

U.S. DEPARTMENT OF THE INTERIOR

DATA FILE

THE 1976 ATLANTIC MARGIN CORING (AMCOR) PROJECT

OF THE

U.S. GEOLOGICAL SURVEY

Lawrence J. Poppe, Editor

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## INTRODUCTION

by John C. Hathaway

In 1976, the U. S. Geological Survey conducted the Atlantic Margin Coring Project (AMCOR) to obtain information on stratigraphy, hydrology and water chemistry, mineral resources other than petroleum hydrocarbons, and geotechnical engineering properties at sites widely distributed along the Continental Shelf and Slope of the Eastern United States (Hathaway and others, 1976, 1979). This program's primary purpose was to investigate a broad variety of sediment properties, many of which had not been previously studied in this region. Previous studies of sediments recovered by core drilling in this region were usually limited to one or two aspects of the sediment properties (Hathaway and others, 1979, table 2).

The AMCOR program was limited by two factors: water depth and penetration depth. Because the ship selected for the program, the Glomar Conception, lacked dynamic positioning capability, its anchoring capacity determined the maximum water depth in which drilling could take place. Although it was equipped to anchor in water 450 m deep and did so successfully at one site, we attempted no drilling in water depths greater than 300 m. Strong Gulf Stream currents at the one attempted deep (443 m) site frustrated attempts to "spud in" to begin the hole.

The amount of space necessary to assemble the drilling equipment imposed a lower limit of 18 m for the water depth at any site. Safety considerations limited penetration depth. Because the program involved open-hole drilling without equipment such as blowout preventers, sites were selected at locations devoid of structures capable of trapping oil or gas, and the holes were drilled no deeper than 310 m to further minimize the possibility of encountering hydrocarbon accumulations.

Holes were cored at 19 sites (fig. 1 and table 1) in water depths ranging from 20 to 300 m, and sediments totaling 1020 m were recovered in 380 cores. At a twentieth site (6003), no cores were recovered because of a resistant layer at the sea floor.

Shipboard analytical tests of the cores included visual description and photographing; measurements of the bulk density, shear strength, and electrical resistivity of the sediment; measurements of the salinity, pH, alkalinity, and calcium content of the interstitial water; gas chromatography of the light hydrocarbon and hydrogen sulfide contents; and micropaleontologic analyses.

After the coring operation in each of the 10 holes was completed, logs were obtained of responses to various sensors lowered into the boreholes; these measured spontaneous potential and resistivity, gamma ray and neutron porosity, compensated formation density, borehole diameter, temperature, and velocity of sound in the borehole. Complete logging of several holes was prevented by caving, loss of downhole equipment, or sticking of the logging tools. These logs are useful for correlation but are not discussed further in this paper. Information on them is given in Hathaway and others (1976).

# ATLANTIC MARGIN CORING PROJECT 1976

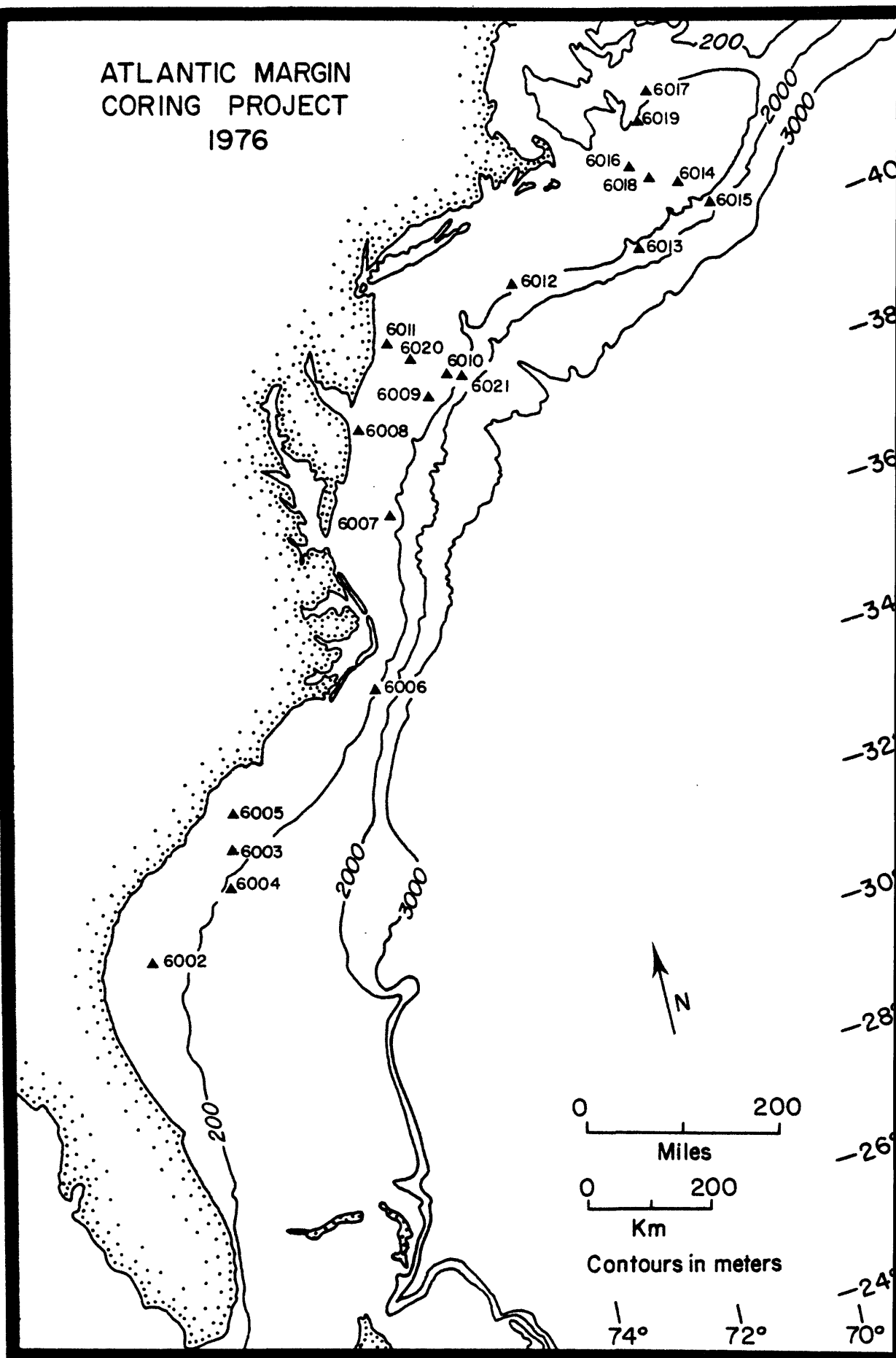


Figure 1—Location of Atlantic Margin Coring Project Sites. From Hathaway and others (1976).

Table 1. Locations and depths of AMCOR drill holes on the Atlantic outer Continental Shelf and Slope of the United States.

Site	Date completed 1976	Latitude (N)	Longitude (W)	Water depth (m)	Penetration depth (m)
6002	23 July	31°08.57'	80°31.05'	32.3	304.8
6003	25 July	32°37.66'	78°48.80'	41.0	N.R.*
6004	26 July	32°03.98'	79°05.86'	173.7	307.9
6005	30 July	33°15.10'	78°44.08'	18.6	47.6
6006	2 August	34°41.4'	75°43.0'	56.1	89.3
6007	6 August	37°17.99'	74°39.16'	85.0	310.6
6008	8 August	38°24.21'	74°53.83'	20.7	119.5
6009	13 August	38°51.27'	73°35.47'	58.5	229.6
6010	15 August	39°03.70'	73°05.90'	75.9	310.6
6011	18 August	39°43.5'	73°58.6'	22.3	260.0
6012	22 August	39°59.57'	71°20.09'	262.7	303.9
6013	25 August	40°05.04'	68°52.13'	238.7	304.8
6014	27 August	40°48.33'	67°53.64'	69.8	102.4
6015	29 August	40°23.11'	67°35.85'	209.1	62.8
6016	2 September	41°09.50'	68°41.83'	66.4	68.9
6017	5 September	42°10.45'	67°57.51'	238.7	90.5
6018	7 September	40°55.90'	68°18.14'	46.3	48.5
6019	10 September	41°49.27'	68°16.39'	173.7	71.6
6020	13 September	39°25.41'	73°35.63'	39.0	43.9
6021	18 September	38°57.92'	72°49.20'	301.2	304.8

\*No recovery; resistant layer at sea floor.

The results of various laboratory analyses of the samples are tabulated in this report as individual chapters authored by those persons responsible for that set of analyses.

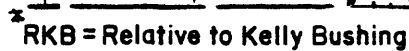
The samples are numbered in accordance with the system shown in figure 2: first by hole number, then by core and section number, then by position in centimeters below the top of each 150-cm section. Core catcher samples are designated CC. Thus, 6002-17-3-120 denotes a sample taken 120 cm from the top of section 3 of core 17 from hole 6002; the sample 6006 8CC is from the core catcher of core 8 from hole 6006. Approximate depth below the sea floor is given in Appendix I and can also be assessed from Hathaway and others (1976). In cores characterized by less than full undisturbed recovery this depth is uncertain because of the factors illustrated in figure 3. The uncertainty range is equal to the difference between the coring interval and the amount of recovery.

Reports by Richards (1978) and by Swanson and others (1978) contain further geotechnical data on AMCOR samples.

#### ACKNOWLEDGEMENTS

The authors would like to thank Edna Williams, Lester North, Pat Hernandez, Carol Renaud, Cathy Williamson, Tim Ling and Margie Bellinger for organizing and compiling this data and Bruce Kohn for calculating the depths given in Appendix I.

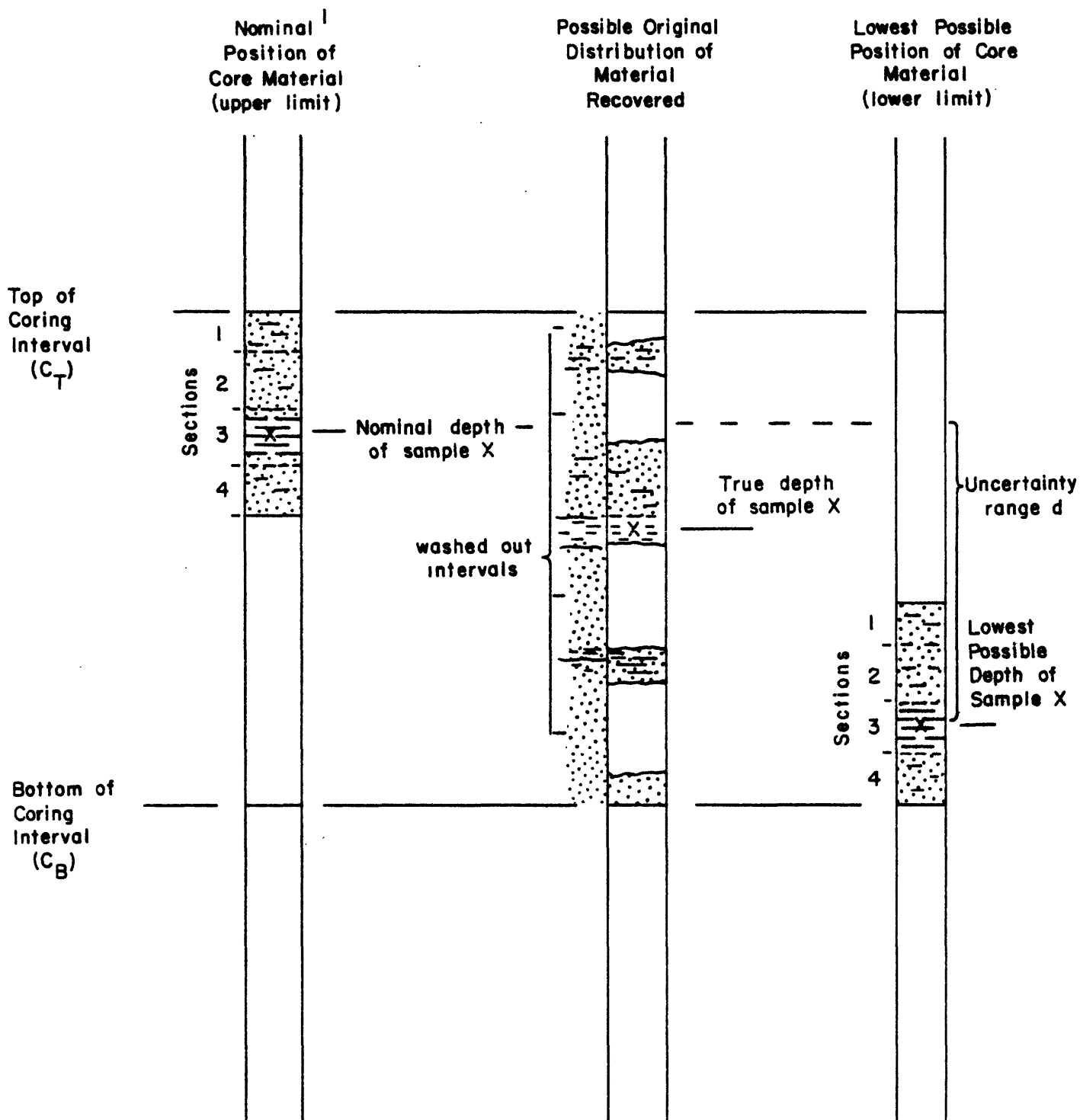
Figure 2.



**Not to Scale**

(from Hathaway and others 1976)

FIG. 3, EXPLANATION OF UNCERTAINTY OF SAMPLE DEPTH



<sup>1</sup> This convention is adopted on the assumption that much of the time, material will enter the core barrel when coring starts and that incomplete recovery is the result of core barrel plugging and washing away of the lower part of the interval. This is undoubtedly not always true; selective loss (such as in middle diagram) is also possible.



## CHAPTER I

### GRAIN SIZE ANALYSES

by Wayne M. Ferrebee

The weight percent of sediment contained in each size fraction is expressed in phi units ( $\text{Size mm} = 2^{-(\phi)}$ ). These weights were determined by sieving (gravel), a settling tube (sand) (Schlee, 1966), and a Coulter Counter, model TAI (silt and clay).

#### Phi Values

<u>Phi Class</u>	<u>Symbol</u>	<u>Millimeters</u>	<u>Phi Class</u>	<u>Symbol</u>	<u>Millimeters</u>
			6	6P	.0156
-1	-1P	2.0	7	7P	.0078
0	0P	1.0	8	8P	.0039
1	1P	.5	9	9P	.00195
2	2P	.25	10	10P	.00098
3	3P	.125	11	11P	.00049
4	4P	.0625			
5	5P	.0313			

HOLE	SEC	CM	-1P	0P	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P
6002	1-1	6	.0	.0	29.4	49.1	15.7	3.9	.2	.3	.3	.3	.3	.3	.2
6002	2-1	11	.0	.0	.0	.0	.0	67.4	5.0	6.2	5.0	5.2	4.7	4.1	2.5
6002	4-6	137	.0	.0	.0	.0	.0	.4	6.2	18.5	25.6	22.1	13.8	9.1	4.0
6002	7-2	117	.0	.0	.0	2.4	15.3	17.1	5.9	9.5	12.7	12.2	11.3	8.4	5.0
6002	8-3	137	.0	.0	.0	.0	.0	.0	6.3	16.0	17.9	18.2	16.0	19.2	6.4
6002	9-6	137	.0	.0	.0	3.0	9.1	13.2	17.5	16.5	12.2	10.9	9.2	5.9	2.2
6002	10-2	113	.0	.0	.0	.0	.0	8.2	20.1	15.7	12.3	12.9	13.8	11.3	5.5
6002	11-1	113	.0	.0	.0	.0	3.4	13.8	27.2	16.1	10.8	9.8	7.9	6.7	3.6
6002	15-2	134	.0	.0	.0	.0	.0	2.4	7.0	14.8	16.8	18.1	14.9	14.5	11.4
6002	17-2	87	.0	.0	.0	.0	.0	3.2	16.0	21.5	15.3	15.8	13.3	9.5	5.5
6002	17-3	121	.0	.0	.0	.0	14.6	21.8	8.6	10.5	7.9	9.6	11.4	10.0	5.4
6002	19-2	105	.0	.0	8.6	14.6	6.4	15.9	11.2	9.4	10.2	9.5	5.9	5.1	3.0
6002	22-1	80	.0	.0	.0	8.7	10.1	14.8	21.5	9.6	5.2	7.5	10.7	8.9	2.9
6002	23-2	21	.0	.0	13.4	17.8	8.9	15.6	8.4	7.1	7.0	8.3	6.6	4.8	2.2
6002	33-1	72	.0	.0	.0	.0	.0	9.3	14.8	24.1	19.6	13.5	9.1	6.5	3.0
6004	1-2	127	.0	.0	.0	.0	15.3	61.4	6.8	4.8	2.8	2.5	2.7	2.5	1.3
6004	2-2	107	.0	.0	3.0	12.2	16.7	44.1	7.0	4.8	3.0	2.8	2.9	2.4	1.0
6004	3-1	132	.0	.0	.0	.0	25.8	60.1	4.8	2.2	1.1	1.2	1.6	2.1	1.0
6004	5-2	137	.0	.0	.0	.9	7.7	34.2	20.7	12.0	7.4	6.3	4.6	3.8	2.1
6004	5-4	99	.0	.0	.0	.0	.0	25.8	28.0	14.8	10.6	6.8	5.6	5.6	3.0
6004	6-2	75	.0	.0	.0	.0	.0	29.1	33.0	12.5	6.4	4.9	4.8	6.0	3.4
6004	6-4	125	.0	.0	.0	.0	.0	38.3	29.1	11.2	5.0	4.2	4.6	4.8	2.6
6004	7-1	125	.0	.0	.0	.0	2.3	36.8	29.0	11.0	5.0	4.0	4.6	4.8	2.6
6004	7-3	125	.0	.0	.0	.0	2.0	23.5	28.9	15.1	7.6	5.7	5.7	6.9	4.5
6004	7-6	125	.0	.0	.0	.0	1.5	13.9	31.6	22.2	8.6	6.2	5.8	6.4	3.6
6004	9-1	125	6.6	.0	3.5	13.9	3.5	13.9	17.8	15.3	9.8	6.0	4.3	3.5	1.9
6004	9-4	125	11.8	.0	31.3	11.9	2.2	8.6	12.0	8.8	4.2	2.8	2.6	2.4	1.4
6004	11-4	112	.0	.0	.0	.0	10.9	43.5	12.1	10.8	7.3	6.2	5.1	2.9	1.6
6004	14-6	5	.0	.0	.0	.0	.0	44.8	12.6	13.1	8.3	8.6	6.7	3.9	2.1
6004B	2-1	70	.0	.0	.0	.0	7.5	33.9	18.5	13.7	7.5	6.7	6.3	3.8	2.0
6004B	4-1	110	.0	.0	.0	.0	6.8	16.0	4.2	12.4	14.7	16.5	14.6	9.7	5.0
6004B	7-1	80	.0	.0	.0	.0	.0	3.2	9.0	13.0	13.0	23.2	21.0	10.6	6.9
6004B	12-2	70	.0	.0	.0	.9	17.3	73.0	3.8	1.2	.6	.8	1.0	.9	.5
6004B	14-2	97	.0	.0	.0	.0	.0	.6	5.8	11.9	13.7	24.3	24.4	11.0	8.4
6004B	15-1	99	.0	.0	.0	.0	.0	2.4	13.6	15.4	13.1	18.6	20.8	10.0	6.0
6004B	19-6	80	.0	.0	.0	.0	.0	14.3	22.2	12.6	7.5	8.8	12.0	13.7	9.0
6005	2-1	25	.0	.0	29.9	51.0	13.5	1.9	.1	.1	.1	.2	.9	1.5	.7
6005	5-1	145	19.6	.0	.0	.0	.0	7.8	7.5	7.8	6.0	7.3	12.8	18.2	13.0
6005	6-1	140	.0	.0	.0	.0	.0	25.0	21.7	14.2	6.3	7.0	11.4	10.2	4.4
6006	3-2	75	.0	.0	.0	3.8	60.9	30.4	1.1	.7	.6	.6	.4	.9	.6
6006	3-4	25	.0	.0	.0	25.9	56.7	13.5	1.5	.6	.2	.3	.4	.7	.3
6006	5-2	75	.0	.0	.0	.0	19.9	46.5	21.0	5.5	2.0	1.4	1.1	1.3	1.2
6006	6-6	65	.0	.0	.0	.0	1.2	40.3	5.7	11.3	9.7	8.7	8.8	8.5	5.8
6007	2-2	125	.0	.0	.0	.0	19.7	74.1	1.4	.9	.5	.6	1.4	1.0	.3
6007	4-5	120	.0	.0	.0	.0	.0	1.0	1.5	6.3	12.0	17.2	20.6	22.5	19.1
6007	5-2	115	.0	.0	.0	.0	2.3	21.0	22.9	18.3	13.0	9.4	6.2	4.8	2.3
6007	6-2	124	.0	.0	.0	.0	.0	1.3	6.0	14.3	16.8	16.7	16.8	17.1	11.0
6007	8-1	135	19.9	3.3	24.6	18.4	5.6	3.9	4.2	6.7	5.9	3.1	2.0	1.7	.7
6007	9-1	125	.0	.0	.0	1.2	4.9	6.2	23.3	22.5	11.8	9.2	9.2	8.6	3.0
6007B	1-1	130	.0	.0	.0	.0	.0	12.3	16.5	26.3	16.8	11.1	7.7	6.2	3.1
6007B	10-1	133	.0	.0	.0	9.5	53.9	4.8	4.6	8.3	7.2	5.2	3.1	2.3	1.1
6007B	10-5	145	.0	.0	.0	.0	3.8	33.9	14.5	11.7	10.0	9.5	8.1	6.0	2.5
6007B	18-3	79	.0	2.9	38.2	38.2	12.4	3.8	.9	1.1	.7	.7	.6	.5	.1
6008	1-2	123	1.8	.0	.0	23.9	30.2	2.8	3.0	5.2	6.5	8.7	7.6	6.7	3.9
6008	1-4	125	.0	.0	.0	2.7	9.5	1.4	4.7	10.9	14.2	17.2	16.0	15.7	7.5
6008	3-1	136	8.6	.0	.0	2.0	3.8	28.5	7.5	10.6	10.6	10.4	8.1	6.5	3.3
6008	4-2	105	.4	.0	.0	.0	.0	7.0	27.8	12.4	12.9	10.0	8.7	8.8	3.5
6008	5-1	125	.0	.0	4.9	76.9	14.8	2.0	.3	.2	.2	.2	.2	.2	.1
6008	6-1	115	2.3	.0	.0	31.2	39.4	3.7	1.7	3.0	3.7	5.4	5.0	3.2	1.4
6008	9-2	54	7.6	.0	.0	.0	.0	31.0	6.0	13.4	14.3	11.8	7.7	5.5	2.8
6008	10-1	115	.0	10.4	64.5	12.3	3.8	3.8	1.1	.9	.8	.7	.9	.6	.5
6008	12-1	0	.0	.0	.0	34.0	58.3	4.9	.9	.6	.3	.3	.3	.3	.2

