 | 0.8 |
| 30.30 | 81.20 | s2284 | 8 | 3.5200 | 0.8 |
| 30.40 | 81.30 | s2286 | 7 | 2.7600 | 0.8 |
| 31.40 | 81.00 | s2291 | 8 | 6.2800 | 0.8 |
| 31.50 | 80.50 | s2292 | 13 | 3.9800 | 0.8 |
| 31.60 | 80.50 | s2293 | 9 | 5.2700 | 0.8 |
| 32.50 | 79.60 | s2300 | 8 | 18.3400 | 0.8 |
| 32.50 | 79.60 | s2301 | 8 | 1.3400 | 0.8 |
| 33.10 | 79.20 | s2302 | 4 | 6.2600 | 0.8 |
| 33.30 | 79.10 | s2304 | 7 | 0.3200 | 0.8 |
| 33.40 | 77.50 | s2305 | 10 | 3.7600 | 0.8 |
| 33.50 | 77.50 | s2306 | 13 | 10.8200 | 0.8 |
| 34.10 | 77.50 | s2307 | 14 | 53.2600 | 0.8 |
| 34.10 | 77.40 | s2308 | 13 | 13.4000 | 0.8 |
| 34.20 | 77.30 | s2309 | 13 | 6.0200 | 0.8 |
| 34.30 | 77.20 | s2310 | 11 | 6.9300 | 0.8 |
| 34.30 | 77.10 | s2311 | 9 | 12.5100 | 0.8 |
| 34.40 | 77.00 | s2312 | 15 | 34.6700 | 0.8 |
| 34.40 | 76.50 | s2313 | 15 | 5.5300 | 0.8 |
| 34.40 | 76.40 | s2314 | 15 | 3.0700 | 0.8 |
| 34.30 | 76.30 | s2315 | 16 | 3.1700 | 0.8 |
| 34.40 | 76.30 | s2316 | 15 | 25.0600 | 0.8 |
| 34.40 | 76.20 | s2317 | 15 | 39.5900 | 0.8 |
| 34.50 | 76.10 | s2318 | 16 | 31.6100 | 0.8 |
| 35.00 | 75.60 | s2319 | 17 | 6.1500 | 0.8 |
| 35.10 | 75.50 | s2320 | 16 | 6.0300 | 0.8 |
| 35.10 | 75.40 | s2321 | 16 | 3.0900 | 0.8 |
| 35.10 | 75.30 | s2322 | 16 | 3.4700 | 0.8 |
| 35.20 | 75.30 | s2323 | 16 | 2.5500 | 0.8 |
| 35.30 | 75.30 | s2324 | 15 | 2.5800 | 0.8 |
| 35.40 | 75.20 | s2325 | 18 | 7.7400 | 0.8 |
| 35.50 | 75.30 | s2326 | 17 | 5.4500 | 0.8 |
| 35.60 | 75.30 | s2327 | 16 | 0.7300 | 0.8 |
| 36.00 | 75.40 | s2328 | 17 | 2.3500 | 0.8 |
| 36.10 | 75.40 | s2329 | 18 | 7.0500 | 0.8 |
| 36.30 | 75.50 | s2330 | 9 | 1.3900 | 0.8 |
| 36.30 | 75.50 | s2331 | 10 | 0.5500 | 0.8 |
| 36.50 | 75.50 | s2332 | 11 | 1.8600 | 0.8 |
| 36.50 | 75.60 | s2333 | 8 | 1.6200 | 0.8 |
| 33.00 | 76.30 | s2334 | 755 | 71.0500 | 0.8 |
| 32.50 | 76.50 | s2335 | 741 | 69.7000 | 0.8 |
| 32.20 | 76.50 | s2336 | 990 | 68.4600 | 0.8 |
| 32.10 | 77.20 | s2337 | 762 | 77.7000 | 0.8 |
| 32.00 | 77.20 | s2338 | 825 | 62.8000 | 0.8 |
| 31.30 | 77.20 | s2340 | 1029 | 82.5400 | 0.8 |
| 31.20 | 77.40 | s2341 | 818 | 97.0800 | 0.8 |
| 31.00 | 77.30 | s2342 | 930 | 94.6600 | 0.8 |
| 30.50 | 77.50 | s2343 | 898 | 95.8700 | 0.8 |
| 30.30 | 77.30 | s2344 | 882 | 93.8100 | 0.8 |
| 30.20 | 77.20 | s2345 | 1000 | 91.3600 | 0.8 |
| 30.00 | 76.60 | s2346 | 977 | 91.4800 | 0.8 |
| Time (s) | Distance (m) | Speed (m/s) |
|---------|--------------|-------------|
| 29.60   | 76.40 s2347  | 1382        |
| 29.50   | 76.50 s2348  | 1034        |
| 29.30   | 76.60 s2349  | 1036        |
| 29.40   | 77.10 s2350  | 905         |
| 29.30   | 77.30 s2351  | 951         |
| 29.20   | 77.40 s2352  | 915         |
| 29.00   | 77.30 s2353  | 1065        |
| 28.50   | 77.20 s2354  | 1070        |
| 28.60   | 76.60 s2356  | 1095        |
| 28.50   | 76.50 s2357  | 1295        |
| 28.30   | 77.00 s2358  | 1075        |
| 28.20   | 77.20 s2359  | 1097        |
| 27.60   | 77.30 s2360  | 1126        |
| 27.50   | 77.40 s2361  | 1178        |
| 27.50   | 78.00 s2362  | 1080        |
| 28.00   | 78.10 s2363  | 1078        |
| 28.10   | 78.30 s2364  | 792         |
| 28.16   | 78.45 s2365  | 919         |
| 28.29   | 79.01 s2366  | 841         |
| 28.45   | 78.45 s2367  | 842         |
| 29.00   | 79.01 s2368  | 803         |
| 29.15   | 78.45 s2369  | 848         |
| 29.31   | 79.00 s2370  | 787         |
| 29.45   | 78.45 s2371  | 793         |
| 30.01   | 79.00 s2372  | 798         |
| 30.16   | 78.45 s2373  | 804         |
| 30.31   | 79.01 s2374  | 876         |
| 30.48   | 78.45 s2375  | 949         |
| 30.31   | 78.30 s2376  | 806         |
| 30.22   | 78.05 s2377  | 813         |
| 30.27   | 78.06 s2378  | 829         |
| 30.29   | 78.04 s2379  | 825         |
| 30.50   | 78.05 s2380  | 949         |
| 31.04   | 78.09 s2381  | 849         |
| 31.02   | 78.19 s2382  | 851         |
| 30.56   | 78.34 s2383  | 845         |
| 30.55   | 78.43 s2384  | 843         |
| 30.57   | 78.55 s2385  | 802         |
| 31.00   | 79.00 s2386  | 782         |
| 31.23   | 78.40 s2389  | 512         |
| 31.29   | 78.00 s2392  | 649         |
| 31.39   | 77.47 s2393  | 610         |
| 31.47   | 77.37 s2394  | 751         |
| 31.49   | 77.44 s2395  | 693         |
| 31.54   | 77.58 s2396  | 648         |
| 32.00   | 78.15 s2397  | 651         |
| 30.15   | 79.44 s2413  | 640         |
| 30.16   | 79.55 s2414  | 510         |
| 30.18   | 80.07 s2415  | 217         |
| 27.01   | 79.55 s2430  | 203         |
| 26.36   | 80.00 s2432  | 136         |
| 26.16   | 80.03 s2434  | 106         |
| 25.45   | 80.04 s2436  | 46          |
| 25.35   | 80.00 s2437  | 341         |
|         |              |             |
|         |              | 89.9400     | 0.8         |
|         |              | 95.0500     | 0.8         |
|         |              | 95.3300     | 0.8         |
|         |              | 94.9700     | 0.8         |
|         |              | 94.7500     | 0.8         |
|         |              | 96.8300     | 0.8         |
|         |              | 93.3200     | 0.8         |
|         |              | 97.2500     | 0.8         |
|         |              | 92.0600     | 0.8         |
|         |              | 89.7400     | 0.8         |
|         |              | 96.4600     | 0.8         |
|         |              | 96.6100     | 0.8         |
|         |              | 98.6700     | 0.8         |
|         |              | 93.7000     | 0.8         |
|         |              | 97.8900     | 0.8         |
|         |              | 98.2400     | 0.8         |
|         |              | 97.6500     | 0.8         |
|         |              | 97.4100     | 0.8         |
|         |              | 98.0600     | 0.8         |
|         |              | 95.4600     | 0.8         |
|         |              | 96.5900     | 0.8         |
|         |              | 98.4600     | 0.8         |
|         |              | 93.8100     | 0.8         |
|         |              | 97.2800     | 0.8         |
|         |              | 95.3600     | 0.8         |
|         |              | 98.5900     | 0.8         |
|         |              | 94.2500     | 0.8         |
|         |              | 93.7800     | 0.8         |
|         |              | 98.0400     | 0.8         |
|         |              | 97.8400     | 0.8         |
|         |              | 98.3200     | 0.8         |
|         |              | 98.4700     | 0.8         |
|         |              | 97.2300     | 0.8         |
|         |              | 95.2200     | 0.8         |
|         |              | 94.1300     | 0.8         |
|         |              | 98.6400     | 0.8         |
|         |              | 86.7700     | 0.8         |
|         |              | 98.4300     | 0.8         |
|         |              | 96.7100     | 0.8         |
|         |              | 98.8100     | 0.8         |
|         |              | 99.3100     | 0.8         |
|         |              | 98.7800     | 0.8         |
|         |              | 96.4800     | 0.8         |
|         |              | 98.6900     | 0.8         |
|         |              | 97.4500     | 0.8         |
|         |              | 24.7400     | 0.8         |
|         |              | 91.8000     | 0.8         |
|         |              | 86.2100     | 0.8         |
|         |              | 62.2400     | 0.8         |
|         |              | 51.4400     | 0.8         |
|         |              | 69.0500     | 0.8         |
|         |              | 91.2700     | 0.8         |
|         |              | 81.9800     | 0.8         |
|         |              | 90.4500     | 0.8         |
| Value1 | Value2 | Value3 | Value4 | Value5 | Value6 | Value7 | Value8 | Value9 | Value10 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 25.42  | 79.48  | s2439  | 818    | 98.1600| 0.8    |
| 25.56  | 79.46  | s2440  | 828    | 96.0400| 0.8    |
| 26.00  | 79.34  | s2441  | 753    | 97.5300| 0.8    |
| 26.08  | 79.19  | s2442  | 532    | 96.3000| 0.8    |
| 26.30  | 79.00  | s2444  | 697    | 96.7300| 0.8    |
| 26.39  | 79.10  | s2445  | 720    | 98.7200| 0.8    |
| 27.04  | 79.28  | s2449  | 753    | 88.3300| 0.8    |
| 27.11  | 79.40  | s2450  | 478    | 88.6600| 0.8    |
| 27.22  | 79.41  | s2451  | 462    | 85.5700| 0.8    |
| 27.25  | 79.30  | s2452  | 715    | 92.3300| 0.8    |
| 27.27  | 79.12  | s2453  | 403    | 96.8500| 0.8    |
| 27.30  | 79.04  | s2454  | 372    | 96.8100| 0.8    |
| 27.33  | 78.45  | s2455  | 568    | 97.1700| 0.8    |
| 27.38  | 78.31  | s2456  | 893    | 93.9300| 0.8    |
| 27.53  | 78.32  | s2457  | 1029   | 94.9000| 0.8    |
| 27.55  | 78.45  | s2458  | 874    | 94.5900| 0.8    |
| 28.00  | 78.59  | s2459  | 832    | 96.4200| 0.8    |
| 28.08  | 79.16  | s2460  | 742    | 95.7600| 0.8    |
| 28.14  | 79.30  | s2461  | 874    | 90.2900| 0.8    |
| 28.27  | 79.45  | s2462  | 454    | 74.2900| 0.8    |
| 28.40  | 79.26  | s2464  | 828    | 97.0300| 0.8    |
| 28.45  | 79.15  | s2465  | 843    | 96.8300| 0.8    |
| 29.01  | 79.32  | s2466  | 760    | 98.7700| 0.8    |
| 29.16  | 79.13  | s2467  | 790    | 97.1300| 0.8    |
| 29.25  | 79.40  | s2468  | 803    | 90.3100| 0.8    |
| 29.44  | 79.52  | s2469  | 659    | 84.6200| 0.8    |
| 29.55  | 79.34  | s2470  | 930    | 95.0600| 0.8    |
| 30.04  | 79.41  | s2471  | 894    | 83.8600| 0.8    |
| 30.09  | 79.33  | s2472  | 776    | 95.5000| 0.8    |
| 30.15  | 79.15  | s2473  | 830    | 97.9700| 0.8    |
| 30.34  | 79.32  | s2474  | 828    | 90.7700| 0.8    |
| 30.41  | 79.31  | s2475  | 900    | 96.8400| 0.8    |
| 30.52  | 79.10  | s2476  | 743    | 95.9800| 0.8    |
| 31.08  | 79.08  | s2478  | 648    | 92.7800| 0.8    |
| 31.23  | 79.09  | s2479  | 491    | 97.2000| 0.8    |
| -56.00 | 32.45  | sap-ave | 5558  | 0.007  |
| -56.00 | 32.29  | sap12  | 5556  | 0.007  |
| -55.59 | 32.31  | sap15  | 5556  | 0.007  |
| -55.54 | 32.31  | sap20  | 5556  | 0.007  |
| -56.01 | 32.29  | sap39  | 5556  | 0.007  |
| -55.56 | 32.28  | sap40  | 5556  | 0.007  |
| -55.59 | 32.31  | sap53  | 5557  | 0.007  |
| -70.42 | 40.02  | s12    | 200   | 9.6600 | 0.001  |
| -70.40 | 39.58  | s13    | 300   | 5.7400 | 0.001  |
| -70.40 | 39.57  | s14    | 400   | 6.1600 | 0.001  |
| -55.55 | 31.33  | sohm-s2| 5581  | 0.002  |
| -18.32 | 32.50  | sp8-4  |       | 0.6    |
| -7.00  | 4.19   | stat2  |       | 0.02   |
| 9.57   | -6.00  | t78-30 | 3040  | 0.02   |
| 7.58   | -5.11  | t78-33 | 4120  | 0.02   |
| Value | Formula | Result |
|-------|---------|--------|
| -7.07 | 65.46 v23-58 | 20610 3083 2 - 5 6.08 6.72 |
| 0.01  | 68.02 v23-59 | 1454 2973 1 5.09 5.93 |
| -8.19 | 70.03 v23-60 | 1518 1928 2 - 5 11.66 4.69 |
| -7.23 | 74.02 v23-61 | 1455 3050 1 10.54 4.11 |
| 0.12  | 77.57 v23-62 | 1519 3047 2 - 5 6.88 5.50 |
| -6.41 | 70.59 v23-70 | 15110 2970 1 - 3 5.67 4.57 |
| -2.48 | 68.33 v23-73 | 1456 1926 1 - 4 2.40 9.02 |
| -9.36 | 68.11 v23-74 | 15515 2592 2 - 4 21.67 4.03 |
| 11.19 | 56.10 v23-80 | 1211 2393 10 5.53 3.30 |
| 16.50 | 54.15 v23-81 | 1457 3974 4 4.32 7.47 |
| 21.56 | 52.53 v23-82 | 15516 3871 5 - 7 3.68 21.31 |
| 16.55 | 46.00 v23-84 | 15512 4513 5 - 7 8.59 4.55 |
| 17.02 | 37.24 v23-86 | 1593 4175 1 - 3 4.35 2.28 |
| 19.42 | 34.05 v23-87 | 1594 5127 2 - 4 5.01 7.47 |
| 25.03 | 29.51 v23-90 | 1595 5394 4 - 6 6.10 14.51 |
| 28.34 | 29.35 v23-91 | 20611 2758 0 - 3 3.37 7.68 |
| 28.15 | 30.04 v23-92 | 1596 2210 2 - 4 5.43 4.84 |
| 23.24 | 30.27 v23-93 | 1597 5310 1 - 3 6.17 8.49 |
| 20.09 | 30.37 v23-94 | 1561 5380 0 - 4 12.03 7.62 |
| 15.06 | 29.48 v23-96 | 1395 3471 2 4.15 5.14 |
| 19.18 | 23.07 v23-98 | 1385 3506 4 4.15 5.14 |
| 73.30 | 36.30 v24-1 | 20612 3012 4 - 6 16.85 5.16 |
| 68.58 | 22.31 v24-262 | 15914 5517 1 - 3 6.30 1.51 |
| 77.57 | 15.19 v24-28 | 1458 2274 2 - 5 2.23 5.43 |
| 71.08 | 28.33 v25-2 | 15915 5409 1 - 3 4.90 2.37 |
| 67.28 | 28.43 v25-3 | 15916 5130 1 - 3 5.90 6.59 |
| 48.01 | 24.19 v25-30 | 1398 4096 3 - 4 5.26 3.25 |
| 52.35 | 24.43 v25-33 | 1399 941 2 4.56 1.94 |
| 53.36 | 20.23 v25-35 | 1387 5269 8 5.13 2.62 |
| 63.56 | 28.44 v25-4 | 1564 5203 1 - 4 7.34 3.78 |
| 50.39 | 12.33 v25-42 | 2061 4707 2 - 5 9.66 4.01 |
| 45.09 | 11.30 v25-44 | 1459 4049 3 5.82 5.63 |
| 33.29 | 1.22 v25-59 | 1973 3824 2 - 5 7.88 6.39 |
| 34.50 | 3.17 v25-60 | 3749 0.06 |
| 34.49 | 3.17 v25-60 | 15113 3749 4 - 6 7.17 12.87 |
| 53.09 | 8.38 v25-74 | 13910 3446 3 5.89 3.69 |
| 53.10 | 8.35 v25-75 | 2743 0.06 |
| 46.52 | 4.41 v26-107 | 14512 3224 2 9.01 2.80 |
| 56.53 | 15.28 v26-113 | 13913 5231 2 - 3 4.89 7.17 |
| 74.27 | 16.08 v26-124 | 14513 3005 3 7.73 15.28 |
| 68.34 | 24.30 v26-153 | 1601 5706 1 - 3 11.12 2.72 |
| 65.18 | 24.29 v26-154 | 1602 5773 3 - 6 5.11 2.21 |
| 65.16 | 27.27 v26-156 | 1566 5035 1 - 4 5.35 3.11 |
| 72.23 | 36.03 v26-176 | 3942 0.5 |
| 72.23 | 36.03 v26-176 | 3942 0.5 |
| 72.23 | 36.03 v26-176 | 3942 0.5 |
| 72.34 | 37.33 v26-177 | 2979 0.5 |
| 40.29 | 26.28 v26-24 | 13911 4213 1 - 2 9.40 5.27 |
| 55.23 | 26.26 v26-28 | 13912 6293 2 6.22 2.21 |
| 40.39 | 27.04 v26-29 | 1389 4519 2 - 4 7.21 4.73 |
| 36.55 | 19.51 v26-34 | 17415 5601 0 - 2 8.67 2.40 |
| 34.14 | 17.42 v26-35 | 13810 5123 2 7.94 4.03 |
| 31.33 | 16.32 v26-36 | 17416 5181 2 - 4 9.53 2.45 |
| Value | Description | Value | Description |
|-------|-------------|-------|-------------|
| -31.06 | 16.38 v26-37 | 15114 | 4898 | 1- 3 9.73 6.19 |
| -31.33 | 16.22 v26-38 | 1751 | 5181 | 4- 6 10.29 5.48 |
| -31.34 | 16.33 v26-39 | 1752 | 5059 | 0- 2 10.70 5.11 |
| -59.10 | 32.37 v26-4 | 1565 | 4781 | 4- 7 6.85 4.85 |
| -26.07 | 19.20 v26-41 | 14510 | 4341 | 4- 11.05 8.75 |
| -18.11 | 9.34 v26-46 | 14511 | 2898 | 1- 4 3.61 8.06 |
| -17.52 | 5.50 v26-49 | 15115 | 4621 | 10 9.05 8.26 |
| -17.55 | 6.16 v26-50 | 13113 | 4826 | 2 8.19 4.05 |
| -22.52 | 61.14 v27-106 | 15614 | 1900 | 5- 8 1.79 22.56 |
| -23.58 | 59.27 v27-107 | 15615 | 2492 | 2- 4 5.79 20.73 |
| -58.03 | 43.29 v27-11 | 1603 | 3488 | 1- 3 12.72 6.34 |
| -18.29 | 56.54 v27-110 | 2072 | 1264 | 4- 6 10.01 4.85 |
| -24.05 | 56.04 v27-111 | 15616 | 2809 | 3- 6 12.03 17.84 |
| -25.31 | 56.08 v27-112 | 1571 | 3217 | 4- 6 4.70 34.86 |
| -27.37 | 56.10 v27-113 | 1572 | 2622 | 4- 6 2.05 30.79 |
| -33.04 | 55.03 v27-114 | 1605 | 2532 | 3- 6 1.30 40.59 |
| -30.20 | 52.50 v27-116 | 1607 | 3202 | 5- 7 2.84 24.81 |
| -19.13 | 50.58 v27-120 | 14812 | 4376 | 5- 7 6.25 7.21 |
| -16.58 | 48.18 v27-122 | 1573 | 4696 | 2- 5 14.56 5.77 |
| -14.58 | 44.37 v27-127 | 1574 | 5095 | 1- 4 11.18 2.34 |
| -9.36 | 45.12 v27-129 | 1575 | 4578 | 2- 4 12.44 2.88 |
| -51.05 | 42.03 v27-13 | 1604 | 3294 | 5- 7 10.03 7.67 |
| -12.06 | 48.00 v27-134 | 1576 | 3350 | 2- 4 17.81 3.85 |
| -17.04 | 42.42 v27-137 | 13811 | 4883 | 4 9.10 2.14 |
| -27.17 | 42.03 v27-139 | 1577 | 2465 | 4- 6 11.55 7.42 |
| -46.50 | 41.21 v27-14 | 1567 | 4453 | 4- 6 19.77 9.38 |
| -1.28 | 61.51 v27-142 | 15611 | 954 | 0- 3 53.04 8.73 |
| -13.33 | 39.36 v27-144 | 1608 | 4894 | 1- 3 8.65 2.06 |
| -10.42 | 38.09 v27-146 | 1609 | 4921 | 5- 7 6.45 0.59 |
| -13.58 | 33.35 v27-161 | 1753 | 4445 | 0- 2 5.88 2.77 |
| -16.52 | 34.12 v27-162 | 1578 | 4281 | 1- 4 4.04 6.99 |
| -40.55 | 35.01 v27-163 | 16011 | 3704 | 2- 4 3.48 3.82 |
| -17.22 | 31.30 v27-163 | 13914 | 4530 | 0 7.51 4.25 |
| -22.43 | 25.51 v27-166 | 1759 | 4945 | 2- 4 13.63 8.05 |
| -26.35 | 25.56 v27-167 | 13915 | 5099 | 2 10.18 5.32 |
| -30.19 | 25.52 v27-168 | 1755 | 5206 | 6- 8 11.48 3.36 |
| -32.26 | 25.50 v27-169 | 1756 | 4960 | 4- 6 8.59 3.02 |
| -37.18 | 50.06 v27-17 | 14514 | 4054 | 4- 7 7.12 14.82 |
| -34.02 | 24.26 v27-170 | 1757 | 6224 | 3- 5 9.23 2.70 |
| -32.33 | 21.44 v27-171 | 13916 | 4639 | 1- 2 11.40 3.49 |
| -25.00 | 12.51 v27-174 | 16010 | 4912 | 1- 3 8.71 12.90 |
| -22.07 | 8.48 v27-175 | 13114 | 5481 | 2 7.59 22.20 |
| -26.39 | 5.06 v27-178 | 1321 | 4327 | 0 6.57 16.67 |
| -38.48 | 52.06 v27-19 | 1529 | 3466 | 4- 6 9.62 7.51 |
| -46.12 | 54.00 v27-20 | 14515 | 3510 | 5 5.42 13.25 |
| 1.59 | 1.00 v27-234 | 1759 | 4618 | 0- 2 10.85 22.54 |
| -11.49 | 3.03 v27-248 | 13115 | 4543 | 0 3.44 33.08 |
| -13.38 | 1.02 v27-250 | 13116 | 4942 | 0 4.92 48.58 |
| -28.00 | 22.36 v27-255 | 17511 | 5554 | 0- 2 10.06 2.38 |
| -29.59 | 26.25 v27-256 | 17512 | 5079 | 2- 4 5.54 4.35 |
| -34.53 | 26.46 v27-259 | 17513 | 5596 | 4- 6 7.15 2.23 |
| -31.06 | 25.56 v27-260 | 17514 | 5590 | 8-10 10.18 3.25 |
| -40.55 | 35.01 v27-263 | 16012 | 4801 | 2- 4 3.80 5.60 |
| -43.43 | 36.31 v27-264 | 16012 | 4801 | 2- 4 3.80 5.60 |
| BV      | Value    | V29-160 | 1765 | 4971 | 3-5  | 7.32 | 17.27 | 16.37 |
|---------|----------|---------|------|------|------|------|------|-------|
| BV      | Value    | V29-161 | 1766 | 4807 | 0-2  | 6.23 | 21.31 | 15.50 |
| BV      | Value    | V29-162 | 1767 | 4768 | 0-2  | 5.25 | 18.74 | 15.45 |
| BV      | Value    | V29-163 | 1768 | 3907 | 0-2  | 5.02 | 21.36 | 14.56 |
| BV      | Value    | V29-164 | 1769 | 582  | 2-4  | 11.26| 15.23 | 14.19 |
| BV      | Value    | V29-166 | 17610| 4159 | 0-2  | 11.64| 16.34 | 20.57 |
| BV      | Value    | V29-167 | 17611| 2822 | 0-2  | 11.46| 13.47 | 17.55 |
| BV      | Value    | V29-168 | 17612| 2833 | 0-2  | 13.48| 11.01 | 18.04 |
| BV      | Value    | V29-169 | 17613| 3508 | 0-2  | 13.18| 8.72  | 20.00 |
| BV      | Value    | V29-170 | 17614| 4455 | 0-2  | 7.80 | 8.17  | 20.04 |
| BV      | Value    | V30-241 | 17812| 23.24| 17.07| 10.76| 6.84  | 16.21 |
| BV      | Value    | V30-242 | 17813| 3625 | 3-5  | 10.55| 4.11  | 16.21 |
| BV      | Value    | V30-243 | 17814| 4487 | 3-5  | 14.12| 6.58  | 22.10 |
| BV      | Value    | V30-36  |     |      |      |      |      | 27.19 |
| BV      | Value    | V30-36  | 17616| 4245 | 6-8  | 8.95 | 16.76 | 27.19 |
| BV      | Value    | V30-41k |     | 3874 |      |      |      | 23.04 |
| BV      | Value    | V30-45  | 17016| 3568 | 0    | 9.67 | 19.15 | 19.56 |
| BV      | Value    | V30-46  | 1772 | 3378 | 5-7  | 8.06 | 10.73 | 18.05 |
| BV      | Value    | V30-48  | 1773 | 3351 | 2-4  | 11.39| 10.89 | 19.20 |
| BV      | Value    | V30-49  | 1773 | 3093 | 0-2  | 13.57| 9.61  | 21.05 |
| BV      | Value    | V30-50  | 1775 | 3409 | 0-2  | 12.21| 9.15  | 19.55 |
| BV      | Value    | V30-51  | 1776 | 3409 | 0-2  | 13.60| 11.88 | 19.55 |
| BV      | Value    | V30-51k |     | 3409 |      |      |      | 19.55 |
| BV      | Value    | V30-52  | 1777 | 4269 | 2-4  | 14.46| 6.56  | 21.19 |
| BV      | Value    | V30-53  | 1779 | 3506 | 3-5  | 11.65| 8.34  | 19.12 |
| BV      | Value    | V30-54  | 1778 | 2160 | 2-4  | 12.52| 7.52  | 18.04 |
| BV      | Value    | V30-55  | 17710| 1692 | 3-5  | 13.95| 6.03  | 17.40 |
| BV      | Value    | V30-56  | 17712| 3150 | 3-5  | 12.93| 7.09  | 19.06 |
| BV      | Value    | V30-57  |     | 1213 | 3-5  | 20.88| 5.99  | 16.40 |
| BV      | Value    | V30-58  | 17713| 4492 | 0-2  | 10.76| 6.84  | 20.53 |
| BV      | Value    | V30-59  | 17714| 3760 | 2-4  | 9.65 | 5.59  | 19.31 |
| BV      | Value    | V30-61  | 17715| 3170 | 4-6  | 9.90 | 5.40  | 16.50 |
| BV      | Value    | V30-62  | 17716| 942  | 3-5  | 19.92| 4.64  | 16.55 |
| BV      | Value    | V30-67  | 1781 | 1953 | 0-3  | 14.16| 5.49  | 15.09 |
| BV      | Value    | V30-68  | 1782 | 3841 | 3-5  | 6.82 | 6.38  | 19.08 |
| Value 1  | Value 2  | Value 3  | Value 4  | Value 5  | Value 6  | Value 7  | Value 8  | Value 9  | Value 10 | Value 11 | Value 12 | Value 13 | Value 14 | Value 15 | Value 16 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| -18.49  | 32.12   | v30-69  | 1783    | 4353    | 2  | 4 | 3.55  | 8.15  | 1       |          |          |          |          |          |          |
| -18.55  | 32.19   | v30-70  | 1784    | 4304    | 0  | 2 | 4.35  | 6.84  | 1       |          |          |          |          |          |          |
| -19.51  | 32.18   | v30-71  | 1785    | 4124    | 0  | 2 | 4.88  | 7.25  | 1       |          |          |          |          |          |          |
| -24.13  | 32.43   | v30-73  | 1786    | 5225    | 3  | 5 | 7.15  | 8.73  | 1       |          |          |          |          |          |          |
| -33.08  | 39.57   | v30-96  | 20712   | 3188    | 2  | 4 | 5.06  | 7.55  | 1       |          |          |          |          |          | 1.08    |
| -32.56  | 41.00   | v30-97  | 20713   | 3371    | 3  | 5 | 6.74  | 6.97  | 1       |          |          |          |          |          |          |
| -32.27  | 43.09   | v30-99  | 20714   | 3594    | 1  | 3 | 29.28 | 6.53  | 1       |          |          |          |          |          |          |
| -24.12  | 9.19    | v31-2   | 17815   | 1922    | 2  | 4 | 9.30  | 10.23 | 1       |          |          |          |          |          |          |
| -32.25  | 34.47   | v32-8   |         | 3252    |     |   |       |       | 0.06    |          |          |          |          |          |
| -70.55  | 38.53   | v4-1    |         | 2867    |     |   |       |       | 0.5     |          |          |          |          |          |
| -11.37  | 35.03   | v4-32   |         | 16515   | 2296 | 0 | 7.18  | 2.38  | 1.6     |          |          |          |          |          |
| -33.08  | 37.14   | v4-8    |         | 16513   | 1655 | 0 | 0.74  | 53.44 | 1.6     |          |          |          |          |          |
| -20.31  | 14.48   | x164012 |         | 4061    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -20.34  | 14.25   | x164021 |         | 4203    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -20.32  | 14.23   | x164032 |         | 4234    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -21.18  | 12.40   | x164041 |         | 4787    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -21.25  | 12.16   | x164051 |         | 4870    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -21.37  | 9.52    | x164061 |         | 5141    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -21.58  | 9.02    | x164071 |         | 4586    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -21.27  | 9.01    | x164081 |         | 4239    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -20.51  | 8.55    | x164101 |         | 3969    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.54  | 9.31    | x164111 |         | 4622    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.51  | 9.34    | x164121 |         | 4607    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.18  | 10.01   | x164131 |         | 4397    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.06  | 9.34    | x164151 |         | 3841    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.24  | 9.52    | x164161 |         | 4336    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.44  | 10.05   | x164171 |         | 4627    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -16.38  | 9.53    | x164182 |         | 130     |     | tp|       |       | 0.01    |          |          |          |          |          |
| -16.44  | 9.54    | x164191 |         | 312     |     | tp|       |       | 0.01    |          |          |          |          |          |
| -17.32  | 9.56    | x164201 |         | 806     |     | tp|       |       | 0.01    |          |          |          |          |          |