HOLE	SEC	CM	-1P	OP	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P
6008	13-1	50	.0	.0	.0	19.7	63.6	10.3	1.3	1.3	.9	.9	.9	.8	.5
6008	13-1	125	1.4	38.3	49.9	4.8	1.9	1.9	.5	.6	.4	.4	.4	.4	.2
6008	13-2	120	.0	57.0	36.4	2.9	2.0	.0	.1	.2	.2	.3	.3	.4	.3
6009B	1-1	81	.0	.0	.0	.0	.0	3.0	5.7	26.8	20.8	16.4	12.3	9.9	5.1
6009B	2-1	125	.0	.0	.0	19.7	70.8	7.9	.3	.2	.2	.2	.2	.3	.2
6009B	4-1	115	.5	.0	.0	.0	.0	1.7	1.1	6.2	10.3	18.0	24.6	25.7	12.1
6009B	8-3	115	.0	.0	.0	.0	.0	5.8	11.0	22.5	18.4	15.6	13.1	8.9	4.4
6009B	9-2	65	.0	.0	.0	.0	.0	6.0	4.9	13.6	14.4	19.2	20.0	14.0	7.6
6009B	10-2	105	.0	.0	.0	.0	2.9	11.4	4.9	8.0	8.1	8.7	18.9	25.2	11.9
6009B	11-1	105	1.8	1.0	1.3	1.6	2.1	3.7	9.8	18.4	17.7	15.7	12.6	9.9	4.5
6009B	14-4	97	2.7	.0	.0	.0	.0	11.5	9.8	14.9	13.8	12.4	13.0	14.0	7.9
6009B	16-1	120	.0	.0	29.0	57.0	9.7	1.0	.5	.7	.6	.6	.4	.3	.2
6009B	19-1	91	.0	.0	.0	24.2	46.6	22.4	4.5	1.2	.3	.2	.2	.2	.1
6009B	20-1	130	63.7	1.5	2.4	3.0	3.0	5.1	3.4	4.4	4.0	3.4	2.8	2.2	1.1
6009B	23-1	110	.0	.0	.0	9.3	71.0	13.1	1.5	1.3	1.0	.9	.7	.7	.4
6009B	27-1	40	.0	.0	.0	4.9	12.4	20.4	5.0	7.7	11.0	14.6	12.6	8.1	3.2
6009B	30-2	51	.0	.0	.0	.0	.0	.4	1.4	9.5	16.0	16.5	20.7	20.2	15.2
6009B	31-1	100	.0	.0	.0	58.6	35.1	3.9	.6	.4	.3	.3	.3	.3	.1
6010	2-2	119	.0	.0	.0	.0	.0	1.6	1.7	5.0	6.3	11.9	22.9	29.5	21.2
6010	3-2	105	.3	.0	.0	.0	.0	3.5	1.9	7.0	10.6	16.5	20.4	23.5	16.0
6010	4-2	105	.0	.0	.0	.0	.0	.7	1.7	9.2	13.8	15.4	20.4	23.3	15.8
6010	5-1	85	6.0	1.3	1.5	1.6	1.5	1.5	3.9	10.1	13.4	16.3	17.1	16.0	9.5
6010	7-2	105	.0	.0	.0	33.8	55.5	4.7	.6	1.1	1.1	1.1	.9	.7	.4
6010	7-4	125	.0	.0	.0	.0	.0	3.7	1.4	7.0	10.9	15.0	22.7	25.2	14.0
6010	8-1	100	.0	.0	.0	.0	.0	1.2	2.3	7.2	11.4	14.8	20.3	23.5	19.4
6010	9-2	85	2.1	.0	.3	4.5	8.6	2.6	3.2	9.0	14.0	17.1	15.2	14.6	8.5
6010	11-2	75	.0	.0	.0	.0	48.7	48.7	.8	.4	.2	.3	.3	.4	.3
6010	13-2	111	.0	.0	.0	.0	3.0	22.0	6.7	11.5	10.8	12.2	14.1	12.3	7.3
6010	16-2	90	.0	.0	.0	.0	.0	13.1	7.6	12.0	12.9	16.5	17.0	12.9	7.8
6010	17-1	140	.0	.0	.0	.0	9.2	56.6	10.7	6.0	3.5	4.0	4.1	3.5	2.6
6010	19-1	150	.0	.0	.0	.0	7.4	29.7	4.2	6.8	6.2	9.1	14.5	14.1	8.2
6010	21-2	100	.0	.0	.0	.0	.0	25.1	15.6	17.5	14.4	11.6	8.0	5.3	2.6
6010	25-1	100	.0	.0	.0	.0	.0	3.6	7.4	20.8	22.4	19.4	12.8	9.0	4.7
6010	26-2	100	.0	.0	.0	.0	.0	1.3	5.1	16.6	21.2	21.0	14.9	11.8	6.9
6010	27-1	75	.0	.0	.0	1.8	70.2	19.2	1.9	1.5	1.3	1.3	1.2	1.0	.6
6010	27-1	130	.0	.0	.0	.0	2.8	11.3	15.1	20.4	16.0	13.4	10.2	7.2	3.6
6011	1-1	100	.1	.0	.0	.0	.0	3.2	11.9	16.2	15.9	15.0	14.9	14.3	8.3
6011	7-1	123	23.6	.0	.0	.0	2.9	6.8	8.8	12.9	12.6	12.1	9.9	7.1	3.3
6011	8-1	75	.0	.0	.0	.0	.0	1.0	10.5	20.2	22.4	20.0	12.7	9.1	4.1
6011	8-3	75	.0	.0	.0	.0	.0	1.0	6.6	17.0	22.0	20.6	15.5	11.7	5.7
6011	8-5	75	.0	.0	.0	.0	.0	.5	6.3	18.1	22.7	24.0	14.4	9.5	4.3
6011	9-1	125	.0	.0	.0	.0	.0	1.6	6.7	16.4	20.4	21.5	16.0	11.8	5.2
6011	10-1	140	.0	1.0	47.9	38.3	7.7	1.9	.5	.3	.3	.5	1.1	1.2	.4
6011	11-2	75	.0	.0	.0	.0	.0	.4	5.6	11.9	12.5	14.3	21.9	21.6	11.6
6011	12-1	125	12.6	3.2	10.1	3.5	5.8	5.8	7.3	12.8	12.4	10.1	7.0	5.7	2.9
6011	13-1	130	.0	.0	.0	.0	.0	1.5	17.8	24.6	21.0	14.8	9.4	7.2	3.8
6011	13-6	60	.0	.0	.0	.0	.0	.8	11.9	25.9	21.2	17.4	10.8	7.7	4.2
6011	14-2	75	.0	.0	.0	.0	.0	1.9	11.6	26.0	23.2	15.4	10.5	7.6	3.8
6011	16-2	115	.0	.0	2.9	6.7	9.6	28.7	14.2	11.5	8.5	7.5	5.4	3.5	1.5
6011	20-1	140	4.0	.0	1.1	22.0	19.1	14.1	4.9	5.0	5.9	7.7	7.3	6.0	3.0
6011	22-1	140	.0	.0	.0	.0	.0	56.3	12.7	9.0	8.8	6.6	3.8	2.1	.7
6011	23-1	130	.0	.0	.0	35.6	40.1	13.4	5.8	2.0	1.0	.9	.6	.5	.2
6011	26-2	70	.0	.0	2.9	90.3	4.9	.0	.4	.4	.4	.3	.2	.2	.1
6011	28-6	69	.0	.0	.0	.0	1.7	15.0	18.4	15.6	11.9	12.3	11.9	9.2	3.8
6012	1-5	95	.0	.0	.0	.0	.0	7.5	11.6	10.2	10.5	14.2	16.2	18.4	11.4
6012	2-6	75	.0	.0	.0	.0	.0	7.7	7.8	11.8	13.5	15.2	16.1	16.7	11.3
6012	3-2	95	.0	.0	.0	.0	.0	7.7	5.6	11.5	12.7	15.0	15.9	19.7	11.9
6012	3-4	105	.0	.0	.0	.0	.0	9.8	6.2	10.3	9.8	11.7	15.6	20.8	15.8
6012	3-6	85	.0	.0	.0	.0	.0	3.0	5.0	8.5	9.8	17.4	21.1	23.5	11.3
6012	4-3	99	.4	.0	.0	2.7	5.4	4.2	7.1	11.6	13.3	15.6	14.7	16.4	8.7
6012	5-4	105	.0	.0	.0	.0	.0	3.1	6.2	12.4	14.1	17.2	18.3	17.5	11.1
6012	6-1	105	.8	.0	.0	2.0	9.4	1.2	3.6	7.7	10.3	15.4	17.9	20.0	11.9
6012	8-2	105	.0	.0	.0	.0	.0	1.6	4.9	10.9	12.1	17.1	17.1	24.9	11.2

HOLE	SEC	CM	-1P	OP	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P
6012	9-2	115	.0	.0	.0	.0	.0	1.6	2.0	9.6	17.8	25.1	23.1	15.4	5.0
6012	12-6	50	.0	.0	.0	.0	.0	4.6	10.1	18.0	16.9	17.2	16.2	12.0	5.0
6012	18-4	124	.0	.0	.0	.0	.0	8.1	4.6	13.6	16.0	17.6	18.0	15.3	7.0
6012	25-4	50	.0	.0	.0	.0	.0	1.9	7.1	16.4	15.4	16.6	18.5	16.5	7.7
6012	28-2	50	.0	.0	.0	.0	.0	1.3	8.9	16.3	14.2	15.2	15.5	16.7	11.9
6012	33-4	35	.0	.0	.0	.0	.0	7.2	5.8	13.9	16.3	20.0	18.4	13.0	5.3
6012	33-4	97	.0	.0	.0	.0	.0	55.4	8.7	9.7	7.9	6.7	5.8	4.2	1.7
6013	4-1	135	.0	.0	.0	1.7	9.0	6.6	3.1	7.8	11.3	14.5	17.2	19.0	9.5
6013	5-2	2	.0	.0	.0	1.3	21.9	39.4	8.6	7.1	5.9	5.3	4.9	3.7	1.7
6013	6-2	125	.0	.0	.0	1.2	29.1	27.9	7.9	7.0	5.8	5.2	5.5	6.2	4.2
6013	6-3	85	.0	.0	.0	.0	25.6	25.6	6.1	8.3	8.1	8.6	8.0	6.8	2.8
6013	7-3	75	.0	.0	.0	.0	.0	3.2	7.9	12.4	11.9	14.5	17.8	24.6	7.3
6013	7-5	35	.0	.0	.0	.0	.0	1.8	6.6	11.0	14.3	19.1	18.6	18.2	10.4
6013	7-6	138	.0	.0	.0	.0	.0	2.6	7.5	14.3	16.9	17.1	17.6	17.2	6.7
6013	8-2	105	.0	.0	.0	7.7	57.8	11.6	2.3	5.1	4.9	4.3	3.3	2.2	.9
6013	8-2	138	.0	.0	.0	13.4	57.4	7.9	4.4	4.9	3.6	3.3	2.6	1.8	.9
6013	11-2	110	.0	.0	5.9	40.3	41.3	10.8	.4	.2	.2	.2	.2	.3	.1
6013	11-4	115	1.0	1.0	14.6	35.1	38.0	8.8	.3	.2	.2	.2	.3	.3	.1
6013B	15-1	110	.0	.0	.0	.0	43.7	18.7	4.9	7.1	7.4	7.4	5.8	3.6	1.3
6013B	16-2	12	.0	.0	.0	.0	13.2	24.5	6.2	10.0	11.4	12.8	11.3	7.5	2.9
6013B	18-2	21	.0	.0	.0	.0	36.7	19.7	3.9	9.5	9.7	8.8	6.3	3.9	1.4
6013B	22-2	88	.0	.0	.0	.0	25.7	38.5	3.3	6.6	7.1	7.3	6.2	4.0	1.5
6013B	26-1	145	.0	.0	.0	.0	16.8	35.6	4.7	8.7	9.4	9.2	8.2	5.5	1.9
6013B	28-1	110	.0	.0	.0	.0	33.3	36.1	4.7	6.4	6.0	5.3	4.3	2.9	1.0
6013B	31-1	140	.0	.0	.0	16.9	33.8	16.9	3.3	6.4	7.1	6.3	4.8	3.3	1.2
6014	2-3	116	4.3	.0	.0	.0	.0	20.4	1.3	6.8	15.1	17.8	15.3	12.7	6.3
6014	2-3	139	.0	.0	.0	.0	.0	9.0	4.0	11.0	13.8	18.3	18.5	16.4	9.0
6014	6-2	85	.0	.0	.0	16.6	72.2	8.8	.1	.1	.1	.3	.6	.8	.4
6014	7-2	85	.0	.0	.0	.0	35.7	18.4	6.1	8.2	6.9	7.6	7.8	6.6	2.7
6014	7-4	81	.0	.0	.0	.0	20.4	34.8	8.9	10.1	8.2	6.7	5.2	4.0	1.7
6014	9-1	100	30.2	64.0	3.4	.0	.0	.0	.1	.2	.2	.3	.5	.7	.3
6014	10-1	120	.0	.0	.0	.0	13.0	27.6	6.9	12.9	12.8	10.6	8.1	5.8	2.1
6015	2-1	143	.0	.0	3.3	32.9	19.8	9.9	3.4	8.3	7.8	6.1	4.1	3.0	1.4
6015	4-1	125	.0	.0	.0	.0	.0	1.2	3.8	10.8	16.8	19.0	18.9	17.6	11.9
6015	6-1	120	.0	.0	.0	1.0	7.5	17.2	7.0	8.6	8.5	10.6	13.7	15.6	10.5
6016B	2-1	140	.0	.0	19.2	24.0	47.9	4.8	.4	.4	.5	.6	.9	1.0	.4
6016B	6-1	75	.0	.0	.0	.0	2.0	26.0	19.4	13.3	9.8	9.8	8.8	7.3	3.7
6017	1-2	75	4.0	.8	8.3	11.1	11.5	7.9	1.1	2.1	2.6	7.4	16.4	17.4	9.4
6017	2-3	60	.0	3.4	11.2	13.6	10.7	9.7	2.6	8.4	11.8	12.4	8.7	5.3	2.1
6017	5-1	136	1.4	.0	.6	5.1	3.5	3.6	3.0	9.0	11.8	15.5	17.9	19.6	8.8
6017	7-1	45	.0	.0	.0	.0	.0	3.4	3.0	8.5	10.0	15.3	20.8	26.9	12.0
6017	8-1	115	8.7	.4	4.1	10.4	12.8	13.7	6.1	8.0	8.3	8.5	8.4	8.3	2.2
6017	9-1	134	5.4	.9	3.5	12.8	14.6	12.4	6.7	8.1	8.2	9.2	8.5	7.8	2.0
6018	6-2	25	.0	.0	.0	33.9	59.0	3.9	.9	.4	.3	.3	.4	.5	.2
6019	1CC		.0	.0	.0	.0	.0	10.2	13.0	16.1	15.1	15.4	17.4	9.9	3.2
6019	2-2	118	.0	.0	.0	.0	.0	6.8	13.5	22.3	18.2	15.9	11.9	8.3	3.1
6019	2-3	122	.0	.0	.0	.0	.0	.0	9.6	20.6	19.0	18.4	14.9	12.3	5.3
6019	3-1	140	.2	.0	.0	.0	.0	2.9	12.5	26.6	23.3	16.9	10.1	5.6	1.6
6019	4-1	30	1.7	.0	.0	.0	1.6	9.2	11.5	15.8	14.0	11.0	14.9	14.0	6.4
6019	5-1	81	.0	.0	.0	2.5	7.5	14.9	14.0	16.9	15.3	12.9	8.7	5.3	2.1
6019	8-1	30	8.7	.0	.0	23.6	23.6	11.8	2.9	4.1	5.1	7.6	6.4	4.1	1.9
6019B	1-2	118	.0	.0	.0	.0	.0	22.5	16.5	13.9	13.2	12.9	11.2	7.4	2.3
6020	1-1	85	.0	.0	.0	.0	3.2	8.3	5.0	7.9	8.1	11.9	18.7	21.7	15.5
6020	2-2	25	.0	.0	.0	1.5	9.2	2.0	2.2	8.0	8.6	12.7	18.5	24.5	12.8
6020	3-2	118	.0	.0	.0	.0	.0	1.4	3.4	9.1	14.0	15.6	15.6	29.2	11.7
6020	4-2	15	.0	.0	7.2	11.5	5.8	4.3	3.7	8.3	8.8	10.4	12.6	15.7	11.8
6020	4-2	40	4.0	3.7	20.7	11.2	5.0	.8	.4	1.5	2.3	4.6	12.1	18.7	15.1
6020	6-1	72	.8	.0	.0	.0	4.1	5.1	5.0	10.7	12.0	14.8	18.0	18.4	11.4
6021	1-3	10	.0	.0	.0	.0	.0	5.2	4.6	12.0	13.1	16.1	16.3	20.0	12.6
6021	1-3	115	.0	.0	.0	.0	8.4	16.4	11.4	12.0	11.1	12.2	11.3	11.2	6.2
6021	2-2	112	.0	.0	.0	.0	2.5	13.0	11.2	11.8	9.9	13.1	14.8	14.5	9.1
6021	2-3	125	.0	.0	.0	.0	4.8	8.8	7.6	10.2	10.6	13.7	17.1	16.0	11.0
6021	2-4	50	.0	.0	.0	.0	8.1	14.9	15.9	13.2	11.4	12.0	11.8	9.0	3.6

HOLE	SEC	CM	-1P	0P	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	11P
6021C	1-2	12	.0	.0	.0	.0	.0	2.6	6.1	16.0	17.9	17.9	14.1	14.0	11.2
6021C	1-2	112	.0	.0	.0	.6	6.5	14.5	9.4	10.0	11.2	12.5	12.8	13.4	8.9
6021C	3-2	115	.0	.0	.0	.0	.0	7.3	11.0	14.9	13.8	13.0	14.5	15.4	10.1
6021C	6-1	113	.0	.0	.0	.0	2.2	10.2	8.7	13.3	15.9	15.9	13.8	12.4	7.6
6021C	7-1	38	.0	.0	.0	.0	.0	4.7	4.8	7.1	6.6	12.6	21.9	27.6	14.6
6021C	8-3	27	.0	.0	.0	.0	.0	7.7	9.0	15.5	16.4	16.6	15.4	12.5	6.6
6021C	9-2	25	.0	.0	.0	.0	.0	5.4	5.0	13.6	17.4	18.4	16.7	14.6	8.8
6021C	10-2	127	.0	.0	.0	.0	.0	3.6	7.0	12.1	13.0	15.4	18.6	18.8	11.5
6021C	11-3	120	.0	.0	.0	.0	.0	2.7	6.0	12.7	12.8	15.3	19.8	19.2	11.4
6021C	12-3	70	.0	.0	.0	.0	.0	4.1	11.7	15.2	16.4	16.4	15.5	13.4	7.4
6021C	14-1	110	.0	.0	.0	.0	.0	11.2	9.0	16.4	17.8	17.3	14.0	9.9	4.6
6021C	17-1	100	.0	.0	.0	.0	.0	7.2	4.3	15.6	18.1	17.3	15.6	13.6	8.4
6021C	21-2	100	.0	.0	.0	.0	.0	6.9	7.3	17.6	20.1	18.2	13.5	10.1	6.2
6021C	26-3	75	.0	.0	.0	.0	.0	9.5	7.6	16.9	18.5	16.3	12.8	10.5	8.1
6021C	29-1	100	.0	.0	.0	.0	.0	4.3	6.8	16.8	18.2	16.6	15.3	13.5	8.4
6021C	32-1	69	.0	.0	.0	.0	.0	6.4	6.3	14.1	17.8	17.8	15.9	13.3	8.4

## CHAPTER II

### GRAIN SIZE DISTRIBUTIONS AND TEXTURAL PARAMETERS

by Wayne M. Ferrebee

These values were calculated from the phi class data presented in the preceding section. The computer program used to generate this data was designed by Schlee and Webster (1967) and uses the method of moments.