| -17.53  | 9.53    | x164212 |         | 1507    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.38  | 9.14    | x164222 |         | 4694    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.20  | 9.02    | x164241 |         | 4648    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.02  | 9.08    | x164251 |         | 4802    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -18.26  | 8.15    | x164263 |         | 4766    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -18.42  | 7.37    | x164282 |         | 4645    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.25  | 6.44    | x164291 |         | 4275    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -19.59  | 5.37    | x164301 |         | 2811    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -20.18  | 5.30    | x164311 |         | 2986    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -22.03  | 3.00    | x164321 |         | 4515    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -24.01  | 3.21    | x164331 |         | 4530    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -23.45  | 4.22    | x164351 |         | 4571    |     | tp|       |       | 0.01    |          |          |          |          |          |
| -17.56  | 16.56   | x164373 |         | 2766    |     | tp|       |       | 0.01    |          |          |          |          |          |
# SOUTH ATLANTIC OCEAN

| LONG | LAT | CORE | ACCESS | DEPTH | SAMP | QTZ | OPAL | CACO3 | SOURCE |
|------|-----|------|--------|-------|------|-----|------|-------|--------|
| D M  | D M | ID   | DEPTH  | %     | %    | %   |       |       |        |
|      |     |      | DEPTH  |       |      |      |       |       |        |
| -36.39 | -31.59 | a1160-13 | 2739  | 0.7   |       |      |       |       |        |
| -24.10 | -0.03  | a18-074 |       | 0.6   |       |      |       |       |        |
| -26.02 | -0.46  | a18-076 | 1469  | 1.6   |       |      |       |       |        |
| -33.37 | -6.59  | a18-083 | 1226  |       | 1.0   |      |       |       |        |
| -1.32  | -7.34  | clr1220 | 4313  | 5.00  | 96.000 |     |       |       |        |
| 7.10   | -25.40 | clr143  | 4106  | 9.00  | 79.000 |     |       |       |        |
| 9.26   | -25.46 | clr144  | 4554  | 14.00 | 67.000 |     |       |       |        |
| 5.29   | -8.04  | clr216  | 4249  | 33.00 | 19.000 |     |       |       |        |
| -6.14  | -7.49  | clr227  | 4178  | 50.00 | 97.000 |     |       |       |        |
| -11.07 | -8.17  | clr240  | 3201  | 47.00 | 98.000 |     |       |       |        |
| -19.02 | -4.35  | ch315   | 4349  | 9.00  | 88.000 |     |       |       |        |
| -18.55 | -6.38  | ch316   | 4713  | 22.00 | 84.000 |     |       |       |        |
| -14.05 | -7.20  | ch324a  | 3722  | 35.00 | 95.000 |     |       |       |        |
| -13.04 | -8.23  | ch326   | 3116  | 5.00  | 74.000 |     |       |       |        |
| -9.27  | -8.39  | ch329   | 3714  | 57.00 | 92.000 |     |       |       |        |
| -38.05 | -30.55 | chn11588| 2941  | 0.7   |       |      |       |       |        |
| -35.39 | -29.55 | chn115-70| 2340  | 0.7   |       |      |       |       |        |
| -38.12 | -30.53 | chn115-89| 3152  | 0.7   |       |      |       |       |        |
| -38.22 | -30.51 | chn115-90| 3384  | 0.7   |       |      |       |       |        |
| -38.26 | -30.50 | chn115-91| 3576  | 0.7   |       |      |       |       |        |
| -38.50 | -30.26 | chn115-92| 3934  | 0.7   |       |      |       |       |        |
| 15.07  | -33.51 | lsdal159 | 4150  | 34.00 | 69.000 |     |       |       |        |
| 1.58   | -31.21 | lsdal63  | 4190  | 19.00 | 96.000 |     |       |       |        |
| -7.20  | -29.42 | lsdal67  | 4152  | 12.00 | 94.000 |     |       |       |        |
| -9.25  | -28.51 | lsdal68  | 3930  | 9.00  | 92.000 |     |       |       |        |
| -15.32 | -24.03 | lsdal78  | 4045  | 10.00 | 92.000 |     |       |       |        |
| -12.55 | -19.44 | lsdal83  | 3500  | 12.00 | 99.000 |     |       |       |        |
| -10.17 | -18.33 | lsdal85  | 3460  | 5.00  | 97.000 |     |       |       |        |
| -11.14 | -5.42  | lsdal199 | 2900  | 83.00 | 98.000 |     |       |       |        |
| -15.07 | -24.04 | rco8-18  | 3977  | 5.66  | 17.00  |     |       |       |        |
| 71.32  | -37.48 | rcl1-118 | 4354  | 0.3   |       |      |       |       |        |
| 74.34  | 40.18  | rcl1-119 | 3709  | 0.3   |       |      |       |       |        |
| 79.52  | 43.31  | rcl1-120 | 3193  | 0.3   |       |      |       |       |        |
| -32.54 | -12.49 | rcl1-19  | 7415  |       | 3.34   |     |       |       |        |
| -33.59 | -16.09 | rcl1-20  | 7416  |       | 9.11   |     |       |       |        |
| -35.58 | -17.16 | rcl1-21  | 1952  |       | 5.68   |     |       |       |        |
| -32.42 | -20.09 | rcl1-22  | 7722  |       | 4.17   |     |       |       |        |
| -32.37 | -22.47 | rcl1-23  | 7733  |       | 4.41   |     |       |       |        |
| -31.46 | -25.04 | rcl1-24  | 774  |       | 30.37  |     |       |       |        |
| -30.04 | -28.35 | rcl1-26  | 1953  |       | 10.14  |     |       |       |        |
| -33.37 | -31.19 | rcl1-34  | 779  |       | 8.39   |     |       |       |        |
| -35.06 | -34.43 | rcl1-35  | 7710  |       | 6.96   |     |       |       |        |
| -35.16 | -33.52 | rcl1-36  | 7711  |       | 5.64   |     |       |       |        |
| -35.32 | -31.59 | rcl1-37  | 7712  |       | 6.09   |     |       |       |        |
| -38.14 | -28.42 | rcl1-38  | 7713  |       | 3.04   |     |       |       |        |
| -39.00 | -29.19 | rcl1-40  | 7714  |       | 3.32   |     |       |       |        |
| -37.33 | -31.56 | rcl1-41  | 7715  |       | 8.60   |     |       |       |        |
| -9.52  | -50.52 | rcl1-78  | 1493  | 1.3   |       |      |       |       |        |
| -4.36  | -49.00 | rcl1-79  | 3385  | 7.0000|       |     |       |       |        |
| -0.03  | -46.45 | rcl1-80  | 1954  | 1.0   |       |      |       |       |        |

128
| Product Code | Description | Weight (kg) | Length (m) | Width (m) | Height (m) | Volume (m³) | Color | Type |
|--------------|-------------|------------|-----------|---------|---------|-----------|------|------|
| P12-66       | Heavy Duty  | 0.70      | 20        | 2.0     | 1.5     | 6.0       | Blue | Steel |
| P12-71       | Industrial  | 0.90      | 30        | 3.0     | 2.5     | 9.0       | Green| Plastic |
| P12-73       | Commercial  | 1.10      | 40        | 4.0     | 3.0     | 12.0      | Red  | Aluminum |

*Note: Descriptions and specifications are for illustrative purposes only.*
| 10.36 | -29.37 | v19-241 | 4493 | 4-9 | 0.00 | 2.00 | 74.000000 | 8 |
| 6.15 | -27.15 | v19-244 | 4865 | 0/-2 | 12.00 | 15.00 | 68.000000 | 8 |
| 4.42 | -26.12 | v19-245 | 2725 | 0/-5 | 9.00 | 3.00 | 96.000000 | 8 |
| 3.20 | -25.25 | v19-247 | 5002 | 3/-4 | 10.00 | 8.00 | 91.000000 | 8 |
| 4.50 | -24.34 | v19-248 | 1964 | 3321 | 0 | 5.03 | 19.05 | 1 |
| 8.23 | -18.20 | v19-262 | 4918 | 3/-5 | 2.00 | 0.00 | 76.000000 | 8 |
| 6.36 | -15.55 | v19-263 | 5278 | 0 | 14.00 | 2.00 | 8.000000 | 8 |
| 2.13 | -13.23 | v19-267 | 5585 | 0 | 12.00 | 15.00 | 17.000000 | 8 |
| 4.39 | -3.19 | v19-281 | 2066 | 4566 | 2/-5 | 2.60 | 60.74 | 1 |
| 5.32 | -1.17 | v19-283 | 1965 | 3442 | 0 | 2.52 | 58.06 | 1 |
| -7.45 | -28.26 | v20-209 | 4257 | 0 | 13.00 | 15.00 | 90.000000 | 8 |
| -10.20 | -28.13 | v20-212 | 19713 | 3523 | 4 | 5.11 | 15.77 | 1 |
| -10.02 | -28.13 | v20-212 | 3523 | 0/-2 | 8.00 | 8.00 | 95.000000 | 8 |
| -16.21 | -28.38 | v20-215 | 4114 | 0 | 10.00 | 9.00 | 91.000000 | 8 |
| -18.50 | -28.41 | v20-216 | 4451 | 0 | 9.00 | 7.00 | 83.000000 | 8 |
| -23.03 | -28.33 | v20-217 | 4601 | 0 | 2.00 | 2.00 | 51.000000 | 8 |
| -27.38 | -28.40 | v20-218 | 5115 | 0/-8 | 14.00 | 7.00 | 30.000000 | 8 |
| -29.13 | -29.02 | v20-219 | 3092 | 6/-8 | 12.00 | 6.00 | 96.000000 | 8 |
| -28.53 | -22.53 | v20-221 | 5298 | 8/-9 | 13.00 | 6.00 | 6.000000 | 8 |
| -28.07 | -19.29 | v20-222 | 5148 | 0 | 12.00 | 6.00 | 4.000000 | 8 |
| -28.44 | -15.21 | v20-223 | 5318 | 0 | 13.00 | 6.00 | 5.000000 | 8 |
| -31.19 | -9.48 | v20-225 | 5214 | 0 | 13.00 | 4.00 | 7.000000 | 8 |
| -31.19 | -9.48 | v20-225 | 7113 | 5214 | 0 | 5.75 | 4.45 | 1 |
| -32.05 | -7.38 | v20-226 | 7114 | 5092 | 0 | 6.72 | 4.45 | 1 |
| -32.05 | -7.38 | v20-226 | 5092 | 0 | 17.00 | 6.00 | 9.000000 | 8 |
| -34.38 | -4.14 | v20-227 | 2068 | 3812 | 2/-5 | 7.41 | 3.03 | 1 |
| -36.25 | -2.29 | v20-228 | 1966 | 3676 | 0 | 8.06 | 4.31 | 1 |
| 3.54 | -18.43 | v21-170 | m112697 | 4131 | 0 | 18.12 | 3.20 | 0.950000 | 7 |
| -26.00 | -49.09 | v22-101 | 4506 | 0 | 16.00 | 10.00 | 2.000000 | 8 |
| -21.24 | -49.50 | v22-103 | 3871 | 3/-6 | 11.00 | 38.00 | 11.000000 | 8 |
| -19.29 | -49.00 | v22-104 | 4321 | 5 | 15.00 | 46.00 | 4.000000 | 8 |
| -10.54 | -46.08 | v22-106 | 3037 | 7 | 18.00 | 32.00 | 54.000000 | 8 |
| -6.38 | -44.28 | v22-107 | 3898 | 0/-3 | 8.00 | 36.00 | 87.000000 | 8 |
| -3.15 | -43.11 | v22-108 | 4171 | 8/-9 | 7.00 | 36.00 | 83.000000 | 8.3 |
| -3.15 | -43.11 | v22-108 | 19610 | 4171 | 0 | 4.25 | 44.89 | 1 |
| -0.15 | -41.58 | v22-109 | 733 | 8/-10 | 2.00 | 9.00 | 98.000000 | 8 |
| 5.06 | -39.45 | v22-110 | 5145 | 10 | 14.00 | 17.00 | 24.000000 | 8 |
| 9.56 | -37.33 | v22-113 | 5073 | 10 | 31.00 | 20.00 | 35.000000 | 8 |
| 13.41 | -36.01 | v22-115 | 4854 | 10 | 63.00 | 7.00 | 15.000000 | 8 |
| 8.22 | -35.05 | v22-139 | 4825 | 8/-9 | 2.00 | 11.00 | 3.000000 | 8 |
| 2.21 | -33.37 | v22-140 | 4433 | 10 | 13.00 | 12.00 | 62.000000 | 8 |
| 2.10 | -32.21 | v22-146 | 2177 | 0/-1 | 0.00 | 5.00 | 89.000000 | 8 |
| 1.55 | -28.43 | v22-159 | 3471 | 0 | 11.00 | 18.00 | 93.000000 | 8 |
| D | M | D | M | ID   | ACCESS | DEPTH | SAMP | QTZ | OPAL | CAC03 | SOURCE |
|---|---|---|---|------|--------|-------|------|-----|------|-------|--------|
| -126.24 | 46.15 | 660410 | mlo2834 | 3002 | 6-8 | 0.3410 | 0.09 |
| -128.08 | 43.08 | 66042 | 3786 | 0 | 0.00 | 0.00 | 2.7110 | 6 |
| -127.44 | 43.07 | 660913 | 4016 | 0 | 0.00 | 0.00 | 1.1370 | 6 |
| -128.29 | 43.43 | 660920 | 2597 | 20 | 0.00 | 0.00 | 43.2620 | 6 |
| -126.28 | 43.34 | 660955 | moo2852 | 2980 | 4-6 | 0.6699 |
| -124.59 | 42.07 | 67112 | 1365 | 19 | 0.00 | 0.00 | 5.3230 | 6 |
| -129.51 | 45.10 | 68094 | 2700 | 6 | 0.00 | 0.00 | 10.6870 | 6 |
| -131.01 | 46.42 | 68088 | moo7167 | 488 | 2-3 | 61.5793 |
| -127.02 | 41.16 | 69102 | moo2922 | 2615 | 5-7 | 0.5708 |
| -127.22 | 41.17 | 69103 | moo9237 | 2880 | 0-1 | 0.6144 |
| -128.39 | 41.19 | 69104 | moo3026 | 3130 | 1-3 | 0.4614 |
| -127.38 | 42.32 | 70041 | moo9353 | 2960 | 0-1 | 0.9561 |
| -162.33 | 44.56 | 70114p | moo2892 | 5492 | 0-9 | 0.7978 |
| -119.45 | 32.52 | ahf10614 | mc09908 | 1275 | 5-7 | 11.86 | 3.73 | 36.1500 | 7 |
| -119.49 | 32.52 | ahf10614 | nl09908 | 1275 | 5 | 11.86 | 3.73 | 5 |
| -119.33 | 32.51 | ahf10626 | mc05586 | 1400 | 0 | 10.45 | 4.87 | 36.2100 | 0.09 |
| -160.59 | 29.39 | aries40pg | nso4942 | 5701 | 2-9 | 0.7311 |
| -160.59 | 29.39 | aries40pg | nso4942 | 5701 | 2-9 | 0.7311 |
| 174.57 | 36.35 | aries45pg | nso4942 | 5195 | 7-12 | 0.4582 |
| 178.50 | 36.33 | aries48g | nso4944 | 4482 | 3-7 | 5.7827 |
| 178.50 | 36.33 | aries48g | nso4944 | 4482 | 3-7 | 5.7827 |
| -108.01 | 10.29 | bnfc43 | ms09061 | 2720 | 2-4 | 3.75 | 35.86 | 65.9827 | 5.09 |
| -109.01 | 10.29 | bnfc43 | ms09061 | 2720 | 2 | 3.75 | 35.86 | 5 |
| -109.01 | 10.29 | bnfc43pg | nso09061 | 2720 | 2-4 | 3.75 | 35.86 | 65.9800 | 7.09 |
| -143.11 | 45.34 | cuspl1g | nso0905 | 4590 | 7-12 | 1.0648 |
| -143.11 | 45.34 | cuspl1g | nso0905 | 4590 | 7-12 | 1.0648 |
| -143.07 | 37.15 | cuspl7g | nso4946 | 5260 | 5-0 | 0.5394 |
| -135.24 | 31.05 | cusplg | nso4945 | 4940 | 6-12 | 0.3820 |
| -135.24 | 31.05 | cusplg | nso4945 | 4940 | 6-12 | 0.3820 |
| -134.15 | 34.27 | cuspl22g | nso4947 | 5120 | 2-7 | 0.4683 |
| -134.15 | 34.27 | cuspl22g | nso4947 | 5120 | 2-7 | 0.4683 |
| -140.38 | 43.58 | cuspl9g | nso0904 | 4350 | 2-8 | 5.7008 |
| -140.38 | 43.58 | cuspl9g | nso0904 | 4350 | 2-8 | 5.7008 |
| -126.43 | 21.27 | dwbg2 | ms05222 | 4370 | 18.73 | 3.38 | 94.2000 | 0.09 |
| -128.32 | 41.16 | fanbg22 | ms05223 | 3220 | 15.45 | 9.69 | 0.7400 | 0 |
| -128.12 | 40.08 | fanbg27 | ms05224 | 4507 | 18.01 | 9.00 | 0.7100 | 0 |
| -117.18 | 28.12 | fanhms1 | ms06782 | 3690 | 0 | 13.08 | 4.65 | 5 |
| -118.14 | 30.17 | fanhms2 | ms06790 | 2970 | 0 | 16.93 | 4.93 | 5 |
| -118.42 | 30.06 | fanhms3 | ms06806 | 3535 | 0 | 8.36 | 8.27 | 5 |
| -8.12 | 1.05 | g76-510 | g76-527 | 18.01 | 9.00 | 0.7100 | 0 |
| -12.49 | 0.00 | g76-514 | g76-527 | 18.01 | 9.00 | 0.7100 | 0 |
| -5.06 | 4.59 | g76-527 | g76-528 | 18.01 | 9.00 | 0.7100 | 0 |
| -6.43 | 2.52 | g76-55 | g76-528 | 18.01 | 9.00 | 0.7100 | 0 |
| -156.05 | 23.36 | hilo12g | nso4951 | 4270 | 6-11 | 0.5083 |
| -156.05 | 23.36 | hilo12g | nso4951 | 4270 | 6-11 | 0.5083 |
| Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value | Value |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -127.37 | 28.15 | hilo2g | ms05225 | 4560 | 16.70 | 4.29 | 0.6600 | 0 |
| -134.31 | 24.47 | hilo3g | ms05226 | 4700 | 13.91 | 3.28 | 0.5200 | 0 |
| -143.58 | 22.57 | hilo5g | ms05227 | 4850 | 14.14 | 2.74 | 0.6400 | 0 |
| 169.48 | 40.30 | jnyiil10g | nso4959 | 5550 | 12-17 | 2.4797 |
| 165.32 | 39.56 | jnyiil11g | nso4960 | 5350 | 5-13 | 1.8706 |
| 165.32 | 39.56 | jnyiil12g | nso4961 | 5510 | 7-13 | 2.8866 |
| 153.10 | 38.28 | jnyiil17g | gso0442 | 5690 | 0-2 | 49.0507 |
| -162.28 | 24.34 | jnyiil11g | nso4952 | 4940 | 5-24 | 0.7799 |
| -162.28 | 24.34 | jnyiil11g | nso4953 | 4700 | 13.91 | 3.28 | 0.5200 | 0 |
| -174.15 | 33.04 | jnyiil14g | nso4954 | 5530 | 4-12 | 0.5031 |
| -174.15 | 33.04 | jnyiil14g | nso4955 | 165.32 | 39.56 | Jnyiil10g | 5550 | 12-17 | 2.4797 |
| -177.43 | 35.25 | jnyiil15g | nso4955 | 4320 | 5-17 | 38.8151 |
| -177.43 | 35.25 | jnyiil15g | nso4956 | 5250 | 1.5069 |
| 178.10 | 37.56 | jnyiil16g | nso4956 | 5250 | 1.5069 |
| 178.10 | 37.56 | jnyiil16g | nso4957 | 5250 | 1.5069 |
| 173.59 | 40.12 | jnyiil17g | gso0443 | 4340 | 0-2 | 87.2546 |
| 172.33 | 40.29 | jnyiil18g | nso4958 | 4250 | 32.831 |
| 177.41 | 27.05 | jnyiil19g | nso4958 | 4250 | 32.831 |
| 150.42 | 29.18 | jnyiil20g | nso4959 | 5850 | 0-2 | 88.1443 |
| -109.49 | 25.46 | l-35 | gso0450 | 1025 | 0-10 | 51.5084 |
| -110.12 | 25.33 | l-39 | gso0450 | 2030 | 0-10 | 47.3912 |
| -110.33 | 25.24 | l-43 | gso0450 | 976 | 0-10 | 47.2943 |
| -110.41 | 25.19 | l-45 | gso0450 | 0-10 | 9.8684 |
| -110.45 | 25.20 | l-46 | gso0450 | 805 | 0-10 | 8.9205 |
| -110.59 | 22.53 | lapdlig | nso4956 | 2322 | 0-2 | 1.9391 |
| -110.59 | 22.53 | lapdlig | ms05228 | 3240 | 0-2 | 1.9391 |
| -129.22 | 40.35 | lfgs47g | nso5228 | 3240 | 0-2 | 1.9391 |
| -127.45 | 38.35 | lfgs48g | nso5229 | 4617 | 5.09 |
| -127.03 | 37.38 | lfgs49g | nso5230 | 5061 | 1.9391 |
| -125.56 | 36.19 | lfgs50g | nso5231 | 4599 | 0.4749 |
| -124.06 | 36.33 | lfgs68g | nso5231 | 3922 | 0.4749 |
| -157.56 | 1.45 | lrrlfcl0mah02025 | gso0440 | 2687 | 79.3650 |
| -160.42 | 3.15 | lrrlfclmah02005 | gso0440 | 4542 | 76.0190 |
| -130.58 | 23.15 | lsdhl02g | nso5235 | 4850 | 0.6351 |
| -125.49 | 27.29 | lsdhl03g | nso5234 | 4450 | 0.6351 |
| -123.59 | 28.37 | lsdhl04g | nso5233 | 4360 | 0.6351 |
| -104.00 | 8.48 | m77-7b | 3116 | 0.5945 |
| -92.46 | 6.33 | m77-9b | 1568 | 0.5945 |
| 127.01 | 41.16 | mco2922 | 69102 | 2615 | 5-7 | 0.5700 |
| -135.32 | 41.06 | men20g | nso0907 | 4080 | 8-16 | 2.6859 |
| -135.32 | 41.06 | men20g | nso0907 | 4080 | 8-16 | 2.6859 |
| -142.52 | 40.41 | men25g | nso0909 | 4700 | 0-9 | 1.3647 |
| -139.22 | 40.44 | men26g | nso0910 | 4540 | 6-14 | 1.6459 |
| -125.15 | 34.02 | men4g | molo130 | 4640 | 0 | 5.98 |
| -131.43 | 33.36 | mzf12gc4 | mho4187 | 0 | 13.11 |
| -136.23 | 31.47 | mzf2002 | mho2006 | 0 | 13.11 |
| -134.39 | 33.19 | mzf201cl | mho4188 | 0 | 13.11 |
| -151.22 | 29.58 | mzf4ffgc4 | mho2007 | 0 | 13.11 |
| -151.18 | 28.36 | mzf6pocl2l | mho2008 | 0 | 13.11 |
| Value   | Description                        | Value   | Description                        |
|---------|------------------------------------|---------|------------------------------------|
| 126.24  | 43.16 m101608 660410 3002 1-4     | 0.00    | 3.8000                            |
| -137.06 | 15.09 msn155g mo10129 4992 0   13.17 | 3.61    | 5                                  |
| -137.06 | 15.09 msn155g ms05238 4992     | 11.24   | 4.01                               |
| -126.30 | 24.18 msn157 ms06742 4414 3   13.44 | 2.36    | 5                                  |
| -122.57 | 29.07 msn158g ms05239 4075    | 15.63   | 4.94 0.8437                        |
| -135.12 | 20.01 msn3g ms05236 5220      | 16.03   | 3.62 0.5971                        |
| -139.18 | 16.55 msn4g ms05237 5355       | 13.02   | 4.27 0.6309                        |
| -141.28 | 42.19 muk6 nso0911 4480 0-13   | 1.1708  |                                    |
| -144.49 | 45.03 mub7g nso0912 4722 8-13  | 1.4116  |                                    |
| -144.49 | 45.03 mub7g                0.8205 |                  |                                    |
| -144.28 | 45.01 mub8g                1.2644 |                  |                                    |
| -144.28 | 45.01 mub8g nso0913 4690 0-10  | 1.6438  |                                    |
| -144.27 | 45.38 mub7 nso0915 4699 4-10  | 1.8038  |                                    |
| -144.27 | 45.38 mub7                   1.7637 |                  |                                    |
| -144.27 | 45.39 muk8g                   2.2987 |                  |                                    |
| -144.27 | 45.39 muk8g nso0916 4681 4-12  | 1.8074  |                                    |
| -156.57 | 53.15 muk9g nso0917 4540 3-14  | 0.8595  |                                    |
| -119.53 | 23.35 pap2g ms05240 4169      | 16.77   | 5.33 0.7578                        |
| -143.29 | 9.22 rcl0-102 m105788 5084 0 10.67 | 8.97    | 0.3437                            |
| -143.38 | 10.02 rcl0-103                 5253 |                  |                                    |
| -150.23 | 6.46 rcl0-149                  4451 |                  |                                    |
| -154.03 | 14.48 rcl0-153 m102240 5460 0 14.72 | 3.79    | 0.5206                            |
| -157.49 | 22.20 rcl0-156                 5402 |                  |                                    |
| -159.08 | 24.46 rcl0-157                 5682 |                  |                                    |
| -160.36 | 28.07 rcl0-158 m103814 5892 0 15.69 | 2.02    | 0.7666                            |
| -162.19 | 31.13 rcl0-159 m102245 5894 0 19.74 | 3.98    | 0.7147                            |
| -159.56 | 32.29 rcl0-160 m103815 4621 0 13.85 | 2.64    | 0.8035                            |
| -158.00 | 33.05 rcl0-161 m102301 3587 1-3 18.35 | 5.56    | 39.2400                           |
| -158.00 | 33.05 rcl0-161 m102301 3587 0 21.74 | 5.56    | 39.2398                           |
| -158.48 | 31.25 rcl0-162                 3913 |                  |                                    |
| -157.30 | 32.43 rcl0-163                   0.9 |                  |                                    |
| -150.23 | 33.24 rcl0-167 m105002 6092 0-1 0.5077 | 0.9 |                                    |
| -150.23 | 33.24 rcl0-167 m105002 6092 0 12.43 | 3.93    | 0.5077                            |
| -150.23 | 33.24 rcl0-167 m103816 6092 0 13.26 | 3.33    | 0.7700                            |
| -148.26 | 32.23 rcl0-168                   0.9 |                  |                                    |
| -151.04 | 32.31 rcl0-169                   0.9 |                  |                                    |
| -152.14 | 32.29 rcl0-170                   0.9 |                  |                                    |
| -153.02 | 32.29 rcl0-171 m102252 5544 0 13.91 | 5.13    | 0.5193                            |
| -154.38 | 32.29 rcl0-172                   0.9 |                  |                                    |
| -156.27 | 37.41 rcl0-173                 4056 |                  |                                    |
| -157.35 | 32.35 rcl0-174                 3191 |                  |                                    |
| -159.10 | 34.35 rcl0-175                   0.9 |                  |                                    |
| -160.40 | 34.47 rcl0-176                 4226 |                  |                                    |
| -170.51 | 37.12 rcl0-177                 5302 |                  |                                    |
| -172.20 | 37.48 rcl0-178 m109171 5808 0-1 15.90 | 1.50    | 7.09                               |
| -173.43 | 39.38 rcl0-179 m103817 4312 0 14.10 | 6.06    | 1.4771                            |
| -176.50 | 44.05 rcl0-181 m105790 5698 0 16.03 | 7.25    | 0.3864                            |
| -177.52 | 45.37 rcl0-182 m105791 5561 0 15.40 | 5.92    | 0.3218                            |
| -179.04 | 49.31 rcl0-184                 4986 |                  |                                    |
| -177.11 | 50.12 rcl0-186                 6591 |                  |                                    |
| -175.40 | 50.40 rcl0-187                 6216 |                  |                                    |
| -176.54 | 52.33 rcl0-188                 3673 |                  |                                    |
| -178.04 | 52.15 rcl0-189                 3422 |                  |                                    |
| -177.41 | 53.12 rcl0-190                 3733 |                  |                                    |
| Value 1  | Value 2  | Value 3  |
|---------|---------|---------|
| 179.12  | 53.15   | rc10-191|
| 178.27  | 53.38   | rc10-192|
| -179.01 | 55.01   | rc10-194|
| 176.56  | 55.58   | rc10-195|
| 177.05  | 54.42   | rc10-196|
| 178.34  | 54.54   | rc10-197|
| -174.01 | 1.36    | rc10-199|
| -175.13 | 48.32   | rc10-201|
| -173.00 | 45.37   | rc10-202|
| -171.57 | 41.42   | rc10-203|
| -170.03 | 44.37   | rc10-205|
| -170.26 | 47.13   | rc10-206|
| -171.33 | 50.55   | rc10-207|
| -171.46 | 51.38   | rc10-208|
| -172.38 | 50.48   | rc10-210|
| -171.45 | 50.03   | rc10-211|
| -164.08 | 50.59   | rc10-214|
| -158.06 | 51.01   | rc10-215|
| -151.10 | 50.58   | rc10-216|
| -146.05 | 50.57   | rc10-217|
| -139.33 | 51.03   | rc10-219|
| -133.44 | 51.03   | rc10-220|
| -131.37 | 50.33   | rc10-221|
| -135.14 | 49.57   | rc10-222|
| -134.39 | 49.18   | rc10-223|
| -127.45 | 48.45   | rc10-225|
| -127.16 | 47.27   | rc10-226|
| -128.00 | 46.18   | rc10-227|
| -127.00 | 45.56   | rc10-228|
| -126.09 | 45.35   | rc10-229|
| -128.25 | 40.28   | rc10-230|
| -128.34 | 37.58   | rc10-231|
| -128.39 | 35.35   | rc10-232|
| -129.06 | 28.31   | rc10-234|
| -129.25 | 25.50   | rc10-235|
| -128.17 | 22.58   | rc10-236|
| -125.07 | 21.15   | rc10-237|
| -114.31 | 16.37   | rc10-240|
| -107.53 | 14.21   | rc10-242|
| -107.53 | 13.06   | rc10-243|
| -98.44  | 11.08   | rc10-245|
| -95.20  | 9.41    | rc10-246|
| -91.33  | 8.27    | rc10-248|
| -87.03  | 7.19    | rc10-249|
| -93.16  | 4.21    | rc10-257|
| -94.47  | 6.08    | rc10-58 |
| -96.19  | 5.34    | rc10-59 |
| -101.43 | 3.20    | rc10-62 |
| -104.27 | 2.19    | rc10-63 |
| -105.41 | 1.49    | rc10-64 |
| -108.37 | 0.41    | rc10-65 |
| -114.54 | 1.20    | rc10-70 |
| -114.42 | 1.27    | rc10-71 |
| -113.37 | 2.48    | rc10-72 |

- **Values** represent various numerical data points.
- **rc10** prefixes indicate specific referencing or identification codes.
- **Values 1, 2, 3** represent different parameters or measurements corresponding to each row.
- Additional columns include numerical values and sometimes units of measurement.
| Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|--------|--------|--------|--------|--------|
| -111.37 | 5.42 | rc10-74 | 4100 |
| -110.28 | 6.50 | rc10-75 | 3696 |
| -109.17 | 11.54 | rc10-86 | m108059 | 3288 | 2 | 5.72 | 17.84 | 5 |
| -110.13 | 16.39 | rc10-88 | m102237 | 3660 | 0 | 7.60 | 17.55 | 0.7375 | 0 |
| -113.28 | 15.08 | rc10-89 | 3919 |
| -116.38 | 13.46 | rc10-90 | m106714 | 4261 | 2 | 12.31 | 5.74 | 5 |
| -120.29 | 12.16 | rc10-91 | m106716 | 4471 | 0 | 11.73 | 7.60 | 5 |
| -120.10 | 12.17 | rc10-91 | m102238 | 4471 | 0 | 10.91 | 7.31 | 1.1574 | 0 |
| -125.20 | 7.18 | rc10-93 | 4610 |
| -127.20 | 5.40 | rc10-94 | m103813 | 4356 | 0 | 6.19 | 19.22 | 54.7457 | 0 |
| 136.27 | 31.06 | rc11-161 | 4449 |
| 139.02 | 33.12 | rc11-162 | 1763 |
| 152.42 | 39.32 | rc11-163 | 5559 |
| 162.38 | 35.20 | rc11-164 | 5158 |
| 166.34 | 37.03 | rc11-165 | 4978 |
| -163.21 | 44.29 | rc11-166 | 0.9 |
| -170.14 | 42.10 | rc11-169 | m107160 | 5665 | 0 | 15.89 | 4.99 | 0.9 |
| -163.21 | 44.29 | rc11-170 | m13465 | 5451 | 0 | 14.11 | 2.38 | 7.09 |
| -159.40 | 46.36 | rc11-171 | m105991 | 5167 | 0 | 11.54 | 7.16 | 0.4000 | 0.9 |
| -164.53 | 51.15 | rc11-172 | estimat | 4808 | | | | 7.09 |
| -164.58 | 53.12 | rc11-173 | 3607 |
| -151.21 | 52.35 | rc11-174 | 1618 |
| -144.44 | 56.57 | rc11-176 | m103821 | 3819 | 0 | 13.29 | 2.38 | 1.1017 | 0 |
| -145.39 | 53.30 | rc11-179 | 4067 | | | | | 7.09 |
| -142.54 | 53.09 | rc11-180 | m103822 | 3860 | 0 | 7.68 | 6.54 | 1.2100 | 0 |
| -140.31 | 49.43 | rc11-184 | m103823 | 3959 | 0 | 15.98 | 4.48 | 0.9764 | 0 |
| -143.25 | 47.60 | rc11-185 | m103824 | 4438 | 0 | 19.87 | 5.33 | 3.8981 | 0 |
| -127.72 | 47.54 | rc11-186 | 2582 |
| -130.07 | 47.09 | rc11-187 | 2670 |
| -134.25 | 45.58 | rc11-189 | 3922 |
| -139.57 | 44.31 | rc11-191 | m103916 | 4387 | 0 | 6.76 | 1.91 | 0.4862 | 0 |
| -139.57 | 42.02 | rc11-192 | 4116 |
| -140.03 | 39.57 | rc11-193 | m103917 | 4748 | 0 | 14.45 | 1.04 | 0.4042 | 0.9 |
| -139.57 | 35.00 | rc11-194 | 0.9 |
| -139.59 | 31.51 | rc11-195 | m103918 | 4934 | 0 | 14.44 | 0.49 | 0.5279 | 0.9 |
| -139.56 | 29.11 | rc11-196 | 0.9 |
| -139.59 | 26.24 | rc11-197 | m103825 | 4413 | 0 | 17.98 | 1.59 | 0.5298 | 0 |
| -139.60 | 21.31 | rc11-198 | m103826 | 5378 | 0 | 13.11 | 1.78 | 0.4040 | 0.9 |
| -140.02 | 19.29 | rc11-199 | 5574 |
| -140.02 | 14.52 | rc11-200 | 4828 |
| -140.05 | 12.32 | rc11-202 | m105994 | 4996 | 0 | 10.55 | 6.36 | 0.6700 | 0 |
| -139.53 | 8.47 | rc11-206 | 5086 |
| -139.58 | 5.21 | rc11-208 | m102276 | 4720 | 0 | 7.24 | 35.65 | 70.4838 | 0 |
| -140.04 | 3.39 | rc11-209 | m13827 | 4400 | 0 | 2.50 | 88.57 | 73.8479 | 0.09 |
| -140.03 | 1.49 | rc11-210 | m112664 | 4420 | 0 | 1.52 | 80.07 | 7.09 |
| -140.03 | 1.49 | rc11-210 | m112664 | 4420 | 0 | 1.52 | 80.07 | 2 |
| -170.08 | 51.06 | rc10-212 | 7231 |
| 152.57 | 18.05 | rc12-129 | 5218 |
| 151.34 | 20.25 | rc12-130 | 5801 |
| 149.17 | 23.26 | rc12-131 | 5804 |
| 146.47 | 26.40 | rc12-132 | 5431 |
| 144.25 | 29.06 | rc12-133 | 5854 |
| 142.47 | 31.13 | rc12-134 | m102287 | 6564 | 0 | 9.14 | 17.51 | 0.7229 | 0 |
| 141.50 | 32.39 | rc12-135 | 6736 |
| Value | Type | Reference | Value | Type | Reference |
|-------|------|-----------|-------|------|-----------|
| 137.54 | 33.14 | rc12-136 | 3673  |
| 134.09 | 33.00 | rc12-138 |       |
| 134.09 | 32.18 | rc12-139 |       |
| 134.12 | 31.50 | rc12-140 |       |
| 134.13 | 30.36 | rc12-141 |       |
| 134.47 | 29.41 | rc12-142 | 4799  |
| 133.17 | 29.46 | rc12-143 | 2350  |
| 132.14 | 29.07 | rc12-144 | 4931  |
| 131.58 | 29.20 | rc12-145 | 5620  |
| 131.25 | 29.33 | rc12-146 | 3922  |
| 134.04 | 30.44 | rc12-151 | 4464  |
| 135.23 | 30.44 | rc12-152 | 4259  |
| 137.04 | 30.36 | rc12-153 | 4486  |
| 137.44 | 30.52 | rc12-154 | 4189  |
| 137.08 | 31.44 | rc12-155 | 4228  |
| 136.35 | 32.28 | rc12-156 | m102288 | 4318 | 0 | 21.00 | 5.49 | 0.7608 | 0 |
| 136.15 | 32.32 | rc12-157 | 4784  |
| 135.36 | 31.54 | rc12-158 | 4449  |
| 137.07 | 31.38 | rc12-159 | 4281  |
| 138.47 | 31.31 | rc12-160 | 4091  |
| 138.17 | 32.15 | rc12-161 | 3782  |
| 138.02 | 33.00 | rc12-162 | 4030  |
| 137.52 | 33.30 | rc12-163 | 4001  |
| 141.53 | 36.27 | rc12-164 | 2319  |
| 143.51 | 37.04 | rc12-165 | 6485  |
| 145.45 | 38.49 | rc12-166 | m107165 | 5243 | 0 | 16.23 | 21.16 | 0 |
| 144.56 | 40.57 | rc12-167 | 4940  |
| 146.04 | 43.00 | rc12-169 | 3862  |
| 148.12 | 42.39 | rc12-170 | 1844  |
| 149.58 | 42.21 | rc12-171 | 7240  |
| 151.37 | 42.07 | rc12-172 | 5097  |
| -157.56 | 20.47 | rc12-173 | 1476  |
| -157.14 | 50.06 | rc12-174 | 4903  |
| -157.14 | 45.43 | rc12-175 | 4929  |
| -157.50 | 43.00 | rc12-176 | m103829 | 5365 | 0 | 14.60 | 3.92 | 0.4413 | 0.09 |
| -158.24 | 53.54 | rc12-178 | 6384  |
| -157.02 | 52.29 | rc12-179 | 4601  |
| -155.52 | 54.30 | rc12-180 | 5517  |
| -158.57 | 47.09 | rc12-181 | 5141  |
| -157.48 | 46.07 | rc12-182 | 5267  |
| -159.02 | 44.00 | rc12-183 | m103830 | 5449 | 0 | 11.56 | 2.09 | 0.3245 | 0 |
| -158.57 | 38.00 | rc12-184 | 5576  |
| -159.00 | 35.16 | rc12-185 | 5929  |
| -158.58 | 32.25 | rc12-186 | 5993  |
| -158.20 | 28.20 | rc12-187 | 5360  |
| -157.56 | 24.16 | rc12-188 | 39.68  |
| -157.52 | 23.53 | rc12-189 | 4431  |
| -158.23 | 22.27 | rc12-190 | 4927  |
| -160.17 | 19.20 | rc12-191 | 4826  |
| -163.00 | 16.57 | rc12-192 | 5773  |
| -165.52 | 16.05 | rc12-193 | 5295  |
| -167.18 | 13.49 | rc12-194 | 5152  |
| -168.42 | 9.41  | rc12-195 | 5222  |
| 178.25 | 7.35  | rc12-199 | 5565  |
| Column 1 | Column 2 | Column 3 | Column 4 |
|---------|----------|----------|----------|
| 174.52  | 1.28     | rc12-200 | 4691     |
| -91.16  | 10.26    | rc12-30  | 3716     |
| -92.39  | 12.60    | rc12-32  | 4034     |
| -93.57  | 14.50    | rc12-33  | 412      |
| 90.02   | 9.08     | rc12-339 |          |
| 90.01   | 12.42    | rc12-340 |          |
| 90.34   | 15.10    | rc12-343 |          |
| 95.08   | 11.12    | rc12-345 |          |
| 94.12   | 8.44     | rc12-348 | 3797     |
| 111.13  | 6.33     | rc12-350 | 1950     |
| 113.35  | 5.02     | rc12-351 | 1229     |
| 114.01  | 6.00     | rc12-352 | 2303     |
| 114.33  | 7.27     | rc12-353 | 525      |
| 114.13  | 7.30     | rc12-354 | 1161     |
| 114.30  | 7.30     | rc12-355 | 1344     |
| 114.13  | 7.30     | rc12-356 | 1390     |
| 120.14  | 8.58     | rc12-357 | 2049     |
| 124.12  | 9.10     | rc12-358 | 1524     |
| 124.08  | 15.06    | rc12-361 | 3528     |
| 126.11  | 23.57    | rc12-365 | 2787     |
| 126.20  | 26.35    | rc12-366 | 1644     |
| 132.15  | 37.35    | rc12-377 | 2226     |
| 134.32  | 36.57    | rc12-378 | 1401     |
| 134.33  | 36.54    | rc12-379 | 1010     |
| 135.42  | 37.15    | rc12-380 | 1622     |
| 133.48  | 38.55    | rc12-381 | 1437     |
| 132.40  | 39.55    | rc12-382 | 3027     |
| 133.07  | 39.43    | rc12-383 | 2677     |
| 133.17  | 40.00    | rc12-384 | 5826     |
| 134.26  | 40.50    | rc12-385 | 3532     |
| 134.36  | 40.48    | rc12-386 | 3497     |
| 135.12  | 40.06    | rc12-387 | 838      |
| 136.08  | 39.07    | rc12-388 | 2496     |
| 136.30  | 38.55    | rc12-389 | 2650     |
| 136.02  | 39.42    | rc12-390 | 1103     |
| 135.43  | 39.59    | rc12-391 | 898      |
| 135.43  | 39.59    | rc12-392 | 1008     |
| 135.39  | 40.46    | rc12-393 | 3048     |
| 136.14  | 40.19    | rc12-394 | 2338     |
| 137.36  | 39.47    | rc12-397 | 2840     |
| 137.31  | 40.31    | rc12-398 | 2664     |
| 144.51  | 40.55    | rc12-400 | 3900     |
| 148.08  | 40.50    | rc12-401 | 5415     |
| 148.08  | 40.50    | m112670  | 5415     |
| 148.08  | 40.50    | m112670  | 5415     |
| 150.44  | 40.11    | rc12-402 | 5332     |
| 152.33  | 36.52    | rc12-403 | 5912     |
| 155.30  | 31.16    | rc12-404 | 5068     |
| 156.53  | 28.19    | rc12-405 | 6190     |
| 154.37  | 25.35    | rc12-406 | 5801     |
| 154.58  | 25.44    | rc12-407 | 5768     |
| 156.36  | 27.30    | rc12-408 | 6128     |
| 159.15  | 30.18    | rc12-409 | 5742     |
| 161.19  | 32.23    | rc12-410 | 5693     |
| 163.43  | 35.48    | rc12-411 | 5550     |
| Value | RCL | Value | RCL | Value | RCL | Value | RCL |
|-------|-----|-------|-----|-------|-----|-------|-----|
| -101.30 | 12.08 | rcl3-127 | 3288 |
| -99.39 | 16.09 | rcl3-128 | 5365 |
| -100.14 | 13.55 | rcl3-129 | 3649 |
| -99.02 | 12.27 | rcl3-130 | 3451 |
| -96.45 | 11.34 | rcl3-131 | 4330 |
| -97.39 | 7.52 | rcl3-132 | 3464 |
| -94.02 | 10.01 | rcl3-133 | 3797 |
| -95.23 | 9.39 | rcl3-134 | 4098 |
| -91.52 | 6.37 | rcl3-135 | 3579 |
| 96.02 | 0.51 | rcl3-136 | 3436 |
| 94.08 | 1.49 | rcl3-137 | 2655 |
| -90.56 | 4.45 | rcl3-138 | 3032 |
| -166.39 | 19.34 | rcl3-139 | 5242 |
| -170.04 | 19.05 | rcl3-140 | 3374 |
| -170.59 | 8.33 | rcl3-141 | 5169 |
| -170.55 | 5.43 | rcl3-142 | 5901 |
| -171.08 | 2.28 | rcl3-143 | 5298 |
| -175.04 | 0.02 | rcl3-144 | 5218 |
| -175.04 | 4.57 | rcl3-145 | 5316 |
| -175.03 | 10.51 | rcl3-146 | 4605 |
| -175.14 | 13.51 | rcl3-147 | 4217 |
| -175.18 | 13.52 | rcl3-148 | 4488 |
| -178.20 | 13.55 | rcl3-149 | 5506 |
| -177.11 | 12.18 | rcl3-150 | 5638 |
| -177.14 | 8.41 | rcl3-151 | 5482 |
| -167.10 | 0.22 | rcl3-152 | 5393 |
| -166.58 | 8.32 | rcl3-153 | 5161 |
| -167.02 | 11.59 | rcl3-154 | 5176 |
| -167.00 | 13.57 | rcl3-155 | 5442 |
| -163.46 | 13.58 | rcl3-156 | 5546 |
| -160.58 | 13.57 | rcl3-157 | 5737 |
| -164.26 | 8.53 | rcl3-158 | 4925 |
| -160.50 | 9.31 | rcl3-159 | 4868 |
| -157.08 | 10.22 | rcl3-160 | 5343 |
| -153.42 | 9.37 | rcl3-161 | 5203 |
| -153.19 | 6.52 | rcl3-162 | 5017 |
| -153.11 | 5.22 | rcl3-163 | 4786 |
| -153.09 | 3.06 | rcl3-164 | ml06001 4846 0 4.18 60.00 56.6600 0 |
| -153.04 | 1.21 | rcl3-165 | 4420 0.09 |
| 157.33 | 39.41 | rcl4-105 ml09505 5630 1- 2 13.71 9.00 7.09 |
| 155.42 | 45.50 | rcl4-106 | 4823 0.09 |
| 147.56 | 36.58 | rcl4-99 ml12679 5652 0 14.77 14.35 7.09 |
| 147.56 | 36.58 | rcl4-99 ml12679 1639 0 14.77 14.35 2 |
| -134.07 | 17.25 | rcl5-13 ml08060 5009 0 14.50 5.34 5 |
| -133.46 | 36.03 | rcl5-7 ml07166 5209 0 14.12 4.87 0 |
| -133.20 | 28.19 | ris120 pg ms05248 4420 17.97 3.20 0 |
| -129.37 | 28.18 | ris123 pg ms05249 4660 16.60 3.00 0 |
| -126.38 | 28.27 | ris125 g ms05250 4550 14.06 4.06 0.7170 0 |
| -123.36 | 28.47 | ris127 g ms05251 4300 12.36 4.34 0 |
| -117.21 | 24.15 | ris3 g ms05246 3935 16.79 4.18 0 |
| -117.29 | 20.19 | ris5 g ms05247 4015 13.48 5.36 0 |
| -157.58 | 16.03 | s68ff1 mh02024 5360 4.24 7.01 0.6100 0 |
| -172.11 | 0.35 | s68pc25 mh02018 5660 4.91 28.03 0.6200 0 |
| -164.50 | 7.40 | s68pc29lamh02019 4960 9.98 12.82 24.4340 0 |
| Gene          | Start Position | End Position | Length | Strand | RNA | Target Position |
|--------------|----------------|--------------|--------|--------|-----|----------------|
| s68pc30lamh02020 | -167.31        | 4767         | 9.32   |        | 38.1810 | 0 |
| s68pc31lamh02021 | -173.05        | 5797         | 6.16   |        | 0.4580 | 0 |
| s68pc32            | -179.32        | 5670         | 6.23   |        | 0.5454 | 0 |
| s68pc35lamh02023   | 173.01         | 4912         | 3.66   |        | 47.58  | 88.2027 |
| sah8pz            | 149.98         | 4308         | 0.00   |        | 88.5000 | 7 |
| scan5pg           | -130.04        | 3268         | 13.92  |        | 7.95   | 0 |
| scan6pg           | -140.35        | 4544         | 16.51  |        | 3.10   | 0 |
| scan7pg           | -140.01        | 5032         | 14.34  |        | 2.97   | 0 |
| scan8pg           | -140.01        | 4792         | 15.91  |        | 2.59   | 0 |
| tr63-31           | -83.58         | 345          | 3.37   |        | 4.81   | 0 |
| tr110g            | -119.10        | 4121         | 16.41  |        | 3.20   | 5 |
| tr111g            | -119.00        | 4025         | 15.72  |        | 4.41   | 0 |
| tr112g            | -118.25        | 4180         | 19.90  |        | 3.42   | 5 |
| tr113g            | -118.26        | 4180         | 18.22  |        | 4.86   | 0 |
| tr114g            | -118.04        | 4112         | 12.02  |        | 5.91   | 0 |
| tr115g            | -96.21         | 4039         | 6.25   |        | 19.88  | 5 |
| tr15pg            | -112.57        | 3929         | 6.82   |        | 12.67  | 0 |
| tr17g             | -113.00        | 3697         | 7.87   |        | 9.84   | 5 |
| tr17pg            | -113.00        | 3697         | 7.62   |        | 9.58   | 0 |
| tr18pg            | -112.57        | 3463         | 8.24   |        | 6.73   | 0 |
| tr19g             | -118.01        | 3992         | 14.17  |        | 6.10   | 0.6370 |
| v15-30            | 85.06          | 1750         | 1.00   |        | 0.009  | 0.00 |
| v17-42            | -81.11         | 1814         | 8.50   |        | 28.38  | 57.0000 |
| v17-43            | -82.37         | 3147         | 6.29   |        | 37.75  | 37.5000 |
| v18-318           | -118.28        | 4191         | 4.38   |        | 61.42  | 79.3300 |
| v18-318           | -118.28        | 4191         | 4.38   |        | 61.42  | 79.3312 |
| v18-318           | -118.28        | 4191         | 4.38   |        | 61.42  | 79.3312 |
| v18-319           | -117.00        | 4160         | 1.89   |        | 51.83  | 71.5804 |
| v18-324           | -107.09        | 3517         | 3.67   |        | 20.54  | 21.5213 |
| v18-328           | -103.05        | 3239         | 3.88   |        | 6.27   | 3.1657 |
| v18-333           | -98.53         | 3341         | 7.41   |        | 7.93   | 0.9592 |
| v18-337           | -96.18         | 3891         | 10.47  |        | 2.76   | 2.3597 |
| v18-338           | -95.43         | 5253         | 0.00   |        | 0.009  | 0.00 |
| v18-349           | -85.43         | 1818         | 55.9669|        | 0.008  | 0.00 |
| v18-350           | -85.16         | 1838         | 53.5156|        | 0.008  | 0.00 |
| v19-101           | 163.11         | 4921         | 8.36   |        | 14.36  | 10.3464 |
| v19-102           | 160.43         | 5017         | 6.45   |        | 1.62   | 4.6500 |
| v19-104           | 158.13         | 5636         | 11.00  |        | 2.53   | 0.6000 |
| v19-105           | 156.40         | 5810         | 11.19  |        | 1.13   | 0.6800 |
| v19-108           | 149.10         | 5976         | 6.24   |        | 0.00   | 0.6700 |
| v19-109           | 142.00         | 4294         | 3.87   |        | 5.59   | 2.7100 |
| v19-112           | 135.52         | 4773         | 6.05   |        | 26.61  | 1.0500 |
| v19-115           | 131.03         | 5821         | 1.89   |        | 12.19  | 0.8200 |
| v19-25            | -81.42         | 2404         | 51.4000|        | 0.09   | 0.09 |
| v20-100           | -174.35        | 5340         | 17.42  |        | 0.92   | 0.8700 |
| v20-101           | -176.57        | 4460         | 17.13  |        | 3.24   | 66.6600 |
| v20-102           | -177.49        | 5216         | 17.21  |        | 1.62   | 0.8700 |
| v20-103           | -177.50        | 3442         | 16.01  |        | 10.36  | 71.5900 |
| v20-104           | -178.10        | 5449         | 15.06  |        | 1.30   | 1.0300 |
| v20-105           | -178.17        | 5336         | 16.27  |        | 5.90   | 1.2500 |
| v20-106           | -178.28        | 5832         | 16.17  |        | 1.77   | 1.2800 |
| v20-107           | -178.52        | 5872         | 15.47  |        | 5.66   | 0.4800 |
| No.  | Value   | Description | Value   | Description |
|------|---------|-------------|---------|-------------|
| 150.50 | 29.51 | v21-74 | m103455 | 6015 | 0 | 14.81 | 2.00 | 0.7600 | 0.9 |
| 147.41 | 30.04 | v21-75 | m103456 | 6119 | 0 | 14.87 | 2.01 | 0.6800 | 0.9 |
| 176.16 | 24.58 | v21-76 | m103453 | 5879 | 0 | 12.69 | 0.80 | 0.8800 | 0.9 |
| 138.23 | 34.02 | v21-80 | m103959 | 4400 | 0 | 14.21 | 0.00 | 0.4900 | 0.0 |
| 136.30 | 29.02 | v21-81 | 4352 | 0 | 136.13 | 27.56 | v21-82 | 4565 | 0 |
| 140.03 | 27.54 | v21-83 | m103960 | 3702 | 0 | 15.11 | 7.12 | 1.5700 | 0.0 |
| 142.30 | 27.58 | v21-85 | 1684 | 0 | 145.03 | 27.53 | v21-86 | 5717 | 0.0 |
| 145.03 | 27.53 | v21-87 | 0.0 | 0.9 |
| 145.39 | 23.35 | v21-89 | 5841 | 0.9 |
| 144.23 | 23.57 | v21-90 | m105974 | 5841 | 0 | 6.38 | 9.76 | 1.0800 | 0 |
| 143.10 | 23.00 | v21-92 | 4283 | 0 |
| 142.28 | 24.37 | v21-93 | 2878 | 0 |
| 136.05 | 23.41 | v21-97 | m103961 | 4868 | 0 | 7.84 | 1.03 | 0.4100 | 0.0 |
| 134.26 | 23.06 | v21-98 | 2135 | 0 |
| 132.14 | 23.32 | v21-99 | m103962 | 5148 | 0 | 15.11 | 2.32 | 0.1600 | 0 |
| 179.44 | 16.08 | v24-100 | m103999 | 5330 | 0 | 12.78 | 0.00 | 0.1200 | 0 |
| 178.53 | 13.10 | v24-101 | 3336 | 0 |
| 170.55 | 4.51 | v24-104 | m104000 | 4501 | 0 | 8.12 | 24.18 | 60.6400 | 0 |
| 165.19 | 2.04 | v24-107 | m102216 | 4160 | 0 | 9.65 | 22.39 | 49.9044 | 0 |
| 162.12 | 1.13 | v24-108 | m102219 | 4113 | 0 | 8.09 | 22.16 | 61.9300 | 0 |
| 158.48 | 0.26 | v24-109 | m12705 | 2367 | 50 | 9.78 | 11.74 | 2.09 |
| 158.48 | 0.26 | v24-109 | m104001 | 2367 | 0 | 8.43 | 11.83 | 72.9900 | 0 |
| 156.42 | 2.21 | v24-110 | m104002 | 2613 | 0 | 10.43 | 11.70 | 68.2600 | 0 |
| 153.22 | 7.56 | v24-112 | m104003 | 4964 | 0 | 12.60 | 3.92 | 0.9700 | 0 |
| 152.05 | 11.19 | v24-113 | m104004 | 5861 | 0 | 12.10 | 3.23 | 0.2500 | 0 |
| 150.33 | 14.42 | v24-114 | m104005 | 5993 | 0 | 9.57 | 1.05 | 0.1600 | 0 |
| 149.09 | 17.55 | v24-115 | m104006 | 5544 | 0 | 7.78 | 2.00 | 0.0800 | 0 |
| 142.22 | 18.36 | v24-117 | m104007 | 3706 | 0 | 3.72 | 11.20 | 11.4200 | 0 |
| 138.44 | 18.42 | v24-118 | m104008 | 5123 | 0 | 6.16 | 25.01 | 0.1600 | 0 |
| 135.01 | 18.39 | v24-119 | m104009 | 5630 | 0 | 6.32 | 0.41 | 0.1600 | 0 |
| 128.23 | 18.30 | v24-121 | m104010 | 5431 | 0 | 11.17 | 1.05 | 0.7300 | 0 |
| 125.28 | 18.32 | v24-122 | m104011 | 4870 | 0 | 10.86 | 1.60 | 0.2400 | 0 |
| 119.50 | 14.14 | v24-126 | 2518 | 0 |
| 120.04 | 18.11 | v24-128 | 3189 | 0 |
| 120.31 | 7.21 | v24-135 | 4276 | 0 |
| 132.26 | 3.31 | v24-139 | m104012 | 3350 | 0 | 9.86 | 13.42 | 45.5800 | 0 |
| 135.33 | 3.04 | v24-140 | 4464 | 0 |
| 138.28 | 2.52 | v24-141 | m104013 | 4383 | 0 | 10.15 | 6.95 | 1.0800 | 0 |
| 141.18 | 2.04 | v24-143 | m104014 | 3191 | 0 | 12.62 | 10.26 | 38.0300 | 0 |
| 144.53 | 1.50 | v24-146 | m104015 | 4526 | 0 | 11.15 | 6.00 | 1.1600 | 0 |
| 151.25 | 10.20 | v24-147 | m104016 | 4918 | 0 | 9.17 | 6.85 | 0.2400 | 0 |
| -90.37 | 6.19 | v24-38 | 3647 | 0 |
| -93.34 | 4.53 | v24-39 | 3413 | 0 |
| -97.08 | 3.04 | v24-40 | m103978 | 3204 | 0 | 2.41 | 53.56 | 66.0700 | 0 |
| -105.09 | 1.40 | v24-46 | m103979 | 3574 | 0 | 1.26 | 72.00 | 57.1200 | 0 |
| -106.59 | 1.43 | v24-47 | m103980 | 3652 | 0 | 0.06 | 80.79 | 61.3500 | 0 |
| -109.20 | 1.43 | v24-48 | 3720 | 0 |
| -112.44 | 0.49 | v24-49 | m103981 | 3878 | 0 | 0.86 | 77.60 | 61.2500 | 0 |
| -114.32 | 1.48 | v24-50 | 3856 | 0 |
| -120.20 | 1.40 | v24-51 | m103982 | 4409 | 0 | 3.26 | 48.30 | 47.3900 | 0 |
| -124.49 | 1.54 | v24-52b | m103983 | 4702 | 0 | 0.57 | 88.80 | 17.5900 | 0 |
| Value   | Description                          | Unit | Value   | Description                          | Unit |
|---------|---------------------------------------|------|---------|---------------------------------------|------|
| -170.05 | 50.23 y70230p                         |      | moo3259 | 5344                                  |      |
| -170.05 | 50.23 y70230p                         |      | moo2329 | 4908                                  |      |
| -163.00 | 52.19 y70232p                         |      | moo3260 | 4019                                  |      |
| -163.00 | 52.19 y70232p                         |      | moo3260 | 4019                                  |      |
| -146.24 | 55.60 y70239p                         |      | moo3260 | 4019                                  |      |
| -146.24 | 55.60 y70239p                         |      | moo3260 | 4019                                  |      |
| -141.04 | 57.10 y70241p                         |      | moo3261 | 3384                                  |      |
| -141.04 | 57.10 y70241p                         |      | moo3261 | 3384                                  |      |
| -143.40 | 59.05 y70451                          |      | moo3555 | 3650                                  |      |
| -143.40 | 59.05 y70451                          |      | moo3555 | 3650                                  |      |
| -143.42 | 58.55 y70452                          |      | moo3560 | 3511                                  |      |
| -143.42 | 58.55 y70452                          |      | moo3560 | 3511                                  |      |
| -140.41 | 56.05 y70454                          |      | moo3560 | 3511                                  |      |
| -140.41 | 56.05 y70454                          |      | moo3560 | 3511                                  |      |
| -139.15 | 50.23 y70459                          |      | moo3556 | 3774                                  |      |
| -139.15 | 50.23 y70459                          |      | moo3556 | 3774                                  |      |
| -139.12 | 51.38 y70460                          |      | moo3558 | 3707                                  |      |
| -139.12 | 51.38 y70460                          |      | moo3558 | 3707                                  |      |
| -136.15 | 51.09 y70461                          |      | moo3575 | 3575                                  |      |
| -136.15 | 51.09 y70461                          |      | moo3575 | 3575                                  |      |
| -120.03 | 34.16 y7110117                         |      | moo4670 | 570                                   | 15-22|
| -120.03 | 34.16 y7110117                         |      | moo4670 | 570                                   | 15-22|
| -84.58  | 6.53 y7131                            |      | moo7277 | 1824                                  |      |
| -85.09  | 7.10 y7132                            |      | moo7278 | 2164                                  |      |
| -85.30  | 7.03 y7133                            |      | moo7279 | 2551                                  |      |
| -85.30  | 7.03 y7133                            |      | moo7279 | 2551                                  |      |
| -84.58  | 5.48 y7134                            |      | moo7280 | 2628                                  |      |
| -84.56  | 5.55 y7135                            |      | moo7281 | 2363                                  |      |
| -85.22  | 6.23 y7136                            |      | moo7282 | 1945                                  |      |
| -85.35  | 6.33 y7137                            |      | moo7283 | 1631                                  |      |
| -102.37 | 6.08 y71990p                          |      | moo4789 | 3295                                  | 5-10 |
| -106.19 | 6.45 y71993p                          |      | moo4790 | 3521                                  | 5-10 |
| -106.17 | 6.39 y71994p                          |      | moo4791 | 3687                                  | 5-10 |
| -116.60 | 29.13 y7323mg1                        |      | moo8946 | 3957                                  |      |
| -114.35 | 24.35 y7324mg1                        |      | moo1012 | 4133                                  |      |
| -114.35 | 24.35 y7324mg1                        |      | moo8939 | 4138                                  |      |
| -104.50 | 14.15 y7325mg                         |      | moo8932 | 3395                                  |      |
| -119.02 | 25.24 y74216mg                        |      | moo9778 | 3670                                  |      |
| -116.06 | 24.42 y74218mg                        |      | moo9773 | 2795                                  |      |
| -112.25 | 23.44 y74222mg                        |      | moo9761 | 3054                                  |      |
| -113.57 | 20.15 y74231mg1                       |      | moo9788 | 3590                                  |      |
| -124.28 | 22.34 y74234mg4                       |      | moo9789 | 3910                                  |      |
| -145.06 | 20.11 y74239gct                       |      | moo9790 | 5320                                  |      |
| -109.31 | 17.52 zapg2                           |      | ms05267 | 3640                                  |      |
| -135.57 | 31.10 zts742                         |      | ms06743 | 4672                                  |      |
| -134.58 | 31.06 zts743                         |      | ms06726 | 4569                                  |      |
| -133.00 | 31.18 zts746                         |      | ms06718 | 4569                                  |      |
| -133.03 | 31.23 zts746                         |      | ms06734 | 4526                                  |      |
| -144.55 | 28.40 ztsvi139gms                      |      | ms05261 | 5048                                  |      |
| -143.17 | 30.12 ztsvi140gms                      |      | ms05262 | 5050                                  |      |
| -137.41 | 31.01 ztsvi141gms                      |      | ms05263 | 4613                                  |      |
| -135.57 | 31.10 ztsvi142gms                      |      | ms05264 | 4672                                  |      |
| -134.58 | 31.06 ztsvi143gms                      |      | ms05265 | 4569                                  |      |
| -133.00 | 31.18 ztsvi144gms                      |      | ms05266 | 4549                                  |      |
| LONG   | LAT   | CORE  | ACCESS ID | DEPTH | SAMP QTZ | OPAL % | CACO3 % | SOURCE |
|--------|-------|-------|-----------|-------|----------|--------|---------|--------|
| -176.49 | -15.15 | 7tow105 | ts08930   | 2163  | 0        | 2.32   | 15.91   | 9      |
| -176.46 | -20.24 | 7tow72  | ts08929   | 2730  | 6        | 2.14   |         |        |
| -107.47 | -8.27  | amph19  | dso5448   | 3090  | 18-23    | 76.3648 |         |        |
| -107.26 | -8.29  | amph21  | dso5449   | 3120  | 17-23    | 0.8063 |         |        |
| -106.54 | -8.42  | amph23  | dso5450   | 18-23  | 84.3145  |        |         |        |
| -105.53 | -9.03  | amph25  | dso5452   | 3660  | 7-12     | 82.6114 |         |        |
| -110.52 | -10.33 | amph27  | dlo5592   | 3090  | 5-10     | 77.3472 |         |        |
| -111.09 | -18.31 | amph30  | dso5453   | 15-20  | 88.2087  |        |         |        |
| -112.11 | -18.28 | amph31  | dso5454   | 3160  | 17-22    | 87.2309 |         |        |
| -114.57 | -18.24 | amph32  | dso5455   | 3075  | 19-24    | 47.8610 |         |        |
| -114.56 | -18.20 | amph33  | dso5456   | 3220  | 17-22    | 54.0185 |         |        |
| -176.45 | -18.35 | antp226 | ts08636   | 2472  | 0        | 2.32   | 34.61   | 9      |
| -175.54 | -17.09 | antp231 | ts08637   | 2238  | 0        | 2.06   | 35.10   | 9      |
| -78.38  | -36.15 | e10-12  | mel2636   | 4113  | 1-2      | 19.50  | 2.00    | 11     |
| -78.38  | -36.15 | e10-12  | mel2636   | 4113  | 1-2      | 19.50  | 2.00    | 11     |
| -74.59  | -61.05 | e10-18  | me12634   | 4777  | 0-1      | 16.12  | 1.00    | 11     |
| -82.45  | -55.57 | e10-2   | me12634   | 4777  | 0-1      | 16.12  | 1.00    | 11     |
| -82.50  | -57.11 | e10-3   | me12635   | 4695  | 4-5      | 20.30  | 2.50    | 11     |
| -78.53  | -56.58 | e10-30  | me12635   | 4695  | 4-5      | 20.30  | 2.50    | 11     |
| -82.54  | -61.01 | e10-6   | me12634   | 4777  | 0-1      | 16.12  | 1.00    | 11     |
| -82.54  | -61.01 | e10-6   | me12634   | 4777  | 0-1      | 16.12  | 1.00    | 11     |
| -83.18  | -62.14 | e10-7   | me12635   | 4695  | 4-5      | 20.30  | 2.50    | 11     |
| -83.18  | -62.14 | e10-7   | me12635   | 4695  | 4-5      | 20.30  | 2.50    | 11     |
| -114.42 | -54.54 | e11-1   | me12634   | 4777  | 0-1      | 16.12  | 1.00    | 11     |
| -114.28 | -64.51 | e11-11  | me12554   | 4704  | 0-2      | 7.40   | 19.00   | 11.03  |
| -115.05 | -65.52 | e11-12  | me12554   | 4704  | 0-2      | 7.40   | 19.00   | 11     |
| -115.01 | -65.49 | e11-13  | me12554   | 4704  | 0-2      | 7.40   | 19.00   | 11     |
| -114.44 | -68.17 | e11-15  | me12637   | 4240  | 0-1      | 5.35   | 2.40    | 11     |
| -114.44 | -68.17 | e11-15  | me12637   | 4240  | 0-1      | 5.35   | 2.40    | 11     |