#### Explanation of Headings

GR%	Percent gravel, particles greater than -1 phi ( 2mm) in diameter.
SA%	Percent sand, particles between -1 phi and 4 phi (2mm - 0.0625mm) in diameter.
SI%	Percent silt, particles between 4 phi and 8 phi (0.0625mm - 0.0039mm) in diameter.
CL%	Percent clay, particles less than 8 phi (0.0039mm) in diameter.
MD	Median grain diameter in phi units.
MN	Mean grain diameter in phi units.
SD	Standard deviation of grain-size distribution in phi units.
SK	Skewness of grain size distribution.
K	Kurtosis of grain size distribution.
M1, M2, M3	Modes in phi units; M1 - coarsest to M3 = finest.

HOLE	SEC	CM	GRZ	SAZ	SIZ	CLZ	MD	MN	SD	SK	K	M1	M2	M3
6002	1-1	6	.0	98.1	1.1	.8	1.42	1.56	1.13	1.83	20.88	1.5		
6002	2-1	11	.0	67.4	21.4	11.3	3.74	4.69	1.99	.79	1.06	3.5	7.5	
6002	4-6	137	.0	.6	72.5	26.9	6.97	7.11	1.50	.16	.00	6.5		
6002	7-2	117	.0	34.8	40.3	24.7	5.98	5.84	2.56	.06	.00	3.5	6.5	
6002	8-3	137	.0	.0	58.4	41.6	7.54	7.55	1.67	-.02	.00	7.5		
6002	9-6	137	.0	25.4	57.1	17.3	5.44	5.63	2.19	.12	.00	4.5		
6002	10-2	113	.0	8.2	61.0	30.6	6.49	6.66	2.04	.10	.00	4.5	8.5	
6002	11-1	113	.0	17.2	64.4	18.2	5.35	5.84	2.04	.31	.00	4.5		
6002	15-2	134	.0	2.4	56.7	40.8	7.50	7.51	1.86	-.04	.00	7.5		
6002	17-2	87	.0	3.2	68.6	28.3	6.61	6.80	1.84	.15	.00	5.5		
6002	17-3	121	.0	36.4	36.6	26.8	5.48	5.82	2.56	.15	.00	3.5	8.5	
6002	19-2	105	.0	45.5	40.3	14.0	4.40	4.69	2.77	.13	.00	1.5	6.5	
6002	22-1	80	.0	33.6	43.8	22.5	4.76	5.36	2.54	.18	.00	4.5	8.5	
6002	23-2	21	.0	55.7	30.8	13.6	3.63	4.19	2.87	.24	.00	1.5	7.5	
6002	33-1	72	.0	9.3	72.0	18.6	6.09	6.32	1.77	.22	.00	5.5		
6004	1-2	127	.0	76.7	16.9	6.5	3.57	4.07	1.69	1.10	4.12	3.5		
6004	2-2	107	.0	76.0	17.6	6.3	3.41	3.73	1.96	.71	2.08	3.5		
6004	3-1	132	.0	85.9	9.3	4.7	3.40	3.69	1.49	1.47	8.61	3.5		
6004	5-2	137	.0	42.7	46.4	10.5	4.35	4.94	1.97	.53	.35	3.5		
6004	5-4	99	.0	25.8	60.2	14.2	4.86	5.49	1.94	.50	.00	4.5		
6004	6-2	75	.0	29.1	56.8	14.2	4.63	5.30	1.97	.62	.40	4.5	9.5	
6004	6-4	125	.0	38.3	49.5	12.0	4.40	5.04	1.89	.72	.98	3.5		
6004	7-1	125	.0	39.1	49.0	12.0	4.38	5.00	1.92	.70	.96	3.5		
6004	7-3	125	.0	25.5	57.3	17.1	4.85	5.54	2.09	.48	.00	4.5	9.5	
6004	7-6	125	.0	15.4	68.6	15.8	5.14	5.68	1.92	.49	.03	4.5	9.5	
6004	9-1	125	6.6	34.7	48.9	9.7	4.48	4.33	2.77	-.07	.00	-1.5	1.5	4.5
6004	9-4	125	11.8	53.9	27.8	6.4	1.58	2.62	2.98	.33	.00	-1.5	4.5	
6004	11-4	112	.0	54.4	36.4	9.6	3.90	4.73	1.95	.59	.40	3.5		
6004	14-6	5	.0	44.8	42.6	12.7	4.41	5.08	1.84	.47	.00	3.5	7.5	
6004B	2-1	70	.0	41.4	46.4	12.1	4.46	5.06	1.99	.49	.00	3.5		
6004B	4-1	110	.0	22.8	47.8	29.3	6.72	6.49	2.27	-.08	.00	3.5	7.5	
6004B	7-1	80	.0	3.2	58.2	38.5	7.51	7.34	1.77	-.11	.00	7.5		
6004B	12-2	70	.0	91.2	6.4	2.4	3.44	3.56	1.10	1.97	18.27	3.5		
6004B	14-2	97	.0	.6	55.7	43.8	7.74	7.64	1.60	-.10	.00	8.5		
6004B	15-1	99	.0	2.4	60.7	36.8	7.30	7.14	1.82	-.02	.00	5.5	8.5	
6004B	19-6	80	.0	14.3	51.1	34.7	6.12	6.60	2.33	.12	.00	4.5	9.5	
6005	2-1	25	.0	96.3	.5	3.1	1.39	1.64	1.58	1.95	16.69	1.5		
6005	5-1	145	19.6	7.8	28.6	44.0	7.18	5.86	4.18	-.38	.00	-1.5	3.5	9.5
6005	6-1	140	.0	25.0	49.2	26.0	5.23	5.96	2.24	.29	.00	3.5	8.5	
6006	3-2	75	.0	95.1	3.0	1.4	2.76	3.00	1.15	2.10	20.66	2.5		
6006	3-4	25	.0	96.1	2.6	1.4	2.43	2.54	1.10	1.99	21.82	2.5		
6006	5-2	75	.0	66.4	29.9	3.6	3.65	3.95	1.44	1.20	6.81	3.5		
6006	6-6	65	.0	41.5	35.4	23.1	5.25	5.77	2.38	.28	.00	3.5	8.5	
6007	2-2	125	.0	93.8	3.4	2.7	3.41	3.53	1.08	2.10	19.29	3.5		
6007	4-5	120	.0	1.0	37.0	62.2	8.58	8.40	1.61	-.29	.00	9.5		
6007	5-2	115	.0	23.3	63.6	13.3	5.21	5.59	1.89	.36	.00	4.5		
6007	6-2	124	.0	1.3	53.8	44.9	7.69	7.65	1.80	-.07	.00	6.5	9.5	
6007	8-1	135	19.6	55.8	19.9	4.4	1.12	1.94	2.96	.44	.00	-1.5	5.5	
6007	9-1	125	.0	12.3	66.8	20.8	5.64	6.02	2.05	.17	.00	4.5		
6007B	1-1	130	.0	12.3	70.7	17.0	5.81	6.11	1.81	.29	.00	5.5		
6007B	10-1	133	.0	68.2	25.3	6.5	2.75	3.78	2.18	.64	.48	2.5	5.5	
6007B	10-5	145	.0	37.7	45.7	16.6	4.85	5.46	2.13	.34	.00	3.5		
6007B	18-3	79	.0	95.4	3.4	1.2	1.23	1.50	1.44	1.43	10.79	1.5		
6008	1-2	123	1.8	56.9	23.4	18.2	2.80	4.36	3.05	.28	.00	2.5	7.5	
6008	1-4	125	.0	13.6	47.0	39.4	7.38	7.00	2.39	-.32	.00	2.5	7.5	
6008	3-1	136	8.6	34.3	39.1	17.9	4.95	5.04	2.99	-.19	.00	-1.5	3.5	
6008	4-2	105	.4	34.8	44.0	20.9	5.19	5.64	2.33	.20	.00	3.5	8.5	
6008	5-1	125	.0	98.6	.9	.5	1.59	1.72	.80	3.08	50.23	1.5		
6008	6-1	115	2.3	74.3	13.8	9.6	2.42	3.31	2.55	.62	.63	2.5	7.5	
6008	9-2	54	7.6	31.0	45.5	16.0	5.40	5.26	2.79	-.29	.46	-1.5	3.5	6.5
6008	10-1	115	.0	94.8	3.5	2.0	.61	1.07	1.70	1.62	11.48	.5		
6008	12-1	0	.0	97.1	2.1	.8	2.27	2.33	.93	2.28	29.79	2.5		
6008	13-1	125	1.4	95.8	1.9	1.0	.21	.42	1.40	1.96	19.19	.5		
6008	13-1	50	.0	93.6	4.4	2.2	2.48	2.70	1.32	1.77	14.31	2.5		
6008	13-2	120	.0	98.3	.8	1.0	.12	.14	1.25	2.73	35.53	-.5		

HOLE	SEC	CM	GRZ	SAZ	SIX	CLZ	MD	MN	SD	SK	K	M1	M2	M3
6009B	1-1	81	.0	3.0	69.7	27.3	6.70	6.94	1.69	.17	.00	5.5		
6009B	2-1	125	.0	98.4	.9	.7	2.43	2.46	.81	2.77	45.13	2.5		
6009B	4-1	115	.5	1.7	35.6	62.4	8.50	8.25	1.69	-.74	4.78	9.5		
6009B	8-3	115	.0	5.8	67.5	26.4	6.58	6.74	1.80	.11	.00	5.5		
6009B	9-2	65	.0	6.0	52.1	41.6	7.58	7.40	1.86	-.16	.00	3.5	8.5	
6009B	10-2	105	.0	14.3	29.7	56.0	8.32	7.56	2.38	-.33	.00	3.5	9.5	
6009B	11-1	105	1.8	9.7	61.6	27.0	6.58	6.44	2.44	-.45	1.26	5.5		
6009B	14-4	97	2.7	11.5	50.9	34.9	6.80	6.71	2.52	-.38	.99	3.5	9.5	
6009B	16-1	120	.0	96.7	2.4	.9	1.37	1.51	1.19	2.03	21.12	1.5		
6009B	19-1	91	.0	93.2	6.2	.5	2.55	2.66	.99	1.15	11.21	2.5		
6009B	20-1	130	63.7	14.9	15.2	6.1	1.22	.71	3.39	.62	.02	-1.5	3.5	
6009B	23-1	110	.0	93.4	4.7	1.8	2.57	2.82	1.21	1.92	16.73	2.5		
6009B	27-1	40	.0	37.7	38.3	23.9	5.95	5.74	2.56	.03	.00	3.5	7.5	
6009B	30-2	51	.0	.4	43.4	56.1	8.30	8.16	1.61	-.15	.00	8.5		
6009B	31-1	100	.0	97.6	1.6	.7	1.85	2.05	.92	2.40	30.73	1.5		
6010	2-2	119	.0	1.6	24.9	73.6	9.02	8.68	1.59	-.56	.87	9.5		
6010	3-2	105	.3	3.5	36.0	59.9	8.50	8.19	1.84	-.53	1.76	9.5		
6010	4-2	105	.0	.7	40.1	59.5	8.45	8.24	1.64	-.23	.00	9.5		
6010	5-1	85	6.0	7.4	43.7	42.6	7.56	6.84	3.11	-.67	1.23	-1.5	8.5	
6010	7-2	105	.0	94.0	3.9	2.0	2.29	2.49	1.34	1.78	14.11	2.5		
6010	7-4	125	.0	3.7	34.3	61.9	8.53	8.21	1.74	-.42	.16	9.5		
6010	8-1	100	.0	1.2	35.7	63.2	8.65	8.38	1.68	-.33	.00	9.5		
6010	9-2	85	2.1	16.0	43.3	38.3	7.33	6.77	2.78	-.45	.23	2.5	7.5	
6010	11-2	75	.0	97.3	1.7	1.0	3.03	3.11	.84	2.58	36.10	3.5	8.5	
6010	13-2	111	.0	25.0	41.2	33.7	6.63	6.54	2.39	.00	.00	3.5	8.5	
6010	16-2	90	.0	13.1	49.0	37.7	7.27	7.04	2.12	-.10	.00	3.5	8.5	
6010	17-1	140	.0	65.8	24.2	10.2	3.72	4.50	1.97	.84	1.68	3.5		
6010	19-1	150	.0	37.1	26.3	36.8	6.31	6.29	2.68	.04	.00	3.5	8.5	
6010	21-2	100	.0	25.1	59.1	15.9	5.53	5.80	1.95	.28	.00	3.5		
6010	25-1	100	.0	3.6	70.0	26.5	6.81	6.94	1.68	.10	.00	6.5		
6010	26-2	100	1.0	1.3	63.9	33.6	7.28	7.34	1.65	.06	.00	6.5		
6010	27-1	75	.0	91.2	6.0	2.8	2.69	3.06	1.36	1.74	12.25	2.5		
6010	27-1	130	.0	14.1	64.9	21.0	6.03	6.24	1.97	.13	.00	5.5		
6011	1-1	100	.1	3.2	59.0	37.5	7.18	7.21	1.94	-.03	.00	5.5		
6011	7-1	123	23.6	9.7	46.4	20.3	5.61	4.65	3.85	-.27	.00	-1.5	5.5	
6011	8-1	75	.0	1.0	73.1	25.9	6.82	6.95	1.62	.15	.00	6.5		
6011	8-3	75	.0	1.0	66.2	32.9	7.17	7.26	1.63	.07	.00	6.5		
6011	8-5	75	.0	.5	71.1	28.2	7.10	7.16	1.52	.12	.00	7.5		
6011	9-1	125	.0	1.6	65.0	33.0	7.23	7.25	1.64	.02	.00	7.5		
6011	10-1	140	.0	95.7	1.6	2.7	1.03	1.40	1.59	1.86	15.11	.5		
6011	11-2	75	.0	.4	44.3	55.1	8.24	7.95	1.74	-.20	.00	8.5		
6011	12-1	125	12.6	29.2	42.6	15.6	5.13	4.32	3.56	-.12	1.13	-1.5	5.5	
6011	13-1	130	.0	1.5	78.2	20.4	6.29	6.56	1.67	.29	.00	5.5		
6011	13-6	60	.0	.8	76.4	22.7	6.54	6.77	1.62	.26	.00	5.5		
6011	14-2	75	.0	1.9	76.2	21.9	6.45	6.69	1.62	.25	.00	5.5		
6011	16-2	115	.0	47.9	41.7	10.4	4.15	4.69	2.24	.27	.00	3.5		
6011	20-1	140	4.0	56.3	23.5	16.3	3.26	4.20	3.01	.23	.00	1.5	7.5	
6011	22-1	140	.0	56.3	37.1	6.6	3.89	4.70	1.69	.70	.88	3.5		
6011	23-1	130	.0	89.1	9.7	1.3	2.36	2.63	1.33	1.24	8.15	2.5		
6011	26-2	70	.0	98.1	1.5	.5	1.52	1.62	.77	4.06	68.33	1.5		
6011	28-6	69	.0	16.7	58.2	24.9	5.96	6.25	2.10	.14	.00	4.5	7.5	
6012	1-5	95	.0	7.5	46.5	46.0	7.72	7.41	2.14	-.15	.00	4.5	9.5	
6012	2-6	75	.0	7.7	48.3	44.1	7.61	7.42	2.07	-.14	.00	9.5		
6012	3-2	95	.0	7.7	44.8	47.5	7.83	7.58	2.06	-.20	.00	3.5	9.5	
6012	3-4	105	.0	9.8	38.0	52.2	8.14	7.66	2.22	-.24	.00	3.5	9.5	
6012	3-6	85	.0	3.0	40.7	55.9	8.30	7.98	1.80	-.33	.00	9.5		
6012	4-3	99	.4	12.2	47.6	39.8	7.34	7.02	2.41	-.31	.00	2.5	7.5	
6012	5-4	105	.0	3.1	49.9	46.9	7.83	7.67	1.86	-.15	.00	8.5		
6012	6-1	105	.8	12.5	37.0	49.8	7.97	7.36	2.56	-.49	.33	2.5	9.5	
6012	8-2	105	.0	1.6	45.0	53.2	8.20	7.96	1.77	-.24	.00	9.5		
6012	9-2	115	.0	1.6	54.5	43.5	7.76	7.70	1.48	-.16	.00	7.5		
6012	12-6	50	.0	4.6	62.2	33.2	7.02	7.04	1.82	.00	.00	5.5		
6012	18-4	124	.0	8.1	51.8	40.3	7.44	7.30	1.93	-.15	.00	3.5	8.5	
6012	25-4	50	.0	1.9	55.5	42.7	7.55	7.48	1.79	-.07	.00	5.5	8.5	
6012	28-2	50	.0	1.3	54.6	44.1	7.61	7.56	1.90	-.05	.00	5.5	9.5	