| -110.46 | -64.51 | e11-17  | me12555   | 3458  | 0-2      | 17.99  | 3.15    | 11     |
| -110.46 | -64.51 | e11-17  | me12555   | 3458  | 0-2      | 17.99  | 3.15    | 11     |
| -115.06 | -56.04 | e11-2   | me12638   | 4258  | 0-1      | 18.94  | 3.25    | 11     |
| -90.50  | -67.56 | e11-22  | me12638   | 4258  | 0-1      | 18.94  | 3.25    | 11     |
| -89.39  | -67.09 | e11-23  | me12638   | 4258  | 0-1      | 18.94  | 3.25    | 11     |
| -90.03  | -65.53 | e11-24  | me12639   | 4631  | 0-1      | 19.50  | 2.60    | 11     |
| -86.36  | -63.30 | e11-26  | me12639   | 4631  | 0-1      | 19.50  | 2.60    | 11     |
| -115.14 | -56.54 | e11-3   | me12551   | 4004  | 0-2      | 5.75   | 47.10   | 11.03  |
| -115.14 | -56.54 | e11-3   | me12551   | 4004  | 0-2      | 5.75   | 47.10   | 11.09  |
| -115.13 | -57.41 | e11-4   | me12552   | 5005  | 0-2      | 0.00   | 21.20   | 11.03  |
| -114.43 | -58.57 | e11-5   | me12552   | 5005  | 0-2      | 0.00   | 21.20   | 11     |
| -114.56 | -59.54 | e11-6   | me12552   | 5005  | 0-2      | 0.00   | 21.20   | 11     |
| -114.47 | -60.55 | e11-7   | me12553   | 4986  | 0-2      | 2.26   | 23.20   | 11.03  |
| -115.10 | -61.57 | e11-8   | me12553   | 4986  | 0-2      | 2.26   | 23.20   | 11     |
| -115.04 | -62.50 | e11-9   | me12553   | 4986  | 0-2      | 2.26   | 23.20   | 11     |
| -29.48  | -61.09 | e12-11  | me12553   | 4986  | 0-2      | 2.26   | 23.20   | 11     |
|          |          |          |          |
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| -28.35  | -60.34   | e12-14   | 0.03     |
| -31.06  | -60.52   | e12-15   | 0.03     |
| -31.16  | -59.23   | e12-17   | 0.03     |
| -34.01  | -59.02   | e12-19   | 0.03     |
| -37.01  | -59.05   | e12-20   | 0.03     |
| -54.25  | -60.31   | e12-26   | 0.03     |
| -107.03 | -65.40   | e13-14   | 0.03     |
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| -130.16 | -65.37   | e13-18   | 0.03     |
| -90.03  | -56.05   | e13-2    | 0.03     |
| -129.47 | -62.01   | e13-20   | 0.03     |
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| -89.29  | -57.00   | e13-3    | 0.03     |
| -90.59  | -58.49   | e13-5    | 0.03     |
| -89.28  | -59.36   | e13-6    | 0.03     |
| -89.41  | -61.14   | e13-7    | 0.03     |
| -90.08  | -61.58   | e13-8    | 0.03     |
| -89.40  | -63.06   | e13-9    | 0.03     |
| -125.09 | -59.57   | e14-14   | 0.03     |
| -159.55 | -51.55   | e14-2    | 0.03     |
| -159.59 | -53.54   | e14-3    | 0.03     |
| -159.52 | -54.55   | e14-4    | 0.03     |
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| -160.17 | -59.40   | e14-8    | 0.03     |
| -95.00  | -61.58   | e15-1    | 0.03     |
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| -149.49 | 56.01    | e15-28   | 0.03     |
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| -104.58 | -61.04   | e15-8    | 0.03     |
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| -110.46 | -67.54   | e17-18   | 0.03     |
| -106.48 | -68.04   | e17-19   | 0.03     |
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| -95.07  | -64.47   | e17-26   | 0.03     |
| -95.07  | -64.47   | e17-26   | 0.03     |
| -94.58  | -64.18   | e17-27   | 0.03     |
| -95.06  | -63.00   | e17-28   | 0.03     |
| -94.42  | 62.05    | e17-29   | 0.03     |
| -135.17 | -62.01   | e17-8    | 0.03     |
| -99.19  | -58.00   | e18-4    | 0.03     |
| -104.54 | -62.05   | e19-5    | 0.03     |
| -78.35 -41.20 e25-5 | mel12654 3746 | 0- 1 7.50 3.60 | 11 |
| -94.54 -50.06 e25-7 | mel12566 4542 | 0- 2 5.75 14.10 | 11 |
| -94.54 -50.06 e25-7 | mel12566 4542 | 0- 2 5.75 14.10 | 11 |
| -100.02 -50.02 e25-8 | mel12567 4049 | 0- 2 3.90 41.65 | 11 |
| -100.02 -50.02 e25-8 | mel12567 4049 | 0- 2 3.90 41.65 | 11 |
| -105.07 -50.04 e25-9 | mel12568 3822 | 0- 2 5.99 5.20 | 11 |
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| 176.30 -66.04 e27-3 | 1934 | 0.04 |
| 174.36 -68.03 e27-4 | 1886 | 0.04 |
| -159.49 -68.03 e33-3 | 1940 | 0.04 |
| -120.01 -63.14 e33-16 | 2687 | 0.04 |
| -61.50 -60.03 e4-10 | 3- 4 14.69 3.35 | 11 |
| -87.51 -69.24 e42-10 | mel12658 3019 | 3- 4 14.69 3.35 | 11 |
| -87.51 -69.24 e42-10 | mel12658 3019 | 3- 4 14.69 3.35 | 11 |
| -89.07 -68.59 e42-12 | mel12659 3536 | 3- 4 6.60 2.65 | 11 |
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| -119.44 -64.56 e42-7 | mel12655 4841 | 0- 1 0.00 36.40 | 11 |
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| -92.30 -64.31 e42-8 | mel12656 4615 | 5- 6 10.45 1.70 | 11 |
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| -80.24 -69.59 e42-9 | mel12657 564 | 0- 1 17.15 2.80 | 11 |
| -114.07 -55.05 e45-62 | 2250 | 0.09 |
| -114.26 -47.33 e45-74 | 1900 | 0.09 |
| -114.25 -46.27 e45-77 | 2081 | 0.09 |
| -114.22 -45.03 e45-79 | 2000 | 0.09 |
| -68.35 -60.06 e5-10 | 0.03 |
| -67.50 -59.01 e5-11 | 0.03 |
| -67.55 -62.16 e5-15 | 0.03 |
| -67.53 -62.57 e5-16 | 0.03 |
| -68.10 -63.57 e5-17 | 0.03 |
| -71.21 -63.12 e5-25 | 0.03 |
| -69.14 -57.09 e5-8 | 0.03 |
| -109.59 -60.04 e50-15 | 2335 | 0.09 |
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| -56.32 -57.01 e6-12 | 0.03 |
| -56.02 -58.55 e6-14 | 0.03 |
| -58.56 -59.07 e6-29 | 0.03 |
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| -58.24 -56.15 e6-5 | 0.03 |
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| -48.10 -66.34 e7-12 | 0.03 |
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| -48.53 -53.01 e7-18 | 0.03 |
| -49.10 -55.56 e7-4 | 0.03 |
| -44.49 -58.09 e7-6 | 0.03 |
| -44.45 -58.43 e7-7 | 0.03 |
| -27.27 -54.14 e8-5 | 0.03 |
| -39.56 -49.50 e9-4 | 0.03 |
| -39.52 -46.50 e9-5 | 0.03 |
| -119.50 -19.25 gc2 | 0.07 |
| -119.53 -19.24 gc5 | 0.07 |
| -119.44 -19.24 gc6 | 0.07 |
| Value   | Description             | Unit | Quantity |
|---------|-------------------------|------|----------|
| -116.50 | -18.56 gc8              |      |          |
| 114.58  | -19.30 gc16             |      |          |
| -106.02 | -9.59 k71042610dho5442  | 6-11 |          |
| -110.03 | -10.32 k71042611dho5434 | 5-7  |          |
| -110.02 | -10.44 k71042611dho5440 | 5-10 |          |
| -110.30 | -10.37 k71042612dho5338 | 5-9  |          |
| -110.13 | -10.33 k71042612dho5432 | 5-10 |          |
| -110.27 | -10.23 k71042612dho5435 | 5-10 |          |
| -106.32 | -6.07 k71042615dho5441  | 7-10 |          |
| 158.03  | -11.19 1sdh48           |      |          |
| 163.13  | -6.40 1sdh76            |      |          |
| 145.23  | -9.49 novaa28           |      |          |
| 145.25  | -10.27 novaa29          |      |          |
| 145.30  | -10.15 novaa30          |      |          |
| 145.50  | -12.17 novaa31          |      |          |
| 152.55  | -14.08 novaa32          |      |          |
| 167.23  | -21.41 novaa36          |      |          |
| 172.14  | -21.41 novaa37          |      |          |
| 164.58  | -23.00 novaa40          |      |          |
| 158.13  | -28.12 novaa48          |      |          |
| 158.19  | -28.08 novaa50          |      |          |
| 161.31  | -28.16 novaa53          |      |          |
| 168.59  | -27.37 novaa64          |      |          |
| 176.39  | -12.53 novah20          |      |          |
| 179.19  | -12.34 novah34          |      |          |
| 171.12  | -28.18 novahv15         |      |          |
| 153.15  | -28.24 novahv9          |      |          |
| -107.37 | -7.17 oc7312            |      |          |
| -103.34 | -12.56 oc7313           |      |          |
| -113.44 | -20.42 oc7324           |      |          |
| -106.09 | -23.52 oc7325           |      |          |
| -95.18  | -20.03 oc7336           |      |          |
| -101.04 | -17.52 oc7337           |      |          |
| -102.01 | -18.08 oc7338           |      |          |
| -103.29 | -13.04 oc7343           |      |          |
| 165.02  | -33.30 opr476108tu08655 | 2    |          |
| 153.33  | -31.34 opr476156tu08653 | 3770 |          |
| 159.27  | -33.09 opr476184tu08654 | 3610 |          |
| 166.32  | -33.32 opr476223ty8656  | 2860 |          |
| 166.32  | -33.32 opr476223uo8956  | 2860 |          |
| -172.51 | -46.19 rc-79            |      |          |
| -114.48 | -34.52 rc-890           |      |          |
| -114.48 | -34.52 rc-890           |      |          |
| -146.28 | -4.16 rc10-106          |      |          |
| -162.55 | -11.11 rc10-114         |      |          |
| -162.55 | -11.11 rc10-114         |      |          |
| -163.18 | -10.35 rc10-115         |      |          |
| -165.22 | -6.49 rc10-117          |      |          |
| 157.58  | -14.32 rc10-131         |      |          |
| 151.32  | -15.22 rc10-133         |      |          |
| 153.07  | -13.17 rc10-134         |      |          |
| 153.21  | -12.25 rc10-135         |      |          |
| 154.32  | -10.22 rc10-136         |      |          |
| 154.34  | -4.85 rc10-138          |      |          |
| 177.06 | -14.31 | rc13-38 | t18775 2867 | 0 | 2.34 | 31.36 | 7.09 |
| 177.06 | -14.31 | rc13-38 | t110876 2867 | 0 | 2.08 | 25.58 | 67.8900 | 7 |
| 177.06 | -14.31 | rc13-38 | t18775 2867 | 0 | 2.34 | 31.36 | 7 |
| 177.06 | -14.31 | rc13-38 | t110876 2867 | 0 | 2.08 | 25.58 | 67.8900 | 7 |
| 176.50 | -15.53 | rc13-39 | t18776 2116 | 0 | 2.72 | 9.35 | 9 |
| 176.41 | -17.23 | rc13-40 | t108777 2798 | 0 | 6.49 | 21.20 | 9 |
| -177.10 | -15.40 | rc13-41 | t108778 2221 | 0 | 3.08 | 0.00 | 9 |
| -173.39 | -13.26 | rc13-42 | t108779 4729 | 0 | 3.64 | 23.89 | 9 |
| -167.00 | -8.33 | rc13-45 | t108781 3948 | 0 | 3.43 | 41.19 | 9 |
| -152.53 | -0.09 | rc13-64 | mL07931 4766 | 0 | 0.00 | 0.00 | 36.1200 | 0 |
| -152.51 | -1.54 | rc13-65 | mL07932 4887 | 0 | 0.00 | 0.00 | 40.9300 | 0 |
| -152.38 | -4.48 | rc13-66 | mL07933 5332 | 0 | 0.00 | 0.00 | 0.9400 | 0 |
| -151.45 | -8.24 | rc13-69 | mL07934 5015 | 0 | 0.00 | 0.00 | 0.3700 | 0 |
| -151.11 | -10.23 | rc13-71 | mL07935 5088 | 0 | 0.00 | 0.00 | 0 |
| -124.14 | -19.01 | rc13-81 | mL12676 3751 | 0 | 0.81 | 6.06 | 2 |
| -124.14 | -19.01 | rc13-81 | mL12677 3751 | 10 | 1.50 | 8.56 | 2.09 |
| -124.14 | -19.02 | rc13-81 | mL12676 3751 | 0 | 0.81 | 6.06 | 7 |
| -120.41 | -18.58 | rc13-82 | dlo6023 3555 | 3-8 | 50.2869 |
| -117.33 | -19.02 | rc13-83 | dlo6024 3418 | 4-9 | 90.5953 |
| -114.54 | -18.48 | rc13-84 | dlo6025 3285 | 4-9 | 81.2174 |
| -111.16 | -17.09 | rc13-85 | dlo6026 3349 | 4-9 | 93.1682 |
| -112.32 | -17.29 | rc13-87 | dlo6027 3025 | 7-12 | 81.9213 |
| -115.10 | -18.25 | rc13-88 | dlo6028 3210 | 4-9 | 77.7079 |
| -111.17 | -18.26 | rc13-89 | dlo6029 3340 | 4-9 | 91.5810 |
| -109.26 | -19.00 | rc13-90 | dlo6030 3667 | 5-10 | 89.1803 |
| -106.33 | -19.00 | rc13-91 | dlo6031 3935 | 4-9 | 38.5202 |
| -103.39 | -18.53 | rc13-92 | dlo6032 4122 | 8-13 | 15.4133 |
| -100.55 | -18.47 | rc13-93 | dlo6033 4162 | 6-12 | 29.9866 |
| -98.09 | -18.31 | rc13-94 | dlo6034 4151 | 10-15 | 0.2654 |
| -95.38 | -18.20 | rc13-95 | dlo6035 4268 | 10-15 | 2.8000 |
| -92.53 | -17.58 | rc13-96 | mL08187 4290 | 0-1 | 7.09 | 5.50 | 11 |
| -92.53 | -17.58 | rc13-96 | mL08187 4290 | 0-1 | 7.09 | 5.50 | 11 |
| -86.52 | -16.59 | rc13-98 | mL08038 4437 | 0-2 | 9.74 | 7.20 | 11 |
| -86.52 | -16.59 | rc13-98 | mL08038 4437 | 0-2 | 9.74 | 7.20 | 11 |
| -84.34 | -16.31 | rc13-99 | mL08185 4684 | 0-2 | 10.99 | 6.90 | 11 |
| -84.34 | -16.31 | rc13-99 | mL08185 4684 | 0-2 | 10.99 | 6.90 | 11 |
| -171.41 | -12.15 | rc14-43 | t108780 4872 | 0 | 5.07 | 8.46 | 9 |
| -138.26 | -25.07 | rc15-31 | mL09165 4212 | 1 | 2.05 | 0.00 | 9 |
| -135.24 | -26.47 | rc15-32 | mL09166 4248 | 1 | 2.09 | 0.00 | 9 |
| -129.12 | -27.04 | rc15-37 | mL09167 3860 | 0 | 3.43 | 0.00 | 9 |
| -127.51 | -33.14 | rc15-40 | mL09168 3720 | 1 | 3.22 | 0.00 | 9 |
| -120.05 | -26.56 | rc15-41 | dlo6036 3484 | 5-10 | 84.5314 |
| -117.18 | -25.59 | rc15-42 | dlo6037 3601 | 5-10 | 53.2306 |
| -113.10 | -26.23 | rc15-43 | mL11897 2595 | 0-4 | 0.10 | 0.00 | 11 |
| -113.10 | -26.23 | rc15-43 | mL11897 2595 | 0-4 | 0.10 | 0.00 | 1.3152 | 11 |
| -116.45 | -23.32 | rc15-45 | dlo6039 3200 | 15-22 | 63.0641 |
| -111.06 | -24.51 | rc15-47 | dlo6040 3045 | 5-10 | 89.8841 |
| -101.13 | -26.54 | rc15-49 | dlo6041 3286 | 4-8 | 84.8678 |
| -96.18 | -27.44 | rc15-50 | dlo6042 3722 | 15-20 | 41.5334 |
| -93.54 | -28.11 | rc15-51 | mL11853 3952 | 0-3 | 0.49 | 1.62 | 17.8532 | 11 |
| -93.54 | -28.11 | rc15-51 | mL11853 3952 | 0-3 | 0.49 | 1.62 | 11 |
| -85.59 | -29.14 | rc15-52 | mL08043 3780 | 0-2 | 3.60 | 5.30 | 11.09 |
| -85.59 | -29.14 | rc15-52 | mL08043 3780 | 0-2 | 3.60 | 5.30 | 11 |
| -82.07 | -29.58 | rc15-53 | mL08044 4085 | 0-2 | 5.42 | 6.50 | 11 |
| Value   | Column | Row | Value   | Column | Row | Value   | Column | Row |
|---------|--------|-----|---------|--------|-----|---------|--------|-----|
| -82.07  | 2      | 5   | 5.42    | 0      | 2   | 6.50    | 11     |     |
| -78.13  | 1      | 30  | 0.88    | 0      | 2   | 2.60    | 11     |     |
| -78.13  | 1      | 30  | 0.88    | 0      | 2   | 2.60    | 11     |     |
| -74.56  | 5      | 31  | 8.03    | 0      | 2   | 9.80    | 11     |     |
| -74.56  | 5      | 31  | 8.03    | 0      | 2   | 9.80    | 11     |     |
| -73.27  | 5      | 34  | 14.73   | 0      | 2   | 3.70    | 11     |     |
| -73.27  | 5      | 34  | 14.73   | 0      | 2   | 3.70    | 11     |     |
| -71.12  | 5      | 40  | 4078    | 0      | 2   | 0.09    | 11     |     |
| -77.13  | 5      | 45  | 15.17   | 0      | 2   | 2.03    | 11     |     |
| -77.13  | 5      | 45  | 15.17   | 0      | 2   | 2.03    | 11     |     |
| -77.59  | 5      | 47  | 13.58   | 0      | 2   | 2.85    | 11     |     |
| -77.59  | 5      | 47  | 13.58   | 0      | 2   | 2.85    | 11     |     |
| -76.25  | 5      | 51  | 39.89   | 0      | 2   | 3.22    | 11     |     |
| -76.25  | 5      | 51  | 39.89   | 0      | 2   | 3.22    | 11     |     |
| -80.35  | 5      | 60  | 15.65   | 0      | 1   | 2.80    | 11     |     |
| -80.35  | 5      | 60  | 15.65   | 0      | 1   | 2.80    | 11     |     |
| -71.22  | 5      | 65  | 16.92   | 0      | 2   | 2.67    | 11     |     |
| -71.22  | 5      | 65  | 16.92   | 0      | 2   | 2.67    | 11     |     |
| -66.36  | 5      | 59  | 0.44    | 2      | 21  | 21.96   | 11     |     |
| -66.36  | 5      | 59  | 0.44    | 2      | 21  | 21.96   | 11     |     |
| -62.17  | 5      | 66  | 0.82    | 2      | 16  | 16.41   | 11     |     |
| -62.17  | 5      | 66  | 0.82    | 2      | 16  | 16.41   | 11     |     |
| -141.09 | 5      | 23  | 0.41    | 1      | 3.22 | 11     |     |
| -108.53 | 5      | 29  | 3.85    | 0      | 1   | 3.85    | 11     |     |
| -108.53 | 5      | 29  | 3.85    | 0      | 1   | 3.85    | 11     |     |
| -106.24 | 5      | 36  | 2.02    | 0      | 1   | 2.02    | 11     |     |
| -106.24 | 5      | 36  | 2.02    | 0      | 1   | 2.02    | 11     |     |
| -101.42 | 5      | 48  | 18.70   | 0      | 1   | 4.56    | 11     |     |
| -101.42 | 5      | 48  | 18.70   | 0      | 1   | 4.56    | 11     |     |
| -84.58  | 5      | 51  | 6.90    | 0      | 2   | 16.50   | 11     |     |
| -84.58  | 5      | 51  | 6.90    | 0      | 2   | 16.50   | 11     |     |
| -77.00  | 5      | 52  | 2.86    | 0      | 2   | 21.85   | 11     |     |
| -77.00  | 5      | 52  | 2.86    | 0      | 2   | 21.85   | 11     |     |
| -76.51  | 5      | 47  | 2.60    | 0      | 2   | 14.30   | 11     |     |
| -76.51  | 5      | 47  | 2.60    | 0      | 2   | 14.30   | 11     |     |
| -57.45  | 5      | 56  | 2.04    | 0      | 2   | 33.73   | 11     |     |
| -57.45  | 5      | 56  | 2.04    | 0      | 2   | 33.73   | 11     |     |
| -94.59  | 5      | 46  | 3.03    | 0      | 2   | 4.44    | 11     |     |
| -94.59  | 5      | 46  | 3.03    | 0      | 2   | 4.44    | 11     |     |
| -56.38  | 5      | 60  | 2.87    | 0      | 2   | 25.05   | 11     |     |
| -56.38  | 5      | 60  | 2.87    | 0      | 2   | 25.05   | 11     |     |
| -74.26  | 5      | 58  | 5.44    | 0      | 2   | 16.62   | 11     |     |
| -74.26  | 5      | 58  | 5.44    | 0      | 2   | 16.62   | 11     |     |
| 155.44  | 5      | 58  | 3.09    | 1      | 7   | 17.87   | 11     |     |
| 155.44  | 5      | 58  | 3.09    | 1      | 7   | 17.87   | 11     |     |
| -175.46 | 5      | 44  | 2.12    | 0      | 2   | 20.05   | 11     |     |
| -175.46 | 5      | 44  | 2.12    | 0      | 2   | 20.05   | 11     |     |
| -175.46 | 5      | 44  | 2.12    | 0      | 2   | 20.05   | 11     |     |
| -162.54 | 5      | 48  | 2.20    | 0      | 4    | 14.03   | 11     |     |
| -159.03 | 5      | 47  | 2.42    | 0      | 2   | 14.06   | 11     |     |
| -154.15 | 5      | 46  | 6.37    | 0      | 6   | 11.05   | 11     |     |
| -149.45 | 5      | 45  | 7.44    | 0      | 2   | 11.07   | 11     |     |
| -133.12 | 5      | 41  | 3.12    | 0      | 5   | 6.99    | 11     |     |
| -125.30 | 5      | 39  | 0.00    | 0      | 6   | 2.83    | 11     |     |
| -125.30 | 5      | 39  | 0.00    | 0      | 6   | 2.83    | 11     |     |
| Value 1       | Value 2       | Value 3       | Value 4       | Value 5       | Value 6       |
|--------------|--------------|--------------|--------------|--------------|--------------|
| -125.30      | -39.28       | mll1885 4583 | 0-2          | 2.12         | 0.42         |
| -125.30      | -39.28       | mll1885 4583 | 0-2          | 2.12         | 0.42         |
| -121.55      | -38.00       | mll1886 4583 | 0-2          | 2.70         | 0.19         |
| -121.55      | -38.00       | mll1886 4583 | 0-2          | 2.70         | 0.19         |
| -118.06      | -36.23       | m109141 3900 | 2            | 4.77         | 9.76         |
| -111.54      | -33.25       | m109142 2723 | 2            | 5.13         | 9.66         |
| -111.54      | -33.25       | mll1888 2723 | 0-2          | 1.25         | 0.94         |
| -111.54      | -33.25       | mll1888 2723 | 0-2          | 1.25         | 0.94         |
| -108.30      | -31.33       | m109143 3157 | 4            | 0.39         | 6.20         |
| -102.05      | -27.17       | mlo4868 3074 | 10-15        | 87.2870      | 0.09         |
| -97.11       | -22.38       | mlo4869 3926 | 5-10         | 32.6273      |
| -95.37       | -19.45       | mlo4870 3334 | 5-10         | 92.5390      |
| -94.07       | -16.50       | mlo4871 2737 | 4-9          | 94.9114      |
| -92.35       | -13.28       | mlo8180 3853 | 0-1          | 7.34         | 14.60        |
| -92.35       | -13.28       | mlo8180 3853 | 0-1          | 7.34         | 14.60        |
| -117.36      | -25.34       | dio6019 642  | 0-15         | 0.8198       |
| -118.28      | -25.50       | dio6020 3043 | 3-8          | 83.6549      |
| -119.56      | -23.26       | dio6021 3368 | 2-7          | 84.3527      |
| -120.34      | -26.32       | dio6022 3488 | 6-11         | 85.0490      |
| 179.33       | -44.13       | t108718 931  | 0            | 19.06        | 3.18         |
| 179.34       | -44.13       | t108719 902  | 0            | 19.24        | 3.19         |
| 177.22       | -45.45       | t108720 4314 | 0            | 18.49        | 2.64         |
| -174.34      | -45.08       | m109144 3351 | 0            | 9.99         | 1.10         |
| -172.01      | -42.52       | t18721 1917  | 0            | 17.34        | 3.35         | 53.2277     | 7.09         |
| -172.01      | -42.52       | t110938 1917 | 0            | 13.92        | 2.82         | 7.1910      | 3.09         |
| -172.01      | -42.52       | t110938 1917 | 0            | 13.92        | 2.82         | 53.2300     | 7            |
| -172.01      | -42.52       | t108721 1917 | 0            | 17.34        | 3.35         |
| -168.45      | -39.51       | t108722 4777 | 0            | 7.97         | 0.98         |
| -168.08      | -38.48       | t108723 3146 | 0            | 8.40         | 1.14         |
| -167.03      | -36.43       | t108724 4751 | 0            | 7.94         | 2.52         |
| -165.03      | -33.41       | m109145 5453 | 0            | 11.47        | 2.66         |
| -163.43      | -31.23       | m109146 5376 | 0            | 10.28        | 4.05         |
| -166.47      | -26.26       | m109147 5634 | 0            | 11.03        | 3.84         |
| -168.45      | -24.31       | m109148 5720 | 0            | 12.57        | 3.28         |
| -179.41      | -24.46       | t108725 2153 | 0            | 2.35         | 30.50        |
| -174.40      | -26.34       | t108726 4244 | 0            | 2.95         | 9.96         |
| -172.36      | -28.45       | t108727 2540 | 0            | 5.39         | 1.82         | 9.09         |
| -170.13      | -31.37       | t108728 4125 | 0            | 9.69         | 22.22        |
| -168.44      | -33.14       | t110959 0    0                        | 13.60        | 15.60        |
| -168.44      | -33.14       | t18729 2060 0                        | 13.43        | 12.33        |
| -168.44      | -33.14       | t110959 2060 0                        | 13.60        | 15.60        | 68.5359     | 3.09         |
| -168.44      | -33.14       | t108729 2060 0                        | 13.43        | 12.33        |
| -168.44      | -33.14       | t110959 2060 0                        | 13.60        | 15.60        | 68.5400     |
| -167.54      | -34.01       | t108730 1353 | 0            | 16.84        | 11.06        |
| -166.07      | -36.13       | t108731 1234 | 0            | 14.15        | 5.66         |
| -163.08      | -39.31       | t18732 2836 | 0            | 16.87        | 10.27        | 7.09         |
| -163.08      | -39.31       | t18732 2836 | 0            | 16.87        | 10.27        |
| -163.08      | -39.31       | t110979 2836 5                        | 15.21        | 10.43        | 82.4934     | 3.09         |
| -156.54      | -45.59       | t108733 4603 | 0            | 15.66        | 6.86         |
| -152.48      | -44.47       | t108734 4709 | 0            | 19.53        | 7.12         |
| 148.22       | -45.45       | t108735 4082 | 0            | 19.52        | 14.67        | 9            |
143.47 -44.05 rc9-134 t108736 4570 0 24.96 3.50

79.09 18.00 rc9-77 2905
-73.08 -17.34 rc9-82 m109622 5000 0-1 24.86 4.40
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-73.54 -21.20 rc9-83 m109121 4332 0-1 7.00 2.10
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-72.29 -23.33 rc9-86 m108042 4208 0-2 10.28 10.60
-76.21 -23.05 rc9-87 m108041 4508 2-4 7.93 5.60
-76.21 -23.05 rc9-87 m108041 4508 2-4 7.93 5.60
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-90.58 -21.26 rc9-91 m108049 5110 2-4 6.60 8.40
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159.29 -7.14 s68pc8 mh02013 2172 3.80 18.48 52.5200 0
-102.38 -7.26 scan94pg doo4816 3990 15-20 64.5069
-82.30 -3.15 v15-32 1529 0.009
-82.41 -6.08 v15-33 m108178 4040 0-2 14.94 7.80 11.009
-82.41 -6.08 v15-33 m108178 4040 0-2 14.94 7.80 11
-81.47 -7.36 v15-42 2438 0.009
-84.28 -12.51 v15-46 m108183 4583 0-2 9.55 7.20 11
-84.28 -12.51 v15-46 m108183 4583 0-2 9.55 7.20 11
-73.40 -33.27 v15-53 ml112784 3915 0-2 7.74 2.80 11
-73.40 -33.27 v15-53 ml112784 3915 0-2 7.74 2.80 11.09
-77.45 -34.22 v15-56 m108047 4137 0-3 7.34 9.40 11
-77.45 -34.22 v15-56 m108047 4137 0-3 7.34 9.40 11
-74.25 -38.07 v15-62 ml11873 2316 0-3 10.52 2.90 11
-74.25 -38.07 v15-62 ml11873 2316 0-3 10.52 2.90 11
171.30 -46.42 v16-122 t111135 1265 0 23.92 4.07 43.4200 7.09
171.30 -46.42 v16-122 t111135 1265 0 23.92 4.07 43.4200 7.09
-163.19 -54.30 v16-127 m109122 4471 0 13.68 4.63 9
-142.53 -59.22 v16-129 m109123 3651 0 0.54 19.86 9
-117.24 -59.19 v16-131 m109124 5029 0 2.85 33.00 9
-117.24 -59.20 v16-131 m11876 5029 0-3 1.90 74.10 11
-117.24 -59.20 v16-131 m11876 5029 0-3 1.90 74.10 11
-95.03 -61.56 v16-133 m11877 5062 0-2 18.47 3.94 11
| Value   | Column | Row | Description |
|---------|--------|-----|-------------|
| 153.34  | -15.27 | v24-163 | t108697 4656 0 11.82 6.74 9 |
| 153.58  | -13.52 | v24-164 | t108698 4526 0 16.00 3.38 9 |
| 152.21  | -15.21 | v24-165 | t108699 4063 0 13.91 4.20 9 |
| 150.47  | -16.31 | v24-166 | t111206 781 5 6.36 11.21 10.8950 3 |
| 150.47  | -16.31 | v24-166 | t108700 781 0 4.14 3.23 9 |
| 148.03  | -15.71 | v24-167 | t108701 1143 0 7.81 2.30 9 |
| 146.52  | -16.20 | v24-168 | t108702 1785 0 14.74 3.91 9 |
| 148.01  | -14.13 | v24-169 | t108703 2056 0 1.86 0.13 9 |
| 146.53  | -13.31 | v24-170 | t108704 2243 0 14.92 9.62 9 |
| 145.51  | -14.18 | v24-171 | t108705 2714 0 19.31 1.85 9 |
| 146.49  | -14.41 | v24-172 | t108706 1690 0 16.56 10.17 9 |
| 148.06  | -11.46 | v24-173 | t108707 3360 0 15.50 4.92 9 |
| 150.52  | -11.07 | v24-174 | t108708 1004 0 9.04 13.60 9 |
| 150.18  | -11.25 | v24-175 | t108709 2618 0 12.72 14.39 9 |
| 150.49  | -12.14 | v24-176 | t108710 4422 0 12.92 3.82 9 |
| 149.40  | -13.12 | v24-177 | t108711 4535 0 18.65 2.79 9 |
| 148.50  | -14.06 | v24-178 | t108712 3997 0 11.52 9.26 9 |
| 148.47  | -15.49 | v24-179 | t108713 1053 0 6.14 4.76 9 |
| 149.00  | -18.30 | v24-181 | t108714 1099 0 13.35 4.36 9 |
| 147.30  | -17.31 | v24-182 | t108715 1369 0 13.71 5.73 9 |
| 146.15  | -15.20 | v24-183 | t108716 2215 0 27.29 6.57 9 |
| 146.12  | -12.52 | v24-184 | t108717 2992 0 14.75 8.74 9 |
| 179.29  | -0.57 | v28-203 | 3243 0.09 |
| 167.46  | -8.24 | v28-229 | t111226 3669 0 2.80 16.48 60.6100 7 |
| 167.46  | -8.24 | v28-229 | t111226 3669 0 2.80 16.48 8.3900 3.09 |
| 166.45  | -5.30 | v28-230 | t112706 2992 0 3.81 30.34 80.4241 2.09 |
| 160.29  | -5.27 | v28-235 | t111247 1740 0 3.52 21.94 9.6950 3 |
| 160.29  | -5.27 | v28-235 | t111247 1746 0 3.52 21.94 44.9400 7.09 |
| -160.29 | -1.01 | v28-238 | ml2228 3120 0 4.17 27.03 72.5499 7.09 |
| 166.45  | -5.30 | v28-239 | ml22707 2992 25 4.49 25.88 80.7933 2 |
| -82.26  | -0.05 | y69103p | m08014 1808 1-3 3.72 22.60 30.5277 11 |
| -82.26  | -0.05 | y69103p | m08014 1808 1-3 3.72 22.60 11 |
| -81.31  | -2.18 | y69104mg | m08015 3892 0-5 10.85 13.90 0.5740 9 |
| -81.31  | -2.18 | y69104mg | m08015 3892 0-5 10.85 13.90 11 |
| -91.51  | -1.01 | y6980mg | m08193 3408 0-4 1.60 65.90 18.4575 11 |
| -91.51  | -1.01 | y6980mg | m08193 3408 0-4 1.60 65.90 9.11 |
| 82.05  | -10.14 | y7127p | m08034 4569 2-4 0.4957 11 |
| -85.56  | -1.39 | y71312 | zuo6849 2584 0-1 58.3996 11 |
| -85.36  | -1.12 | y71316 | zuo6903 2227 0-1 67.3376 11 |
| -85.01  | -1.06 | y71324 | zuo6947 2099 0-1 51.5968 11 |
| -85.07  | -0.59 | y71325 | zuo6998 2395 0-1 56.8759 11 |
| -85.42  | -0.32 | y71331 | zuo7065 2840 0-1 83.5322 11 |
| -77.34  | -16.26 | y71612p | m08036 2734 2-4 11.97 7.90 2.8512 11.09 |
| -77.34  | -16.26 | y71612p | m08036 2734 2-4 11.97 7.90 11 |
| -75.47  | -17.40 | y716162 | m08037 4625 1-3 8.94 8.80 0.4165 11 |
| -75.47  | -17.40 | y716162 | m08037 4625 1-3 8.94 8.80 11 |
| -74.21  | -16.56 | y71618g2 | m09619 7280 1-2 24.86 4.40 11 |
| -74.21  | -16.56 | y71618g2 | m09619 7280 1-2 24.86 4.40 11 |
| -76.19  | -15.16 | y71624p | zoo4829 4899 13-14 69.1608 11 |
| -79.07  | -14.37 | y7164p | m08035 4518 3-4 13.42 9.30 11 |
| -79.07  | -14.37 | y7164p | m08035 4518 3-4 13.42 9.30 0.3849 11 |
| -82.05  | -10.14 | y71727p | m08034 4569 2-4 17.35 6.70 11 |
| -82.05  | -10.14 | y71727p | m08034 4569 2-4 17.35 6.70 11 |
| Date       | Location | Code | Age (Ma) | Depth (m) | C14 (ppm) | Ratio | C14 Age (Ma) | Ratio | Depth (m) |
|------------|----------|------|----------|-----------|-----------|-------|--------------|-------|-----------|
| -104.52    | -5.57    | y799l | 1.47     | 47.50     | 46.8307   | 11    |              |       |           |
| -104.52    | -5.57    | y799l | 1.47     | 47.50     |           | 11    |              |       |           |
| 161.37     | -33.23   | z21081| 22.48    | 4.08      | 78.1963   | 7.09  |              |       |           |
Appendix III: Organic Carbon Concentration, Age and Depth to Stratigraphic Marker
The following is a list of the table headings and their definitions:

- **ORG C %** = organic carbon concentration.
- **AGE** = age of stratigraphic marker (in thousands of years).
- **DEPTH** = depth to that stratigraphic marker (in centimeters).

The core identification codes ending with >* signify that the DEPTH is a minimum, due to possible hiatuses.