HOLE	SEC	CM	GRX	SAX	SIX	CLZ	MD	MN	SD	SK	K	M1	M2	M3
6012	33-4	35	.0	7.2	56.0	36.7	7.34	7.20	1.85	-.13	.00	3.5	7.5	
6012	33-4	97	.0	55.4	33.0	11.7	3.90	4.95	1.97	.60	.15	3.5		
6013	4-1	135	.0	17.4	36.7	45.7	7.72	7.16	2.50	-.32	.00	2.5	9.5	
6013	5-2	2	.0	62.6	26.9	10.3	3.68	4.46	2.10	.62	.47	3.5		
6013	6-2	125	.0	58.1	25.9	15.9	3.71	4.73	2.48	.50	.00	2.5	9.5	
6013	6-3	85	.0	51.2	31.1	17.6	3.95	5.06	2.46	.33	.00	5.5		
6013	7-3	75	.0	3.2	46.7	49.7	8.01	7.66	1.89	-.22	.00	5.5	9.5	
6013	7-5	35	.0	1.8	51.0	47.2	7.85	7.73	1.78	-.16	.00	7.5		
6013	7-6	138	.0	2.6	55.8	41.5	7.51	7.44	1.79	-.09	.00	8.5		
6013	8-2	105	.0	78.6	16.2	5.3	2.64	3.34	1.96	.93	2.62	2.5		
6013	8-2	138	.0	77.1	16.6	6.4	2.73	3.57	2.05	.83	1.63	2.5	5.5	
6013	11-2	110	.0	98.4	1.0	.6	2.09	2.16	.97	1.50	19.14	2.5		
6013	11-4	115	1.0	97.4	.9	.7	1.95	1.95	1.15	.91	11.98	2.5		
6013B	15-1	110	.0	62.4	26.8	10.7	3.34	4.37	2.27	.51	.00	2.5		
6013B	16-2	12	.0	37.7	40.4	21.7	5.61	5.71	2.38	.13	.00	3.5	7.5	
6013B	18-2	21	.0	56.4	31.9	11.6	3.68	4.65	2.31	.39	.00	2.5	6.5	
6013B	22-2	88	.0	64.2	24.3	11.7	3.63	4.57	2.20	.53	.00	3.5	7.5	
6013B	26-1	145	.0	52.4	32.0	15.6	3.93	5.08	2.30	.35	.00	3.5	6.5	
6013B	28-1	110	.0	69.4	22.4	8.3	3.46	4.19	2.02	.69	.78	3.5		
6013B	31-1	140	.0	67.5	23.1	9.3	2.98	3.97	2.37	.52	.00	2.5	6.5	
6014	2-3	116	4.3	20.4	41.0	34.3	7.12	6.57	2.75	-.49	.91	3.5	7.5	
6014	2-3	139	.0	9.0	47.1	43.9	7.67	7.44	1.99	-.21	.00	3.5	8.5	
6014	6-2	85	.0	97.6	.6	1.8	2.46	2.57	1.06	2.58	30.83	2.5		
6014	7-2	85	.0	54.1	28.8	17.1	3.78	4.85	2.51	.37	.00	2.5	5.5	8.5
6014	7-4	81	.0	55.2	33.9	10.9	3.85	4.72	2.12	.50	.00	3.5		
6014	9-1	100	30.2	67.4	.8	1.5	.69	.57	1.45	2.88	35.57	-.5		
6014	10-1	120	.0	40.6	43.2	16.0	5.19	5.41	2.24	.23	.00	3.5		
6015	2-1	143	.0	65.9	25.6	8.5	2.70	3.71	2.55	.46	.00	1.5	5.5	
6015	4-1	125	.0	1.2	50.4	48.4	7.92	7.85	1.70	-.12	.00	7.5		
6015	6-1	120	.0	25.7	34.7	39.8	7.02	6.68	2.64	-.08	.00	3.5	9.5	
6016B	2-1	140	.0	95.9	1.9	2.3	2.14	2.15	1.48	1.43	11.68	2.5		
6016B	6-1	75	.0	28.0	52.3	19.8	5.20	5.76	2.15	.30	.00	3.5		
6017	1-2	75	4.0	39.5	13.2	43.2	7.08	5.63	3.78	-.13	.00	2.5	9.5	
6017	2-3	60	.0	48.6	35.2	16.1	4.54	4.59	3.07	.04	.00	1.5	7.5	
6017	5-1	136	1.4	12.8	39.3	46.3	7.77	7.15	2.65	-.54	.68	1.5	9.5	
6017	7-1	45	.0	3.4	36.8	59.7	8.47	8.11	1.78	-.39	.00	9.5		
6017	8-1	115	8.7	41.4	30.9	18.9	3.99	4.47	3.28	-.02	.00	-1.5	3.5	7.5
6017	9-1	134	5.4	44.2	32.2	18.3	4.06	4.56	3.12	.02	.00	-1.5	2.5	7.5
6018	6-2	25	.0	96.8	1.9	1.1	2.27	2.33	.99	2.37	29.60	2.5		
6019	1CC		.0	10.2	59.6	30.5	6.71	6.70	1.93	.00	.00	5.5	8.5	
6019	2-2	118	.0	6.8	69.9	23.3	6.41	6.57	1.78	.13	.00	5.5		
6019	2-3	122	.0	.0	67.6	32.5	7.04	7.16	1.67	.11	.00	5.5		
6019	3-1	140	.2	2.9	79.3	17.3	6.33	6.48	1.55	.07	.80	5.5		
6019	4-1	30	1.7	10.8	52.3	35.3	6.73	6.72	2.38	-.29	.63	5.5	8.5	
6019	5-1	81	.0	24.9	59.1	16.1	5.66	5.73	2.12	.08	.00	3.5		
6019	8-1	30	.0	59.0	19.7	12.4	2.75	3.62	3.02	.25	.00	-1.5	7.5	
6019B	1-2	118	.0	22.5	56.5	20.9	5.79	6.02	2.03	.18	.00	3.5		
6020	1-1	85	.0	11.5	32.9	55.9	8.30	7.70	2.30	-.35	.00	3.5	9.5	
6020	2-2	25	.0	12.7	31.5	55.8	8.31	7.62	2.45	-.47	.00	2.5	9.5	
6020	3-2	118	.0	1.4	42.1	56.5	8.42	8.11	1.72	-.28	.00	9.5		
6020	4-2	15	.0	28.8	31.2	40.1	7.04	6.27	3.28	-.21	.00	1.5	9.5	
6020	4-2	40	4.0	41.4	8.8	45.9	7.09	5.33	4.32	-.07	.00	.5	9.5	
6020	6-1	72	.8	9.2	42.5	47.8	7.83	7.43	2.31	-.43	.64	3.5	9.5	
6021	1-3	10	.0	5.2	45.8	48.9	7.94	7.72	1.96	-.21	.00	3.5	9.5	
6021	1-3	115	.0	24.8	46.7	28.7	6.16	6.26	2.41	.05	.00	3.5	7.5	
6021	2-2	112	.0	15.5	46.0	38.4	7.12	6.89	2.32	-.06	.00	3.5	8.5	
6021	2-3	125	.0	13.6	42.1	44.1	7.58	7.19	2.33	-.20	.00	3.5	8.5	
6021	2-4	50	.0	23.0	52.5	24.4	5.84	6.05	2.26	.10	.00	4.5	7.5	
6021C	1-2	12	.0	2.6	57.9	39.3	7.41	7.47	1.85	-.01	.00			
6021C	1-2	112	.0	21.6	43.1	35.1	6.80	6.63	2.48	-.05	.00	3.5	9.5	
6021C	3-2	115	.0	7.3	52.7	40.0	7.23	7.20	2.09	-.04	.00	5.5	9.5	
6021C	6-1	113	.0	12.4	53.8	33.8	6.98	6.91	2.13	-.07	.00	3.5		
6021C	7-1	38	.0	4.7	31.1	64.1	8.65	8.17	1.91	-.46	.00	5.5	9.5	
6021C	8-3	27	.0	7.7	57.5	34.5	7.08	7.05	1.95	-.03	.00	7.5		
6021C	9-2	25	.0	5.4	54.4	40.1	7.47	7.41	1.87	-.11	.00	3.5	7.5	

HOLE	SEC	CM	GR%	SA%	SI%	CL%	MD	MN	SD	SK	K	M1	M2	M3
6021C	10-2	127	.0	3.6	47.5	48.9	7.93	7.68	1.92	-.18	.00	9.5		
6021C	11-3	120	.0	2.7	46.8	50.4	8.03	7.75	1.86	-.19	.00	8.5		
6021C	12-3	70	.0	4.1	59.7	36.3	7.16	7.16	1.91	-.01	.00			
6021C	14-1	110	.0	11.2	60.6	28.5	6.75	6.75	1.93	.01	.00	3.5	6.5	
6021C	17-1	100	.0	7.2	55.3	37.6	7.28	7.27	1.91	-.08	.00	3.5	6.5	
6021C	21-2	100	.0	6.9	63.2	29.8	6.91	6.97	1.85	.02	.00	6.5		
6021C	26-3	75	.0	9.5	59.3	31.4	6.86	6.95	1.99	.02	.00	3.5	6.5	
6021C	29-1	100	.0	4.3	58.4	37.2	7.23	7.28	1.86	-.02	.00	6.5		
6021C	32-1	69	.0	6.4	56.0	37.6	7.30	7.27	1.91	-.08	.00	3.5		

## CHAPTER III

### X-RAY DIFFRACTION ANALYSES

by Lawrence J. Poppe

This section contains the relative percentages of minerals detected by X-ray diffraction.

A split from each sample was mounted and X-rayed as a randomly oriented powder. The clay fraction from each sample was separated by centrifuge and mounted as an oriented aggregate on a silver filter. Four treatments were performed on the oriented silver filter mounts: air drying, glycolation with ethelene glycol, heating to 400°C, and heating to 550°C. After each treatment, the samples were X-rayed between the angles of 2° and 40° two theta on a Philips X-ray diffractometer fitted with a graphite curved-crystal monochromator. This study used CuK $\alpha$  radiation, a scanning rate of 2° per minute, and a chart scale of 1000 cps full scale.

Semiquantitative estimates of the minerals present were made by comparison of peak intensities with intensities of a collection of standards. Relative percents of the clay minerals were estimated by a method described by Biscaye (1965). These semiquantitative estimates are generally considered to be accurate to within 10% of their actual values; however, the smaller values can vary considerably more than this.

In addition, a split was taken from each sample and mounted in Caedex (n=1.56) as a smear slide. These slides were used to check the semiquantitative diffraction techniques, to detect minerals occurring in trace amounts, or lacking X-ray diffraction effects, and to examine the biological debris.

The presence of gypsum and halite are principally due to drying of pore fluids, after coring.

Values reported in the tables as T indicate a trace of that mineral was detected. Other values are in relative percent. Blanks indicate that the mineral was not detected. Samples whose relative percents do not add up to 100 and do not have values listed for the clay minerals were X-rayed solely as randomly oriented powders.

#### Explanation of Headings

I/M	Illite/Mica
SMC	Smectites
I-S	Mixed layered illite-smectite
C-S	Mixed layered chlorite-smectite
KAO	Kaolinite
CHL	Chlorite
PALY	Palygorskite
SEPL	Sepiolite
VER	Vermiculite
NONS	Mixed layered nonswelling clay minerals
GLAU	Glaucinite
QTZ	Quartz
CRIS	Disordered cristobalite

Explanation of Headings (cont)

FELD	Na, Ca, and K Feldspars
PYR	Pyrite
SID	Siderite
HEM	Hematite
CALC	Calcite
MCAL	Magnesium calcite
ARAG	Aragonite
D/A	Dolomite/Ankerite
APA	Apatite
BAR	Barite
GYP	Gypsum
HAL	Halite
ZEO	Zeolite
AMP	Amphibole

HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6002	1-1	6	T	2.0			2.0						T	94.0		T
6002	2-1	11	2.0	16.0	T		32.0							25.0		6.0
6002	3-1	50												30.0		4.0
6002	3-2	49	5.0		13.0		4.0		2.0				T	24.0		20.0
6002	3-3	70	T	2.0	6.0		2.0		5.0				T	30.0		18.0
6002	3-5	40	4.0		5.0		2.0		4.0					45.0		15.0
6002	3-5	125			16.0		5.0		19.0					25.0		17.0
6002	4-6	137			10.0				10.0	40.0				17.0		T
6002	6-1	31	3.0	1.0	8.0		T		3.0	2.0			T	5.0		2.0
6002	6-2	30	T		13.0				7.0	20.0				10.0		5.0
6002	7-2	117			5.0		T		28.0	16.0				11.0		4.0
6002	8-3	137			15.0				30.0	25.0				7.0		T
6002	9-1	134												T	72.0	
6002	9-2	80	T		9.0				4.0	2.0				T	12.0	4.0
6002	9-6	137		2.0	6.0				2.0	15.0				15.0		5.0
6002	10-2	113	6.0	1.0	5.0					18.0				7.0		15.0
6002	12-1	20	T	3.0	4.0				T	T				2.0		
6002	13-1	47	T		8.0					T				2.0		
6002	14-1	88												2.0		
6002	14-6	30	3.0	5.0	10.0	T	6.0							2.0		T
6002	15-1	10		4.0	6.0		5.0						T	2.0		
6002	15-2	134		25.0										T		
6002	16-1	71	T	2.0	6.0		T		T	T				2.0		
6002	16-2	100	T	T	2.0									2.0		
6002	16-3	81	T	T	T									T		
6002	17-2	87	T	T	T									T		
6002	17-3	121	1.0	T	9.0		T							1.0		
6002	19-1	16			2.0									3.0		
6002	19-2	105	T	4.0	T									4.0		
6002	20-2	81												6.0		
6002	20-3	91	1.0	2.0	6.0				T					2.0		T
6002	22-1	80	1.0		1.0		2.0							1.0		
6002	23-2	21	2.0		2.0		2.0						T	4.0		
6002	23-3	85	T		T		T							1.0		
6002	24-1	111	T	T	T		T							2.0		
6002	25CC													T		
6002	27CC				T									2.0		
6002	28-1	129	T		4.0								T	1.0		
6002	32CC													T	28.0	
6002	33-1	72	1.0	9.0										2.0		
6004	1-2	127	T		2.0		4.0							9.0		
6004	2-2	107	T	T	2.0		5.0						5.0	5.0		
6004	3-1	132	T		2.0		2.0						T	4.0		
6004	4-3	89					T						1.0	16.0		2.0
6004	5-1	91	T		2.0		6.0							5.0		2.0
6004	5-2	137	1.0		2.0		7.0							6.0		
6004	5-4	99	T		T		3.0							3.0		
6004	6-1	61	T		1.0		3.0							6.0		1.0
6004	6-2	75	T	T	T		T							3.0		
6004	6-4	125	T		2.0		3.0							12.0		T
6004	7-1	125	T	1.0	2.0		7.0							14.0		T
6004	7-3	125	T	T	2.0		7.0							15.0		2.0
6004	7-5	47	T		4.0		7.0							19.0		4.0
6004	7-6	125	3.0	T	3.0		5.0							19.0		4.0
6004	9-1	125	T		4.0		5.0							26.0		12.0
6004	9-4	125	T	T	2.0		3.0						T	28.0		10.0
6004	10-1	121												3.0		
6004	10-3	50	T	T	2.0		3.0			T				2.0		T
6004	11-1	55	3.0	T	3.0		3.0						T	4.0		5.0
6004	11-4	112	T	T	2.0		2.0						3.0	7.0		10.0
6004	12-3	85												T		
6004	13-2	25		T	1.0				4.0				T	T		
6004	13-6	70			5.0				5.0				T	1.0		
6004	14-6	5			4.0				6.0					2.0		
6004B	2-1	70			T				4.0				T	T		

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6002	1-1	6	T		T	T				T			T		
6002	2-1	11	2.0			13.0			T	T			2.0		T
6002	3-1	50				60.0			T	2.0			T		
6002	3-2	49	1.0			T			28.0	1.0			T		
6002	3-3	70				10.0			20.0	3.0		T	T		
6002	3-5	40				15.0			2.0	5.0	T		T		
6002	3-5	125	2.0			10.0				2.0		T	T		
6002	4-6	137	T						20.0	T		T	2.0		
6002	6-1	31	1.0			66.0			7.0	T			T	T	
6002	6-2	30	1.0			23.0			14.0	6.0			T		
6002	7-2	117	2.0						26.0	4.0			2.0		
6002	8-3	137	T			20.0			T	T			2.0		
6002	9-1	134				T			15.0	10.0			T		
6002	9-2	80	T			31.0			36.0	T		T	T	T	
6002	9-6	137				25.0			30.0				T		
6002	10-2	113				44.0			3.0				T		
6002	12-1	20				85.0							T	2.0	
6002	13-1	47				79.0			1.0	T			T		
6002	14-1	88				80.0			T				T		
6002	14-6	30	T			71.0-			T	T			T		
6002	15-1	10				82.0			T	T			T	T	
6002	15-2	134				72.0							T	T	
6002	16-1	71				85.0			T				T	2.0	
6002	16-2	100				94.0							T		
6002	16-3	81				95.0			2.0				T	T	
6002	17-2	87				95.0			2.0				T	T	
6002	17-3	121				85.0			2.0				T	T	
6002	19-1	16				85.0			5.0				T	4.0	
6002	19-2	105				75.0			10.0				T	4.0	
6002	20-2	81				86.0							T	2.0	
6002	20-3	91				85.0			T				T	2.0	
6002	22-1	80				92.0			2.0				T		
6002	23-2	21				82.0			8.0				T		
6002	23-3	85				97.0			T				T		
6002	24-1	111				93.0			2.0				T		
6002	25CC					96.0			T				T	T	
6002	27CC					95.0			T				T		
6002	28-1	129				92.0							T	T	
6002	32CC					70.0			T				T		
6002	33-1	72				78.0			T				T	10.0	
6004	1-2	127				69.0	9.0	5.0					1.0		
6004	2-2	107				60.0	10.0	10.0					1.0		
6004	3-1	132				73.0	12.0	5.0					1.0		
6004	4-3	89				65.0	8.0	8.0					T		
6004	5-1	91				65.0	8.0	10.0					T		
6004	5-2	137				59.0	6.0	17.0					1.0		
6004	5-4	99				76.0	9.0	6.0					1.0		
6004	6-1	61				68.0	8.0	10.0					T		
6004	6-2	75				83.0	4.0	6.0					1.0		
6004	6-4	125				75.0	2.0	5.0					1.0		
6004	7-1	125				67.0	2.0	6.0					1.0		
6004	7-3	125				67.0	T	5.0					1.0		
6004	7-5	47	1.0			58.0		5.0	T				T		T
6004	7-6	125				60.0		5.0					1.0		
6004	9-1	125				45.0		6.0	T				1.0		
6004	9-4	125				50.0		5.0	T				1.0		
6004	10-1	121				91.0		4.0	T				1.0		
6004	10-3	50				85.0		4.0					1.0		
6004	11-1	55				73.0		5.0	2.0				1.0		
6004	11-4	112				69.0		2.0	4.0				1.0		
6004	12-3	85				93.0			4.0				1.0		
6004	13-2	25				92.0			1.0	T			T		
6004	13-6	70				82.0			6.0				1.0		
6004	14-6	5				84.0			3.0				1.0		
6004B	2-1	70				92.0			T	T			1.0		

HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6004B	2-6	80												T		
6004B	4-1	110			10.0				25.0					2.0		
6004B	5-1	141												2.0		
6004B	5CC		14.0	8.0	9.0									11.0	10.0	T
6004B	7-1	80	22.0	9.0	14.0								1.0	16.0	8.0	T
6004B	7-6	65	9.0	8.0	15.0								3.0	9.0	8.0	T
6004B	8-6	69	8.0	19.0	6.0				1.0					8.0	9.0	T
6004B	10-1	135	7.0	14.0	7.0				T					12.0	7.0	
6004B	11-1	75												9.0	10.0	
6004B	12-2	70	T		4.0		2.0						3.0	8.0		
6004B	13-2	135	6.0	14.0	7.0				T				T	9.0	14.0	T
6004B	14-2	97	16.0	20.0	14.0									18.0	11.0	T
6004B	15-1	99	16.0	14.0	20.0								T	11.0	17.0	T
6004B	16-3	93	6.0	3.0	11.0									3.0	8.0	
6004B	19-1	20												2.0	T	
6004B	19-1	83											5.0	8.0		
6004B	19-2	80	8.0	3.0	13.0		8.0							7.0		2.0
6004B	19-6	80	2.0	T	4.0		3.0						20.0	20.0		2.0
6004B	20-1	102	3.0	T	6.0		10.0							1.0		
6004B	20-1	133	T		2.0		7.0							3.0		T
6005	2-1	25	T	3.0			T						T	80.0		14.0
6005	4-2	110		7.0									T	50.0		10.0
6005	5-1	145	20.0		20.0								T	24.0	13.0	T
6005	6-1	140	2.0	T	2.0								10.0	43.0	T	9.0
6005B	2-2	130												5.0		
6006	3-2	75	T	T	T		T							80.0		15.0
6006	3-4	25	T	T			T							80.0		15.0
6006	5-2	75	T	T	T		T							55.0		37.0
6006	6-3	139												43.0		38.0
6006	6-6	65	T	T	T		T	T						36.0		48.0
6006	8CC		T	T	1.0		2.0							21.0		
6006	9CC													3.0		
6007	2-2	125	T				T	T					T	75.0		20.0
6007	3-5	140	30.0	T	3.0		10.0	6.0						30.0		15.0
6007	3-6	19	31.0		7.0		6.0	8.0					T	33.0		12.0
6007	4-5	120	36.0				6.0	18.0						20.0		8.0
6007	5-2	115	13.0	T	7.0		6.0	1.0					3.0	52.0		15.0
6007	5-3	19	15.0	T	12.0	T	5.0	5.0					T	35.0		24.0
6007	6-1	120												55.0		20.0
6007	6-2	124	30.0	3.0	14.0		8.0	12.0						15.0		15.0
6007	7-1	130												55.0		20.0
6007	8-1	110	8.0	T	T		2.0							16.0		T
6007	8-1	135	3.0	T	1.0		T						13.0	26.0		T
6007	9-1	125	13.0	1.0	4.0		3.0	4.0					T	60.0		12.0
6007	11-2	11											T	46.0		19.0
6007	11-2	12	4.0		2.0		3.0							37.0		18.0
6007B	1-1	130	15.0		7.0		6.0	2.0				T	T	58.0		7.0
6007B	2-2	118	28.0	2.0	6.0	T	15.0	9.0						30.0		2.0
6007B	2-3	105	25.0	3.0	7.0		10.0	5.0						41.0		3.0
6007B	3-1	105												67.0		20.0
6007B	4-3	70												27.0		2.0
6007B	5-1	130	23.0	2.0	6.0		9.0	3.0						50.0		4.0
6007B	6-2	55												12.0		T
6007B	7-1	145												96.0		2.0
6007B	8-1	140	10.0		7.0		6.0	2.0					T	54.0		16.0
6007B	8-2	30	1.0		4.0		T	1.0					T	76.0		14.0
6007B	10-1	133	20.0	2.0	8.0	T	14.0	2.0						32.0		1.0
6007B	10-5	145	14.0		12.0		8.0	2.0					T	60.0		2.0
6007B	10-6	50	17.0	1.0	8.0		13.0	4.0					T	45.0		8.0
6007B	11-2	70	9.0	2.0	8.0		10.0						52.0	10.0		T
6007B	11-3	86	24.0	7.0	21.0		16.0	T					T	25.0		1.0
6007B	12-3	132	37.0	4.0	16.0		11.0	4.0					T	25.0		T
6007B	13CC		29.0	4.0	16.0		24.0							25.0		1.0
6007B	15-1	25	17.0	T	9.0		13.0	6.0					4.0	42.0		5.0
6007B	18-3	79	T		T									88.0		T