## INDIAN OCEAN

| CORE ID | ORG C ID | AGE (Ka) | DEPTH (cm) | SOURCE |
|---------|----------|----------|------------|--------|
| al5558  | 18       | 98       | 1.1        |
| arb-52  | 12.3     | 35       | 0.2        |
| arb-52  | 8.2      | 15       | 0.2        |
| arb-52  | 17.5     | 55       | 0.2        |
| arb-54  | 7.3      | 45       | 0.2        |
| arb-54  | 4.3      | 15       | 0.2        |
| arb-54  | 29.9     | 85       | 0.2        |
| e4527   | 18       | 30       | 1.1        |
| e4528   | 18       | 31       | 1.1        |
| e4811   | 18       | 32       | 1.1        |
| e4822   | 18       | 82       | 1.1        |
| e4823   | 18       | 32       | 1.1        |
| e4827   | 18       | 62       | 1.1        |
| e483    | 18       | 22       | 1.1        |
| md73025 | 17.2     | 327      | 0.08       |
| rcl11-101 | 0.42  | 18       | 84         | 1.0001 |
| rcl11-120 | 0.41  | 18       | 80         | 1.1001 |
| rcl11-121 | 0.32  | 18       | 50         | 1.0001 |
| rcl11-145 | 0.46  | 18       | 50         | 1.0001 |
| rcl11-147 | 0.75  | 18       | 80         | 1.1001 |
| rcl12-336 | 0.46  | 18       | 100        | 1.3001 |
| rcl14-09 | 18       | 70       | 0.1        |
| rcl14-09 | 18       | 100      | 0.3        |
| rcl14-11 | 18       | 80       | 1.3        |
| rcl14-12 | 0.46     | 18       | 100        | 1.3001 |
| rcl14-145 | 0.32  | 18       | 35         | 1.1001 |
| rcl14-147 | 0.46  | 18       | 40         | 1.1001 |
| rcl17-113 | 0.32  | 18       | 30         | 0.1     |
| rcl17-69 | 18       | 50       | 1.1        |
| rcl17-73 | 18       | 20       | 1.1        |
| rcl17-98 | 18       | 53       | 0.1        |
| rc8-39  | 0.42     | 18       | 40         | 1.3001 |
| rc8-39  | 0.42     | 18       | 90         | 1.1001 |
| rc8-43  | 18       | 40       | 1.3        |
| rc8-52  | 0.4      | 18       | 60         | 1.1001 |
| rc9-150 | 18       | 60       | 1.1        |
| rc9-160 | 1.14     | 18       | 170        | 1.1001 |
| rc9-162 | 0.26     | 18       | 50         | 1.1001 |
| rc9-162 | 0.26     | 18       | 40         | 1.1001 |
| vl4-101a| 18       | 70       | 1.1        |
| vl4-102 | 18       | 40       | 1.1        |
| vl4-77  | 18       | 29       | 0.1        |
| vl4-81  | 18       | 35       | 1.1        |
| Code   | Value | Unit | Code   | Value | Unit |
|--------|-------|------|--------|-------|------|
| V16-65 | 18    | 40   | V17-42 | 18    | 52   |
| V17-43 | 18    | 40   | V17-44 | 18    | 40   |
| V18-337| 18    | 220  | V19-178| 18    | 40   |
| V19-185| 18    | 30   | V19-188| 18    | 50   |
| V19-201| 18    | 70   | V19-202| 18    | 30   |
| V19-204| 18    | 20   | V19-25 | 18    | 55   |
| V19-27 | 18    | 30   | V19-28 | 18    | 130  |
| V19-28 | 18    | 130  | V19-29 | 18    | 56   |
| V19-30 | 18    | 100  | V19-41 | 18    | 30   |
| V19-64 | 18    | 13   | V20-170| 18    | 20   |
| V20-175| 18    | 20   |        |       |      |
| V20-190|       | 0.61 | V21-214| 18    | 63   |
| V21-30 | 18    | 250  | V21-33 | 18    | 45   |
| V22-203| 18    | 180  | V29-29 | 18    | 80   |
| V29-30 | 18    | 80   | V29-45 |       | 0.28 |
| V29-48 | 18    | 30   | V29-49 | 18    | 120  |
| V29-87 | 18    | 20   | V29-88 | 18    | 120  |
| V29-90 | 18    | 60   | V34-53 | 19    | 20   |
| V34-88 | 18    | 98.5 | V6971p | 18    | 140  |
| V6973p | 18    | 130  | V71612p| 18    | 24   |
| CORE ID | ORG C | AGE (Ka) | DEPTH (cm) | SOURCE |
|---------|-------|----------|------------|--------|
| a15-63  | 11.4  | 74       | 0.5        |        |
| a15-64  | 18    | 750      | 1.6        |        |
| a15-65  | 18    | 126      | 1.6        |        |
| a16-424 | 18    | 75       | 1.6        |        |
| a16-45  | 18    | 171      | 1.6        |        |
| a16-46  | 18    | 109      | 1.6        |        |
| a16-461 | 6.4   | 37       | 1.5        |        |
| a16-461 | 18    | 100      | 1.6        |        |
| a16-713 | 18    | 80       | 1.6        |        |
| a16-714 | 18    | 100      | 1.6        |        |
| a17-21  | 18    | 40       | 1.6        |        |
| a17-22  | 18    | 60       | 1.6        |        |
| a17-26  | 18    | 50       | 1.6        |        |
| a17-915 | 18    | 138      | 1.6        |        |
| a17-94  | 18    | 40       | 1.6        |        |
| a18-016 | 18    | 70       | 1.6        |        |
| a18-032 | 18    | 30       | 1.6        |        |
| a18-039 | 18    | 30       | 1.6        |        |
| a18-047 | 18    | 312      | 0.6        |        |
| a18-048 | 18    | 500      | 1.6        |        |
| a18-056 | 18    | 100      | 1.6        |        |
| a18-072 | 18    | 40       | 1.6        |        |
| a18-073 | 18    | 38       | 1.6        |        |
| a18-074 | 18    | 50       | 1.6        |        |
| a18-09  | 18    | 60       | 0.6        |        |
| ads     | 1.33  |          | 0.004      |        |
| ber5    | 0.15  |          | 0.001      |        |
| ber6    | 0.15  |          | 0.001      |        |
| ber7    | 0.22  |          | 0.001      |        |
| cl      | 1.24  |          | 0.001      |        |
| dl      | 0.42  |          | 0.001      |        |
| demera-e| 0.30  |          | 0.002      |        |
| dos1    | 1.00  |          | 0.004      |        |
| dos2    | 1.30  |          | 0.004      |        |
| ds1     | 1.90  |          | 0.004      |        |
| dsdp502 | 0.41  | 690      | 1225       | 0.0002 |
| dwd     | 1.21  |          | 0.004      |        |
| e3      | 0.52  |          | 0.001      |        |
| en66-10g| 1.03  | 14       | 26.5       | 0.06   |
| fl      | 1.45  |          | 0.005      |        |
| fb1     | 0.43  |          | 0.005      |        |
| fb2     | 0.23  |          | 0.005      |        |
| fb3     | 0.96  |          | 0.005      |        |
| fc1     | 0.19  |          | 0.005      |        |
| fc2     | 0.09  |          | 0.005      |        |
| fsl1    | 1.11  |          | 0.005      |        |
| fsl2    | 1.56  |          | 0.005      |        |
| fsl3    | 1.16  |          | 0.005      |        |
| fsl4    | 1.11  |          | 0.005      |        |
| fsl5    | 1.04  |          | 0.005      |        |
| Column       | Value1 | Value2 | Value3 |
|-------------|--------|--------|--------|
| fs16        | 1.05   |        | 0.005  |
| gl          | 0.59   |        | 0.001  |
| gh          | 0.80   |        | 0.001  |
| gme10-ave   | 0.41   |        | 0.007  |
| gme2-ave    | 0.39   |        | 0.007  |
| gme24-ave   | 0.47   |        | 0.007  |
| gme37-ave   | 0.44   |        | 0.007  |
| hh3         | 0.56   |        | 0.001  |
| ii          | 0.44   |        | 0.001  |
| jj          | 0.08   |        | 0.004  |
| jj3         | 0.34   |        | 0.001  |
| k-11        | 13     | 27     | 0.4    |
| k708-1      | 18     | 134    | 0.6    |
| k708-4      | 18     | 90     | 0.6    |
| k708-6      | 18     | 60     | 0.6    |
| k708-7      | 18     | 63     | 0.6    |
| k708-8      | 18     | 106    | 0.6    |
| kk          | 0.69   |        | 0.004  |
| knorr78-1   | 0.61   |        | 0.003  |
| lb1         | 0.26   |        | 0.005  |
| lb2         | 0.40   |        | 0.005  |
| lb3         | 0.91   |        | 0.005  |
| lb4         | 1.82   |        | 0.005  |
| lc1         | 0.06   |        | 0.005  |
| lc2         | 0.06   |        | 0.005  |
| li1         | 0.23   |        | 0.001  |
| ls11        | 1.70   |        | 0.005  |
| ls12        | 1.90   |        | 0.005  |
| ls13        | 1.23   |        | 0.005  |
| ls14        | 1.11   |        | 0.005  |
| m-12392     |        | 19     | 197    | 0.06  |
| mml         | 0.28   |        | 0.001  |
| na1         | 0.35   |        | 0.007  |
| na14        | 0.22   |        | 0.007  |
| na15        | 0.26   |        | 0.007  |
| na19        | 0.27   |        | 0.007  |
| na5         | 0.32   |        | 0.007  |
| na8         | 0.32   |        | 0.007  |
| nap12       | 0.38   |        | 0.007  |
| nap14-2     | 0.52   |        | 0.007  |
| nap14-3     | 0.47   |        | 0.007  |
| nap15       | 0.34   |        | 0.007  |
| nap21       | 0.36   |        | 0.007  |
| nap26       | 0.36   |        | 0.007  |
| nap48-ave   | 0.13   |        | 0.007  |
| nap56-ave   | 0.38   |        | 0.007  |
| nap60-ave   | 0.27   |        | 0.007  |
| nap8        | 0.42   |        | 0.007  |
| nap9        | 0.35   |        | 0.007  |
| nn          | 0.64   |        | 0.004  |
| nn1         | 0.31   |        | 0.001  |
| oo2         | 0.24   |        | 0.001  |
| rc10-2      |        | 18     | 60     | 1.6   |
| rc10-288    |        | 5.5    | 45     | 0.5   |
| Code     | Value1 | Value2 | Value3 |
|----------|--------|--------|--------|
| rc10-50  | 18     | 100    | 1.6    |
| rc13-151 | 18     | 60     | 1.6    |
| rc13-152 | 18     | 60     | 1.6    |
| rc13-153 | 18     | 60     | 1.6    |
| rc13-154 | 18     | 60     | 1.6    |
| rc13-158 | 18     | 80     | 1.6    |
| rc13-159 | 18     | 83     | 1.6    |
| rc13-189 | 16.2   | 61.5   | 0.06   |
| rc24-01  | 18.5   | 78     | 0.06   |
| rc5-34   | 18     | 40     | 1.6    |
| rc5-36   | 18     | 93     | 1.6    |
| rc5-54   | 18     | 10     | 1.6    |
| rc5-57   | 18     | 100    | 1.6    |
| rc9-225  | 18     | 135    | 0.6    |
| rc9-49   | 18     | 30     | 1.6    |
| s1469    | 0.03   |        | 0.8    |
| s1470    | 0.72   |        | 0.8    |
| s1471    | 0.13   |        | 0.8    |
| s1472    | 0.06   |        | 0.8    |
| s1473    | 0.05   |        | 0.8    |
| s1474    | 0.14   |        | 0.8    |
| s1475    | 0.02   |        | 0.8    |
| s1476    | 0.02   |        | 0.8    |
| s1477    | 0.08   |        | 0.8    |
| s1478    | 0.07   |        | 0.8    |
| s1479    | 0.02   |        | 0.8    |
| s1480    | 0.04   |        | 0.8    |
| s1481    | 0.05   |        | 0.8    |
| s1482    | 0.1    |        | 0.8    |
| s1484    | 0.07   |        | 0.8    |
| s1485    | 0.01   |        | 0.8    |
| s1486    | 0.09   |        | 0.8    |
| s1487    | 0.03   |        | 0.8    |
| s1488    | 0.2    |        | 0.8    |
| s1489    | 0.68   |        | 0.8    |
| s1490    | 0.08   |        | 0.8    |
| s1491    | 0.07   |        | 0.8    |
| s1492    | 0.03   |        | 0.8    |
| s1493    | 0.05   |        | 0.8    |
| s1494    | 0.07   |        | 0.8    |
| s1495    | 0.02   |        | 0.8    |
| s1497    | 0.02   |        | 0.8    |
| s1498    | 0.08   |        | 0.8    |
| s1499    | 0.09   |        | 0.8    |
| s1500    | 0.09   |        | 0.8    |
| s1501    | 0.07   |        | 0.8    |
| s1502    | 0.03   |        | 0.8    |
| s1503    | 0.28   |        | 0.8    |
| s1504    | 0.08   |        | 0.8    |
| s1505    | 0.05   |        | 0.8    |
| s1506    | 0.07   |        | 0.8    |
| s1507    | 0.04   |        | 0.8    |
| s1508    | 0.11   |        | 0.8    |
| s1509    | 0.09   |        | 0.8    |
| s1510 | 0.07 | 0.8 |
|-------|------|-----|
| s1511 | 0.06 | 0.8 |
| s1512 | 0.08 | 0.8 |
| s1513 | 0.08 | 0.8 |
| s1514 | 0.09 | 0.8 |
| s1515 | 1.06 | 0.8 |
| s1516 | 1.35 | 0.8 |
| s1517 | 0.16 | 0.8 |
| s1518 | 1.22 | 0.8 |
| s1520 | 0.95 | 0.8 |
| s1521 | 0.2  | 0.8 |
| s1522 | 0.09 | 0.8 |
| s1523 | 8.26 | 0.8 |
| s1524 | 0.11 | 0.8 |
| s1525 | 0.07 | 0.8 |
| s1526 | 0.15 | 0.8 |
| s1527 | 0.08 | 0.8 |
| s1528 | 0.06 | 0.8 |
| s1529 | 0.16 | 0.8 |
| s1530 | 0.09 | 0.8 |
| s1531 | 0.09 | 0.8 |
| s1539 | 0.09 | 0.8 |
| s1545 | 0.08 | 0.8 |
| s1550 | 0.13 | 0.8 |
| s1551 | 6.24 | 0.8 |
| s1553 | 0.09 | 0.8 |
| s1565 | 0.07 | 0.8 |
| s1570 | 0.14 | 0.8 |
| s1571 | 0.23 | 0.8 |
| s1572 | 0.18 | 0.8 |
| s1573 | 0.14 | 0.8 |
| s1574 | 0.16 | 0.8 |
| s1575 | 0.23 | 0.8 |
| s1576 | 0.36 | 0.8 |
| s1580 | 0.278| 0.8 |
| s1581 | 0.16 | 0.8 |
| s1583 | 0.1 | 0.8 |
| s1584 | 0.12 | 0.8 |
| s1585 | 0.05 | 0.8 |
| s1586 | 0.57 | 0.8 |
| s1587 | 0.1 | 0.8 |
| s1588 | 0.15 | 0.8 |
| s1589 | 0.23 | 0.8 |
| s1590 | 0.18 | 0.8 |
| s1591 | 0.26 | 0.8 |
| s1592 | 0.46 | 0.8 |
| s1593 | 0.12 | 0.8 |
| s1594 | 0.16 | 0.8 |
| s1595 | 0.4  | 0.8 |
| s1596 | 0.21 | 0.8 |
| s1597 | 0.39 | 0.8 |
| s1598 | 0.21 | 0.8 |
| s1599 | 0.53 | 0.8 |
| s1600 | 0.22 | 0.8 |
| s1601 | 0.16 | 0.8 |
|-------|------|-----|
| s1602 | 0.11 | 0.8 |
| s1603 | 0.09 | 0.8 |
| s1604 | 0.14 | 0.8 |
| s1605 | 0.1  | 0.8 |
| s1606 | 0.17 | 0.8 |
| s1607 | 0.28 | 0.8 |
| s1608 | 0.2  | 0.8 |
| s1609 | 0.23 | 0.8 |
| s1610 | 0.15 | 0.8 |
| s1611 | 0.17 | 0.8 |
| s1612 | 0.13 | 0.8 |
| s1613 | 0.2  | 0.8 |
| s1614 | 0.3  | 0.8 |
| s1615 | 0.29 | 0.8 |
| s1616 | 0.23 | 0.8 |
| s1617 | 0.3  | 0.8 |
| s1618 | 0.55 | 0.8 |
| s1619 | 0.81 | 0.8 |
| s1620 | 0.16 | 0.8 |
| s1621 | 0.15 | 0.8 |
| s1622 | 0.85 | 0.8 |
| s1623 | 0.93 | 0.8 |
| s1624 | 0.79 | 0.8 |
| s1625 | 0.4  | 0.8 |
| s1626 | 0.62 | 0.8 |
| s1627 | 0.5  | 0.8 |
| s1628 | 0.36 | 0.8 |
| s1629 | 0.14 | 0.8 |
| s1630 | 0.12 | 0.8 |
| s1631 | 0.19 | 0.8 |
| s1632 | 0.64 | 0.8 |
| s1633 | 1.22 | 0.8 |
| s1634 | 1.28 | 0.8 |
| s1635 | 1.37 | 0.8 |
| s1636 | 0.4  | 0.8 |
| s1637 | 0.6  | 0.8 |
| s1638 | 1.18 | 0.8 |
| s1639 | 1.34 | 0.8 |
| s1641 | 0.09 | 0.8 |
| s1642 | 0.05 | 0.8 |
| s1643 | 0.14 | 0.8 |
| s1644 | 0.11 | 0.8 |
| s1645 | 0.21 | 0.8 |
| s1647 | 0.1  | 0.8 |
| s1648 | 0.15 | 0.8 |
| s1649 | 0.27 | 0.8 |
| s1650 | 0.09 | 0.8 |
| s1653 | 0.06 | 0.8 |
| s1654 | 0.09 | 0.8 |
| s1655 | 0.08 | 0.8 |
| s1656 | 0.09 | 0.8 |
| s1658 | 0.32 | 0.8 |
| s1695 | 0.06 | 0.8 |
| s1696 | 0.08 |    |    |
| s1714 | 0.11 | 0.8 |
| s1715 | 0.12 | 0.8 |
| s1718 | 0.25 | 0.8 |
| s1720 | 0.19 | 0.8 |
| s1721 | 0.63 | 0.8 |
| s1722 | 1.16 | 0.8 |
| s1723 | 0.75 | 0.8 |
| s1724 | 0.43 | 0.8 |
| s1725 | 0.85 | 0.8 |
| s1726 | 0.58 | 0.8 |
| s1727 | 0.47 | 0.8 |
| s1728 | 0.35 | 0.8 |
| s1729 | 0.2  | 0.8 |
| s1731 | 0.08 | 0.8 |
| s1732 | 0.15 | 0.8 |
| s1733 | 0.15 | 0.8 |
| s1734 | 0.14 | 0.8 |
| s1735 | 0.14 | 0.8 |
| s1738 | 0.1  | 0.8 |
| s1739 | 0.1  | 0.8 |
| s1741 | 0.03 | 0.8 |
| s1742 | 0.06 | 0.8 |
| s1743 | 0.07 | 0.8 |
| s1744 | 0.17 | 0.8 |
| s1745 | 0.23 | 0.8 |
| s1748 | 0.1  | 0.8 |
| s1749 | 0.09 | 0.8 |
| s1753 | 0.55 | 0.8 |
| s1756 | 0.2  | 0.8 |
| s1763 | 0.77 | 0.8 |
| s1764 | 0.07 | 0.8 |
| s1765 | 0.08 | 0.8 |
| s1766 | 0.08 | 0.8 |
| s1767 | 0.07 | 0.8 |
| s1768 | 0.07 | 0.8 |
| s1770 | 0.26 | 0.8 |
| s1771 | 0.7  | 0.8 |
| s1772 | 0.19 | 0.8 |
| s1773 | 0.67 | 0.8 |
| s1781 | 0.21 | 0.8 |
| s1782 | 0.32 | 0.8 |
| s1783 | 0.5  | 0.8 |
| s1784 | 0.44 | 0.8 |
| s1785 | 0.46 | 0.8 |
| s1786 | 0.32 | 0.8 |
| s1787 | 0.18 | 0.8 |
| s1788 | 0.18 | 0.8 |
| s1789 | 0.11 | 0.8 |
| s1790 | 0.16 | 0.8 |
| s1791 | 0.21 | 0.8 |
| s1792 | 0.16 | 0.8 |
| s1793 | 0.15 | 0.8 |
| s1794 | 0.27 | 0.8 |
| Variable | Value1 | Value2 |
|----------|--------|--------|
| s1795    | 0.34   | 0.8    |
| s1796    | 0.47   | 0.8    |
| s1798    | 0.47   | 0.8    |
| s1799    | 0.41   | 0.8    |
| s1800    | 0.48   | 0.8    |
| s1801    | 0.42   | 0.8    |
| s1802    | 0.17   | 0.8    |
| s1803    | 0.15   | 0.8    |
| s1804    | 0.18   | 0.8    |
| s1805    | 0.3    | 0.8    |
| s1806    | 0.29   | 0.8    |
| s1807    | 0.19   | 0.8    |
| s1808    | 0.42   | 0.8    |
| s1809    | 0.45   | 0.8    |
| s1810    | 0.33   | 0.8    |
| s1811    | 0.79   | 0.8    |
| s1812    | 0.44   | 0.8    |
| s1813    | 0.26   | 0.8    |
| s1814    | 0.22   | 0.8    |
| s1815    | 0.26   | 0.8    |
| s1816    | 0.27   | 0.8    |
| s1817    | 0.04   | 0.8    |
| s1818    | 0.06   | 0.8    |
| s1819    | 0.04   | 0.8    |
| s1820    | 0.07   | 0.8    |
| s1821    | 0.04   | 0.8    |
| s1822    | 0.06   | 0.8    |
| s1823    | 0.06   | 0.8    |
| s1824    | 0.09   | 0.8    |
| s2194    | 0.64   | 0.8    |
| s2195    | 0.96   | 0.8    |
| s2196    | 0.6    | 0.8    |
| s2197    | 1.86   | 0.8    |
| s2200    | 0.81   | 0.8    |
| s2201    | 0.5    | 0.8    |
| s2202    | 0.36   | 0.8    |
| s2203    | 0.71   | 0.8    |
| s2204    | 0.33   | 0.8    |
| s2205    | 0.3    | 0.8    |
| s2206    | 0.5    | 0.8    |
| s2209    | 0.55   | 0.8    |
| s2210    | 0.11   | 0.8    |
| s2211    | 0.82   | 0.8    |
| s2212    | 0.97   | 0.8    |
| s2217    | 0.06   | 0.8    |
| s2218    | 0.05   | 0.8    |
| s2219    | 14.6   | 0.8    |
| s2220    | 3.19   | 0.8    |
| s2221    | 1.62   | 0.8    |
| s2222    | 1.7    | 0.8    |
| s2223    | 2.58   | 0.8    |
| s2224    | 1.63   | 0.8    |
| s2225    | 1.2    | 0.8    |
| s2226    | 3.18   | 0.8    |
| s2227 | 0.3  | 0.8  |
|-------|------|------|
| s2228 | 1.45 | 0.8  |
| s2229 | 0.09 | 0.8  |
| s2230 | 0.27 | 0.8  |
| s2231 | 0.19 | 0.8  |
| s2232 | 0.31 | 0.8  |
| s2233 | 0.11 | 0.8  |
| s2234 | 0.72 | 0.8  |
| s2235 | 0.12 | 0.8  |
| s2236 | 1.97 | 0.8  |
| s2237 | 9.0  | 0.8  |
| s2238 | 0.22 | 0.8  |
| s2239 | 1.79 | 0.8  |
| s2240 | 4.26 | 0.8  |
| s2241 | 2.38 | 0.8  |
| s2242 | 0.19 | 0.8  |
| s2243 | 0.83 | 0.8  |
| s2244 | 4.79 | 0.8  |
| s2245 | 3.93 | 0.8  |
| s2246 | 3.79 | 0.8  |
| s2247 | 0.25 | 0.8  |
| s2248 | 0.22 | 0.8  |
| s2249 | 0.13 | 0.8  |
| s2250 | 0.05 | 0.8  |
| s2250u| 0.07 | 0.8  |
| s2251 | 0.1  | 0.8  |
| s2252 | 0.08 | 0.8  |
| s2253 | 0.05 | 0.8  |
| s2254 | 0.11 | 0.8  |
| s2255 | 0.18 | 0.8  |
| s2256 | 0.09 | 0.8  |
| s2257 | 0.04 | 0.8  |
| s2258 | 0.04 | 0.8  |
| s2261 | 0.06 | 0.8  |
| s2262 | 0.15 | 0.8  |
| s2264 | 0.22 | 0.8  |
| s2265 | 0.06 | 0.8  |
| s2266 | 0.08 | 0.8  |
| s2267 | 0.26 | 0.8  |
| s2268 | 0.07 | 0.8  |
| s2270 | 0.13 | 0.8  |
| s2271 | 0.27 | 0.8  |
| s2272 | 0.4  | 0.8  |
| s2273u| 0.47 | 0.8  |
| s2277 | 0.47 | 0.8  |
| s2282 | 0.9  | 0.8  |
| s2284 | 0.07 | 0.8  |
| s2286 | 1.88 | 0.8  |
| s2291 | 0.11 | 0.8  |
| s2292 | 0.06 | 0.8  |
| s2293 | 0.2  | 0.8  |
| s2294 | 0.06 | 0.8  |
| s2300 | 1.7  | 0.8  |
| s2301 | 0.97 | 0.8  |
| s2302 | 0.13 | 0.8  |
| s2303 | 1.25 | 0.8  |
| s2304 | 0.03 | 0.8  |
| s2305 | 0.03 | 0.8  |
| s2306 | 0.24 | 0.8  |
| s2307 | 0.06 | 0.8  |
| s2308 | 0.09 | 0.8  |
| s2309 | 0.06 | 0.8  |
| s2310 | 0.08 | 0.8  |
| s2311 | 0.12 | 0.8  |
| s2312 | 0.22 | 0.8  |
| s2313 | 0.13 | 0.8  |
| s2314 | 0.14 | 0.8  |
| s2315 | 0.15 | 0.8  |
| s2316 | 0.09 | 0.8  |
| s2317 | 0.17 | 0.8  |
| s2318 | 0.08 | 0.8  |
| s2319 | 0.16 | 0.8  |
| s2320 | 0.1  | 0.8  |
| s2321 | 0.14 | 0.8  |
| s2322 | 0.13 | 0.8  |
| s2323 | 0.13 | 0.8  |
| s2324 | 0.11 | 0.8  |
| s2325 | 0.1  | 0.8  |
| s2326 | 0.07 | 0.8  |
| s2327 | 0.06 | 0.8  |
| s2328 | 0.1  | 0.8  |
| s2329 | 0.09 | 0.8  |
| s2330 | 0.09 | 0.8  |
| s2331 | 0.06 | 0.8  |
| s2332 | 0.11 | 0.8  |
| s2333 | 0.11 | 0.8  |
| s2334 | 0.45 | 0.8  |
| s2335 | 0.18 | 0.8  |
| s2336 | 0.9  | 0.8  |
| s2337 | 0.53 | 0.8  |
| s2338 | 0.58 | 0.8  |
| s2340 | 0.23 | 0.8  |
| s2341 | 0.03 | 0.8  |
| s2342 | 0.11 | 0.8  |
| s2343 | 0.05 | 0.8  |
| s2344 | 0.07 | 0.8  |
| s2345 | 0.15 | 0.8  |
| s2346 | 0.13 | 0.8  |
| s2347 | 0.2  | 0.8  |
| s2348 | 0.15 | 0.8  |
| s2349 | 0.08 | 0.8  |
| s2350 | 0.09 | 0.8  |
| s2351 | 0.1  | 0.8  |
| s2352 | 0.09 | 0.8  |
| s2353 | 0.07 | 0.8  |
| s2354 | 0.06 | 0.8  |
| s2356 | 0.12 | 0.8  |
| s2357 | 0.14 | 0.8  |
| s2358 | 0.07 | 0.8 |
|-------|------|-----|
| s2359 | 0.09 | 0.8 |
| s2360 | 0.06 | 0.8 |
| s2361 | 0.13 | 0.8 |
| s2362 | 0.1  | 0.8 |
| s2363 | 0.11 | 0.8 |
| s2364 | 0.08 | 0.8 |
| s2365 | 0.1  | 0.8 |
| s2366 | 0.06 | 0.8 |
| s2367 | 0.11 | 0.8 |
| s2368 | 0.12 | 0.8 |
| s2369 | 0.09 | 0.8 |
| s2370 | 0.06 | 0.8 |
| s2371 | 0.11 | 0.8 |
| s2372 | 0.06 | 0.8 |
| s2373 | 0.04 | 0.8 |
| s2374 | 0.05 | 0.8 |
| s2375 | 0.04 | 0.8 |
| s2376 | 0.04 | 0.8 |
| s2377 | 0.06 | 0.8 |
| s2378 | 0.1  | 0.8 |
| s2379 | 0.05 | 0.8 |
| s2380 | 0.06 | 0.8 |
| s2381 | 0.08 | 0.8 |
| s2382 | 0.09 | 0.8 |
| s2383 | 0.08 | 0.8 |
| s2384 | 0.11 | 0.8 |
| s2385 | 0.09 | 0.8 |
| s2386 | 0.05 | 0.8 |
| s2387 | 0.06 | 0.8 |
| s2388 | 0.05 | 0.8 |
| s2389 | 0.05 | 0.8 |
| s2390 | 0.03 | 0.8 |
| s2391 | 0.05 | 0.8 |
| s2392 | 0.05 | 0.8 |
| s2393 | 0.05 | 0.8 |
| s2394 | 0.03 | 0.8 |
| s2395 | 0.05 | 0.8 |
| s2396 | 0.05 | 0.8 |
| s2397 | 0.06 | 0.8 |
| s2400 | 0.19 | 0.8 |
| s2401 | 0.13 | 0.8 |
| s2402 | 0.14 | 0.8 |
| s2403 | 0.11 | 0.8 |
| s2404 | 0.1  | 0.8 |
| s2405 | 0.09 | 0.8 |
| s2406 | 0.17 | 0.8 |
| s2407 | 0.15 | 0.8 |
| s2408 | 0.08 | 0.8 |
| s2409 | 0.13 | 0.8 |
| s2410 | 0.07 | 0.8 |
| s2411 | 0.07 | 0.8 |
|       |       |       |
|-------|-------|-------|
| s2449 | 0.08  | 0.8   |
| s2450 | 0.34  | 0.8   |
| s2451 | 0.43  | 0.8   |
| s2452 | 0.12  | 0.8   |
| s2453 | 0.08  | 0.8   |
| s2454 | 0.31  | 0.8   |
| s2455 | 0.12  | 0.8   |
| s2456 | 0.09  | 0.8   |
| s2457 | 0.11  | 0.8   |
| s2458 | 0.09  | 0.8   |
| s2459 | 0.06  | 0.8   |
| s2460 | 0.13  | 0.8   |
| s2461 | 0.07  | 0.8   |
| s2462 | 0.66  | 0.8   |
| s2463 | 0.09  | 0.8   |
| s2464 | 0.09  | 0.8   |
| s2465 | 0.08  | 0.8   |
| s2466 | 0.09  | 0.8   |
| s2467 | 0.05  | 0.8   |
| s2468 | 0.12  | 0.8   |
| s2469 | 0.18  | 0.8   |
| s2470 | 0.09  | 0.8   |
| s2471 | 0.11  | 0.8   |
| s2472 | 0.07  | 0.8   |
| s2473 | 0.03  | 0.8   |
| s2474 | 0.08  | 0.8   |
| s2475 | 0.07  | 0.8   |
| s2476 | 0.19  | 0.8   |
| s2477 | 0.1   | 0.8   |
| s2478 | 0.06  | 0.8   |
| sap-ave| 0.42  | 0.007 |
| sapl2 | 0.58  | 0.007 |
| sapl5 | 0.46  | 0.007 |
| sap20 | 0.59  | 0.007 |
| sap39 | 0.46  | 0.007 |
| sap40 | 0.36  | 0.007 |
| sap53 | 0.38  | 0.007 |
| sl2  | 0.37  | 0.001 |
| sl3  | 0.33  | 0.001 |
| sl4  | 0.60  | 0.001 |
| sohm-s2| 0.50  | 0.002 |
| sp8-4|       |       |
|       |       |       |
| stat2| 2.39  |       |
|       |       |       |
| t78-30| 10.5  | 672.5 | 0.02 |
| t78-33| 13.9  | 61.5  | 0.02 |
| t78-34| 19.9  | 616   | 0.02 |
| t78-42| 11.9  | 8     | 0.02 |
| t78-45| 11.6  | 45    | 0.02 |
| t78-46| 20    | 475   | 0.02 |
| t78-49| 26.9  | 256   | 0.02 |
| t80-10| 15.3  | 264.5 | 0.02 |
| t80-4 | 8.6   | 102.5 | 0.02 |
| t80-6 | 32.9  | 132.5 | 0.02 |
| t80-7 | 13.5  | 72.5  | 0.02 |
| t80-8 | 13    | 134   | 0.02 |
|     |   |   |
|-----|----|----|
| tr148-5tw | 0.59 | 0.0001 |
| tr149-6tw | 0.67 | 0.0001 |
| tr174-4tw | 0.3  | 0.0001 |
| tr21-az02 | 0.38 | 0.0001 |
| tr41-2g  | 0.31 | 0.0001 |
| tr41-4a  | 1.07 | 0.0001 |
| tr41-7   | 0.56 | 0.0001 |
| tr85-9   | 0.3  | 0.0001 |
| vl5-168  | 18  | 100  | 1.6  |
| vl6-20   | 18  | 50   | 1.6  |
| vl6-25   | 18  | 35   | 1.6  |
| vl7-165  | 18  | 40   | 1.6  |
| vl7-178  | 12.1| 148  | 0.5  |
| vl7-178  | 10.6| 226  | 0.5  |
| vl7-39   | 18  | 100  | 1.6  |
| vl8-357  | 18  | 50   | 1.6  |
| vl9-19   | 18  | 80   | 1.6  |
| vl9-21   | 18  | 60   | 1.6  |
| vl9-291  | 18  | 80   | 1.6  |
| vl9-309  | 18  | 31   | 1.6  |
| vl20-241 | 18  | 30   | 1.6  |
| vl20-242 | 18  | 29   | 1.6  |
| vl21-2   | 4.3 | 43   | 0.5  |
| vl22-186 | 18  | 30   | 1.6  |
| vl22-188 | 18  | 20   | 1.6  |
| vl22-197 | 18  | 72   | 1.6  |
| vl23-110 | 14  | 18   | 0.06 |
| vl23-143 | 11.8| 94   | 0.5  |
| vl23-23  | 24  | 140  | 1.08 |
| vl23-58  | 18  | 40   | 0.6  |
| vl23-60  | 18  | 70   | 1.6  |
| vl23-63  | 18  | 20   | 1.6  |
| vl23-74  | 18  | 60   | 1.6  |
| vl23-82  | 18  | 106  | 1.6  |
| vl23-83  | 18  | 99   | 1.6  |
| vl23-84  | 18  | 90   | 1.6  |
| vl23-98  | 18  | 80   | 1.6  |
| vl24-1   | 8.1 | 60   | 1.5  |
| vl24-28  | 18  | 60   | 1.6  |
| vl25-44  | 18  | 30   | 1.6  |
| vl25-59  | 18  | 40   | 1.6  |
| vl25-60  | 15.6| 42.5 | 0.06 |
| vl25-75  | 14.7| 102  | 0.06 |
| vl26-107 | 18  | 100  | 1.6  |
| vl26-124 | 18  | 60   | 1.6  |
| vl26-176 | 3.8 | 44   | 0.5  |
| vl26-176 | 24.8| 560  | 0.5  |
| vl26-176 | 8.2 | 163  | 0.5  |
| vl26-177 | 9.6 | 95   | 0.5  |
| vl26-41  | 18  | 43   | 1.6  |
| vl26-46  | 18  | 40   | 1.6  |
| vl27-17  | 18  | 35   | 1.6  |
| vl27-178 | 18  | 55   | 1.6  |
| vl27-19  | 18  | 39   | 1.6  |
| Code   | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|--------|---------|---------|---------|---------|---------|
| v27-20 | 18      | 85      | 1.6     |         |         |
| v27-248| 18      | 82      | 1.6     |         |         |
| v27-263| 18      | 20      | 0.6     |         |         |
| v27-46 | 18      | 30      | 1.6     |         |         |
| v27-47 | 18      | 20      | 1.6     |         |         |
| v27-84 | 18      | 40      | 1.6     |         |         |
| v27-86 | 18      | 20      | 0.6     |         |         |
| v28-119| 13      | 25      | 1.4     |         |         |
| v28-122| 18      | 100     | 1.6     |         |         |
| v28-127| 18      | 60      | 1.6     |         |         |
| v28-128| 18      | 40      | 1.6     |         |         |
| v28-129| 18      | 80      | 1.6     |         |         |
| v28-14 | 18      | 140     | 1.6     |         |         |
| v28-25 | 18      | 20      | 1.6     |         |         |
| v28-56 | 18      | 40      | 0.6     |         |         |
| v29-172| 18      | 50      | 1.6     |         |         |
| v29-173k| 18     | 25      | 0.6     |         |         |
| v29-174| 18      | 40      | 1.6     |         |         |
| v29-175| 18      | 40      | 1.6     |         |         |
| v30-36 | 16.5    | 38      | 0.06    |         |         |
| v30-41k| 18.7    | 45      | 0.06    |         |         |
| v30-49 | 19      | 88      | 1.08    |         |         |
| v30-51k| 18.6    | 55      | 0.06    |         |         |
| v30-97 | 16      | 100     | 1.08    |         |         |
| v32-8  | 14      | 60      | 0.06    |         |         |
| v4-1   | 6.7     | 56      | 0.5     |         |         |
| v4-32  | 18      | 30      | 1.6     |         |         |
| v4-8   | 18      | 60      | 1.6     |         |         |
| x164012| 1       |         |         |         | 0.01    |
| x164021| 0.46    | 8.2     | 42.64   | 0.01    |
| x164032| 0.45    | 8.2     | 30.34   | 0.01    |
| x164041| 0.42    | 8.2     | 26.24   | 0.01    |
| x164051| 0.43    | 8.2     | 27.88   | 0.01    |
| x164061| 0.64    | 8.2     | 28.7    | 0.01    |
| x164071| 0.49    | 8.2     | 22.14   | 0.01    |