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6004B	2-6	80				97.0							1.0		
6004B	4-1	110				53.0			9.0	T			1.0		
6004B	5-1	141				10.0			65.0				1.0		
6004B	5CC					46.0			T				T	1.0	
6004B	7-1	80				27.0			2.0	T			T	2.0	
6004B	7-6	65				46.0			T				T	T	
6004B	8-6	69				47.0			T				T	T	
6004B	10-1	135				49.0			2.0				T	T	
6004B	11-1	75				50.0							T		
6004B	12-2	70				69.0	6.0	6.0					1.0		
6004B	13-2	135				46.0							1.0		
6004B	14-2	97				20.0							T	T	
6004B	15-1	99				21.0							T	T	
6004B	16-3	93				66.0							T	T	
6004B	19-1	20				92.0							T	T	
6004B	19-1	83				85.0							T	T	
6004B	19-2	80				60.0							T		
6004B	19-6	80				47.0							T		T
6004B	20-1	102				75.0				2.0	T		T		
6004B	20-1	133				86.0							T		
6005	2-1	25				T			T		T		1.0		T
6005	4-2	110				30.0							T		T
6005	5-1	145	2.0			20.0			T				T		
6005	6-1	140				23.0			10.0				T		
6005B	2-2	130	T			89.0	T						T		
6006	3-2	75	T			2.0	1.0						1.0		T
6006	3-4	25				1.0	T						1.0		1.0
6006	5-2	75	T			2.0			2.0				T		2.0
6006	6-3	139	1.0	T		5.0	3.0						T		2.0
6006	6-6	65	T			5.0			2.0				T		2.0
6006	8CC					73.0			2.0				T		
6006	9CC					95.0			T				T		
6007	2-2	125				T			T				T		T
6007	3-5	140	T	1.0								T	T		T
6007	3-6	19	T	1.0								T	T		
6007	4-5	120				8.0			4.0				T		
6007	5-2	115	1.0										T		
6007	5-3	19	1.0						T			T	T		T
6007	6-1	120	1.0									T	T		T
6007	6-2	124	T	T		1.0	T						T		T
6007	7-1	130	T			T	T						T		1.0
6007	8-1	110		73.0									T		
6007	8-1	135	T	55.0									T		
6007	9-1	125	2.0	1.0		T							T		
6007	11-2	11	1.0			T			10.0				T		
6007	11-2	12	T			T			34.0						
6007B	1-1	130	1.0	2.0		T							T		1.0
6007B	2-2	118	2.0	2.0		3.0						T	T		
6007B	2-3	105	1.0	T								T	T		T
6007B	3-1	105	T								T		T		1.0
6007B	4-3	70	2.0										T		T
6007B	5-1	130	1.0	T									T		
6007B	6-2	55		67.0											
6007B	7-1	145											1.0		
6007B	8-1	140	T	1.0					T				1.0		T
6007B	8-2	30	T			T							1.0		1.0
6007B	10-1	133	3.0	3.0		T					4.0		1.0		
6007B	10-5	145	1.0	2.0									T		
6007B	10-6	50	T	1.0									T		T
6007B	11-2	70	T	5.0									T		
6007B	11-3	86	T	3.0									T		
6007B	12-3	132	T	1.0							T		T		
6007B	13CC		T	T							1.0		T		
6007B	15-1	25	1.0	T							1.0		T		T
6007B	18-3	79				10.0									1.0



HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6008	1-2	123	23.0	1.0	7.0		5.0	5.0					T	40.0		18.0
6008	1-3	99	27.0		1.0		6.0	8.0					T	22.0		33.0
6008	1-4	125	34.0	T	6.0		6.0	3.0						24.0		25.0
6008	2-1	150	25.0		5.0		7.0	15.0						30.0		15.0
6008	3-1	136	17.0	2.0	6.0		15.0				3.0			50.0		2.0
6008	3-2	11	19.0		5.0		13.0	16.0						33.0		10.0
6008	4-2	105	15.0	T	17.0		8.0				3.0			50.0		3.0
6008	5-1	125	T	T	T		T				T			87.0		9.0
6008	6-1	115	10.0	2.0	5.0		8.0	T			T			67.0		5.0
6008	8-1	130												78.0		8.0
6008	9-1	127												39.0		5.0
6008	9-1	143												68.0		10.0
6008	9-2	54	16.0	T	9.0		14.0	3.0			5.0			48.0		2.0
6008	10-1	115	4.0	T	T		4.0	T			1.0			83.0		5.0
6008	10CC		8.0		3.0		8.0	4.0						30.0		2.0
6008	11-2	90												70.0		16.0
6008	12-2	25	1.0	T	T		1.0	T						83.0		12.0
6008	12-2	129												88.0		8.0
6008	13-1	50	4.0	T	2.0		2.0	T			T			83.0		5.0
6008	13-1	125	T	T	T		T	T			T			87.0		4.0
6008	13-2	120	T	T	T		T	T			T			90.0		5.0
6009	1-1	135	21.0		2.0	T	T	14.0					T	36.0		12.0
6009	3-2	146	26.0		5.0	T	6.0	13.0					T	13.0		32.0
6009	3-3	50	27.0		3.0		T	15.0						20.0		24.0
6009	6-1	7	20.0		4.0		6.0	14.0						22.0		20.0
6009B	1-1	81	24.0				T	8.0				T		40.0		18.0
6009B	2-1	125	T	T	T		T	T						65.0		30.0
6009B	3-1	147	20.0	T	2.0		2.0	9.0						44.0		15.0
6009B	4-1	115	21.0	T	5.0		7.0	8.0						14.0		20.0
6009B	5-1	9	28.0	T	5.0	T	10.0	11.0						13.0		26.0
6009B	6CC		7.0		T		5.0	3.0						75.0		8.0
6009B	8-2	9	11.0		4.0		20.0	10.0					T	30.0		12.0
6009B	8-3	115	26.0	T	3.0		31.0	T					T	28.0		6.0
6009B	9-1	120												62.0		
6009B	9-2	65	24.0				24.0	12.0						30.0		8.0
6009B	10-2	105	22.0		19.0		12.0	12.0						32.0		1.0
6009B	11-1	105	14.0	4.0	12.0		13.0	2.0						45.0		7.0
6009B	12-4	17	27.0	T	5.0	T	29.0	7.0						21.0		8.0
6009B	14-1	129	19.0	T	6.0		12.0	25.0					T	29.0		4.0
6009B	14-4	97	23.0	T	2.0		27.0	7.0			T		T	23.0		3.0
6009B	15-3	61												25.0		2.0
6009B	16-1	120	T	T	T		T				T		15.0	79.0		1.0
6009B	19-1	91	T		T		T				T		T	84.0		8.0
6009B	20-1	130	14.0	2.0	6.0		11.0	3.0					T	50.0		10.0
6009B	21-2	61												33.0		6.0
6009B	21-3	12	17.0		11.0		19.0	8.0					T	36.0		6.0
6009B	23-1	110	4.0	1.0	1.0		3.0	T					T	80.0		7.0
6009B	23-2	70	T		5.0		5.0	1.0					T	78.0		6.0
6009B	24-1	120												65.0		1.0
6009B	24-1	145	30.0	T	3.0		30.0				T			32.0		T
6009B	27-1	40	12.0		17.0		20.0							50.0		1.0
6009B	27-1	135	13.0		9.0		32.0							45.0		1.0
6009B	27-2	129	15.0		4.0		23.0							55.0		3.0
6009B	28-2	41	12.0	T	4.0		15.0							60.0		4.0
6009B	30-2	51	14.0	T	6.0		31.0							40.0		4.0
6009B	31-1	100	1.0	4.0			3.0							80.0		7.0
6009B	32-1	122												89.0		2.0
6010	1-2	119	18.0		3.0	T	5.0	13.0						18.0		14.0
6010	2-2	119	23.0	T	6.0		3.0	7.0						18.0		12.0
6010	3-2	105	21.0		7.0		3.0	8.0						17.0		13.0
6010	4-1	140	25.0	T	T		4.0	9.0					T	24.0		16.0
6010	4-2	105	14.0	T	3.0		2.0	7.0			T			18.0		21.0
6010	5-1	85	21.0	T	10.0		3.0	11.0						17.0		25.0
6010	6-2		15.0	T	3.0		3.0	8.0						25.0		24.0
6010	6-2	19	21.0	T	2.0		2.0	5.0						19.0		26.0

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6008	1-2	123	T										1.0		1.0
6008	1-3	99	T						T				T		1.0
6008	1-4	125	T										1.0		1.0
6008	2-1	150											T		T
6008	3-1	136	2.0	T								T			T
6008	3-2	11	2.0	T									T		T
6008	4-2	105	3.0									T			
6008	5-1	125	1.0	1.0											
6008	6-1	115	1.0	1.0											T
6008	8-1	130	2.0										T		1.0
6008	9-1	127	1.0	T								T	T		
6008	9-1	143	1.0			1.0							T		
6008	9-2	54	T	1.0											T
6008	10-1	115	1.0										2.0		
6008	10CC		1.0					41.0				T	T	T	T
6008	11-2	90	T	T		6.0							T		1.0
6008	12-2	25	T			T							1.0		T
6008	12-2	129	1.0										T		
6008	13-1	50	T										1.0		
6008	13-1	125	2.0			T	4.0						T		
6008	13-2	120	T										2.0		
6009	1-1	135				3.0			5.0			2.0	T	T	T
6009	3-2	146	1.0			2.0			T			T	T		1.0
6009	3-3	50	2.0	T		3.0			2.0			2.0	T		T
6009	6-1	7	T			3.0			8.0			1.0			T
6009B	1-1	81				2.0			4.0				T		2.0
6009B	2-1	125				1.0			T				T		1.0
6009B	3-1	147	1.0			3.0			1.0		T		1.0		2.0
6009B	4-1	115	T			15.0			4.0				T		2.0
6009B	5-1	9	1.0	T		2.0			T			T	T		1.0
6009B	6CC					3.0									T
6009B	8-2	9		3.0								T			T
6009B	8-3	115		4.0									T		
6009B	9-1	120				T					13.0		T		
6009B	9-2	65		2.0									T		T
6009B	10-2	105	T	2.0						T		T			T
6009B	11-1	105	T	T		T				T		T	T		
6009B	12-4	17	1.0	T								T			T
6009B	14-1	129	2.0										T		T
6009B	14-4	97		14.0									T		T
6009B	15-3	61	2.0									T			
6009B	16-1	120	T										1.0		
6009B	19-1	91	T	2.0							2.0		T		
6009B	20-1	130	3.0									T			
6009B	21-2	61	3.0								T	T			
6009B	21-3	12	2.0	T											
6009B	23-1	110	T								3.0				
6009B	23-2	70									3.0	T	T		
6009B	24-1	120									10.0		T		
6009B	24-1	145	2.0										T		
6009B	27-1	40	T	1.0											
6009B	27-1	135	T										T		
6009B	27-2	129	1.0									T			T
6009B	28-2	41	2.0									T	T		T
6009B	30-2	51	4.0									T			T
6009B	31-1	100	T	2.0		T					2.0				
6009B	32-1	122	T			T							T		
6010	1-2	119	T			15.0			12.0				T		T
6010	2-2	119				18.0			10.0				T		T
6010	3-2	105	T			20.0			10.0				T		T
6010	4-1	140	T	T		12.0			6.0				T		T
6010	4-2	105				21.0			12.0				T		T
6010	5-1	85	1.0			6.0			4.0				T		1.0
6010	6-2		T			14.0			5.0				T		1.0
6010	6-2	19				16.0			6.0				T		1.0

WBLE	SEC	CM	I/M	SMC	I-S	C-S	KA0	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6010	7-2	105	T	T	T		T	T					T	63.0		30.0
6010	7-3	120	33.0		2.0		6.0	14.0						20.0		22.0
6010	7-4	125	11.0	T	5.0		4.0	13.0						21.0		24.0
6010	8-1	100	13.0		7.0		3.0	8.0						25.0		24.0
6010	8-2	29	21.0		2.0		5.0	12.0						22.0		27.0
6010	9-1	136											5.0	81.0		12.0
6010	9-2	85	25.0	T	6.0		T	11.0						22.0		26.0
6010	9-3	47	28.0		3.0		T	15.0						30.0		21.0
6010	10-1	132	28.0	T	2.0		5.0	12.0					T	30.0		19.0
6010	11-2	75	T	T	T		T	T					3.0	73.0		16.0
6010	12-1	130											T	63.0		33.0
6010	12-2	47												34.0		13.0
6010	12-3	54	T	T	T		T	T						9.0		4.0
6010	13-2	111	21.0	T	5.0		20.0	8.0					T	T	33.0	
6010	14-3	92	20.0	T	2.0		21.0	10.0						31.0		11.0
6010	14-6	90	18.0		2.0		31.0	2.0					T	30.0		10.0
6010	16-1	120	14.0		3.0		23.0	11.0						30.0		8.0
6010	16-2	90	19.0		9.0		30.0	13.0						29.0		3.0
6010	17-1	140	4.0		2.0		8.0	T						58.0		23.0
6010	18-1	90	17.0		3.0		25.0	10.0					T	29.0		8.0
6010	19-1	50	17.0		6.0		18.0	6.0					T	36.0		7.0
6010	20-3	120	24.0		9.0		20.0	11.0					T	26.0		7.0
6010	20-4	30	22.0	T	5.0		35.0						T	27.0		7.0
6010	20-6	56	22.0	T	2.0		23.0						1.0	44.0		5.0
6010	21-2	100	19.0	T	7.0		30.0						1.0	30.0		8.0
6010	22-5	135											T	21.0		2.0
6010	22-6	60											3.0	31.0		5.0
6010	25-1	100	16.0	1.0	7.0		21.0						T	45.0		8.0
6010	26-2	100	17.0	T	13.0		29.0	T					T	21.0		T
6010	27-1	75	1.0		T		2.0						20.0	70.0		2.0
6010	27-1	105	13.0		5.0		11.0						15.0	55.0		4.0
6010	27-1	130	12.0	5.0	7.0		18.0						T	50.0		4.0
6010	30CC													40.0		2.0
6011	1-1	100	35.0	T	9.0	T	4.0	7.0					T	23.0		18.0
6011	4-1	140											T	94.0		2.0
6011	7-1	123	18.0		4.0		18.0	8.0						50.0		T
6011	8-1	75	19.0	T	10.0		28.0							38.0		2.0
6011	8-2	20	28.0	T	4.0	T	43.0	T						13.0		7.0
6011	8-3	75	17.0	4.0	13.0		26.0							35.0		T
6011	8-4	47	16.0	T	18.0		35.0	T						25.0		2.0
6011	8-5	75	3.0	20.0	12.0		32.0							28.0		T
6011	9-1	125	14.0	12.0	4.0		24.0							42.0		T
6011	10-1	140												98.0		
6011	11-1	20	17.0	T	14.0		29.0						T	37.0		1.0
6011	11-2	75	16.0	T	6.0		28.0							45.0		T
6011	11-4	100	22.0	T	22.0		26.0							25.0		T
6011	11-5	129	16.0		12.0		35.0	14.0				T		15.0		T
6011	12-1	125	3.0	T	7.0	T	4.0	2.0					T	56.0		21.0
6011	13-1	130	14.0	4.0	5.0		14.0	7.0						46.0		T
6011	13-3	15	6.0	6.0	7.0		13.0							55.0		7.0
6011	13-4	100	10.0	12.0	14.0		11.0							43.0		7.0
6011	13-6	60	15.0	2.0	9.0		13.0	9.0						40.0		6.0
6011	14-2	75	5.0		6.0	T	13.0							64.0		5.0
6011	14-3	98	10.0	9.0	20.0		14.0	2.0						38.0		4.0
6011	15-2	44	14.0	2.0	6.0		33.0	T						34.0		7.0
6011	16-2	28	9.0	3.0	4.0		9.0	T						63.0		7.0
6011	16-2	115	T	T	T		T	T						90.0		6.0
6011	17-2	110												95.0		4.0
6011	20-1	110												96.0		3.0
6011	20-1	140					80.0						T	6.0		T
6011	21-1	135	T	T	T		T	T					1.0	92.0		3.0
6011	22-1	140	7.0	T	5.0		13.0	4.0	2.0				2.0	53.0		4.0
6011	23-1	130	1.0	T	T		T	T					40.0	51.0		T
6011	26-2	70	1.0	T	1.0		T						20.0	72.0		T
6011	28-6	69	5.0	22.0	T		5.0			T			25.0	30.0		8.0

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6010	7-2	105	T			T			T				T		1.0
6010	7-3	120	T			T			T				T		1.0
6010	7-4	125	T			15.0			5.0				T		1.0
6010	8-1	100				13.0	T		4.0				T		1.0
6010	8-2	29				8.0		T	2.0	T			T		
6010	9-1	136	T			T	T		T				T		
6010	9-2	85	1.0			6.0	1.0		T				T		
6010	9-3	47				T			1.0				T		T
6010	10-1	132	T			T			1.0				T		T
6010	11-2	75	T			T			1.0				T		T
6010	12-1	130				T			T				T		T
6010	12-2	47	2.0									T	T		T
6010	12-3	54		85.0		T			T						
6010	13-2	111	3.0		7.0							T	T		T
6010	14-3	92		8.0								T	T		
6010	14-6	90		7.0								T	T		
6010	16-1	120		9.0		T							T		T
6010	16-2	90	T	4.0								T	T		T
6010	17-1	140	1.0	2.0		T			T	T		T			1.0
6010	18-1	90	T	6.0								T	T		1.0
6010	19-1	50		8.0											1.0
6010	20-3	120		2.0								T			T
6010	20-4	30		3.0								T			T
6010	20-6	56	T	1.0									T		T
6010	21-2	100		4.0											T
6010	22-5	135		10.0								T			
6010	22-6	60		3.0		T						T			
6010	25-1	100		2.0											
6010	26-2	100	5.0	13.0											
6010	27-1	75	T	T									T		
6010	27-1	105	1.0	T											
6010	27-1	130	1.0	2.0								1.0			
6010	30CC		3.0									T			
6011	1-1	100	T										T		T
6011	4-1	140	T										T		
6011	7-1	123	1.0										T		
6011	8-1	75	1.0	T											
6011	8-2	20	2.0	T								T	T		
6011	8-3	75	4.0												
6011	8-4	47	3.0										T		
6011	8-5	75	4.0												
6011	9-1	125	3.0												
6011	10-1	140	T												
6011	11-1	20	2.0								T	T		T	
6011	11-2	75	3.0									1.0			
6011	11-4	100	3.0								T	T			T
6011	11-5	129	4.0	T											
6011	12-1	125	4.0	T		T						T			
6011	13-1	130	4.0									4.0			
6011	13-3	15	4.0	T	T									T	
6011	13-4	100	2.0			T									T
6011	13-6	60	5.0									1.0			
6011	14-2	75	1.0									4.0			
6011	14-3	98	2.0	T											T
6011	15-2	44	2.0									2.0			
6011	16-2	28	3.0									2.0			
6011	16-2	115	T										T		
6011	17-2	110											T		
6011	20-1	110											T		
6011	20-1	140	T	12.0									T		
6011	21-1	135	T								T	T	T	T	
6011	22-1	140	3.0	T		T						2.0	T	3.0	
6011	23-1	130	1.0										T		T
6011	26-2	70	1.0			T							2.0		
6011	28-6	69	3.0			2.0									

HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6012	1-2	40	12.0	T	4.0		3.0	5.0					1.0	45.0		23.0
6012	1-2	142	26.0	T	6.0		11.0	20.0					T	22.0		12.0
6012	1-4	24	24.0	T	5.0		7.0	12.0					1.0	30.0		18.0
6012	1-5	95	27.0		9.0		4.0	9.0					T	28.0		22.0
6012	2-6	75	28.0		10.0		5.0	14.0					T	22.0		19.0
6012	3-2	95	30.0	T	7.0		7.0	13.0					T	23.0		19.0
6012	3-4	105	32.0	T	9.0		5.0	11.0					T	21.0		20.0
6012	3-6	85	23.0	1.0	7.0		6.0	9.0					T	32.0		20.0
6012	4-2	144	23.0	T	2.0		8.0	13.0					1.0	31.0		19.0
6012	4-3	63	25.0	T	1.0		7.0	14.0					T	35.0		15.0
6012	4-3	109	16.0	T	10.0		5.0	10.0					T	40.0		15.0
6012	5-1	61	30.0	T	5.0		10.0	15.0					T	25.0		12.0
6012	5-4	105	26.0	T	9.0		6.0	19.0					T	28.0		15.0
6012	6-1	105	23.0	T	7.0		6.0	12.0					1.0	27.0		20.0
6012	7-1	81	29.0	T	7.0		7.0	12.0					T	28.0		14.0
6012	8-2	105	23.0	T	15.0		14.0	11.0					1.0	22.0		13.0
6012	9-2	115												35.0		11.0
6012	11-2	95	31.0	T	4.0	T	11.0	15.0						24.0		13.0
6012	11-3	70	27.0	T	7.0		14.0	13.0					T	25.0		11.0
6012	11-4	100	22.0	T	7.0		12.0	10.0					T	30.0		15.0
6012	12-6	50	15.0	2.0	6.0		8.0	5.0					T	48.0		16.0
6012	13-2	34												30.0		10.0
6012	18-4	124	35.0	3.0	9.0		6.0	11.0					T	20.0		14.0
6012	25-4	50	22.0		17.0		6.0	11.0					T	26.0		16.0
6012	26-2	20												25.0		10.0
6012	28-2	50	12.0	T	4.0		3.0	5.0					T	24.0		26.0
6012	29-4	100	28.0	2.0	8.0		6.0	13.0					T	30.0		11.0
6012	30-1	130	29.0	T	5.0		17.0	18.0					T	20.0		9.0
6012	30-3	120	16.0		11.0		20.0	10.0					T	32.0		9.0
6012	30-4	70	16.0	6.0	10.0		14.0	7.0					T	38.0		8.0
6012	33-2	100	16.0	T	3.0		7.0	6.0					23.0	38.0		6.0
6012	33-2	113											T	29.0		6.0
6012	33-4	35	22.0	T	6.0		18.0	9.0					T	30.0		12.0
6012	33-4	97	5.0		2.0		1.0	2.0					30.0	25.0		12.0
6013	3-1	143	1.0	3.0			1.0						T	84.0		9.0
6013	4-1	135	19.0		8.0		7.0	13.0								
6013	4-1	150											T	40.0		7.0
6013	4-2	52	21.0		6.0		17.0	14.0					T	29.0		8.0
6013	5-2	2	9.0		4.0		7.0	9.0					1.0	50.0		14.0
6013	5-2	48	21.0		5.0		9.0	12.0					T	32.0		15.0
6013	6-2	125	24.0		T		7.0	4.0					2.0	45.0		12.0
6013	6-3	85	15.0		2.0		5.0	6.0					2.0	49.0		12.0
6013	7-3	75	20.0		4.0		13.0	15.0					T	37.0		6.0
6013	7-5	35	13.0		8.0		13.0	7.0					T	45.0		8.0
6013	7-6	138											T	50.0		7.0
6013	8-1	66	20.0	T	7.0		16.0	16.0					T	35.0		3.0
6013	8-2	138	8.0	T	2.0		3.0	5.0					T	60.0		11.0
6013	9-2	70											T	77.0		15.0
6013	11-2	110	1.0	T	T		T	T					1.0	81.0		15.0
6013B	13-1		25.0		4.0		12.0	6.0					T	41.0		9.0
6013B	14-1	140												45.0		10.0
6013B	15-1	110	13.0		6.0		8.0	5.0						49.0		16.0
6013B	16-2	12	17.0		7.0		13.0	4.0					T	38.0		9.0
6013B	16-3	107	12.0	T	10.0		10.0	17.0					T	25.0		8.0
6013B	18-2	21	16.0	T	6.0		8.0	14.0					1.0	28.0		8.0
6013B	19-2	58	14.0		4.0		6.0	7.0					T	12.0		3.0
6013B	19-2	130											2.0	42.0		6.0
6013B	22-2	88	11.0		5.0		3.0	8.0					2.0	45.0		9.0
6013B	26-1	145	10.0		8.0		5.0	8.0					2.0	37.0		15.0
6013B	28-1	110	11.0	T	7.0		5.0	6.0					1.0	36.0		8.0
6013B	31-1	140	10.0	9.0	2.0		3.0	6.0					2.0	48.0		7.0
6014	2-2	144												82.0		2.0
6014	2-3	116	23.0		4.0		11.0	12.0					T	37.0		10.0
6014	2-3	139	25.0		6.0		3.0	11.0					T	20.0		14.0
6014	3-1	145											2.0	86.0		8.0

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6012	1-2	40	T			6.0						T	T		
6012	1-2	142				T						T	T		T
6012	1-4	24	T							T			T		T
6012	1-5	95							1.0				T		
6012	2-6	75	T										1.0		T
6012	3-2	95	T	T									1.0		T
6012	3-4	105	T	T									1.0		T
6012	3-6	85	T	T									1.0		T
6012	4-2	144	T	T									T		T
6012	4-3	63	T	T		T							T		T
6012	4-3	109	T	T		T							1.0		T
6012	5-1	61		T		T						T	T		T
6012	5-4	105		T		T							T		T
6012	6-1	105		T		T							T		T
6012	7-1	81		T									T		
6012	8-2	105	T	T									T		T
6012	9-2	115	T	T		T							T		T
6012	11-2	95	T	T									T		
6012	11-3	70	T	T		T							T		
6012	11-4	100	T	T		2.0							T		T
6012	12-6	50	T	T									T		T
6012	13-2	34	T										T		T
6012	18-4	124	T	T					T				T		T
6012	25-4	50	T	T		T							T		T
6012	26-2	20				T							T		T
6012	28-2	50	1.0			22.0			1.0				T		T
6012	29-4	100	T	T		1.0			T						T
6012	30-1	130	T	T		T							T		
6012	30-3	120	T	T	T	T							T		T
6012	30-4	70	T	T		T							T		T
6012	33-2	100	T	T	T	T							T		
6012	33-2	113	T	T		T							T		T
6012	33-4	35	T			T							T		
6012	33-4	97	1.0			21.0							T		T
6013	3-1	143				T							1.0		
6013	4-1	135											T		T
6013	4-1	150	T	3.0		T									
6013	4-2	52	T	3.0		T						T	1.0		T
6013	5-2	2	1.0	1.0		2.0							1.0		T
6013	5-2	48	1.0	2.0		T						1.0	T		
6013	6-2	125	1.0	3.0		1.0				T		T	1.0		
6013	6-3	85	2.0	2.0		2.0							1.0		
6013	7-3	75		4.0		T							T		
6013	7-5	35		5.0		T							T		
6013	7-6	138		4.0		T							T		
6013	8-1	66	T	T		T			T			T	T		
6013	8-2	138	1.0	1.0		8.0							1.0		
6013	9-2	70	T			2.0			T						
6013	11-2	110				T							T		
6013B	13-1		T	T		T						T	T		T
6013B	14-1	140	T	T		T						T	T		
6013B	15-1	110	T			1.0						1.0	T		
6013B	16-2	12	1.0	1.0		8.0						T	T		
6013B	16-3	107	1.0	2.0		13.0							T		T
6013B	18-2	21	2.0	1.0		15.0							T		
6013B	19-2	58	T	T		42.0			10.0				T		
6013B	19-2	130	1.0	T		15.0							T		
6013B	22-2	88	1.0	1.0		14.0						1.0	T		
6013B	26-1	145	1.0			16.0				T		T	T		
6013B	28-1	110	1.0	1.0		23.0						T	T		
6013B	31-1	140	1.0	1.0		9.0						T	T		
6014	2-2	144	T			3.0							T		
6014	2-3	116	T			1.0					2.0		T		
6014	2-3	139	1.0			17.0	2.0						T		T
6014	3-1	145				T							T		

HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6014	4-3	60	5.0	3.0	2.0		4.0	4.0					1.0	59.0		18.0
6014	4-4	140												51.0		30.0
6014	6-2	85	T	4.0			T						1.0	78.0		15.0
6014	7-1	90	8.0	T	2.0		17.0	3.0					T	65.0		3.0
6014	7-2	85	12.0		3.0		21.0	4.0					T	50.0		3.0
6014	7-5	52	13.0	T	3.0	T	18.0	9.0					1.0	25.0		18.0
6014	8-1	67	19.0		5.0		21.0	11.0					T	30.0		8.0
6014	9-1	100												90.0		6.0
6014	10-1	120	10.0		4.0		13.0	11.0					2.0	48.0		8.0
6015	2-1	143	17.0	T	T		T	6.0					1.0	61.0		11.0
6015	3-1	138												35.0		10.0
6015	4-1	125	31.0	T	3.0		24.0	13.0					1.0	21.0		4.0
6015	4-2	42	22.0		10.0		36.0	9.0					1.0	14.0		6.0
6015	6-1	120	11.0	T	6.0		20.0	9.0					1.0	40.0		10.0
6016B	2-1	140	T	6.0			2.0						2.0	78.0		11.0
6016B	6-1	75	11.0		3.0		3.0	13.0					1.0	61.0		6.0
6017	1-1	120	27.0		6.0		6.0	13.0					T	30.0		16.0
6017	1-2	15	17.0	T	6.0		9.0	11.0					T	39.0		16.0
6017	1-2	75	12.0		3.0		12.0	13.0					T	42.0		17.0
6017	2-2	49	24.0	1.0	7.0		6.0	6.0					4.0	35.0		14.0
6017	2-3	60	16.0	3.0	6.0		12.0	11.0					2.0	32.0		16.0
6017	4-2	32	21.0	T	7.0		10.0	20.0					1.0	28.0		10.0
6017	4-3	40												30.0		7.0
6017	5-1	136	21.0	1.0	4.0		9.0	19.0					T	27.0		18.0
6017	6-1	110	21.0		4.0		12.0	18.0					T	28.0		12.0
6017	6-2	123	24.0	T	6.0		11.0	16.0					T	24.0		17.0
6017	7-1	45	23.0		2.0		9.0	17.0						33.0		14.0
6017	8-1	145	13.0	4.0	7.0		8.0	9.0					1.0	46.0		11.0
6017	9-1	134	9.0	3.0	7.0								3.0	49.0		14.0
6018	4-1	144												81.0		6.0
6018	6-2	25	2.0	1.0	T		1.0	T					T	83.0		10.0
6019	1-1	150	24.0		3.0		1.0	12.0					T	46.0		10.0
6019	1-2	40	28.0		2.0		5.0	11.0					T	35.0		12.0
6019	2-2	118	20.0		3.0		1.0	11.0					T	50.0		12.0
6019	2-3	122	21.0		6.0		1.0	14.0					T	41.0		13.0
6019	3-1	140	19.0		7.0		4.0	10.0					T	44.0		12.0
6019	3-2	23	27.0	T	7.0	T	4.0	11.0					T	36.0		12.0
6019	4-1	30	22.0		3.0		4.0	11.0					T	45.0		12.0
6019	5-1	81	14.0	T	7.0		7.0	11.0					T	44.0		15.0
6019	6CC													33.0		8.0
6019	7-1	104	9.0		1.0									3.0		
6019	8-1	30	3.0	T	1.0								5.0	4.0		
6019B	1-2	118	20.0		2.0		2.0	8.0					1.0	43.0		17.0
6020	1-1	85	29.0		4.0		4.0	8.0					T	31.0		16.0
6020	1-1	119	27.0		2.0		3.0	9.0					T	36.0		16.0
6020	2-1	80												64.0		18.0
6020	2-2	25	22.0		5.0		3.0	10.0					T	37.0		20.0
6020	3-2	118	29.0	T	3.0		4.0	8.0					T	21.0		29.0
6020	4-2	15	32.0		5.0		T	14.0						19.0		22.0
6020	4-2	40	26.0	T	7.0		6.0	14.0						21.0		21.0
6020	5-1	141												25.0		24.0
6020	6-1	72	18.0	T	5.0		9.0	5.0						49.0		6.0
6021	1-2	65	32.0		2.0		2.0	14.0						24.0		13.0
6021	1-3	10	28.0		3.0	2.0	3.0	15.0					T	23.0		15.0
6021	1-3	115	21.0	T	2.0		5.0	7.0					T	32.0		25.0
6021	2-3	125	26.0	T	2.0		2.0	9.0					T	31.0		21.0
6021	2-4	50	22.0		4.0		5.0	11.0					T	31.0		18.0
6021C	1-2	12	31.0		2.0		3.0	9.0						28.0		14.0
6021C	1-2	112	23.0	T	2.0		3.0	7.0					T	35.0		18.0
6021C	2-2	112	22.0		6.0		3.0	11.0					T	31.0		19.0
6021C	3-2	115	23.0		9.0		6.0	12.0						32.0		14.0
6021C	4-1	138	27.0		4.0		6.0	9.0					T	30.0		14.0
6021C	6-1	113	18.0		5.0		6.0	10.0					T	36.0		14.0
6021C	7-1	38	23.0	T	4.0		3.0	11.0					T	41.0		14.0
6021C	8-2	33	27.0		3.0		16.0	13.0					T	25.0		13.0

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6014	4-3	60	T			T			T			1.0	T		
6014	4-4	140	2.0			T			T				T		
6014	6-2	85	T			T			T				T		
6014	7-1	90	1.0						T			T	T		
6014	7-2	85	2.0	3.0		T							1.0		
6014	7-5	52	T			4.0			2.0			T	T		T
6014	8-1	67	1.0	2.0		T						T	1.0		
6014	9-1	100	1.0			2.0						T			
6014	10-1	120	2.0	T								T			
6015	2-1	143	1.0	T		1.0							T		T
6015	3-1	138	2.0			2.0							T		
6015	4-1	125	1.0			T							T		
6015	4-2	42	1.0	T									T		T
6015	6-1	120	T	T									T		
6016B	2-1	140									1.0		T		
6016B	6-1	75	2.0										T		
6017	1-1	120		T		T							T		
6017	1-2	15		T		T							T		T
6017	1-2	75	T	T		T				T			T		T
6017	2-2	49	1.0	T									T		T
6017	2-3	60	T			1.0							T		T
6017	4-2	32	T	T		T							T		T
6017	4-3	40	T			T							T		
6017	5-1	136	T	T		T				T			T		T
6017	6-1	110	T	1.0		1.0						1.0	T		
6017	6-2	123	T	T		1.0							T		
6017	7-1	45	T	T		1.0									
6017	8-1	145	1.0	T		3.0							T		
6017	9-1	134	T	T		5.0							T	T	T
6018	4-1	144				T					4.0		T		T
6018	6-2	25	T			T			T		T		T		T
6019	1-1	150	1.0			T							2.0		1.0
6019	1-2	40	T	T		3.0							T		T
6019	2-2	118	1.0			1.0							2.0		T
6019	2-3	122	1.0			T							2.0		T
6019	3-1	140	1.0			T							2.0		1.0
6019	3-2	23	T	T		T							T		
6019	4-1	30	T			1.0							1.0		T
6019	5-1	81	T			T							T		
6019	6CC		T			T							T		T
6019	7-1	104				86.0							T		T
6019	8-1	30				85.0							T		
6019B	1-2	118	1.0			3.0							2.0		T
6020	1-1	85	T	T		6.0							T		T
6020	1-1	119	T	T		5.0							T		T
6020	2-1	80				17.0							T		T
6020	2-2	25	T			T							T		1.0
6020	3-2	118	T			4.0							T		1.0
6020	4-2	15	T			6.0							T		1.0
6020	4-2	40	T			2.0							T		1.0
6020	5-1	141	T			2.0							T		1.0
6020	6-1	72	2.0	5.0								T		T	
6021	1-2	65	T			8.0			3.0				T		T
6021	1-3	10		T		7.0			3.0				T		T
6021	1-3	115		T		3.0			3.0				T		T
6021	2-3	125		T		4.0			3.0				T		T
6021	2-4	50		T		5.0			3.0				T		T
6021C	1-2	12	T	T		7.0			4.0				T		T
6021C	1-2	112	T	T		4.0			6.0			T	T		T
6021C	2-2	112	T	T		3.0			3.0			T	T		1.0
6021C	3-2	115	T	T		2.0			3.0				T		T
6021C	4-1	138	T	T		2.0			3.0				T		T
6021C	6-1	113	T	T		3.0			6.0				T		1.0
6021C	7-1	38	T	T		1.0			1.0				T		T
6021C	8-2	33	T	T		T			1.0			T	T		



HOLE	SEC	CM	I/M	SMC	I-S	C-S	KAO	CHL	PALY	SEPL	VER	NONS	GLAU	QTZ	CRIS	FELD
6021C	8-3	27	21.0		2.0		13.0	12.0					T	32.0		18.0
6021C	9-2	25	24.0	T	4.0		18.0	12.0					T	26.0		15.0
6021C	9-3	45	27.0		2.0		15.0	10.0					T	29.0		15.0
6021C	10-2	127	33.0	T	3.0		10.0	10.0					T	26.0		15.0
6021C	11-1	105											T	36.0		12.0
6021C	11-3	120	19.0		1.0		T	6.0					T	35.0		15.0
6021C	12-3	70	24.0		1.0		T	8.0					T	33.0		14.0
6021C	14-1	110	31.0		3.0		3.0	9.0					T	27.0		18.0
6021C	15-1	144												15.0		15.0
6021C	17-1	100	37.0	T	2.0		5.0	10.0					T	30.0		14.0
6021C	21-2	100	26.0		2.0		3.0	10.0					T	41.0		16.0
6021C	23-1	130												25.0		15.0
6021C	26-3	75	19.0		2.0		T	6.0					T	37.0		23.0
6021C	29-1	100	25.0		2.0		1.0	9.0					T	32.0		14.0
6021C	29-2	64												30.0		12.0
6021C	30-2	25	29.0		4.0		7.0	9.0					1.0	25.0		18.0
6021C	32-1	69	23.0		2.0		T	7.0					1.0	25.0		16.0

HOLE	SEC	CM	PYR	SID	HEM	CALC	MCAL	ARAG	D/A	APA	BAR	GYP	HAL	ZEO	AMP
6021C	8-3	27		T		T			T				T		T
6021C	9-2	25	T	T		T			T				T		T
6021C	9-3	45	T	T		T			1.0				T		T
6021C	10-2	127	T	T		T			1.0				T		T
6021C	11-1	105		T		7.0			8.0			T	T		T
6021C	11-3	120	T	T		8.0			12.0				T		1.0
6021C	12-3	70	T	T		10.0			8.0				T		T
6021C	14-1	110	T	T		T			7.0				T		T
6021C	15-1	144		T		T			T				T		T
6021C	17-1	100	T	T		1.0			T				T		
6021C	21-2	100		T		1.0			T				T		T
6021C	23-1	130	T			3.0			T				T		
6021C	26-3	75	T	T		6.0			4.0				T		T
6021C	29-1	100	T	T		4.0			5.0				T		T
6021C	29-2	64		T		4.0			2.0				T		T
6021C	30-2	25	T			4.0			2.0			T	T		T
6021C	32-1	69		T		13.0			10.0				T		T

## CHAPTER IV

### CHEMICAL ANALYSES (MAJOR ELEMENTS)

by Judith A. Commeau and Frank T. Manheim

Major elemental determinations were divided into two general groups: Concentrations of  $\text{SiO}_2$ ,  $\text{TiO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{Fe}_2\text{O}_3$  (total),  $\text{CaO}$ ,  $\text{MgO}$ ,  $\text{K}_2\text{O}$ ,  $\text{P}_2\text{O}_5$ , and  $\text{MnO}_2$  (total) were determined by X-ray fluorescence in Woods Hole, Mass.; preliminary fusion with lithium borate according to the method of Rose and others (1963). A Diano XRD 8000 unit was used to analyze pressed pulverized beads, along with synthetic and natural rock standards. Additionally, concentrations of  $\text{FeO}$ ,  $\text{H}_2\text{O}^+$ ,  $\text{H}_2\text{O}^-$ , total S, Cl, and F were determined by standard methods in the Reston, Va., analytical laboratories of the U.S. Geological Survey by N. Skinner, Z.A. Hamlin, and J. Reid under the leadership of F. Brown.  $\text{Na}_2\text{O}$  and  $\text{MgO}$  analyses were performed by E. Campbell and P. Aruscavage under the leadership of F. O. Simon. F. J. Flanagan served as liaison among the user and analytical groups. The X-ray fluorescence measurements for  $\text{Na}_2\text{O}$  and  $\text{MgO}$  were corrected by a constant factor, based in part on Reston's analyses of duplicate samples. For the many sediment samples containing sulfide sulfur, the ferrous iron ( $\text{FeO}$ ) results may be questionable. All values are in weight percents.