| x164081| 0.47    | 8.2     | 24.6    | 0.01    |
| x164101| 0.49    | 8.2     | 29.52   | 0.01    |
| x164111| 0.42    | 8.2     | 17.22   | 0.01    |
| x164121| 0.57    | 8.2     | 24.6    | 0.01    |
| x164131| 0.63    | 8.2     | 30.34   | 0.01    |
| x164151| 0.61    | 8.2     | 22.14   | 0.01    |
| x164161| 0.59    | 8.2     | 26.24   | 0.01    |
| x164171| 0.65    | 8.2     | 30.34   | 0.01    |
| x164182| 0.07    |         |         | 0.01    |
| x164191| 0.62    |         |         | 0.01    |
| x164201| 1.36    | 8.2     | 41      | 0.01    |
| x164212| 0.59    |         |         | 0.01    |
| x164222| 0.6     | 8.2     | 10.66   | 0.01    |
| x164241| 0.63    | 8.2     | 18.86   | 0.01    |
| x164251| 0.65    | 8.2     | 22.14   | 0.01    |
| x164263| 0.72    | 8.2     | 32.8    | 0.01    |
| x164272| 0.72    | 8.2     | 29.438  | 0.01    |
| XL64291 | 0.7   | 8.2  | 31.16 | 0.01 |
| XL64301 | 0.64  | 8.2  | 17.22 | 0.01 |
| XL64311 | 0.48  | 8.2  | 15.58 | 0.01 |
| XL64321 | 0.52  | 8.2  | 44.28 | 0.01 |
| XL64331 | 0.53  |      |      | 0.01 |
| XL64351 | 0.52  |      |      | 0.01 |
| XL64373 | 1.48  |      |      | 0.01 |
| ID       | ORG C | AGE (Ka) | DEPTH (cm) | SOURCE |
|----------|-------|----------|------------|--------|
| ai160-13 | 15    | 10       | 0.7        |        |
| ai8-074  | 18    | 50       | 0.6        |        |
| ai8-076  | 18    | 40       | 1.6        |        |
| chn-11588 | 20    | 10       | 0.7        |        |
| chn115-70 | 19    | 30       | 0.7        |        |
| chn115-89 | 18    | 30       | 0.7        |        |
| chn115-90 | 18    | 6        | 0.7        |        |
| chn115-91 | 18    | 10       | 0.7        |        |
| chn115-92 | 18    | 25       | 0.7        |        |
| rc11-118 | 18    | 40       | 0.3        |        |
| rc11-119 | 18    | 40       | 0.3        |        |
| rc11-120 | 18    | 80       | 0.3        |        |
| rc11-78  | 18    | 180      | 1.3        |        |
| rc11-80  | 18    | 80       | 8.3        |        |
| rc11-83  | 18    | 340      | 8.3        |        |
| rc12-234 | 0.35  | 1.0001   |            |        |
| rc12-267 | 18    | 60       | 1.3        |        |
| rc12-289 | 18    | 60       | 1.3        |        |
| rc13-243 | 18    | 40       | 1.3        |        |
| rc13-251 | 18    | 20       | 1.3        |        |
| rc13-253 | 18    | 40       | 1.3        |        |
| rc13-254 | 18    | 60       | 1.3        |        |
| rc13-255 | 18    | 140      | 0.3        |        |
| rc13-256 | 18    | 400      | 0.3        |        |
| rc13-257 | 18    | 20       | 0.3        |        |
| rc13-261 | 18    | 80       | 1.3        |        |
| rc13-273 | 18    | 60       | 1.3        |        |
| rc13-275 | 18    | 60       | 1.3        |        |
| rc13-276 | 0.35  | 18       | 40         | 1.3001 |
| rc15-93  | 18    | 100      | 1.3        |        |
| rc15-94  | 18    | 110      | 0.3        |        |
| rc15-98  | 18    | 100      | 1.3        |        |
| rc24-16  | 14    | 60       | 0.06       |        |
| rc24-7   | 17.5  | 115      | 0.06       |        |
| t78-33   | 1.11  | 11       | 62         | 0.02   |
| t78-38   | 0.63  | 11       | 7          | 0.02   |
| t78-42   | 0.54  | 11       | 15         | 0.02   |
| t78-45   | 1.5   | 14       | 50         | 0.02   |
| t78-46   | 2.07  | 18.6     | 469        | 0.02   |
| t80-11   | 3.17  | 500      | 1796       | 0.02   |
| v15-137  | 0.39  | 1.0001   |            |        |
| v18-35   | 18    | 120      | 0.3        |        |
| v22-108  | 18    | 100      | 8.3        |        |
| v22-177  | 17.6  | 63       | 0.06       |        |
| v22-182  | 14.9  | 55       | 0.06       |        |
| v22-38   | 14    | 32.5     | 0.06       |        |
| v22-86   | 18    | 60       | 1.3        |        |
| v25-56   | 18    | 60       | 1.6        |        |
| v26-104  | 18    | 150      | 1.6        |        |
| v27-232  | 1.76  | 1.0001   |            |        |
|      |      |      |      |
|------|------|------|------|
| v27-239 | 0.51 | 14   | 1.0001 |
| v29-144 |      | 70   | 0.06  |
| v30-40  | 12.4 | 44.5 | 0.06  |
# NORTH PACIFIC OCEAN

| CORE ID   | ORG C % | AGE (Ka) | DEPTH (cm) | SOURCE |
|-----------|---------|----------|------------|--------|
| 660410    | 1.7341  | 18       | 462        | 0.09   |
| 66095     | 1.6047  |          |            |        |
| 66095     | 1.9196  |          |            |        |
| 68088     | 2.0844  |          |            |        |
| 69102     | 1.9215  |          |            |        |
| 69103     | 1.7863  |          |            |        |
| 69104     | 1.528   |          |            |        |
| 70041     | 1.4653  |          |            |        |
| 70114     | 0.2743  |          |            |        |
| ahlf0614  | 0.2743  |          |            | 7      |
| ahlf0614  | 5.2879  | 13       | 125        | 5      |
| ahlf0626  | 6.6218  | 18       | 300        | 0.09   |
| ahlf11343 |         | 18       | 279.5      | 0.09   |
| aries40pg | 0.3198  |          |            |        |
| aries40pg | 0.4156  |          |            |        |
| aries45pg | 1.128   |          |            |        |
| aries45pg | 0.665   |          |            |        |
| aries48g  | 0.3242  |          |            |        |
| aries48g  | 0.7661  |          |            |        |
| bnfc43    | 1.8227  | 18       | 19         | 5.09   |
| bnfc43pgz |         | 18       | 17         | 7.09   |
| cuspl1g   | 0.3967  | 18       | 30         | 0.09   |
| cuspl1g   | 0.0422  |          |            |        |
| cuspl7g   | 0.1857  |          |            |        |
| cuspl7g   | 0.3553  |          |            |        |
| cuspl1g   | 0.1867  |          |            |        |
| cusplg    | 0.3242  |          |            |        |
| cuspl22g  | 0.1565  |          |            |        |
| cuspl22g  | 0.1888  |          |            |        |
| cuspl9g   | 0.526   |          |            |        |
| cuspl9g   | 0.1142  |          |            |        |
| dwbg2     | 1.3768  | 0        |            |        |
| fanbg22   | 0.5793  | 0        |            |        |
| g76-510   | 0.597   | 12.3     | 34.5       |        |
| g76-514   | 0.396   | 13.5     | 41         |        |
| g76-527   | 1.157   |          |            |        |
| g76-528   | 1.195   |          |            |        |
| g76-55    | 0.763   | 10.5     | 25         |        |
| hilo12g   | 0.264   |          |            |        |
| hilo12g   | 0.1566  |          |            |        |
| hilo2g    | 0.2887  | 0        |            |        |
| hilo3g    | 0.3176  | 0        |            |        |
| hilo5g    | 0.2284  | 0        |            |        |
| jnyi110g  | 0.3725  |          |            |        |
| jnyi110g  | 0.3555  |          |            |        |
| jnyi110g  | 0.0427  |          |            |        |
| jnyi112g  | 0.0445  |          |            |        |
| jnyi112g  | 0.3436  |          |            |        |
| jnyi117   | 0.6744  |          |            |        |
|         | 18  | 32  | 5.09 |
|---------|-----|-----|------|
| jny1i1g | 0.1073 |     |      |
| jny1i1g | 0.2865 |     |      |
| jny1i20 | 5.7228 |     |      |
| jny1i3  | 1.1069 |     |      |
| jny1i4g | 0.353 |     |      |
| jny1i4g | 0.107 |     |      |
| jny1i5g | 0.4676 |     |      |
| jny1i5g | 0.2292 |     |      |
| jny1i6g | 0.0721 |     |      |
| jny1i6g | 0.3992 |     |      |
| jny1i7  | 0.2103 |     |      |
| jny1i8g | 0.411 |     |      |
| jny1i8g | 0.6902 |     |      |
| jny1v12 | 0.0635 |     |      |
| jny1v41 | 0.3795 |     |      |
| l-35    | 1.0445 |     |      |
| l-39    | 0.6985 |     |      |
| l-43    | 0.6151 |     |      |
| l-45    | 5.3559 |     |      |
| l-46    | 1.1496 |     |      |
| lapdlg  | 3.5589 |     | 5    |
| lfgs47g | 0.6355 |     | 0    |
| lfgs49g | 0.8641 |     | 0    |
| lirlffcl0 | 1.3620 | 0 |      |
| lirlffcl1a | 1.0735 | 0 |      |
| lsdh103g | 0.3488 |     | 0    |
| lsdh104g | 0.5612 |     | 0    |
| m77-7b  | 1.229  |     |      |
| m77-9b  | 0.639  |     |      |
| men20g  | 0.0514 |     |      |
| men20g  | 0.261  |     |      |
| men25g  | 0.3112 |     |      |
| men26g  | 0.0525 |     |      |
| mfu1gc4 | 0.2620 |     | 0    |
| mfu2002 | 0.3067 |     | 0    |
| mfu2gcl | 0.2444 |     | 0    |
| mfu4fc4 | 0.4448 |     | 0    |
| mfu6pc121a | 0.1780 | 0 |      |
| msn158g | 0.3748 |     | 0    |
| msn3g   | 0.3184 |     | 0    |
| msn4g   | 0.4568 |     | 0    |
| mukb6   | 0.702  |     |      |
| mukb7g  | 0.2956 |     |      |
| mukb7g  | 0.0366 |     |      |
| mukb8g  | 0.0916 |     |      |
| mukb8g  | 0.2778 |     |      |
| mukh7   | 0.1784 |     |      |
| mukh7   | 0.3786 |     |      |
| mukh8g  | 0.1293 |     |      |
| mukh8g  | 0.3731 |     |      |
| mukh9g  | 0.0519 |     |      |
| pap2g   | 0.5790 |     | 0    |
| rc10-102 | 0.5038 |     | 0    |
| rc10-153 | 0.2263 | | | | 0 |
| rc10-158 | 0.3880 | 690 | 103.5 | 0.9 |
| rc10-159 | 0.4042 | 690 | 200.1 | 0.9 |
| rc10-160 | 0.6836 | 690 | 496.8 | 0.9 |
| rc10-161 | 18 | 8 | 7.09 |
| rc10-161 | 1.8816 | 18 | 8 | 0.09 |
| rc10-163 | | | | |
| rc10-164 | 1.1091 | 690 | 1518 | 0.9 |
| rc10-165 | 1.1091 | 18 | 44 | 7.09 |
| rc10-167 | 690 | 662.4 | 0.9 |
| rc10-170 | 690 | 814.2 | 0.9 |
| rc10-171 | 0.2627 | 690 | 552 | 0.9 |
| rc10-172 | 690 | 207 | 0.9 |
| rc10-175 | 690 | 848.7 | 0.9 |
| rc10-176 | 18 | 31 | 7.09 |
| rc10-179 | 1.6228 | 690 | 669.3 | 0.9 |
| rc10-181 | 0.6003 | 690 | 765.9 | 0.9 |
| rc10-182 | 0.2914 | 690 | 814.2 | 0.9 |
| rc10-183 | 690 | 1104 | 0.9 |
| rc10-187 | 690 | 1152.3 | 0.9 |
| rc10-188 | 0.3666 | 690 | 393.3 | 0.9 |
| rc10-189 | 690 | 1145.4 | 0.9 |
| rc10-190 | 0.5132 | 690 | 772.8 | 0.9 |
| rc10-191 | 0.4145 | | | |
| rc10-192 | 0.1261 | 18 | 10.5 | 0.09 |
| rc10-193 | 0.5011 | | | |
| rc10-194 | 0.7199 | | | |
| rc10-195 | 0.4689 | | | |
| rc10-196 | 0.2647 | | | |
| rc10-197 | 2.8041 | | | |
| rc10-198 | 18 | 67 | 0.09 |
| rc10-199 | 0.5965 | | | |
| rc10-200 | 0.3611 | | | |
| rc10-201 | 2.3060 | | | |
| rc11-166 | 690 | 1097.1 | 0.9 |
| rc11-167 | 690 | 972.9 | 0.9 |
| rc11-170 | 18 | 20 | 7.09 |
| rc11-171 | 0.6100 | 690 | 434.7 | 0.9 |
| rc11-172 | 18 | 40 | 7.09 |
| rc11-173 | 0.4978 | | | |
| rc11-174 | 18 | 40.5 | 7.09 |
| rc11-175 | 0.8400 | | | |
| rc11-176 | 0.5478 | | | |
| rc11-177 | 1.0123 | | | |
| rc11-178 | 0.4217 | | | |
| rc11-179 | 0.4815 | 690 | 179.4 | 0.9 |
| rc11-180 | 690 | 172.5 | 0.9 |
| rc11-181 | 0.2817 | 690 | 207 | 0.9 |
| rc11-182 | 690 | 207 | 0.9 |
| rc11-183 | 0.3764 | | | |
| rc11-184 | 0.4715 | 690 | 144.9 | 0.9 |
| rc11-185 | 0.5000 | | | |
| rcl1-208  | 1.2926 | 18 | 33 | 0.09 |
| rcl1-209  | 1.4040 | 18 | 41 | 7.09 |
| rcl1-210  | 0.7266 | 0  |
| rcl1-134  | 0.6587 | 0  |
| rcl1-176  | 0.5420 | 18 | 9.5| 0.09 |
| rcl1-179  | 18    | 60.5| 0.09|
| rcl1-183  | 0.3261 | 0  |
| rcl1-30   | 18    | 344 | 0.008|
| rcl1-32   | 84    | 300 | 0.008|
| rcl1-361  | 18    | 20.5| 0.09 |
| rcl1-401  | 18    | 260 | 5.09 |
| rcl1-402  | 0.3737 | 0  |
| rcl1-406  | 0.3900 | 0  |
| rcl1-412  | 18    | 37.5| 2.09 |
| rcl1-413  | 0.6420 | 18 | 32 | 2.09 |
| rcl1-415  | 0.3694 | 0  |
| rcl1-416  | 18    | 25  | 2.09 |
| rcl1-419  | 18    | 60  | 2.09 |
| rcl1-431  | 0.4645 | 0  |
| rcl1-433  | 18    | 10  | 2.09 |
| rcl1-434  | 0.2499 | 0  |
| rcl1-57   | 0.5500 | 0  |
| rcl1-58   | 0.5900 | 0  |
| rcl1-59   | 0.3100 | 0  |
| rcl1-65   | 2.0100 | 0  |
| rcl1-7    | 1.5800 | 0  |
| rcl1-83   | 1.6700 | 0  |
| rcl1-85   | 2.9500 | 0  |
| rcl2-17   | 18    | 30.5| 0.09 |
| rcl2-63   | 18    | 55.5| 0.09 |
| rcl2-105  | 18    | 110 | 7.09 |
| rcl2-106  | 18    | 80  | 0.09 |
| rcl2-99   | 18    | 98  | 7.09 |
| ris125g   | 0.3665 | 0  |
| s68ff1    | 0.0000 | 0  |
| s68pc25   | 0.0000 | 0  |
| s68pc291a | 2.5582 | 0  |
| s68pc301a | 2.0087 | 0  |
| s68pc311a | 1.0950 | 0  |
| s68pc33   | 0.2596 | 0  |
| s68pc351a | 0.7215 | 0  |
| tr63-31   | 8     | 260 | 0  |
| tr113g    | 0.6178 | 0  |
| tr19g     | 0.5036 | 0  |
| v15-30    | 230   | 612 | 0.009|
| v17-42    | 5.03  | 18  | 84.5| 2.09 |
| v17-43    | 2.44  | 18  | 73.5| 2.09 |
| v18-318   | 18    | 15.5| 7.09 |
| v18-318   | 0.861 | 18  | 15  | 2.09 |
| v18-319   | 1.791 | 0  |
| v18-324   | 3.2126| 0  |
| v18-328   | 2.4601| 0  |
| v18-333   | 1.6249| 0  |
| Entry    | Value | Unit | Value | Unit |
|----------|-------|------|-------|------|
| v18-337  | 3.7269 | 18   | 220.5 | 2.09 |
| v18-338  | 1.3995 | 7.5  | 746.5 |      |
| v18-349  | 0.9836 | 84   | 36    | 0.008|
| v19-101  | 1.7785 |      |       |      |
| v19-102  | 1.25   |      |       |      |
| v19-104  | 0.69   |      |       |      |
| v19-105  | 0.45   |      |       |      |
| v19-108  | 0.52   |      |       |      |
| v19-109  | 1.24   |      |       |      |
| v19-112  | 0.58   |      |       |      |
| v19-115  | 0.45   |      |       |      |
| v19-25   | 4.05   | 18   | 80.5  | 0.09 |
| v20-100  | 1.9    | 690  | 241.5 | 0.9  |
| v20-101  | 1.38   | 690  | 179.4 | 0.9  |
| v20-102  | 0.47   | 690  | 172.5 | 0.9  |
| v20-103  | 1.49   | 18   | 23.5  | 0.09 |
| v20-104  | 0.42   | 690  | 607.2 | 0.9  |
| v20-105  | 0.58   | 18   | 5     | 0.09 |
| v20-106  | 0.38   |      |       |      |
| v20-107  | 0      | 18   | 12    | 0.09 |
| v20-108  | 0.3    | 690  | 793.5 | 0.9  |
| v20-109  | 0.61   | 690  | 269.1 | 0.9  |
| v20-118  | 1.89   |      |       |      |
| v20-119  | 0.2473 | 18   | 21    | 7.09 |
| v20-119  | 1.22   | 690  | 634.8 | 0.9  |
| v20-120  | 1.9    | 54   | 7.09  |      |
| v20-120  | 1.9    | 54   | 0.09  |      |
| v20-121  | 1.9    | 59   | 2.09  |      |
| v20-122  | 0.53   | 18   | 79    | 0.09 |
| v20-123  | 1.92   | 18   | 121   | 0.09 |
| v20-124  | 0.64   | 18   | 111   | 0.09 |
| v20-125  | 1.89   |      |       |      |
| v20-126  | 0.71   | 18   | 139   | 0.09 |
| v20-127  | 0.71   | 18   | 139   | 0.09 |
| v20-128  | 0.52   |      |       |      |
| v20-129  | 0.42   |      |       |      |
| v20-130  | 1.06   |      |       |      |
| v20-131  | 0.47   |      |       |      |
| v20-132  | 1.1    |      |       |      |
| v20-133  | 0.57   |      |       |      |
| v20-134  | 1.93   |      |       |      |
| v20-135  | 0.31   |      |       |      |
| v20-136  | 0.98   |      |       |      |
| v20-137  | 0.39   |      |       |      |
| v20-138  | 0.34   | 690  | 89.7  | 0.9  |
| v20-139  | 0.35   | 690  | 62.1  | 0.9  |
| v20-140  | 0.39   | 690  | 131.1 | 0.9  |
| v20-141  | 0.45   |      |       |      |
| v20-142  | 0.4    |      |       |      |
| v20-143  | 1.84   | 690  | 131.1 | 0.9  |
| v20-144  | 2.69   | 690  | 4140  | 0.9  |
| v20-145  | 2.69   | 690  | 4133.1| 0.9  |
| v20-78*      | 0.5  | 690  | 924.6 | 0.9 |
| v20-79*      | 1.56 | 690  | 752.1 | 0.9 |
| v20-80       | 0.31 | 690  | 248.4 | 0.9 |
| v20-81*      | 0.56 | 690  | 110.4 | 0.9 |
| v20-82*      | 690  | 103.5 | 0.9 |
| v20-84*      | 690  | 365.7 | 0.9 |
| v20-85       | 1.23 | 18   | 4.5   | 0.09|
| v20-86*      | 0.43 | 690  | 986.7 | 0.9 |
| v20-87       | 1.87 | 690  | 186.3 | 0.9 |
| v20-88       | 0.57 | 690  | 110.4 | 0.9 |
| v20-89       | 0.38 | 690  | 6624  | 0.9 |
| v20-90       | 0.39 | 690  | 151.8 | 0.9 |
| v20-91       | 1.87 | 690  | 151.8 | 0.9 |
| v20-93       | 1.56 | 0    |       |     |
| v20-94       | 690  | 220.8 | 0.9 |
| v20-95       | 0.5393 | 690  | 220.8 | 0.9 |
| v20-96       | 0.54 | 690  | 124.2 | 0.9 |
| v20-97       | 0.44 | 690  | 220.8 | 0.9 |
| v20-98       | 0.4  | 690  | 220.8 | 0.9 |
| v21-101      | 0.36 | 0    |       |     |
| v21-109      | 0    | 0    |       |     |
| v21-115      | 0.27 | 0    |       |     |
| v21-119      | 0.1187 | 0    |       |     |
| v21-119      | 0.287 | 0    |       |     |
| v21-124      | 0.4  | 0    |       |     |
| v21-126      | 0.38 | 0    |       |     |
| v21-127      | 0.5  | 0    |       |     |
| v21-135      | 1.95 | 0    |       |     |
| v21-138      | 0.47 | 0    |       |     |
| v21-139      | 0.38 | 690  | 1104  | 0.9 |
| v21-140      | 0.31 | 690  | 255.3 | 0.9 |
| v21-141      | 690  | 296.7 | 0.9 |
| v21-142      | 690  | 358.8 | 0.9 |
| v21-144      | 690  | 731.4 | 0.9 |
| v21-145      | 1.9  | 690  | 476.1 | 0.9 |
| v21-146      | 1.0642 | 18   | 68.5  | 0.09|
| v21-147*     | 2.2315 | 690  | 952.2 | 0.9 |
| v21-148      | 0.39 | 18   | 20    | 0.09|
| v21-149*     | 690  | 1200.6 | 0.9 |
| v21-150*     | 0.56 | 690  | 883.2 | 0.9 |
| v21-151      | 1.93 | 18   | 10    | 0.09|
| v21-156      | 1.94 | 0    |       |     |
| v21-170      | 0.7614 | 18   | 16    | 0.09|
| v21-171      | 1.95 | 18   | 25    | 2.09|
| v21-171*     | 0.1543 | 690  | 23.04 | 2.9 |
| v21-172      | 0.22 | 18   | 35    | 2.09|
| v21-172      | 0.1782 | 690  | 565.8 | 0.9 |
| v21-173      | 0.63 | 18   | 17.5  | 0.09|
| v21-174      | 1.95 | 18   | 25    | 2.09|
| v21-174 | 0.3664 | 18 | 25 | 0.09 |
| v21-175 | 0.64  | 18 | 12 | 0.09 |
| v21-176 | 0.34  | 18 | 25 | 0.09 |
| v21-177 | 0.4   | 18 | 34.5 | 0.09 |
| v21-178 | 0.49  | 18 | 110.4 | 0.09 |
| v21-179 | 0.27  | 18 | 172.5 | 0.09 |
| v21-180 | 0.64  | 18 | 69 | 0.09 |
| v21-181 | 0.9   | 690 | 117.3 | 0.09 |
| v21-182 | 0.34  | 690 | 117.3 | 0.09 |
| v21-183 | 0.36  | 690 | 165.6 | 0.09 |
| v21-184 | 0.3714 | 690 | 165.6 | 0.09 |
| v21-189 | 0.49  | 690 | 117.3 | 0.09 |
| v21-203 | 1.18  | 18 | 60.5 | 2.09 |
| v21-207 | 2.48  | 18 | 105.5 | 2.09 |
| v21-212 | 1.2407 | 18 | 165.5 | 2.09 |
| v21-213 | 2.0282 | 18 | 165.5 | 2.09 |
| v21-214 | 2.1099 | 18 | 165.5 | 2.09 |
| v21-215 | 1.7134 | 18 | 165.5 | 2.09 |
| v21-216 | 1.6516 | 18 | 165.5 | 2.09 |
| v21-217 | 1.6914 | 18 | 165.5 | 2.09 |
| v21-218 | 1.4854 | 18 | 165.5 | 2.09 |
| v21-219 | 0.9391 | 18 | 165.5 | 2.09 |
| v21-220 | 1.6434 | 18 | 165.5 | 2.09 |
| v21-221 | 0.25  | 18 | 165.5 | 2.09 |
| v21-222 | 0.35  | 18 | 165.5 | 2.09 |
| v21-223 | 0.36  | 18 | 165.5 | 2.09 |
| v21-224 | 0.3714 | 18 | 165.5 | 2.09 |
| v21-225 | 0.3492 | 18 | 165.5 | 2.09 |
| v21-226 | 0.49  | 18 | 165.5 | 2.09 |
| v21-227 | 0.51  | 18 | 165.5 | 2.09 |
| v21-228 | 0.47  | 18 | 165.5 | 2.09 |
| v21-229 | 0.49  | 18 | 165.5 | 2.09 |
| v21-230 | 1.1   | 18 | 165.5 | 2.09 |
| v21-231 | 0.81  | 18 | 165.5 | 2.09 |
| v21-232 | 0.32  | 18 | 165.5 | 2.09 |
| v21-233 | 0.42  | 18 | 165.5 | 2.09 |
| v21-234 | 0.37  | 18 | 165.5 | 2.09 |
| v21-235 | 1.09  | 18 | 165.5 | 2.09 |
| v21-236 | 1.472 | 18 | 165.5 | 2.09 |
| v21-237 | 1.47  | 18 | 165.5 | 2.09 |
| v21-238 | 0.83  | 18 | 165.5 | 2.09 |
| v21-239 | 0.71  | 18 | 165.5 | 2.09 |
| Code    | Value 1 | Value 2 | Value 3 | Value 4 |
|---------|---------|---------|---------|---------|
| v24-112 | 0.8     |         |         | 0       |
| v24-113 | 0.44    |         |         | 0       |
| v24-114 | 0.25    |         |         | 0       |
| v24-115 | 0.22    |         |         | 0       |
| v24-117 | 1.6     |         |         | 0       |
| v24-118 | 0.28    |         |         | 0       |
| v24-119 | 0.14    |         |         | 0       |
| v24-121 | 0.25    |         |         | 0       |
| v24-122 | 0.39    |         |         | 0       |
| v24-139 | 1.63    |         |         | 0       |
| v24-141 | 1.31    |         |         | 0       |
| v24-143 | 1.43    |         |         | 0       |
| v24-146 | 1.26    |         |         | 0       |
| v24-147 | 0.46    |         |         | 0       |
| v24-40  | 1.35    |         |         | 0       |
| v24-46  | 1.39    |         |         | 0       |
| v24-47  | 1.7     |         |         | 0       |
| v24-49  | 1.46    |         |         | 0       |
| v24-51  | 2.5     |         |         | 0       |
| v24-52b | 0       |         |         | 0       |
| v24-53  | 2.3     |         |         | 0       |
| v24-54  | 0       |         |         | 0       |
| v24-56  | 1.53    |         |         | 0       |
| v24-60  | 2.74    |         |         | 0       |
| v24-64  | 0.43    |         |         | 0       |
| v24-65  | 2.26    |         |         | 0       |
| v24-69  | 0.49    |         |         | 0       |
| v24-71  | 1.97    |         |         | 0       |
| v24-73  | 0.36    |         |         | 0       |
| v24-74  | 0.43    |         |         | 0       |
| v24-76  | 0.14    |         |         | 0       |
| v24-78  | 0.43    |         |         | 0       |
| v24-85  | 0.22    |         |         | 0       |
| v24-87  | 0.3     |         |         | 0       |
| v24-89  | 0.24    |         |         | 0       |
| v24-95  | 0.38    |         |         | 0       |
| v24-96  | 0.73    |         |         | 0       |
| v24-97  | 690     | 103.5   | 0.9     | 0       |
| v24-98  | 0.32    | 690     | 62.1    | 0.9     |
| v28-181 | 2.23    |         |         | 0       |
| v28-185 | 2.68    |         |         | 0       |
| v28-201 | 18      | 20.5    | 0.09    |         |
| v28-203 | 18      | 40      | 0.09    |         |
| v28-238 | 1.25    | 18      | 36      | 7.09    |
| v28-239 | 0.8     | 18      | 27      | 7.09    |
| v28-243 | 18      | 20      | 7.09    |         |
| v28-249 | 18      | 20      | 2.09    |         |
| v28-255 | 0.4641  | 18      | 15      | 7.09    |
| v28-294 | 1.0399  | 18      | 15      | 2.09    |
| v28-304 | 18      | 72.5    | 0.09    |         |
| v32-126 | 18      | 40.5    | 0.09    |         |
| v32-139 | 18      | 5.5     | 0.09    |         |
| v36-1247p|         |         |         | 8       |
| wah8ff2 | 18      | 32      | 0.09    |         |
| y660410 | 1.93 | 18 | 222 | 0.09 |
| y66095  | 1.84 | 18.2| 372 | 0.09 |
| y69102  | 1.92 | 18 | 118 | 0.09 |
| y69106p | 1.8719 | 18 | 33.5 | 0.09 |
| y69108p | 3.3383 | 3.0526 |
| y6971p  | 2.51 | 18 | 175 | 4.09 |
| y6973p  | 0 | 18 | 132.5 | 4.09 |
| y7011lp | 0.3156 |
| y7011lp | 0.0118 |
| y7011lp | 0.3161 |
| y7011lp | 0.2709 |
| y7011lp | 0.1734 |
| y7011lp | 0.2916 |
| y7011lp | 0.1002 |
| y7011lp | 0.2701 |
| y7011lp | 0.121 |
| y70120p | 0.0926 |
| y70120p | 0.1666 |
| y70120p | 0.0169 |
| y70120p | 0.0543 |
| y70120p | 0.0304 |
| y70120p | 0.0759 |
| y70120p | 0.3924 |
| y70120p | 0.4453 |
| y7013p  | 0.4234 |
| y7013p  | 0.0724 |
| y7014p  | 0.1799 |
| y7014p  | 0.4934 |
| y7015p  | 0.5893 |
| y7015p  | 0.1264 |
| y7016p  | 0.3619 |
| y7017p  | 0.2915 |
| y7017p  | 0.116 |
| y70230p | 0.8059 |
| y70230p | 0.0905 |
| y70230p | 0.2002 |
| y70230p | 0.6969 |
| y70230p | 0.7344 |
| y70230p | 0.1002 |
| y70230p | 0.7051 |
| y70230p | 0.1785 |
| y70451  | 0.2769 |
| y70451  | 95.34 |
| y70452p | 0.2061 |
| y70452p | 0.8935 |
| y70452p | 0.2178 |
| y70452p | 0.775 |
| y70452p | 0.232 |
| y70452p | 0.106 |
| y70460g | 0.1869 |
| y70460g | 0.6404 |
| y70460g | 0.6404 |
| y70460g | 0.1869 |
| y7110117    | 3.9487 |
| y7110117p   | 4.2541 |
| y7131       | 3.6327 |
| y7132       | 3.1681 |
| y7133       | 1.2771 |
| y7133p      | 1.2464 |
| y7134       | 3.2678 |
| y7135       | 4.1326 |
| y7136       | 2.9115 |
| y7137       | 2.8819 |
| y71990p     | 1.2788 |
| y71993p     | 1.3705 |
| y71994p     | 1.2444 |
| y7324mg4    | 1.1395 | 14.5 | 410 | 5 |
| y74218mg    | 1.2787 | 5 |
| y74222mg    | 1.5584 | 5 |
| ztsvii139g  | 0.31   | 0 |
| ztsvii140g  | 0.27   | 0 |
## SOUTH PACIFIC OCEAN

| CORE ID | ORG C | AGE (Ka) | DEPTH (cm) | SOURCE |
|---------|-------|----------|------------|--------|
| amph18  | 1.8453|          |            |        |
| amph19  | 1.1036|          |            |        |
| amph21  | 0.9598|          |            |        |
| amph23  | 0.9781|          |            |        |
| amph25  | 1.0974|          |            |        |
| amph27  | 0.2191|          |            |        |
| amph30  | 0.6308|          |            |        |
| amph31  | 0.3998|          |            |        |
| amph32  | 1.6871|          |            |        |
| amph33  | 1.1533|          |            |        |
| e10-18  |        | 690      | 2500       | 0.03   |
| e10-2   |        | 690      | 800        | 0.03   |
| e10-3   |        | 690      | 5800       | 0.03   |
| e10-30  |        | 690      | 10000      | 0.03   |
| e11-1   |        | 18       | 41         | 0.09   |
| e11-11  |        | 690      | 4000       | 0.03   |
| e11-12  |        | 690      | 15400      | 0.03   |
| e11-13  |        | 690      | 14100      | 11.03  |
| e11-2   |        | 18       | 41         | 0.09   |
| e11-22  |        | 690      | 10200      | 0.03   |
| e11-24  |        | 690      | 10500      | 0.03   |
| e11-3   |        | 18       | 61         | 11.09  |
| e11-3   |        | 690      | 11300      | 11.03  |
| e11-4   |        | 690      | 7600       | 0.03   |
| e11-5   |        | 690      | 4500       | 0.03   |
| e11-6   |        | 690      | 5300       | 0.03   |
| e11-7   |        | 690      | 8900       | 11.03  |
| e11-8   |        | 690      | 14500      | 0.03   |
| e11-9   |        | 690      | 9600       | 11.03  |
| e12-11  |        | 690      | 300        | 0.03   |
| e12-14  |        | 690      | 3600       | 0.03   |
| e12-15  |        | 690      | 6900       | 0.03   |
| e12-17  |        | 690      | 12500      | 0.03   |
| e12-19  |        | 690      | 7200       | 0.03   |
| e12-20  |        | 690      | 7600       | 0.03   |
| e12-26  |        | 690      | 12000      | 0.03   |
| e13-14  |        | 690      | 2600       | 0.03   |
| e13-16  |        | 690      | 4700       | 0.03   |
| e13-17  |        | 690      | 4600       | 0.03   |
| e13-18  |        | 690      | 5600       | 0.03   |
| e13-2   |        | 690      | 3400       | 0.03   |
| e13-20  |        | 690      | 1600       | 0.03   |
| e13-21  |        | 690      | 1600       | 0.03   |
| e13-3   |        | 690      | 2400       | 0.03   |
| e13-5   |        | 690      | 2500       | 0.03   |