#### Explanation of Headings

UCM	Upper limit of sample interval (cm)
LCM	Lower limit of sample interval (cm)
$\text{SiO}_2$	Silicon oxide
$\text{TiO}_2$	Titanium oxide
$\text{Al}_2\text{O}_3$	Aluminum oxide
$\text{Fe}_2\text{O}_3\text{T}$	Iron oxide (total)
$\text{FeO}$	Iron oxide
$\text{CaO}$	Calcium oxide
$\text{MgO}$	Magnesium oxide
$\text{K}_2\text{O}$	Potassium oxide
$\text{Na}_2\text{OT}$	Sodium oxide (total)
CORG	Organic carbon

Explanation of Headings (cont.)

Cl	Chlorine
F	Fluorine
S	Sulfur (total)
P <sub>2</sub> O <sub>5</sub>	Phosphate
H <sub>2</sub> O <sup>-</sup>	Water of adsorption
H <sub>2</sub> O <sup>+</sup>	Water of crystallization
IGL	Ignition Loss
MnO <sub>2</sub>	Manganese oxide

HOLE	CORE	SEC	UCM	LCM	SIO2	TI02	AL203	FE203T	FE0	CAO	MGO	K2O
6002	1	1	4.	8.	78.37	.32	2.15	.77		4.15	.25	.37
6002	1	1	0.	20.	84.23	.19	1.56	.48	.20	4.12	.27	.37
6002	2	1	6.	9.	67.71	.59	8.65	2.88	.45	5.45	.79	
6002	3	1	10.	40.	64.41	.00	1.20	.52	.20	18.40	.73	.28
6002	4	1	48.	50.	48.39	.23	7.65	2.91	1.70	7.37	6.20	1.29
6002	4	6	125.	150.	42.50	.28	6.65	2.78		9.63		1.12
6002	5	1	0.	20.	51.79	.55	8.59	3.39	1.30	6.37	5.70	1.34
6002	6	1	10.	13.	58.16	.52	10.72	3.62		7.20		1.23
6002	6	1	30.	32.	28.42	.34	5.89			28.23	3.90	.93
6002	7	2	50.	70.	13.83	.34	2.48	.62	.40	36.55	2.10	.30
6002	8	1	20.	40.	39.51	.39	7.39	2.79		9.70		1.11
6002	9	2	80.	81.	25.75	.09	3.31	.92	.60	22.72	9.00	.65
6002	9	6	125.	150.	31.94	.15	4.97	1.23		23.35		.91
6002	10	2	20.	40.	35.78	.38	6.21	1.54	.50	22.57	4.50	1.04
6002	11	1	0.	5.	37.98	.10	5.03	1.30	.50	22.58	3.40	.85
6002	12	2	40.	60.	18.29	.28	5.62	1.61	.50	35.60	1.40	.64
6002	13	1	45.	49.	20.95	.26	6.81	2.09	.40	34.42	1.60	.84
6002	15	1	8.	12.	16.24	.11	4.80	1.34	.60	38.09	1.20	.63
6002	16	2	32.	53.	16.36	.08	3.06	.97	.70	40.54	.84	.55
6002	16	2	83.		14.80	.09	2.31	.83	.30	43.15	.65	.36
6002	16	3	44.	98.	6.05	.03	2.34	.35	.20	47.60		.23
6002	17	3	120.	122.	7.49	.01	1.99	.75	.27	41.80	1.41	.46
6002	17	3	130.	150.	9.50	.20	2.71	1.02	.20	41.75	1.50	.56
6002	19	1	15.	18.	10.61	.22	2.51	.52	1.40	44.33	1.30	.42
6002	20	3	40.	45.	19.35	.39	3.57	.85	1.30	37.04	1.20	.81
6002	22	1	40.	60.	5.23	.00	1.51	.45	.40	46.01	1.10	.17
6002	22	1	80.		2.85	.00	.44	.24		45.43		.10
6002	23	2	11.	32.	7.59	.18	1.60	.47	.30	46.20	1.30	.18
6002	24	1	50.	55.					.30		1.10	
6002	24	1	110.	112.	6.39	.03	1.86	.54	.18	47.20	1.16	.17
6002	27	CC			9.62	.15	1.54	.56	.30	44.98	.98	.42
6002	33	1	7.	27.	18.61	.00	1.71	1.65	.20	37.66	1.30	.49
6002	33	1	80.	95.	32.81	.11	6.05	.67	.80	25.67	3.40	1.23
6002	6	1	10.	13.	58.16	.52	10.72	3.62		7.20		1.23
6004	1	1	120.	140.	25.07	.11	3.70	2.17	1.10	31.87	1.70	.73
6004	1	2	115.	140.	20.60	.06	2.07	1.65		33.10		.57
6004	3	1	95.	111.	22.75	.23	2.37	1.52		34.58		.59
6004	5	1	85.	97.	20.25	.18	2.04	.92		36.11		.56
6004	5	2	125.	150.	14.49	.05	2.27	.99		35.87		.52
6004	6	1	50.	73.	12.83	.21	2.73	.73	.40	40.71	.99	.37
6004	7	1	100.	150.	20.50	.32	3.05	1.19		33.11		.57
6004	7	4	30.	50.	28.27	.18	4.41	1.22	1.10	31.27	1.40	.84
6004	9	1	53.	63.	30.27	.20	3.91	1.34		29.80		.87
6004	9	1	100.	150.	18.87	.08	2.38	1.02		34.16		.62
6004	10	3	71.	90.	14.53	.09	3.87	1.16	1.30	37.95	.91	.51
6004	11	4	75.	150.	19.63	.04	2.14	1.16		33.89		.67
6004	12	1	40.	55.	26.72	.19	2.65	1.65		30.90		.85
6004	13	2	20.	30.	8.03	.04	2.38	.64		40.58		.25
6004	14	2	50.	67.	4.65	.00	1.80	.61		44.65		.15
6004	14	6	0.	10.	12.59	.00	2.43	1.10		36.20		.45
6004	14	6	33.	60.	12.86	.19	3.10	.83	.40	38.16	2.00	.41
6004B	2	1	30.	50.	7.49	.12	2.14	.53	.30	43.27	1.10	.21
6004B	2	1	69.	71.	4.73	.00	.74	.50	.10	42.94	.97	
6004B	2	6	0.	12.	5.53	.00	1.68	.41		43.62	.16	
6004B	4	1	110.		22.32	.11	3.84	1.84	.56	25.64	5.42	.60
6004B	5	1	112.	121.	23.51	.28	4.00	1.10	.90	23.30	9.40	.49
6004B	5	1	130.	134.	21.07	.35	3.62	.76		29.68		.43
6004B	6	2	30.	50.	46.28	.14	4.79	2.13	.90	18.57	1.20	1.08
6004B	7	1	80.		52.36	.48	6.48	2.39	.42	17.13	1.62	1.34
6004B	7	6	0.	10.	49.72	.19	5.61	1.83		18.53		1.10
6004B	11	1	45.	63.	45.79	.13	5.25	2.15	1.10	17.77	1.30	1.15
6004B	12	2	70.		34.01	.24	2.57	2.03		27.31		.76
6004B	14	2	97.	98.	40.14	.40	5.96	2.14		15.97		1.12
6004B	15	1	45.	74.	44.77	.11	5.33	1.97	1.20	18.81	1.20	1.21
6004B	19	1	40.	52.	37.26	.26	7.09	1.93		23.51		1.64

HOLE	CORE	SEC	NA2OT	CORG	CL	F	S	P205	H2O-	H2O+	IGL	MNO2
6002	1	1		.16				.13			5.29	.008
6002	1	1	.30		.20	.024	.02	.18	.10	1.20	5.85	.009
6002	2	1	1.60		1.31	.120	.80	.99	1.60	3.80	8.42	.040
6002	3	1	.55			.170	.25	1.85	.36	1.40	14.54	.008
6002	4	1	3.30		2.82	.350	1.50	2.34	8.60	10.9	24.33	.020
6002	4	6		5.50				1.50			26.39	.030
6002	5	1	3.00				1.10	.81	6.20	8.40	24.22	.030
6002	6	1						1.57				.030
6002	6	1	1.70					7.04	3.80	5.10	24.32	.013
6002	7	2	2.00		1.23	1.400	1.40	23.35	1.90	5.00	14.78	.000
6002	8	1						.99			28.17	.014
6002	9	2	1.40		.56	.210	.48	1.05	2.10	3.50	32.13	.004
6002	9	6		1.37				3.37				.013
6002	10	2	2.40		1.38	.330	.88	2.15	3.10	4.10	25.01	.010
6002	11	1	2.40		1.80	.490	.94	5.06	2.60	4.10	20.86	.010
6002	12	1	1.50		1.11	.800	.65	.28	1.80	3.10	34.84	.050
6002	13	1	1.20		1.78	.084	.94	.25	1.70	4.30	32.79	.002
6002	15	1	1.10		.75	.730	.57	.31	1.70	2.80	35.21	.000
6002	16	2	.68		.54	.084	.44	.60	.92	2.10	35.63	.000
6002	16	2	.30		.11	.077	.28	.68	.50	1.40	36.57	.000
6002	16	3			.27	.043	.18	.26	.52	1.40	41.44	.000
6002	17	3	.85	.66	.71	.100		.59	.95	1.59	37.73	.020
6002	17	3	.66		.38	.220	.44	1.83	1.10	1.90		.030
6002	19	1	.68		.59	.033	.29	.19	.52	1.40		.000
6002	20	3	.87		.35	.050	.22	.15	.98	3.00	34.83	.003
6002	22	1	.43		.55	.050	.15	.15	.38	1.00	41.66	.000
6002	22	1		.18				.14	.11		42.25	.000
6002	23	2	.74		1.34	.024	.14	.16	.42	1.10	41.53	.000
6002	24	1	.49		.85	.210	.17	.17	.38	1.00	42.21	.000
6002	24	1	.66	.52	.84	.040		.25	.44	1.18		.001
6002	27	CC	.71		.66	.018	.28	.14	.44	1.40	39.98	.000
6002	33	1	.82	.34	.69	.056	.22	.11	.84	2.00	35.44	.000
6002	33	1	1.80		.68	.400	.18	.09	3.36	4.30	27.16	.000
6002	6	1						1.57				.030
6004	1	1	1.40		1.03	.048	.31	.19	1.20	2.60	31.90	.006
6004	1	2		.25				.18			33.31	.000
6004	3	1						.16			33.20	.002
6004	5	1						.16			35.51	.000
6004	5	2		.36				.15			36.59	.000
6004	6	1	1.10		.88	.043	.26	.18	.64	2.00	38.58	.000
6004	7	1		.46				.19			33.97	.001
6004	7	4	1.80		.93	.051	.33	.17	.90	2.00	29.87	.002
6004	9	1						.17			29.05	.007
6004	9	1		.45				.18			33.53	.002
6004	10	3	1.10		.96	.056	.42	.29	1.20	2.50	37.03	.001
6004	11	4		.70				1.66			32.92	.000
6004	12	1						2.53				.005
6004	13	2						.92			45.84	.001
6004	14	2						.35			43.91	.000
6004	14	6						.61				.008
6004	14	6	1.60		1.76	.140	.40	.66	2.20	2.20	38.68	.003
6004B	2	1	1.10		1.42	.140	.31	.78	1.40	1.90	40.83	.001
6004B	2	1	1.24	.35	1.54	.180		1.27	.90	1.68		.001
6004B	2	6					.57			42.0	46.00	.004
6004B	4	1	1.53	.98	1.42	.460		4.25	4.61	4.55		.001
6004B	5	1	1.40		1.25	.360	.76	1.97	3.40	4.10	33.72	.003
6004B	5	1						2.60			33.03	.004
6004B	6	2	1.40		1.11	.048	.57	.14	2.30	3.10	20.97	.010
6004B	7	1	1.22	.37	.78	.060		.10	2.94	1.03	30.94	.020
6004B	7	6						.12			21.72	.008
6004B	11	1	1.80		.63	.670	.31	.13	2.80	3.10	21.09	.010
6004B	12	2		.70				.33			28.95	.010
6004B	14	2		.25				.07			21.37	.008
6004B	15	1	1.20		.61	.048	.27	.15	2.70	2.70	22.71	.008
6004B	19	1						.17			25.70	.010

HOLE	CORE	SEC	UCM	LCM	SIO2	TIO2	AL2O3	FE2O3T	FEO	CAO	MGO	K2O
6004B	19	6	80.		32.60	.36	6.07	5.63	.77	22.40	.97	1.82
6004B	20	1	86.	114.	20.64	.30	4.10	4.53	1.70	30.59	.97	1.60
6005	2	1	50.	70.	84.71	.49	4.52	.73	.30	.68	.17	1.34
6005	4	2	80.	85.	82.92	.47	4.30	.63	.30	2.39	.19	1.01
6005	5	1	145.		64.39	.55	6.97	3.18	.68	9.77	.76	1.64
6005B	2	2	10.	30.	76.75	.35	4.78	.65	.60	4.74	.36	1.09
6005B	2	2	20.	40.	86.74	.09	3.10	.47	1.20	1.42	.16	1.25
6005B	2	2	140.		24.78	.01	2.98	.88		37.73		.53
6006	6	6	20.	40.	69.30	.00	3.12	.87	.70	13.88	.76	.64
6006	6	6	56.	58.	57.94	.06	5.66	1.98	2.00	21.69	1.20	1.29
6006	6	6	65.		62.48	.31	10.78	3.14		7.63		2.13
6007	1	1	1.		79.30	.40	5.73	1.72	2.90	1.81	1.64	1.50
6007	2	2	115.	119.	78.41	.46	6.50	1.66	2.00	1.88	.72	1.57
6007	2	2	124.	126.	74.22	.52	6.57	1.72		2.04		1.56
6007	5	1	30.	45.	63.71	.55	11.13	5.68	3.20	1.31	1.60	2.46
6007	5	2	90.	140.	75.38	.64	12.54	5.31		1.18		2.56
6007	9	1	100.	150.	75.27	.74	10.53	5.84		.94		2.25
6007	10	1	115.	142.	76.89	.50	4.86	2.87	1.20	1.76	.83	1.43
6007B	1	1	117.	122.	70.69	.59	10.74	4.46	2.60	1.08	1.40	2.24
6007B	1	1	129.	131.	66.68	1.06	10.06	4.17		.44		2.05
6007B	2	2	120.	140.	62.01	.63	8.82	3.50	2.70	7.76	1.20	1.75
6007B	4	2	55.	58.	74.05	.73	9.93	4.16	2.00	.49	1.10	2.23
6007B	5	1	129.	131.	60.13	.89	10.96	4.64		.34		2.05
6007B	7	1	2.	2.	88.23	.31	1.83	1.91	1.60	.75	.24	.52
6007B	8	1	140.		81.79	.38	4.06	3.30	2.30	.63	.56	1.40
6007B	10	1	133.		67.02	.76	6.67	4.02		.46		1.27
6007B	10	5	140.	150.	69.89	1.11	8.66	3.53		.32		1.71
6007B	10	6	40.	60.	76.11	.72	8.50	3.06	1.80	.34	.79	
6007B	11	2	10.	30.	59.47	.57	7.84	13.23	7.50	.31	1.90	3.40
6007B	13	CC			68.74	.56	10.71	4.08	2.00	.82	1.40	1.72
6007B	15	1	25.		67.57	.91	11.80	4.25		.39		2.11
6008	1	2	45.	65.	66.38	.43	10.08	4.20	3.80	1.47	1.80	2.15
6008	1	2	98.	148.	67.80	.63	6.71	3.18		1.15		1.57
6008	3	1	136.	137.	62.23	1.17	10.38	4.53		.37		2.19
6008	5	1	80.	100.	86.32	.55	2.94	.61	.80	.67	.11	.72
6008	5	1	100.	150.	85.54	.44	1.66	.63		.58		.47
6008	10	CC			54.53	.24	3.73	2.01	.90	17.17	.37	.58
6008	12	2	0.	50.	86.81	.69	2.65	1.07		.41		.75
6009	1	1	132.	137.	55.52	.41	7.62	2.90	3.30	13.39	1.70	1.93
6009	3	3	40.	60.	58.97	.54	12.93	5.70	6.30	23.83	2.70	2.86
6009	6	1	7.		70.37	.28	6.09	3.16	2.40	5.02	2.50	1.37
6009	9	1	80.	110.	74.90	.00	2.07	.57	.00	10.60	.10	.15
6009B	1	1	64.	94.	54.77	.76	11.55	5.83		4.47		3.00
6009B	1	1	108.	116.	63.95	.42	10.63	4.82		4.45		2.77
6009B	4	1	90.	140.	46.40	.62	12.05	6.23		5.66		2.95
6009B	8	3	90.	140.	49.25	.94	16.83	8.46		.76		2.50
6009B	10	2	80.	130.	45.09	.82	13.14	13.64		.97		2.45
6009B	11	1	140.	150.	62.21	.63	14.91	6.47	6.70	.52	1.50	2.65
6009B	12	1	70.	90.	59.04	.81	14.92	6.37	4.90	.59	1.60	2.44
6009B	14	1	118.	140.	74.61	.81	9.80	3.87	2.20	.57	.94	1.65
6009B	14	4	96.	98.	53.99	1.15	16.00	8.05		.79		2.18
6009B	16	1	120.		88.50	.43	1.52	1.35		.12		.32
6009B	19	1	90.	92.	89.07	.89	2.22	.55		.12		.36
6009B	21	3	10.	15.	75.27	.65	11.48	4.18	2.20	.34	1.20	2.04
6009B	23	1	110.		85.35	.52	3.00	.91		.18		.50
6009B	23	2	40.	100.	92.51	.47	2.51	.48	.30	.16	.10	.33
6009B	27	1	40.		63.92	.98	10.03	8.82		.40		1.53
6009B	27	1	50.	70.	72.83	.66	10.50	6.22	10.3	.31	.73	1.65
6009B	27	2	20.	25.	83.82	1.00	15.96	3.30	1.30	.17	.62	1.74
6009B	31	1	100.		86.91	.41	1.57	.76		1.54		.37
6009B	31	1	110.	112.	87.70	.18	1.73	.56	.50	2.38	.10	.39
6009B	31	2	40.	70.	87.14	.10	1.17	.43	.30	3.05	.10	.28
6010	2	2	94.	144.	42.19	.62	11.26	5.46		9.47		3.31
6010	3	2	10.	30.	41.80	.43	11.08	5.23	6.60	9.43	5.00	3.36
6010	7	4	100.	150.	51.41	.44	12.61	4.81		8.22		2.65