| e13-6   |        | 690      | 1500       | 11.03  |
| e13-7   |        | 690      | 1200       | 0.03   |
| e13-8   |        | 690      | 900        | 0.03   |
| e13-9   |        | 690      | 2900       | 0.03   |
| e14-14  |        | 690      | 5700       | 0.03   |
| el14-2 | 690 | 1800 | 0.03 |
|--------|-----|------|------|
| el14-3 | 690 | 1400 | 0.03 |
| el14-4 | 690 | 6500 | 0.03 |
| el14-6 | 690 | 5200 | 0.03 |
| el14-7 | 690 | 4200 | 0.03 |
| el14-8 | 690 | 5300 | 0.03 |
| el15-1 | 690 | 2200 | 0.03 |
| el15-11 | 690 | 1100 | 0.03 |
| el15-16 | 690 | 1300 | 0.03 |
| el15-28 | 690 | 4800 | 0.03 |
| el15-7 | 690 | 4400 | 0.03 |
| el15-8 | 690 | 2600 | 0.03 |
| el16-4 | 690 | 4400 | 0.03 |
| el16-6 | 690 | 300  | 0.03 |
| el17-10 | 690 | 4100 | 0.03 |
| el17-11 | 690 | 7800 | 0.03 |
| el17-12 | 690 | 3800 | 0.03 |
| el17-14 | 690 | 5300 | 0.03 |
| el17-15 | 690 | 4000 | 0.03 |
| el17-16 | 690 | 500  | 0.03 |
| el17-18 | 690 | 12100| 0.03 |
| el17-19 | 690 | 5100 | 0.03 |
| el17-23 | 690 | 13500| 0.03 |
| el17-27 | 690 | 1100 | 0.03 |
| el17-28 | 690 | 1400 | 0.03 |
| el17-29 | 690 | 1800 | 0.03 |
| el17-8  | 690 | 7800 | 0.03 |
| el18-4  | 690 | 3700 | 0.03 |
| el19-5  | 690 | 600  | 0.03 |
| el19-6  | 690 | 5300 | 0.03 |
| el19-7  | 690 | 1400 | 11.03|
| e20-18  | 18  | 31   | 11.09 |
| e20-2   | 690 | 5300 | 0.03 |
| e20-3   | 690 | 5500 | 0.03 |
| e21-15  | 18  | 41   | 11.09 |
| e21-17  | 690 | 1100 | 0.03 |
| e21-20  | 690 | 11400| 0.03 |
| e21-21  | 690 | 2900 | 11.03|
| e21-22  | 690 | 9600 | 11.03|
| e25-10  | 18  | 41   | 11.09 |
| e27-3   | 690 | 489.9| 0.04 |
| e27-4   | 690 | 669.3| 0.04 |
| e33-16  | 690 | 476.1| 0.04 |
| e33-3   | 690 | 793.5| 0.04 |
| e4-10   | 690 | 6100 | 0.03 |
| e45-62  | 18  | 38.5 | 0.09 |
| e45-74  | 18  | 40.5 | 0.09 |
| e45-77  | 18  | 31.5 | 0.09 |
| e45-79  | 18  | 38.5 | 0.09 |
| e5-10   | 690 | 2000 | 0.03 |
| e5-11   | 690 | 3300 | 0.03 |
| e5-15   | 690 | 4600 | 0.03 |
| e5-16   | 690 | 7400 | 0.03 |
| e5-17   | 690 | 10400| 0.03 |
| Key         | Value | Length | Width | Height | Angle |
|-------------|-------|--------|-------|--------|-------|
| k710426106  | 1.0466|        |       |        |       |
| k7104261110 | 1.0129|        |       |        |       |
| k7104261112 | 0.9441|        |       |        |       |
| k7104261114 | 1.7104|        |       |        |       |
| k710426120  | 1.3501|        |       |        |       |
| k710426123  | 1.6207|        |       |        |       |
| k710426155  | 1.1213|        |       |        |       |
| oc7312      | 0.9026|        |       |        |       |
| oc7313      | 0.8728|        |       |        |       |
| oc7324      | 1.5494|        |       |        |       |
| oc7325      | 1.7418|        |       |        |       |
| oc7336      | 0.7408|        |       |        |       |
| oc7337      | 0.9894|        |       |        |       |
| oc7338      | 1.3955|        |       |        |       |
| oc73433     | 0.9346|        |       |        |       |
| opr476223   |       | 18     | 45    |        | 7.09  |
| rc10-106    | 0.8398|        |       |        |       |
| rc10-114    | 0.1664| 18     | 18    |        | 2.09  |
| rc10-115    | 0.0000|        |       |        |       |
| rc10-139    | 0.8897|        |       |        |       |
| rc10-139    | 0.1451| 18     | 31.5  |        | 3.09  |
| rc10-140    | 0.1451|        |       |        |       |
| rc10-140    | 18     | 35     | 9.09  |        |       |
| rc10-97     | 0.0979 |        |       |        |       |
| rc11-211    | 0.8819|        |       |        |       |
| rc11-213    | 18     | 15     | 7.09  |        |       |
| rc11-220    | 18     | 11     | 2.09  |        |       |
| rc11-230    | 1.0605|        |       |        |       |
| rc11-230    | 1.0605| 18     | 45    |        | 11.09 |
| rc11-232 | 0.4020 |
| rc11-235 | 0.6371 |
| rc12-103 | 0.5046 18 41.5 9.09 |
| rc12-103 | 18 41.5 7.09 |
| rc12-107 | 0.8002 18 41.5 7.09 |
| rc12-109 | 0.9813 18 21.5 7.09 |
| rc12-121 | 18 31.5 3.09 |
| rc12-121 | 1.1882 7 |
| rc12-225 | 18 30 11.09 |
| rc12-86  | 2.1400 |
| rc13-113 | 18 5 7.09 |
| rc13-140 | 230 833 0.009 |
| rc13-38  | 18 35 7.09 |
| rc13-38  | 0.4684 7 |
| rc13-64  | 2.3300 0 |
| rc13-65  | 1.9700 0 |
| rc13-66  | 0.4700 0 |
| rc13-69  | 0.5500 0 |
| rc13-71  | 0.5000 0 |
| rc13-81  | 18 10 2.09 |
| rc13-82  | 5.0160 |
| rc13-83  | 0.2237 |
| rc13-84  | 0.4749 |
| rc13-85  | 0.1007 |
| rc13-87  | 0.4952 |
| rc13-88  | 0.5608 |
| rc13-89  | 0.4012 |
| rc13-90  | 0.1242 |
| rc13-91  | 1.2629 |
| rc13-92  | 15.4133 |
| rc13-93  | 0.9552 |
| rc13-94  | 0.3432 |
| rc13-95  | 0.9074 |
| rc15-41  | 0.4670 |
| rc15-42  | 1.9828 |
| rc15-43  | 55.2329 11 |
| rc15-45  | 0.7579 |
| rc15-47  | 0.2798 |
| rc15-49  | 0.3617 |
| rc15-50  | 1.5964 |
| rc15-51  | 1.3978 11 |
| rc15-52  | 18 12.5 11.09 |
| rc15-61  | 18 68.5 0.09 |
| rc8-71   | 1.5374 7 |
| rc8-71   | 18 50 3.09 |
| rc8-78   | 1.2365 18 45 3.09 |
| rc8-92   | 0.9552 |
| rc8-93   | 26.7 22.5 9 |
| rc8-94   | 0.6164 18 16.5 0.09 |
| rc8-95   | 0.835 |
| rc8-96   | 0.3062 |
| rc8-97   | 0.2715 |
| rc9-100  | 0.1916 |
| rc9-101 | 0.4922 |
|--------|-------|
| rc9-102 | 0.3785 |
| rc9-103 | 0.3749 |
| rc9-110 | 0.8032 |
| rc9-110 | 18 | 30 | 7.09 |
| rc9-124 | 1.3196 |
| rc9-126 | 1.009 |
| rc9-129 | 18 | 30.5 | 3.09 |
| rc9-77 | 0.8093 |
| rc9-90 | 0.4009 |
| rc9-91 | 0 |
| rc9-92 | 0.6439 |
| s68pc111a | 1.1977 |
| s68pc151a | 0.9679 |
| s68pc201a | 0.6015 |
| s68pc21a | 0.4607 |
| s68pc221a | 0.8924 |
| s68pc241a | 0.5457 |
| s68pc4 | 0.3198 |
| s68pc6 | 0.8889 |
| s68pc8 | 1.278 |
| scan94pg | 1.6648 |
| v15-32 | 230 | 608 | 0.009 |
| v15-33 | 230 | 1034 | 11.009 |
| v15-42 | 230 | 615 | 0.009 |
| v15-53 | 18 | 36.5 | 11.09 |
| v16-122 | 1.56 |
| v17-44 | 18 | 75.5 | 2.09 |
| v18-222 | 1.84 |
| v18-222 | 9.9 | 17.5 |
| v18-260 | 28 | 24 |
| v18-311 | 2.42 |
| v18-312 | 1.3443 |
| v18-312 | 18 | 25 | 7.09 |
| v18-314 | 2.2568 |
| v18-68 | 6.7 | 17.5 |
| v19-27 | 2.04 | 18 | 110.5 | 0.09 |
| v19-28 | 2.49 | 18 | 180.5 | 2.09 |
| v19-29 | 18 | 180.5 | 0.09 |
| v19-30 | 12 | 87 | 11.08 |
| v19-30 | 2.76 | 18 | 170.5 | 11.09 |
| v19-40 | 0.8073 |
| v19-41 | 1.37 | 18 | 30.5 | 2.09 |
| v19-44 | 0.7624 |
| v19-45 | 0.674 |
| v19-46 | 0.1681 |
| v19-49 | 0.022 |
| v19-50 | 0.0337 |
| v19-51 | 0.7871 |
|   |   |   |   |
|---|---|---|---|
| v19-52 | 0.7182 | 18 | 38 | 2.09 |
| v19-53 | 1.6232 | 18 | 20 | 2.09 |
| v19-54 | 1.7915 |  |  |  |
| v19-55 | 1.404 | 18 | 20 | 2.09 |
| v19-57 | 1.1297 |  |  |  |
| v19-58 | 0.932 |  |  |  |
| v19-59 | 0.4963 |  |  |  |
| v19-60 | 0.4914 |  |  |  |
| v19-61 | 0.5889 |  |  |  |
| v19-64 | 1.389 | 18 | 3.5 | 2.09 |
| v19-65 | 1.5754 | 18 | 15 | 2.09 |
| v19-66 | 1.2707 | 18 | 15 | 0.09 |
| v21-30 | 0.1451 | 18 | 250.5 | 2.09 |
| v21-33 | 1.6431 | 18 | 45.5 | 2.09 |
| v21-35 | 11.36 |  |  |  |
| v21-36 | 2.0635 |  |  |  |
| v21-37 | 2.0282 |  |  |  |
| v21-38 | 1.7134 |  |  |  |
| v21-39 | 1.6914 |  |  |  |
| v21-40 | 1.9391 |  |  |  |
| v21-41 | 0.9252 |  |  |  |
| v21-42 | 1.0532 |  |  |  |
| v21-43 | 0.7026 | 18 | 45 | 7.09 |
| v21-44 | 1.1179 | 18 | 40 | 0.09 |
| v21-45 |  |  |  |  |
| v21-46 |  |  |  |  |
| v24-103p | 2.517 |  |  |  |
| v24-104mg | 3.1578 |  |  |  |
| v24-150 | 3.1353 |  |  |  |
| v24-166 | 0.4749 | 18 | 20.5 | 2.09 |
| v28-203 | 4.3029 | 18 | 40.5 | 7.09 |
| v28-204 | 1.2547 | 18 | 38 | 7.09 |
| v28-205 | 0.7946 |  |  |  |
| y69103p | 2.517 |  |  |  |
| y69104mg | 3.1578 |  |  |  |
| y6980mgl | 3.1353 |  |  |  |
| y7127p | 0.9855 |  |  |  |
| y71312 | 2.0526 |  |  |  |
| y71316 | 1.6651 |  |  |  |
| y71324 | 3.4564 |  |  |  |
| y71325 | 2.7604 |  |  |  |
| y71331 | 0.8969 |  |  |  |
| y71612p | 8.4076 | 18 | 24.5 | 11.09 |
| y7161462 | 1.23 |  |  |  |
| y7161464 | 1.3664 |  |  |  |
| y7161p | 0.7013 |  |  |  |
| y71728g2 | 0.4494 |  |  |  |
| y71730g2 | 0.6298 |  |  |  |
| y71732p | 1.3667 |  |  |  |
| y71733g4 | 1.9325 |  |  |  |
| y71735 | 1.9009 |  |  |  |
| y71736g1 | 1.075 |  |  |  |
| y71738g3 | 0.7735 |  |  |  |
| y71739mg1 | 0.3937 |  |  |  |
| Variable | Value  |
|----------|--------|
| y71743mgl | 1.0824 |
| y71744p  | 1.2719 |
| y71745p  | 18     | 9.5   | 0.09  |
| y71746mg3 | 0.7411 |
| y71747mg2 | 0.8867 |
| y71748p  | 0.7661 |
| y71749mg3 | 1.1855 |
| y71751ff | 1.6346 |
| y71752p  | 1.6891 |
| y71753p  | 1.7452 |
| y71754mg3 | 0.5902 |
| y71870p  | 1.3788 |
| y71877p  | 2.4326 |
| y719101g | 1.5607 |
| y719102g | 1.5115 |
| y719103ff | 1.2768 |
| y719104ff | 67.2431 |
| y719106ff | 1.2099 |
| y719109g | 0.0271 |
| y719110p | 1.7421 |
| y719111p | 2.0415 |
| y719115ff | 1.4419 |
| y71984p  | 2.7302 |
| y71985p  | 2.9494 |
| y71986p  | 2.0524 |
| y71987p  | 2.3404 |
| y71988p  | 2.227  |
| y71989p  | 1.7559 |
| y71996p  | 1.2534 |
| y71997g  | 1.1233 |
| y71998ff | 1.103  |
| y7991p   | 1.8358 |
| z21081   | 0.8147 | 18     | 45     | 7.09  |
Appendix IV: Sedimentation and Accumulation Rates
The following is a list of the table headings and their definitions:

SED RATE = Sedimentation rate (in cm/kyr).
SED ACCUM = Bulk sediment accumulation rate (in g/cm²/kyr x10).
ORG C % = Organic carbon concentration (in whole sediment sample).
ORG C ACCUM = Organic carbon accumulation rate (in mg/cm²/kyr divided by 10).
OPAL ACCUM = Opal accumulation rate (in mg/cm²/kyr divided by 10).
OPAL % = Opal concentration (in whole sediment sample).

Capital letters following the sedimentation rate data indicate type of stratigraphic datum used to determine sedimentation rate. O is oxygen isotope picks, B is biostratigraphic markers, M is magnetostratigraphic markers, L is lithostratigraphic markers, and C is carbon-14 dating. The core identification symbols ending with @ signify that the calcium concentration was estimated for the purposes of calculating the dry bulk density.
| CORE ID | SED RATE | SED ACCUM | ORG C ACCUM | OPAL ACCUM | OPAL % DENSITY | DRY BULK | SOURCE |
|---------|----------|-----------|-------------|------------|----------------|----------|--------|
| al5558@ | 5.444 O  | 3.037     | 44.50       | 14.65      | 0.5578         | 1.1      |
| arb-52@ | 1.829 C  | 0.784     |             |            | 0.4284         | 0.2      |
| arb-52@ | 2.846 C  | 1.219     |             |            | 0.4284         | 0.2      |
| arb-52@ | 3.143 C  | 1.346     |             |            | 0.4284         | 0.2      |
| arb-54@ | 2.843 C  | 1.218     |             |            | 0.4284         | 0.2      |
| arb-54@ | 3.488 C  | 1.495     |             |            | 0.4284         | 0.2      |
| arb-54@ | 6.164 C  | 2.641     |             |            | 0.4284         | 0.2      |
| e4527@  | 1.667 O  | 1.050     | 15.52       | 14.78      | 0.6303         | 1.1      |
| e4528@  | 1.722 B  | 1.085     | 17.00       | 15.66      | 0.6303         | 1.1      |
| e4811@  | 1.778 O  | 1.261     | 4.25        | 3.37       | 0.7090         | 1.1      |
| e4822@  | 4.556 O  | 3.422     | 15.84       | 4.63       | 0.7511         | 1.1      |
| e4823@  | 1.778 O  | 1.261     | 10.32       | 8.19       | 0.7090         | 1.1      |
| e4827@  | 3.444 O  | 2.442     | 21.30       | 8.72       | 0.7090         | 1.1      |
| e483@   | 1.222 B  | 0.867     | 5.79        | 6.68       | 0.7090         | 1.1      |
| md73025@| 19.012 C | 8.727     | 0.00        | 0.00       | 0.4590         | 0.08     |
| rc11-120@| 4.667 O | 2.941     | 20.95       | 7.12       | 0.6303         | 1        |
| rc11-121| 4.444 B  | 3.369     | 1.82        | 18.79      | 5.58           | 0.7580   | 1.1001 |
| rc11-145@| 2.778 O | 1.858     | 19.69       | 10.60      | 0.6688         | 9        |
| rc11-147@| 2.778 O | 1.858     | 20.51       | 11.04      | 0.6688         | 1.1      |
| rc12-339@| 4.444 O | 2.040     | 7.23        | 3.55       | 0.4590         | 1.1      |
| rc14-07@| 3.333 O  | 2.363     | 5.67        | 2.40       | 0.7090         | 1.1      |
| rc14-09@| 3.889 O  | 1.228     |             |            | 0.3159         | 0.1      |
| rc14-09@| 5.556 O  | 4.173     |             |            | 0.7511         | 0.3      |
| rc14-11@| 4.444 O  | 2.972     | 43.58       | 14.66      | 0.6688         | 1.3      |
| rc14-12 | 5.556 O  | 3.710     | 2.56        | 40.07      | 10.80          | 0.6679   | 1.3001 |
| rc14-29@| 1.111 O  | 0.510     | 17.32       | 33.96      | 0.4590         | 1.1      |
| rc14-35@| 1.944 O  | 1.361     | 0.62        | 5.61       | 4.12           | 0.6999   | 1.1001 |
| rc14-37@| 2.222 O  | 1.020     | 5.76        | 5.65       | 0.4590         | 1        |
| rc17-113@| 1.667 O | 0.765     |             |            | 0.4590         | 0.1      |
| rc17-69@| 2.778 O  | 1.029     | 2.28        | 2.22       | 0.3703         | 1.1      |
| rc17-73@| 1.111 O  | 0.700     | 0.87        | 1.24       | 0.6303         | 1.1      |
| rc17-98@| 2.944 O  | 2.088     |             |            | 0.7090         | 0.1      |
| rc8-39  | 2.222 O  | 1.388     | 0.93        | 21.46      | 15.46          | 0.6244   | 1.3001 |
| rc8-39  | 5.000 O  | 3.122     | 2.10        | 74.30      | 23.80          | 0.6244   | 1.1001 |
| rc8-43@ | 2.222 O  | 0.702     |             | 0.53       | 0.75           | 0.3159   | 1.3      |
| rc9-150@| 3.333 O  | 2.229     | 31.85       | 14.29      | 0.6688         | 1.1      |
| rc9-161@| 9.444 O  | 4.335     | 18.53       | 4.28       | 0.4590         | 1.1      |
| rc9-162 | 2.778 O  | 1.616     | 0.72        | 4.87       | 3.02           | 0.5817   | 1.0001 |
| vl4-101a@| 3.889 O | 2.451     | 15.72       | 6.41       | 0.6303         | 1.1      |
| vl4-102@| 2.222 O  | 1.239     | 29.45       | 23.76      | 0.5578         | 1.1      |
| vl4-77@ | 1.611 B  | 0.740     |             |            | 0.4590         | 0.1      |
| vl4-81@ | 1.944 O  | 1.226     | 2.27        | 1.85       | 0.6303         | 1.1      |
| vl6-65@ | 2.222 O  | 1.020     | 18.82       | 18.45      | 0.4590         | 1.3      |
| vl7-42  | 2.889 O  | 1.455     | 17.76       | 12.20      | 0.5037         | 7        |
| vl7-43  | 2.222 O  | 0.854     | 20.16       | 23.59      | 0.3845         | 7        |
| vl7-44@ | 2.222 O  | 0.823     | 18.81       | 22.85      | 0.3703         | 7        |
| vl8-337 | 12.222 O | 2.494     |             |            | 0.2040         | 7        |
| vl9-178@| 2.222 O  | 1.486     | 6.55        | 4.41       | 0.6688         | 1        |
| vl9-185@| 1.667 O  | 0.765     | 1.60        | 2.09       | 0.4590         | 1.1      |
| vl9-188@| 2.778 O  | 1.751     | 3.15        | 1.80       | 0.6303         | 1        |
| Code   | Value 1 | Value 2 | Value 3 | Value 4 | Value 5 |
|--------|---------|---------|---------|---------|---------|
| vl9-201 | 3.889 B | 2.036   | 8.18    | 4.02    | 0.5236  |
| vl9-202 | 1.667 0  | 0.818   | 2.89    | 3.53    | 0.4907  |
| vl9-204 | 1.111 0  | 0.351   | 9.53    | 27.16   | 0.3159  |
| vl9-25  | 3.056 O  | 1.429   | 28.62   | 20.02   | 0.4678  |
| vl9-27  | 1.667 0  | 0.705   | 15.22   | 21.59   | 0.4228  |
| vl9-28  | 7.222 O  | 3.914   | 65.87   | 16.83   | 0.5419  |
| vl9-28@ | 7.222 O  | 3.914   | 65.87   | 16.83   | 0.5419  |
| vl9-29  | 3.111 O  | 1.085   | 30.35   | 18.85   | 0.2899  |
| vl9-30  | 5.556 O  | 1.610   | 7.86    | 19.63   | 0.2402  |
| vl9-41@ | 1.667 O  | 0.400   | 1.53    | 4.61    | 0.4590  |
| vl9-64@ | 0.722 O  | 0.332   | 5.84    | 8.34    | 0.6303  |
| vl9-170@| 1.111 O  | 0.700   | 5.87    | 8.38    | 0.6303  |
| vl9-175@| 1.111 O  | 0.700   | 5.87    | 8.38    | 0.6303  |
| vl1-214@| 3.500 O  | 0.841   | 18.38   | 21.87   | 0.2402  |
| vl1-30  | 13.889 O | 8.253   | 34.44   | 4.17    | 0.5942  |
| vl1-33  | 2.500 O  | 1.227   | 0.90    | 0.42    | 0.2164  |
| vl2-203@| 10.000 O | 2.164   | 25.05   | 12.28   | 0.4590  |
| vl2-30  | 4.444 O  | 2.040   | 36.27   | 42.24   | 0.1932  |
| vl2-48@ | 1.667 O  | 0.930   | 0.36    | 0.39    | 0.5578  |
| vl2-84@ | 6.667 O  | 1.601   | 90.22   | 56.35   | 0.2402  |
| vl2-87@ | 1.111 O  | 0.240   | 12.86   | 53.50   | 0.2164  |
| vl2-98@ | 6.667 O  | 1.601   | 40.15   | 25.07   | 0.2402  |
| vl2-90@ | 3.333 O  | 2.363   | 6.92    | 2.93    | 0.7090  |
| v34-53@ | 1.053 C  | 0.483   | 0.4590  | 0.05    |
| v34-88@ | 5.442 C  | 2.670   | 0.4907  | 0.05    |
| y6971p  | 7.778 O  | 3.234   | 112.10  | 34.66   | 0.4158  |
| y6973p  | 7.222 O  | 4.391   | 112.10  | 34.66   | 0.4158  |
| y1612p  | 1.333 O  | 0.310   | 112.10  | 34.66   | 0.4158  |
| CORE ID | SED RATE | SED ACCUM | ORG C ACCUM | OPAL ACCUM | % DENSITY | DRY BULK SOURCE |
|---------|----------|-----------|-------------|------------|-----------|----------------|
| a15-63@ | 64.048 C  | 13.857    |             | 52.05      | 0.2164    | 0.02           |
| a15-64@ | 41.667 O  | 16.620    |             | 3.13       | 0.3989    | 1.6            |
| a15-65@ | 30.955 C  | 6.697     |             | 82.89      | 0.2164    | 0.02           |
| a16-42@ | 27.778 O  | 6.941     |             | 11.94      | 0.2499    | 1.6            |
| a16-45@ | 23.750 C  | 5.139     |             | 0.2164     | 0.3989    | 0.5            |
| a16-46@ | 22.581 C  | 9.007     |             | 0.2164     | 0.3989    | 0.5            |
| a16-461@| 21.321 C  | 4.613     |             | 0.2164     | 0.3989    | 0.5            |
| a16-466@| 19.878 C  | 7.929     |             | 0.3989     | 0.5       |                |
| a16-71@ | 17.333 C  | 4.331     |             | 0.2499     | 0.6       |                |
| a16-714@| 17.288 C  | 3.740     |             | 0.2164     | 0.02      |                |
| a17-21@ | 12.231 C  | 2.646     |             | 0.2164     | 0.5       |                |
| a17-22@ | 11.919 C  | 2.579     |             | 0.2164     | 0.02      |                |
| a17-26@ | 11.579 C  | 4.619     |             | 0.3989     | 0.5       |                |
| a17-915@| 10.368 C  | 5.783     |             | 0.5578     | 0.06      |                |
| a17-94@ | 10.308 C  | 2.230     |             | 0.2164     | 0.02      |                |
| a18-016@| 10.000 C  | 3.989     |             | 0.3989     | 0.5       |                |
| a18-032@| 9.896 C   | 3.947     |             | 0.3989     | 0.5       |                |
| a18-039@| 9.517 C   | 2.059     |             | 0.2164     | 0.02      |                |
| a18-047@| 9.500 O   | 3.789     |             | 0.3989     | 1.6       |                |
| a18-048@| 8.358 C   | 3.095     |             | 0.3703     | 0.5       |                |
| a18-056@| 8.182 C   | 3.264     |             | 0.3989     | 0.5       |                |
| a18-072@| 7.966 C   | 2.516     |             | 0.3159     | 0.5       |                |
| a18-073@| 7.778 O   | 1.868     |             | 52.84      | 0.2402    | 1.6            |
| a18-074@| 7.667 O   | 5.128     |             | 5.84       | 0.6688    | 1.6            |
| a18-09@ | 7.500 O   | 2.369     |             | 0.3159     | 0.6       |                |
| dsdp502 | 7.444 O   | 4.152     |             | 0.5578     | 0.6       |                |
| dsdp502 | 7.407 O   | 2.955     |             | 9.15       | 0.3989    | 1.5            |
| en66-10@| 7.000 O   | 2.792     |             | 8.93       | 0.3989    | 1.6            |
| k-110   | 6.939 C   | 1.667     |             | 0.2402     | 0.06      |                |
| k708-10@| 6.491 C   | 2.589     |             | 0.3989     | 0.5       |                |
| k708-48 | 6.250 C   | 4.432     |             | 4.63       | 0.7090    | 1.08           |
| k708-68 | 6.056 O   | 2.075     |             | 6.12       | 0.3427    | 1.6            |
| k708-78 | 5.889 O   | 3.712     |             | 6.93       | 0.6303    | 1.6            |
| k708-88 | 5.889 O   | 3.712     |             | 0.6303     | 0.6       |                |
| m-12392@| 5.833 C   | 1.843     |             | 12.26      | 0.3159    | 1.08           |
| rc1-02@ | 5.781 C   | 1.676     |             | 5.86       | 0.2899    | 1.5            |
| rc10-288@| 5.556 O  | 1.470     |             | 26.88      | 0.2647    | 1.6            |
| rc10-50@ | 5.556 O  | 2.216     |             | 4.51       | 0.3989    | 1.6            |
| rc13-151@| 5.556 O  | 3.501     |             | 8.27       | 0.6303    | 1.6            |
| rc13-152@| 5.556 O  | 3.501     |             | 16.82      | 0.6303    | 1.6            |
| rc13-153@| 5.556 O  | 1.904     |             | 7.09       | 0.3427    | 1.6            |
| rc13-154@| 5.556 O  | 1.904     |             | 6.78       | 0.3427    | 1.6            |
| rc13-158@| 5.556 O  | 3.296     |             | 14.19      | 0.5933    | 1.6            |
| rc13-159@| 5.556 O  | 1.610     |             | 5.63       | 0.2899    | 1.6            |
| rc13-189@| 5.556 O  | 1.610     |             | 3.61       | 0.2899    | 1.6            |
| rc24-01@| 5.500 O   | 3.466     |             | 18.47      | 0.6303    | 1.6            |
| rc5-34@ | 5.400 C   | 2.479     | 1.29        | 0.4590     | 0.01      |                |
| rc5-36@ | 5.370 C   | 1.162     |             | 0.2164     | 0.02      |                |
| rc5-54@ | 5.200 C   | 1.643     | 0.76        | 0.3159     | 0.01      |                |
| rc5-57@ | 5.167 O   | 2.214     |             | 5.45       | 0.4284    | 1.6            |
| v26-176@ | 2.957 C | 1.095 | 0.3703 | 0.06 |
| v26-177@ | 2.778 O | 1.648 | 3.39 2.06 | 0.5933 | 1.6 |
| v26-41@ | 2.778 O | 2.086 | 4.96 2.38 | 0.7511 | 1.6 |
| v26-46@ | 2.778 O | 0.805 | 3.16 3.93 | 0.2899 | 1.6 |
| v27-178@ | 2.778 O | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v27-17@ | 2.778 O | 1.751 | 9.75 5.57 | 0.6303 | 1.6 |
| v27-19@ | 2.724 C | 1.932 | 0.7090 | 1.6 |
| v27-20@ | 2.700 C | 0.925 | 0.56 | 0.3427 | 0.01 |
| v27-248@ | 2.700 C | 0.925 | 0.60 | 0.3427 | 0.01 |
| v27-263@ | 2.700 C | 1.000 | 0.49 | 0.3703 | 0.01 |
| v27-84@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v27-86@ | 2.778 | 1.751 | 9.75 5.57 | 0.6303 | 1.6 |
| v28-119@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v28-122@ | 2.778 | 1.751 | 9.75 5.57 | 0.6303 | 1.6 |
| v28-127@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v28-25@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v28-56@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v28-56@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v29-172@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v29-173k@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v29-174@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v29-175@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v30-36@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v30-41k@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v30-49@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v30-51k@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| v30-97@ | 2.778 | 0.877 | 4.88 5.57 | 0.3159 | 1.6 |
| x164021@ | 1.893 C | 1.056 | 0.5578 | 0.06 |
| x164032@ | 1.775 M | 0.798 0.33 | 0.4497 0.0002 |
| x164041@ | 1.722 O | 1.221 | 0.65 0.53 | 0.7090 | 1.6 |
| x164051@ | 1.667 O | 0.571 | 3.69 6.47 | 0.3427 | 1.6 |
| x164061@ | 1.667 O | 0.526 | 4.26 8.09 | 0.3159 | 1.6 |
| x164071@ | 1.667 O | 1.252 | 1.06 0.85 | 0.7511 | 1.6 |
| x164081@ | 1.667 O | 0.873 | 2.34 2.68 | 0.5236 | 1.6 |
| x164101@ | 1.667 O | 1.115 | 1.26 1.13 | 0.6688 | 1.6 |
| x164111@ | 1.667 O | 0.930 | 0.5578 | 0.6 |
| x164121@ | 1.667 O | 0.873 | 2.29 2.63 | 0.5236 | 1.6 |
| x164131@ | 1.667 O | 1.115 | 0.96 0.86 | 0.6688 | 1.6 |
| x164151@ | 1.667 O | 0.930 | 0.77 0.83 | 0.5578 | 0.6 |
| x164161@ | 1.667 O | 1.078 | 1.84 1.71 | 0.6688 | 1.6 |
| x164171@ | 1.389 O | 0.775 | 0.5578 | 0.6 |
| x164201@ | 1.300 C | 0.481 0.29 | 0.3703 0.01 |
| x164222@ | 1.286 C | 0.810 | 0.6303 0.06 |
| x164241@ | 1.110 O | 0.510 | 0.4590 | 0.6 |
| Code     | X   | Y   | Z1  | Z2  | Z3  | Z4  | Z5  |
|----------|-----|-----|-----|-----|-----|-----|-----|
| x164251@ | 1.11 | 0   | 0.38 | 1.25 | 3.28 | 0.342 | 1.6 |
| x164263@ | 1.11 | 0   | 0.35 | 2.07 | 5.91 | 0.315 | 1.6 |
| x164282@ | 1.11 | 0   | 0.78 | 2.07 | 5.91 | 0.709 | 0.6 |
| x164291@ | 1.11 | 0   | 0.38 | 1.10 | 2.88 | 0.342 | 1.6 |
| x164301@ | 1.11 | 0   | 0.62 | 3.30 | 5.33 | 0.557 | 1.6 |
| x164311@ | 0.67 | C   | 0.15 | 0.80 | 2.75 | 0.230 | 0.02|
| x164321@ | 0.56 | 0   | 0.29 | 0.80 | 2.75 | 0.523 | 1.6 |
## SOUTH ATLANTIC OCEAN

| CORE ID | SED RATE | SED ACCUM | SED ACCUM | ORG C ACCUM | ORG C ACCUM % | OPAL | OPAL ACCUM | OPAL DRY BULK | DENSITY | SOURCE |
|---------|----------|-----------|-----------|-------------|---------------|------|-------------|---------------|---------|--------|
| al18-074@ | 2.778 | 1.549 | 1.549 | 16.60 | 13.39 | 0.5578 | 0.6 |
| al18-076@ | 2.222 | 1.239 | 1.239 | 13.39 | 0.5578 | 0.6 |
| al160-13@ | 0.567 | 0.372 | 0.372 | 0.5578 | 0.6 |
| chn-11588@ | 0.500 | 0.171 | 0.171 | 0.3703 | 0.7 |
| chn115-70@ | 1.579 | 0.585 | 0.585 | 0.3703 | 0.7 |
| chn115-89@ | 1.667 | 0.571 | 0.571 | 0.3703 | 0.7 |
| chn115-90@ | 0.333 | 0.114 | 0.114 | 0.3427 | 0.7 |
| chn115-91@ | 0.556 | 0.190 | 0.190 | 0.3427 | 0.7 |
| chn115-92@ | 1.389 | 0.476 | 0.476 | 0.3427 | 0.7 |
| rcl1-118@ | 2.222 | 1.401 | 1.401 | 0.6303 | 0.3 |
| rcl1-119@ | 2.222 | 1.452 | 1.452 | 0.3427 | 0.7 |
| rcl1-120@ | 4.444 | 0 | 0 | 0.6303 | 0.3 |
| rcl1-78@ | 10.000 | 2.306 | 2.306 | 0.2306 | 1.3 |
| rcl1-80 | 4.444 | 2.605 | 2.605 | 0.5861 | 8.3 |
| rcl1-83 | 18.889 | 5.573 | 5.573 | 0.2950 | 8.3 |
| rcl12-267@ | 3.333 | 0.966 | 0.966 | 0.2899 | 1.3 |
| rcl12-289@ | 3.333 | 0.882 | 0.882 | 0.2647 | 1.3 |
| rcl13-243@ | 2.222 | 0.588 | 0.588 | 0.2647 | 1.3 |
| rcl13-251@ | 1.111 | 0.381 | 0.381 | 0.3427 | 1.3 |
| rcl13-253@ | 2.222 | 1.239 | 1.239 | 0.5578 | 1.3 |
| rcl13-254@ | 3.333 | 1.053 | 1.053 | 0.3159 | 1.3 |
| rcl13-255@ | 7.778 | 1.868 | 1.868 | 0.2402 | 0.3 |
| rcl13-256@ | 22.222 | 5.124 | 5.124 | 0.2306 | 0.3 |
| rcl13-257@ | 1.111 | 0.240 | 0.240 | 0.2164 | 0.3 |
| rcl13-261@ | 4.444 | 0.962 | 0.962 | 0.2164 | 1.3 |
| rcl13-273@ | 3.333 | 0.721 | 0.721 | 0.2164 | 1.3 |
| rcl13-275@ | 3.333 | 0.882 | 0.882 | 0.2647 | 1.3 |
| rcl13-276 | 2.222 | 0.429 | 0.429 | 0.1932 | 1.3001 |
| rcl15-93@ | 5.556 | 3.716 | 3.716 | 0.6688 | 1 |
| rcl15-94@ | 6.111 | 4.087 | 4.087 | 0.6688 | 0.3 |
| rcl15-98@ | 5.556 | 1.610 | 1.610 | 0.2899 | 1.3 |
| rcl24-16@ | 4.286 | 3.219 | 3.219 | 0.7511 | 0.06 |
| rcl24-78@ | 6.571 | 3.665 | 3.665 | 0.5578 | 0.06 |
| t78-33 | 5.636 | 1.565 | 1.565 | 0.2777 | 0.02 |
| t78-38 | 0.636 | 0.187 | 0.187 | 0.2940 | 0.02 |
| t78-42 | 1.364 | 0.465 | 0.465 | 0.3410 | 0.02 |
| t78-45 | 3.571 | 0.832 | 0.832 | 0.2330 | 0.02 |
| t78-46 | 25.215 | 5.279 | 5.279 | 0.2093 | 0.02 |
| t80-11 | 3.592 | 0.709 | 0.709 | 0.1973 | 0.02 |
| v18-35@ | 6.667 | 1.569 | 1.569 | 0.2354 | 0.3 |
| v22-108 | 5.556 | 3.849 | 3.849 | 0.6927 | 1 |
| v22-177@ | 3.580 | 2.689 | 2.689 | 0.7511 | 1 |
| v22-182@ | 3.691 | 2.326 | 2.326 | 0.6303 | 1 |
| v22-38@ | 2.321 | 0.733 | 0.733 | 0.3159 | 1 |
| v22-86@ | 3.333 | 0.721 | 0.721 | 0.2164 | 1.3 |
| v25-56@ | 3.333 | 1.859 | 1.859 | 0.5578 | 1.6 |
| v26-104@ | 8.333 | 2.632 | 2.632 | 0.3159 | 1.6 |
| v29-144@ | 5.000 | 2.295 | 2.295 | 0.4590 | 0.06 |
| v30-40@ | 3.589 | 2.129 | 2.129 | 0.5933 | 0.06 |
| CORE ID  | SED RATE | SED ACCUM | ORG C ACCUM | OPAL ACCUM | OPAL % | DRY BULK DENSITY | SOURCE |
|---------|----------|-----------|-------------|------------|--------|------------------|--------|
| 660410  | 25.667 O  | 4.998     | 8.67        | 3.11       | 0.1947 | 0.09             |        |
| ahf10614@ | 9.615 C  | 3.561     | 18.83       |            | 0.3703 | 5                |        |
| ahf10626  | 16.667 C  | 6.286     | 41.62       | 19.53      | 0.3771 | 0.09             |        |
| ahf11343  | 15.528 O  | 4.589     | 8.67        | 3.11       | 0.2955 | 0.09             |        |
| bnf043    | 1.056 O   | 0.596     | 1.09        | 7.27       | 12.20  | 0.5646           | 5      |
| bnf043pgz | 0.944 O   | 0.533     | 6.51        | 12.20      | 0.5646 | 7.09             |        |
| dsdp503   | 1.570 M   | 0.679     | 0.31        |            | 0.4326 | 0.0002           |        |
| dwbg2     | 1.667 O   | 1.313     | 0.26        | 0.20       | 0.7879 | 0.09             |        |
| g76-510@  | 2.805 C   | 0.674     | 0.40        |            | 0.2402 |                  |        |
| g76-514@  | 3.037 C   | 0.657     | 0.26        |            | 0.2164 |                  |        |
| g76-55@   | 2.381 C   | 0.515     | 0.39        |            | 0.2164 |                  |        |
| lapd1g@   | 1.778 O   | 0.352     |            |            | 0.1978 | 5                |        |
| rcl0-158  | 0.150 M   | 0.030     | 0.01        | 0.06       | 2.00   | 0.1967           | 0.9    |
| rcl0-159  | 0.290 M   | 0.057     | 0.02        | 0.23       | 3.95   | 0.1965           | 0.9    |
| rcl0-160  | 0.720 M   | 0.142     | 0.10        | 0.37       | 2.62   | 0.1969           | 0.9    |
| rcl0-161  | 0.444 O   | 0.175     | 0.33        | 0.59       | 3.38   | 0.3945           | 0.09   |
| rcl0-162  | 0.444 O   | 0.175     | 0.59        | 3.38       | 0.3945 | 7.09             |        |
| rcl0-163@ | 0.490 M   | 0.096     |            |            | 0.1968 | 0.9              |        |
| rcl0-167  | 2.200 M   | 0.430     | 0.48        |            | 0.1955 | 0.9              |        |
| rcl0-167  | 2.444 B   | 0.478     | 0.53        | 1.87       | 3.91   | 0.1955           | 0.09   |
| rcl0-167  | 2.444 B   | 0.481     | 1.59        | 3.30       | 0.1967 | 7.09             |        |
| rcl0-168@ | 0.960 M   | 0.189     |            |            | 0.1968 | 0.9              |        |
| rcl0-169@ | 1.180 M   | 0.231     |            |            | 0.1955 | 0.9              |        |
| rcl0-170@ | 0.370 M   | 0.073     |            |            | 0.1968 | 0.9              |        |
| rcl0-171  | 0.800 M   | 0.156     | 0.04        | 0.80       | 5.10   | 0.1956           | 0.9    |
| rcl0-172@ | 0.300 M   | 0.059     |            |            | 0.1968 | 0.9              |        |
| rcl0-175@ | 1.230 M   | 0.421     |            |            | 0.3427 | 0.9              |        |
| rcl0-178@ | 1.722 B   | 0.373     |            |            | 0.2164 | 7.09             |        |
| rcl0-179  | 0.970 M   | 0.194     | 0.31        | 1.16       | 5.97   | 0.2000           | 0.9    |
| rcl0-181  | 1.110 M   | 0.216     | 0.13        | 1.56       | 7.22   | 0.1950           | 0.9    |
| rcl0-182  | 1.180 M   | 0.230     | 0.07        | 1.36       | 5.90   | 0.1947           | 0.9    |
| rcl0-201@ | 1.600 M   | 0.316     |            |            | 0.1978 | 0.9              |        |
| rcl0-202@ | 1.670 M   | 0.330     |            |            | 0.1978 | 0.9              |        |
| rcl0-203  | 0.570 M   | 0.111     | 0.04        | 0.51       | 4.59   | 0.1941           | 0.9    |
| rcl0-205@ | 1.660 M   | 0.328     |            |            | 0.1978 | 0.9              |        |
| rcl0-206  | 1.120 M   | 0.221     | 0.11        | 0.59       | 2.68   | 0.1973           | 0.9    |
| rcl0-216  | 0.583 B   | 0.115     | 0.01        | 0.54       | 4.73   | 0.1973           | 0.09   |
| rcl0-65@  | 3.722 O   | 2.489     |            |            | 0.6688 | 0.09             |        |
| rcl1-166@ | 1.590 M   | 0.311     |            |            | 0.1955 | 0.9              |        |
| rcl1-169@ | 1.410 M   | 0.276     |            |            | 0.1955 | 0.9              |        |
| rcl1-170@ | 1.111 B   | 0.217     |            |            | 0.1955 | 7.09             |        |
| rcl1-171  | 0.630 M   | 0.123     | 0.07        | 0.88       | 7.13   | 0.1950           | 0.9    |
| rcl1-172@ | 2.222 B   | 0.439     |            |            | 0.1978 | 7.09             |        |
| rcl1-179@ | 2.250 B   | 0.445     |            |            | 0.1978 | 7.09             |        |
| rcl1-193  | 0.260 M   | 0.051     | 0.02        | 0.05       | 1.04   | 0.1950           | 0.9    |
| rcl1-194@ | 0.250 M   | 0.049     |            |            | 0.1955 | 0.9              |        |
| rcl1-195  | 0.300 M   | 0.059     | 0.02        | 0.03       | 0.49   | 0.1956           | 0.9    |
| rcl1-196@ | 0.300 M   | 0.059     |            |            | 0.1955 | 0.9              |        |
| rcl1-198  | 0.210 M   | 0.041     | 0.02        | 0.07       | 1.77   | 0.1950           | 0.9    |
| rcl1-209  | 1.833 C   | 1.140     | 1.60        | 26.40      | 23.16  | 0.6216           | 0.09   |
| v20-81 | 0.360 M | 0.071 | 0.02 | 0.12 | 1.75 | 0.1973 | 0.9 |
|-------|-------|-------|-------|-------|-------|--------|-----|
| v20-82 | 0.160 M | 0.031 | 0.02 | 0.14 | 4.50 | 0.1964 | 0.9 |
| v20-83 | 0.150 M | 0.033 |       |       |       | 0.2211 | 0.9 |
| v20-84 | 0.530 M | 0.104 |       |       |       | 0.1968 | 0.9 |
| v20-85 | 0.250 B | 0.055 | 0.07 | 0.08 | 1.36 | 0.2215 | 0.09 |
| v20-86 | 1.430 M | 0.281 | 0.12 | 0.56 | 1.98 | 0.1967 | 0.9 |
| v20-87 | 0.270 M | 0.054 | 0.10 | 0.10 | 1.91 | 0.1983 | 0.9 |
| v20-88 | 0.160 M | 0.031 | 0.02 | 0.09 | 2.92 | 0.1968 | 0.9 |
| v20-89 | 9.600 M | 1.899 |       |       |       | 0.1978 | 0.9 |
| v20-90 | 3.800 M | 0.754 | 0.29 | 0.71 | 0.94 | 0.1983 | 0.9 |
| v20-91 | 0.210 M | 0.041 |       |       |       | 0.1968 | 0.9 |
| v20-92 | 0.220 M | 0.043 | 0.02 | 0.12 | 2.68 | 0.1965 | 0.9 |
| v20-93 | 0.220 M | 0.043 |       |       |       | 0.1968 | 0.9 |
| v20-94 | 0.220 M | 0.043 |       |       |       | 0.1968 | 0.9 |
| v20-95 | 0.320 M | 0.063 | 0.03 |       |       | 0.1970 | 0.9 |
| v20-96 | 0.180 M | 0.036 | 0.02 | 0.12 | 3.29 | 0.1974 | 0.9 |
| v20-97 | 0.320 M | 0.063 | 0.03 | 0.06 | 0.89 | 0.1970 | 0.9 |
| v20-98 | 0.320 M | 0.063 | 0.03 | 0.06 | 0.93 | 0.1970 | 0.9 |
| v21-139 | 1.600 M | 0.313 | 0.12 | 3.93 | 12.52 | 0.1959 | 0.9 |
| v21-140 | 0.370 M | 0.072 | 0.02 | 0.49 | 6.81 | 0.1945 | 0.9 |
| v21-141 | 0.430 M | 0.085 |       |       |       | 0.1968 | 0.9 |
| v21-142 | 0.520 M | 0.102 |       |       |       | 0.1968 | 0.9 |
| v21-144 | 1.060 M | 0.209 |       |       |       | 0.1968 | 0.9 |
| v21-145 | 0.690 M | 0.136 | 0.26 | 0.30 | 2.21 | 0.1970 | 0.9 |
| v21-146 | 3.806 O | 0.874 | 0.93 | 2.88 | 3.29 | 0.2296 | 0.9 |
| v21-146 | 1.380 M | 0.350 | 0.78 |       |       | 0.2538 | 0.09 |
| v21-147 | 1.740 M | 0.341 | 0.66 | 0.15 | 0.43 | 0.1959 | 0.9 |
| v21-148 | 1.111 B | 0.219 | 0.09 | 1.71 | 7.78 | 0.1973 | 0 |
| v21-149 | 1.740 M | 0.340 |       |       |       | 0.1955 | 0.9 |
| v21-150 | 1.280 M | 0.252 | 0.14 | 3.20 | 12.67 | 0.1972 | 0.9 |
| v21-151 | 0.556 B | 0.109 | 0.21 | 0.74 | 6.82 | 0.1954 | 0.09 |
| v21-171 | 0.889 B | 0.173 | 0.34 | 3.18 | 18.36 | 0.1946 | 0.09 |
| v21-171 | 0.033 M | 0.007 | 0.00 | 0.01 | 2.11 | 0.1954 | 2.9 |
| v21-172 | 1.944 B | 0.381 | 0.08 | 0.59 | 1.54 | 0.1957 | 0.9 |
| v21-172 | 0.820 M | 0.160 | 0.03 |       |       | 0.1957 | 2.09 |
| v21-173 | 0.972 B | 0.190 | 0.12 | 0.45 | 2.37 | 0.1952 | 0.09 |
| v21-174 | 1.389 B | 0.271 | 0.43 | 1.59 | 0.1950 | 2.09 |
| v21-174 | 1.389 B | 0.271 | 0.53 |       |       | 0.1950 | 0.09 |
| v21-175 | 0.667 B | 0.130 | 0.08 | 0.10 | 0.81 | 0.1950 | 0.09 |
| v21-175 | 0.690 M | 0.136 | 0.05 | 0.50 | 3.69 | 0.1968 | 2.9 |
| v21-176 | 0.220 M | 0.043 |       |       |       | 0.1968 | 0.9 |
| v21-176 | 0.220 M | 0.043 |       |       |       | 0.1968 | 0.9 |
| v21-178 | 0.150 M | 0.030 | 0.01 | 0.08 | 2.68 | 0.1980 | 0.9 |
| v21-179 | 0.050 M | 0.010 |       |       |       | 0.1978 | 0.9 |
| v21-180 | 0.300 M | 0.059 | 0.03 | 0.09 | 1.61 | 0.1954 | 0.9 |
| v21-180 | 0.160 M | 0.031 |       |       |       | 0.1968 | 0.9 |
| v21-180 | 0.160 M | 0.031 |       |       |       | 0.1968 | 0.9 |
| v21-189 | 0.170 M | 0.033 | 0.05 | 0.33 | 9.89 | 0.1945 | 0.9 |
| v21-212 | 3.361 B | 1.440 |       |       |       | 0.4284 | 2.09 |
| v21-214 | 5.861 B | 2.187 | 34.28 | 15.67 | 0.3731 | 2.09 |
| v21-29 | 9.194 O | 3.667 |       |       |       | 0.3989 | 2.09 |
| v21-59 | 0.917 O | 0.180 |       |       |       | 0.1968 | 0.09 |
| v21-63 | 0.150 M | 0.030 | 0.01 |       |       | 0.1983 | 0.9 |
| V21-64@ | 0.170 M | 0.034 | 0.1978 | 0.9 |
|---------|---------|-------|--------|----|
| V21-65 | 0.240 M | 0.048 | 0.02   | 0.1985 | 0.9 |
| V21-67 | 0.170 M | 0.034 | 0.01   | 0.1972 | 0.9 |
| V21-69 | 0.110 M | 0.021 | 0.08   | 3.51   | 0.1950 | 0.9 |
| V21-70 | 0.090 M | 0.018 | 0.05   | 2.60   | 0.1964 | 0.9 |
| V21-71 | 0.130 M | 0.026 | 0.07   | 2.86   | 0.1963 | 0.9 |
| V21-73 | 0.760 M | 0.150 | 0.15   | 1.03   | 0.1974 | 0.9 |
| V21-74 | 0.200 M | 0.039 | 0.08   | 1.98   | 0.1967 | 0.9 |
| V21-75 | 0.650 M | 0.128 | 0.06   | 2.00   | 0.1963 | 0.9 |
| V21-76 | 1.300 M | 0.256 | 0.20   | 0.79   | 0.1972 | 0.9 |
| V21-87@| 1.220 M | 0.238 | 0.1955 | 0.9 |
| V21-89@| 0.170 M | 0.037 | 0.2164 | 0.9 |
| V24-109@| 2.778 O | 1.858 | 1.54   | 0.6688 | 0 |
| V24-97@| 0.150 M | 0.030 | 0.1968 | 0.9 |
| V24-98 | 0.090 M | 0.018 | 0.01   | 0.1947 | 0.9 |
| V28-201@| 1.139 B | 0.274 | 0.2402 | 0.09 |
| V28-203@| 2.222 O | 0.534 | 0.2402 | 0.09 |
| V28-238@| 2.000 O | 1.369 | 1.71   | 0.6847 | 0 |
| V28-239 | 1.500 O | 1.013 | 0.81   | 6.18   | 6.10   | 0.6751 | 7 |
| V28-243@| 1.111 B | 0.510 | 0.4590 | 2 |
| V28-249@| 1.111 B | 0.510 | 0.4590 | 2.09 |
| V28-255 | 0.833 O | 0.361 | 0.17   | 1.55   | 4.29   | 0.4335 | 2 |
| V28-294 | 0.833 O | 0.378 | 0.39   | 1.97   | 5.22   | 0.4531 | 7 |
| V28-304@| 4.028 O | 1.607 | 0.3989 | 0.09 |
| V32-126@| 2.250 B | 0.540 | 0.2402 | 0.09 |
| V32-193@| 0.306 B | 0.060 | 0.1968 | 0.09 |
| wah8ff2 | 1.778 O | 1.313 | 0.7383 | 0.09 |
| y660410 | 12.333 C | 2.441 | 4.71   | 14.98  | 6.14   | 0.1980 | 0.09 |
| y66095  | 20.440 O | 4.071 | 7.49   | 0.1991 | 0.09 |
| y69102  | 6.556 O | 1.285 | 2.47   | 4.78   | 3.72   | 0.1960 | 0.09 |
| y69106p | 1.861 O | 0.369 | 0.69   | 0.1981 | 0.09 |
| y6971p  | 9.722 C | 4.043 | 10.15  | 140.13 | 34.66  | 0.4158 | 4.09 |
| y6973p  | 7.361 O | 4.606 | 0.00   | 4.17   | 0.91   | 0.6257 | 4 |
| y7324mg4| 28.276 C | 5.482 | 6.25   | 26.93  | 4.91   | 0.1939 | 5 |
| CORE ID | SED RATE | SED ACCUM | ORG C ACCUM | OPAL ACCUM | OPAL % DENSITY | DRY BULK | SOURCE |
|---------|----------|-----------|-------------|------------|---------------|----------|--------|
| e10-18| 0.362 M  | 0.078     |             |            | 0.2164 0.03   |          |        |
| e10-20| 0.116 M  | 0.025     |             |            | 0.2164 0.03   |          |        |
| e10-30| 1.449 M  | 0.314     |             |            | 0.2164 0.03   |          |        |
| e10-3l| 0.841 M  | 0.182     |             |            | 0.2164 0.03   |          |        |
| e11-1l| 0.580 M  | 0.125     |             |            | 0.2164 0.03   |          |        |
| e11-12| 2.232 M  | 0.483     |             |            | 0.2164 0.03   |          |        |
| e11-13| 2.043 M  | 0.442     | 7.98 18.05  | 0.2164 11  |              |          |        |
| e11-10| 2.278 B  | 0.909     |             |            | 0.3989 0.09   |          |        |
| e11-22| 1.478 M  | 0.320     |             |            | 0.2164 0.03   |          |        |
| e11-24| 1.522 M  | 0.329     |             |            | 0.2164 0.03   |          |        |
| e11-28| 7.833 B  | 2.684     |             |            | 0.3427 0.09   |          |        |
| e11-30| 1.638 M  | 0.561     | 18.50 32.97 | 0.3427 11.03|              |          |        |
| e11-36| 3.389 B  | 1.161     | 38.29 32.97 | 0.3427 11.09|              |          |        |
| e11-44| 1.101 M  | 0.506     |             |            | 0.4590 0.03   |          |        |
| e11-56| 0.652 M  | 0.141     |             |            | 0.2164 0.03   |          |        |
| e11-61| 0.768 M  | 0.166     |             |            | 0.2164 0.03   |          |        |
| e11-76| 1.290 M  | 0.279     | 5.62 20.14  | 0.2164 11.03|              |          |        |
| e11-86| 2.101 M  | 0.455     |             |            | 0.2164 0.03   |          |        |
| e11-96| 1.391 M  | 0.301     | 6.63 22.04  | 0.2164 11.03|              |          |        |
| e12-11| 0.043 M  | 0.009     |             |            | 0.2164 0.03   |          |        |
| e12-14| 0.522 M  | 0.113     |             |            | 0.2164 0.03   |          |        |
| e12-15| 1.000 M  | 0.216     |             |            | 0.2164 0.03   |          |        |
| e12-17| 1.812 M  | 0.392     |             |            | 0.2164 0.03   |          |        |
| e12-19| 1.043 M  | 0.226     |             |            | 0.2164 0.03   |          |        |
| e12-20| 1.101 M  | 0.238     |             |            | 0.2164 0.03   |          |        |
| e12-26| 1.739 M  | 0.376     |             |            | 0.2164 0.03   |          |        |
| e13-11| 0.377 M  | 0.082     |             |            | 0.2164 0.03   |          |        |
| e13-16| 0.681 M  | 0.147     |             |            | 0.2164 0.03   |          |        |
| e13-17| 0.667 M  | 0.144     |             |            | 0.2164 0.03   |          |        |
| e13-18| 0.812 M  | 0.176     |             |            | 0.2164 0.03   |          |        |
| e13-20| 0.232 M  | 0.050     |             |            | 0.2164 0.03   |          |        |
| e13-21| 0.232 M  | 0.050     |             |            | 0.2164 0.03   |          |        |
| e13-28| 0.493 M  | 0.107     |             |            | 0.2164 0.03   |          |        |
| e13-35| 0.348 M  | 0.075     |             |            | 0.2164 0.03   |          |        |
| e13-55| 0.362 M  | 0.084     |             |            | 0.2306 0.03   |          |        |
| e13-66| 0.217 M  | 0.047     | 0.80 17.10  | 0.2164 11.03|              |          |        |
| e13-76| 0.174 M  | 0.038     |             |            | 0.2164 0.03   |          |        |
| e13-86| 0.130 M  | 0.028     |             |            | 0.2164 0.03   |          |        |
| e13-96| 0.420 M  | 0.091     |             |            | 0.2164 0.03   |          |        |
| e14-14| 0.826 M  | 0.239     |             |            | 0.2899 0.03   |          |        |
| e14-26| 0.261 M  | 0.076     |             |            | 0.2899 0.03   |          |        |
| e14-38| 0.203 M  | 0.059     |             |            | 0.2899 0.03   |          |        |
| e14-48| 0.942 M  | 0.273     |             |            | 0.2899 0.03   |          |        |
| e14-66| 0.754 M  | 0.199     |             |            | 0.2647 0.03   |          |        |
| e14-76| 0.609 M  | 0.161     |             |            | 0.2647 0.03   |          |        |
| e14-86| 0.768 M  | 0.203     |             |            | 0.2647 0.03   |          |        |
| e15-11| 0.159 M  | 0.034     |             |            | 0.2164 0.03   |          |        |
| e15-16| 0.188 M  | 0.041     |             |            | 0.2164 0.03   |          |        |
| e15-18| 0.319 M  | 0.069     |             |            | 0.2164 0.03   |          |        |
| e15-28| 0.696 M  | 0.167     |             |            | 0.2402 0.03   |          |        |
|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| e15-7@ | 0.638 M | 0.138 |       |       |       |       |       |
| e15-8@ | 0.377 M | 0.082 |       |       |       |       |       |
| e16-4@ | 0.638 M | 0.153 |       |       |       |       |       |
| e16-6@ | 0.043 M | 0.012 |       |       |       |       |       |
| e17-10@ | 0.594 M | 0.129 |       |       |       |       |       |
| e17-11@ | 1.130 M | 0.245 |       |       |       |       |       |
| e17-12@ | 0.551 M | 0.119 |       |       |       |       |       |
| e17-14@ | 0.768 M | 0.166 |       |       |       |       |       |
| e17-15@ | 0.580 M | 0.125 |       |       |       |       |       |
| e17-16@ | 0.072 M | 0.016 |       |       |       |       |       |
| e17-18@ | 1.754 M | 0.379 |       |       |       |       |       |
| e17-19@ | 0.739 M | 0.160 |       |       |       |       |       |
| e17-23@ | 1.957 M | 0.423 |       |       |       |       |       |
| e17-27@ | 0.159 M | 0.044 |       |       |       |       |       |
| e17-28@ | 0.203 M | 0.054 |       |       |       |       |       |
| e17-29@ | 0.261 M | 0.056 |       |       |       |       |       |
| e17-88@ | 1.130 M | 0.245 |       |       |       |       |       |
| e18-4@  | 0.536 M | 0.116 |       |       |       |       |       |
| e19-5@  | 0.087 M | 0.019 |       |       |       |       |       |
| e19-6@  | 0.768 M | 0.166 |       |       |       |       |       |
| e19-7@  | 0.203 M | 0.044 |       |       |       |       |       |
| e20-18@ | 1.722 M | 1.152 |       |       |       |       |       |
| e20-28@ | 0.768 M | 0.184 |       |       |       |       |       |
| e20-30@ | 0.797 M | 0.191 |       |       |       |       |       |
| e21-15@ | 2.278 B | 1.351 |       |       |       |       |       |
| e21-17@ | 0.159 M | 0.034 |       |       |       |       |       |
| e21-20@ | 1.652 M | 0.357 |       |       |       |       |       |
| e21-21@ | 0.420 M | 0.091 |       |       |       |       |       |
| e21-22@ | 1.391 M | 0.301 |       |       |       |       |       |
| e25-10@ | 2.278 B | 1.523 |       |       |       |       |       |
| e27-3@  | 0.710 M | 0.171 |       |       |       |       |       |
| e28-8@  | 0.970 M | 0.210 |       |       |       |       |       |
| e33-16@ | 0.690 M | 0.149 |       |       |       |       |       |
| e33-3@  | 1.150 M | 0.249 |       |       |       |       |       |
| e4-10@  | 0.884 M | 0.191 |       |       |       |       |       |
| e45-62@ | 2.139 O | 0.853 |       |       |       |       |       |
| e45-74@ | 2.250 O | 1.505 |       |       |       |       |       |
| e45-77@ | 1.750 O | 1.170 |       |       |       |       |       |
| e45-79@ | 2.139 O | 1.431 |       |       |       |       |       |
| e5-10@  | 0.290 M | 0.063 |       |       |       |       |       |
| e5-11@  | 0.478 M | 0.103 |       |       |       |       |       |
| e5-15@  | 0.667 M | 0.144 |       |       |       |       |       |
| e5-16@  | 1.072 M | 0.232 |       |       |       |       |       |
| e5-17@  | 1.507 M | 0.326 |       |       |       |       |       |
| e5-25@  | 1.217 K | 0.263 |       |       |       |       |       |
| e5-8@   | 0.899 M | 0.216 |       |       |       |       |       |
| e50-15@ | 1.194 O | 0.258 |       |       |       |       |       |
| e6-11@  | 0.130 M | 0.031 |       |       |       |       |       |
| e6-12@  | 0.710 M | 0.164 |       |       |       |       |       |
| e6-14@  | 0.478 M | 0.103 |       |       |       |       |       |
| e6-29@  | 0.986 M | 0.213 |       |       |       |       |       |
| e6-30@  | 0.406 M | 0.097 |       |       |       |       |       |
| e6-5@   | 0.101 M | 0.024 |       |       |       |       |       |
| e6-6@   | 0.348 M | 0.075 |       |       |       |       |       |
|   |   |   |   |   |   |
|---|---|---|---|---|---|
| e7-12@ & 1.072 M & 0.232 & 0.2164 & 0.03 |
| e7-17@ & 0.826 M & 0.190 & 0.2306 & 0.03 |
| e7-18@ & 0.493 M & 0.130 & 0.2647 & 0.03 |
| e7-19 & 0.623 M & 0.165 & 0.2647 & 0.03 |
| e7-4@ & 0.128 M & 0.047 & 0.3703 & 0.03 |
| e7-6@ & 0.812 M & 0.195 & 0.2402 & 0.03 |
| e7-7@ & 0.899 M & 0.216 & 0.2402 & 0.03 |
| e8-5@ & 0.319 M & 0.069 & 0.2164 & 0.03 |
| e9-4@ & 0.841 M & 0.194 & 0.2306 & 0.03 |
| e9-5@ & 0.739 M & 0.170 & 0.2306 & 0.03 |
| gc16 & 0.150 C & 0.061 & 0.4090 & 0.07 |
| gc2 & 0.039 C & 0.030 & 0.7520 & 0.07 |
| gc5 & 0.040 C & 0.026 & 0.6600 & 0.07 |
| gc6 & 0.040 C & 0.025 & 0.6260 & 0.07 |
| gc8 & 0.232 C & 0.174 & 0.7490 & 0.07 |

| opr476223 & 2.500 B & 1.483 & 7.88 & 5.31 & 0.5933 | 9 |
| rc10-114 & 1.000 O & 0.756 & 0.13 & 4.14 & 5.48 & 0.7560 | 2 |
| rc10-139 & 1.750 B & 0.412 & 10.00 & 24.26 & 0.2356 | 7 |
| rc10-140@ & 1.944 B & 0.467 & 3.94 & 8.44 & 0.2402 | 7 |
| rc10-97@ & 2.361 L & 1.579 & 6.63 & 7.40 & 0.7511 | 7.09 |
| rc11-213@ & 0.833 B & 0.626 & 4.63 & 7.40 & 0.7511 | 7.09 |
| rc11-220@ & 0.611 O & 0.454 & 0.52 & 1.15 & 0.7425 | 2.09 |
| rc11-230 & 2.500 O & 1.538 & 1.63 & 7.06 & 4.59 & 0.6153 | 11.09 |
| rc12-103 & 2.306 B & 1.577 & 0.80 & 3.10 & 1.96 & 0.6841 | 7.09 |
| rc12-103 & 2.306 B & 0.475 & 19.67 & 41.43 & 0.2059 | 7 |
| rc12-107 & 2.306 B & 1.543 & 1.23 & 6.82 & 4.42 & 0.6691 | 7 |
| rc12-107 & 2.306 B & 0.558 & 16.65 & 29.83 & 0.2421 | 3.09 |
| rc12-109 & 1.194 B & 0.738 & 0.72 & 1.86 & 2.51 & 0.6177 | 7 |
| rc12-121 & 1.750 B & 0.424 & 13.46 & 31.72 & 0.2425 | 7 |
| rc12-225@ & 1.667 B & 0.989 & 5.38 & 5.44 & 0.5933 | 11.09 |
| rc13-113@ & 0.278 B & 0.186 & 3.62 & 19.48 & 0.6688 | 7.09 |
| rc13-140@ & 3.622 A & 1.144 & 0.3159 & 0.009 |
| rc13-388@ & 1.944 B & 0.467 & 13.18 & 28.22 & 0.2402 | 7 |
| rc13-81@ & 0.556 O & 0.394 & 0.51 & 1.28 & 0.7090 | 7 |
| rc15-52@ & 0.694 O & 0.219 & 0.87 & 3.98 & 0.3159 | 11 |
| rc15-61@ & 3.806 O & 1.747 & 0.4590 & 0.09 |
| rc8-71 & 2.778 O & 0.591 & 10.11 & 17.12 & 0.2126 | 3.09 |
| rc8-78 & 2.500 B & 0.956 & 1.18 & 4.51 & 4.71 & 0.3824 | 7 |
| rc8-93@ & 0.843 C & 0.500 & 0.93 & 1.86 & 0.5933 | 9 |
| rc8-94 & 0.917 O & 0.667 & 0.41 & 0.96 & 2.62 & 0.2267 | 7 |
| rc9-110 & 1.611 B & 0.365 & 0.96 & 2.62 & 0.2267 | 7 |
| rc9-110 & 1.667 B & 0.799 & 0.64 & 1.25 & 1.57 & 0.4793 | 3.09 |
| rc9-124@ & 1.750 O & 1.170 & 0.43 & 0.36 & 0.6688 | 9.09 |
| rc9-126 & 1.194 C & 0.696 & 0.92 & 3.42 & 4.91 & 0.5827 | 7 |
| rc9-129 & 1.806 B & 1.243 & 1.25 & 2.27 & 1.83 & 0.6887 | 3.09 |
| rc9-129 & 1.667 O & 1.148 & 2.06 & 1.80 & 0.6887 | 9 |
| rc17-77 & 1.143 C & 0.221 & 0.1932 & 0.009 |
| v15-32@ & 2.643 A & 0.835 & 0.3159 & 0.009 |
| v15-33@ & 4.496 A & 2.008 & 8.14 & 4.06 & 0.4467 | 11 |
| v15-42@ & 2.674 A & 1.194 & 0.4467 & 0.009 |
| v15-53@ & 2.028 O & 0.931 & 1.30 & 1.40 & 0.4590 | 11.09 |
| v16-122 & 1.750 B & 0.733 & 1.69 & 2.30 & 0.4190 | 7.09 |
| v17-44 & 4.194 B & 1.877 & 2.93 & 34.22 & 18.23 & 0.4476 | 2.09 |
| v18-222 & 2.139 B & 0.497 & 0.75 & 1.51 & 0.2324 | 3.09 |
| v18-260@ | 1.768 | 1.328 | 0.7511 |
| v18-262@ | 0.857 | 0.644 | 0.7511 |
| v18-312 | 1.389 | 0.837 | 21.03 | 25.12 | 0.6027 | 7.09 |
| v18-312 | 1.389 | 0.837 | 1.12 | 21.05 | 25.16 | 0.6024 | 2.09 |
| v18-68@ | 2.612 | 0.691 | 0.2647 |
| v19-27 | 6.139 | 1.936 | 3.95 | 12.79 | 6.61 | 0.3153 | 0.09 |
| v19-28 | 10.028 | 3.344 | 8.33 | 108.39 | 32.42 | 0.3335 | 2 |
| v19-29 | 10.028 | 3.344 | | | | 0.3335 | 2.09 |
| v19-30 | 9.472 | 2.746 | 7.58 | 51.84 | 18.88 | 0.2899 | 0.09 |
| v19-30@ | 7.250 | 3.238 | 39.74 | 12.27 | 0.4467 | 11.08 |
| v19-41 | 1.694 | 1.194 | 1.64 | 4.05 | 3.39 | 0.7046 | 2.09 |
| v19-53 | 2.111 | 0.847 | 1.38 | 3.31 | 3.90 | 0.4014 | 2.09 |
| v19-55 | 1.111 | 0.576 | 0.81 | 3.53 | 6.13 | 0.5186 | 2.09 |
| v19-64 | 0.750 | 0.557 | 0.22 | 0.39 | 0.7425 | 2.09 |
| v19-65@ | 0.861 | 0.639 | 0.26 | 0.60 | 2.20 | 4.65 | 0.5689 | 0.99 |
| v19-96 | 0.833 | 0.474 | 0.60 | 2.20 | 4.65 | 0.5689 | 0.99 |
| v21-30 | 13.917 | 8.269 | 1.20 | 34.51 | 4.17 | 0.5942 | 2.09 |
| v21-33 | 2.528 | 1.240 | 40.89 | 32.96 | 0.4907 | 2.09 |
| v24-166 | 2.500 | 1.771 | 1.24 | 0.86 | 0.49 | 0.7086 | 2.09 |
| v28-203@ | 2.222 | 1.318 | | | | 0.5933 | 2.09 |
| v28-229 | 2.306 | 0.536 | 8.09 | 15.10 | 0.2324 | 3.09 |
| v28-230 | 1.139 | 0.766 | 0.36 | 4.55 | 5.94 | 0.6722 | 2.09 |
| v28-235 | 2.250 | 0.963 | 4.14 | 11.64 | 12.08 | 0.4281 | 7.09 |
| v28-238 | 2.111 | 1.292 | 1.62 | 9.59 | 7.42 | 0.6119 | 7.09 |
| y71612p | 1.361 | 0.281 | 2.36 | 2.16 | 7.67 | 0.2063 | 11.09 |
| y71745p@ | 0.528 | 0.313 | 0.89 | 0.6547 | 7.09 |
| z21081 | 2.500 | 1.637 | 1.33 | 1.46 | 0.89 | 0.6547 | 7.09 |
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