HOLE	CORE	SEC	KA20T	CORG	CL	F	S	P205	H20-	H20+	IGL	MN02
6004B	19	6	1.00	.57	.60	.110		.63	1.69	2.28		.010
6004B	20	1	.96		.70	.290	1.20	2.66	1.30	2.50	25.88	.006
6005	2	1	.71		.47	.010	.11	.04	.18	.84	.86	.020
6005	4	2	.58		.44	.010	.15	.08	.22	.82	2.36	.020
6005	5	1	1.17	.95	.61	.080		.42	2.68	2.66	13.95	.015
6005B	2	2	1.30		.56	.010	.02	.06	.24	.73	4.48	.010
6005B	2	2	.66		.54	.004	.08	.04	.26	1.20	1.72	.010
6005B	2	2						.26			32.57	.020
6006	6	6	.87		.46	.022	.21	.14	.34	.94	12.09	.020
6006	6	6	2.00		.62	.029	.50	.14	.98	2.00	20.88	.020
6006	6	6		.24				.12				.050
6007	1	1	1.80		.48	.014	.01	.06	.36	.63	2.12	.030
6007	2	2	2.00		.48	.018	.12	.09	.28	1.10	2.26	.030
6007	2	2		.08				.07				.030
6007	5	1	2.00		.66	.039	2.20	.09	1.50	4.10		.040
6007	5	2		.59				.10			6.34	.040
6007	9	1		.46				.08				.040
6007	10	1	.95		.43	.017	.88	.14	.94	1.20	4.19	.020
6007B	1	1	1.30		.73	.033	1.30	.15	1.90	3.50	6.67	.030
6007B	1	1		.41				.06				.030
6007B	2	2	1.80		1.55	.029	.96	.16	1.60	2.90	10.85	.020
6007B	4	2	1.40		.62	.026	1.20	.13	2.00	3.30	6.61	.030
6007B	5	1		.65				.09				.030
6007B	7	1	.48		.39	.004	.09	.20	.36	.64	1.48	.020
6007B	8	1	.87		.46	.012	.19	.13	.58	1.20	2.30	.020
6007B	10	1						.05			8.67	.020
6007B	10	5						.05			5.31	.030
6007B	10	6	1.10		.44	.023	.60	.11	.74	2.90	4.37	.020
6007B	11	2	1.10		.38	.025	.64	.12	2.20	4.10	8.00	.030
6007B	13	CC	1.20		.69	.025	.92	.08	1.90	3.90	7.62	.030
6007B	15	1						.09			7.88	.030
6008	1	2	2.10		.54	.036	.40	.11	.92	.88	4.91	.050
6008	1	2		.30				.06			4.16	.040
6008	3	1		.48				.04				.030
6008	5	1	.40		.36	.002	.12	.05	.08	.96	1.06	.010
6008	5	1		.08				.00			.85	.020
6008	10	CC	3.00		.25	.009	.64	.16	.66	1.80	15.14	.010
6008	12	2		.09				.00			.89	.020
6009	1	1	1.60		.32	.029	.26	.14	.58	2.30	13.99	.040
6009	3	3	2.80		.48	.022	1.00	.17	1.10	3.20	6.16	.070
6009	6	1	.87		.34	.041	.50	.28	.60	2.20	7.51	.050
6009	9	1	2.30		.30	.013	.36	.20	.18	.90	8.33	.005
6009B	1	1		.59				.12			9.35	.090
6009B	1	1						.15			787.0	.070
6009B	4	1		.51				.15				.090
6009B	8	3		.46				.13			10.86	.070
6009B	10	2		.73				.19				.110
6009B	11	1	.91		.20	.039	.82	.14	1.10	5.70	8.59	.050
6009B	12	1	.97		.34	.039	1.20	.17	1.60	6.50	10.17	.040
6009B	14	1	.86		.34	.038	1.00	.15	1.00	4.10	6.34	.030
6009B	14	4		.63				.22				.040
6009B	16	1		.07				.05				.010
6009B	19	1		.04				.03			.68	.010
6009B	21	3	.84		.19	.043	1.60	.06	2.00	4.10	7.84	.030
6009B	23	1		.05				.02				.020
6009B	23	2	.25		.44	.002	.16	.02	.14	.70	1.08	.010
6009B	27	1		.07				.02				.070
6009B	27	1	.62		.28	.028	.04	.03	.84	4.10	6.54	.050
6009B	27	2	.67		.32	.034	.10	.12	1.40	4.40	5.76	.020
6009B	31	1		.02				.01			1.97	.010
6009B	31	1	.35			.001	.15	.02	.18	.56		.010
6009B	31	2	.35		.50	.002	.11	.02	.18	.52	2.67	.010
6010	2	2		.44				.17				.070
6010	3	2	2.30		.75	.072	.14	.20	1.40	3.30	14.95	.070
6010	7	4		.26				.16			11.06	.070



HOLE	CORE	SEC	UCM	LCM	SI02	TI02	AL203	FE203T	FE0	CAO	MGO	K2O
6010	9	2	60.	110.	59.74	.52	11.63	5.08		5.11		2.48
6010	11	1	4.		82.59	.66	5.20	2.27	2.20	1.24	.62	1.17
6010	13	2	110.	113.	38.95	.55	11.10	5.90		.70		2.02
6010	16	2	90.		42.52	.74	15.72	6.49		.39		2.53
6010	20	5	35.	65.	62.23	.74	13.69	6.17	7.70	.84	1.60	2.88
6010	21	2	100.		58.36	.67	15.31	5.92		1.64		2.63
6010	22	6	100.	120.	63.79	.67	9.05	9.98	7.60	.93	1.70	3.18
6010	25	1	100.		58.05	.84	18.16	4.39		.29		2.61
6010	26	2	10.	30.	53.74	.80	16.28	7.92	9.00	.45		2.65
6010	26	2	52.	70.	58.73	.96	17.09	6.15	8.00	.38	1.50	2.64
6010	27	1	77.	82.	60.34	.91	13.85	6.52	6.40	.47	1.50	2.44
6010	27	1	115.	120.	65.74	.68	12.54	5.63	3.80	.54	1.40	2.13
6010	27	1	130.		61.40	.71	12.27	5.71		.61		2.03
6011	1	1	86.	100.	53.36	.62	14.72	8.21	9.00	1.60	2.80	3.25
6011	1	1	100.	148.	52.80	.72	16.07	8.51		1.49		3.28
6011	2	1	1.	1.	98.71	.02	1.29	.46	.10	.13	.05	.18
6011	7	1	123.	124.	64.76	1.14	15.38	2.86		.25		1.99
6011	8	4	40.	55.	58.21	.64	14.16	6.44	2.50	.43	1.10	1.91
6011	11	2	50.	100.	61.48	.90	12.70	4.24		.48		1.47
6011	13	1	130.		58.73	.90	11.78	4.21		.88		1.63
6011	14	2	25.	50.	67.87	.80	9.90	3.70	1.50	.72	.98	1.56
6011	15	2	42.	46.	61.55	.71	10.42	4.58	1.60	.99	.92	1.52
6011	16	1	90.	95.	88.30	.90	3.34	.97	.90	.23	.10	.68
6011	16	2	90.	140.	70.59	.93	6.61	2.94		.87		1.28
6011	17	2	140.		93.25	.64	2.11	.92	.80	.29	.06	.32
6011	20	1	110.	134.	87.50	.93	3.07	1.23	.90	1.10	.11	.49
6011	20	1	140.		57.57	.88	19.05	5.84		.77		.44
6011	22	1	140.		70.17	1.26	6.08	2.22		2.20		1.27
6011	23	1	144.	148.	73.39	.47	3.59	8.60	2.70	1.54	.96	2.23
6011	26	2	70.		85.46	.18	1.12	3.52		1.64		.90
6011	28	4	45.	70.	58.27	.63	9.24	6.67	2.60	4.14	1.30	2.25
6011	28	6	68.	70.	63.69	.85	13.52	6.20		2.98		2.09
6012	1	5	70.	120.	55.01	.66	16.60	6.63		1.01		3.38
6012	3	4	10.	30.	55.19	.72	16.33	6.32	7.00	.99	2.10	3.32
6012	3	4	80.	130.	51.76	.96	14.91	6.28	2.84	.92	2.25	3.03
6012	8	2	80.	130.	48.26	.67	15.59	7.34		.84		2.96
6012	12	6	25.	50.	58.30	.69	13.64	6.26	5.50	.85	1.30	2.85
6012	18	4	124.		51.47	.49	12.65	6.16		2.15		3.03
6012	33	4	76.	80.	63.03	.46	11.94	5.31	4.10	1.60	1.60	2.72
6012	33	4	96.	99.	43.65	.22	4.18	.11		3.85		3.02
6012	33	4	100.	120.	58.86	.33	7.83	9.73	4.40	4.23	2.30	3.69
6013	4	1	120.	150.	70.43	.71	16.12	5.58	2.82	.78	1.85	2.70
6013	4	1	96.	113.	67.18	.48	10.05	3.59	4.30	.87	1.40	2.28
6013	7	3	50.	100.	55.62	.82	16.90	6.38	4.04	.58	1.91	2.73
6013	11	4	90.	140.	85.30	.32	1.86	.95		1.08		.56
6013B	13	1	115.	140.	71.89	.35	7.77	3.33	2.70	.95	.98	2.04
6013B	15	1	110.		74.36	.50	6.92	3.03		2.16		1.76
6013B	16	3	95.	120.	63.35	.47	8.96	4.21	4.70	2.52	1.30	2.07
6013B	18	2	20.	22.	68.78	.44	7.66	2.89		2.80		1.81
6013B	26	1	145.	146.	68.54	.52	7.26	3.09	1.09	2.90	.79	1.82
6013B	28	2	30.	50.	73.07	.33	5.54	2.42	2.10	2.58	.71	1.80
6013B	31	1	140.		81.03	.30	4.18	7.96		1.20		1.20
6014	2	2	65.	90.	86.04	.12	1.73	.65	1.10	2.46	.11	.24
6014	2	3	116.		49.16	.72	15.24	6.44		1.36		2.97
6014	6	2	60.	110.	86.27	.41	2.54	.78		.52		.85
6014	7	2	48.	98.	67.48	.60	8.03	4.01	1.64	.59	.93	1.69
6014	7	2	125.	130.	68.48	.74	8.37	3.70	3.50	.47	.94	1.71
6014	7	5	40.	65.	68.78	.64	8.34	3.16	2.50	.77	.83	1.88
6014	10	1	120.		67.47	.69	10.63	4.23		.51		2.08
6015	2	1	143.		79.90	.42	5.58	2.68		1.99		1.28
6015	6	1	95.	145.	69.58	.55	10.57	3.98	1.51	1.09	1.34	2.24
6016B	2	1	85.	150.	89.32	.56	3.07	1.15	1.20	.48	.19	.79
6016B	6	1	50.	100.	71.97	.67	10.07	4.25		.54		12.0
6017	1	2	50.	100.	71.34	.49	11.22	3.91	1.75	1.02	1.16	2.26
6017	5	1	95.	115.	55.68	.56	15.26	6.28	6.90	1.59	1.90	2.90

HOLE	CORE	SEC	NAZOT	CORG	CL	F	S	P205	H20-	H20+	IGL	MNO2
6010	9	2		.27				.14				.070
6010	11	1	1.20		.30	.013	.11	.09	.30	.96	1.88	.040
6010	13	2		.30				.09				.060
6010	16	2		.33				.11			10.19	.050
6010	20	5	1.70		.37	.059	.39	.14	1.40	3.20	7.34	.050
6010	21	2		.44				.20			8.79	.050
6010	22	6	.86		.21	.045	.44	.15	1.30	3.70	6.95	.040
6010	25	1		.78				.06				.050
6010	26	2			.25	.059	1.60	.09	1.20	6.40	11.42	.040
6010	26	2	1.10		.28	.059	.80	.08	2.00	5.30	10.01	.040
6010	27	1	1.10		.54	.055	.72	.10	2.40	5.20	9.60	.040
6010	27	1	1.10		.48	.046	1.40	.06	2.40	4.80	9.18	.030
6010	27	1		.80				.06			9.43	.030
6011	1	1	3.00		.81	.100	.84	.17	3.20	4.70	8.34	.090
6011	1	1						.19			1.79	.080
6011	2	1	.16		.12	.003	.16	.01	.08	.68	.10	.010
6011	7	1						.04			10.87	.030
6011	8	4	.66		.16	.056	3.20	.19	2.50	6.00	13.64	.030
6011	11	2						.06				.020
6011	13	1						.12			15.74	.030
6011	14	2	.64		.13	.041		.10	2.40	5.20		.020
6011	15	2	.55		.16	.050	3.10	.11	3.00	6.40	14.09	.020
6011	16	1	.53		.36	.002	.26	.15	.18	.84		.030
6011	16	2						.25			7.05	.030
6011	17	2	.25			.001	.26	.07	.12	.70	.88	.020
6011	20	1	.29		.22	.005	.20	.04	.12	.94		.030
6011	20	1						.05			1.49	.040
6011	22	1						.07			5.58	.030
6011	23	1	.39		.24	.038	1.10	.30	1.20	2.20	4.59	.030
6011	26	2		.05				.08			2.67	.010
6011	28	4	.76		.16	.051	2.50	.19	2.30	4.40	10.52	.020
6011	28	6		1.82				.14				.030
6012	1	5		.37				.14				.080
6012	3	4	2.30		.66	.067	.25	.13	1.20	4.60	15.57	.090
6012	3	4	2.20	.50	.82	.080		.13	1.48	3.91		.080
6012	8	2		.80				.14			9.98	.060
6012	12	6	1.80		.63	.054	.64	.14	1.40	5.10	7.50	.060
6012	18	4		.43				.09			8.65	.070
6012	33	4	1.40		.51	.044	.24	.07	1.50	4.00	9.23	.050
6012	33	4		.25				.07			9.10	.020
6012	33	4	1.30		.38	.067	.39	.22	1.90	4.10	8.54	.040
6013	4	1	1.22	.29	.56	.050		.10	1.24	4.11		.070
6013	4	1	1.20		.49	.036	.54	.16	1.10	3.50	5.48	.040
6013	7	3	1.24	.41	.59	.060		.11	1.59	6.19		.050
6013	11	4		.08				.04			7.76	.030
6013B	13	1	1.20		.66	.020	.45	.08	.94	2.50	5.16	.030
6013B	15	1						.05				.030
6013B	16	3	1.50		.89	.022	.84	.08	1.50	3.50	8.20	.030
6013B	18	2		.61				.06				.020
6013B	26	1	1.34	.70	.67	.030		.08	.75	2.38		.020
6013B	28	2	1.10		.65	.018	.62	.06	.82	2.30	5.40	.020
6013B	31	1		.27				.03				.030
6014	2	2	.25		.31	.021	.13	.05	.18	.72	2.62	.010
6014	2	3		.39				.08			8.50	.070
6014	6	2		.06				.02			1.07	.010
6014	7	2	.85	.30	.52	.030		.06	.90	2.52		.030
6014	7	2	.84		.58	.001	.84	.11	1.20	3.10	5.94	.030
6014	7	5	.89		.56	.019	.84	.13	.84	3.20	5.76	.020
6014	10	1		.53				.06				.030
6015	2	1		.16				.04				.030
6015	6	1	1.31	.45	.36	.040		.07	.80	2.53		.050
6016B	2	1	.42		.26	.004	.10	.03	.20	.84	1.24	.030
6016B	6	1		.90				.08				.030
6017	1	2	1.52	.36	.64	.040		.08	.64	2.85	4.73	.070
6017	5	1	1.70		.38	.040	.28	.13	1.50	4.50		.090

HOLE	CORE	SEC	UCM	LCM	SI02	TI02	AL203	FE203T	FEO	CAO	MGO	K2O
6017	5	1	122.	150.	61.99	.69	17.19	6.77	2.80	1.72	1.86	3.14
6017	6	1	100.	120.	57.49	.59	11.78	6.16	5.90	1.80	1.50	2.43
6017	9	1	123.	146.	68.51	.41	8.92	5.61		2.23		2.18
6018	6	2	50.	70.	86.51	.14	1.55	.44	.40	.48	.08	.42
6019	1	CC			64.91	.60	9.88	4.90		1.20		2.34
6019	1	2	10.	30.	62.48	.61	7.71	4.11	3.70	1.35	13.0	2.07
6019	1	2	30.	50.	61.53	.74	8.06	4.00	4.30	1.93	1.30	2.05
6019	2	3	100.	145.	61.93	.67	13.04	5.91		1.16		2.86
6019	5	1	81.		68.98	.70	11.33	4.69		.98		2.26
6019B	1	2	100.	137.	62.00	.66	7.73	4.27	2.19	1.83	1.27	2.08
6020	1	1	70.	100.	56.10	.62	13.93	6.08	3.08	3.99	2.74	3.14
6020	1	1	110.	126.	60.28	1.03	12.97	5.38		4.04		2.96
6020	1	3	75.	90.	63.54	.71	13.31	5.31		2.78		3.04
6020	3	3	100.	137.	52.40	.65	15.90	6.97	3.24	3.49	3.00	3.44
6020	6	1	55.	90.	47.30	.65	12.58	4.08	2.13	.78	1.26	2.22
6021	1	3	0.	20.	47.27	.66	12.71	5.96		4.49		3.59
6021	2	3	100.	150.	56.76	.72	12.72	5.46		2.72		3.01
6021C	8	3	4.	50.	53.90	.92	15.20	5.37		1.48		2.98
6021C	9	3	35.	55.	58.92	1.11	15.91	5.87	6.30	2.16	2.20	3.18
6021C	10	2	115.	140.	52.97	1.03	15.09	6.15		1.70		3.22
6021C	14	1	110.	56.	.97	13.2		5.66		1.59		3.11
6021C	21	2	100.		52.90	.63	13.34	6.15		2.02		3.12
6021C	26	3	75.		56.21	.88	11.25	4.97		3.50		2.77
6021C	32	1	69.		49.87	.57	11.75	5.53		5.39		3.16

HOLE	CORE	SEC	NA2OT	CORG	CL	F	S	P2O5	H2O-	H2O+	IGL	MNO2
6017	5	1	1.66	.50	.42	.060		.15	1.35	4.36	7.33	.090
6017	6	1	1.60		.48	.025	.30	.14	1.50	3.50	6.90	.080
6017	9	1		.46				.20			7.33	.060
6018	6	2	.40		.34	.003	.09	.02	.24	.42	1.13	.020
6019	1	CC		2.07				.14				.060
6019	1	2	2.30		1.58	.025	.92	.13	2.30	3.80	10.72	.040
6019	1	2	2.30		1.66	.034	.96	.12	2.20	4.00	11.49	.040
6019	2	3		1.13				.12				.060
6019	5	1		.58				.12				.050
6019B	1	2	2.24		1.37	.040		.11	1.92	4.36		.050
6020	1	1	2.04	.61	.55	.080		.15	1.09	3.17		.080
6020	1	1						.16		10.5		.080
6020	1	3						.17				.070
6020	3	3	2.57	.49	.57	.090		.21	1.58	3.77		.090
6020	6	1	.49	.41	.08	.060		.14	1.67	4.52		.060
6021	1	3						.16				.090
6021	2	3		.46				.17				.070
6021C	8	3		.40				.12				.070
6021C	9	3	2.30		.40	.007	.18	.17	1.30	3.90	7.24	.070
6021C	10	2		.47				.13				.080
6021C	14	1						.12				.070
6021C	21	2		.37				.11				.080
6021C	26	3		.68				.12				.060
6021C	32	1						.13				.080

## CHAPTER V

### CHEMICAL ANALYSES (TRACE ELEMENTS)

by Frank T. Manheim and Judith A. Commeau

Mn, Zn, Li and Rb were determined by flame atomic absorption spectroscopy; Pb, Cd, As and Ag were determined by graphite furnace-atomic absorption spectroscopy by E. Campbell and P. Aruscavage. These analysts determined W and Mo concentrations spectrophotometrically. B, Co, Cr, Cu, La, Ni, V, and Zr were determined by quantitative emission spectroscopy by E. Silk, C. Ansell and D. W. Golightly in the Reston, Va., laboratories of the U.S. Geological Survey. Uranium and thorium analyses were performed by H. T. Millard, C. McFee, and C. Bliss in the USGS Denver laboratories. However, subsequent check showed discrepancies in some thorium data, and the Th values shown here may be unreliable. "L" following a value means "less than". Values are in parts per million.

#### Explanation of Headings

UCM	Upper limit of sample interval (cm)
LCM	Lower limit of sample interval (cm)
AG	Silver
AS	Arsenic
B	Boron
CD	Cadmium
CO	Cobalt
CR	Chromium
CU	Copper
GA	Gallium
LA	Lanthanum
LI	Lithium
PB	Lead

Explanation of Headings (cont.)

MN	Manganese
MO	Molybdenum
NI	Nickel
RB	Rubidium
SN	Tin
TH	Thorium
U	Uranium
V	Vanadium
W	Tungsten
ZN	Zinc
ZR	Zirconium

HOLE	CORE	SEC	UCM	LCM	AG	AS	B	CD	CO	CR	CU	GA	LA	LI
6002	1	1	0	20	.041	2.5	20.L	2.20	10.	2.L	2.L		20.L	4.
6002	2	1	6	9	1.000L	7.4	40.	12.00	10.	35.	52.		20.L	31.
6002	3	1	10	40	.130	4.9	20.L	1.90	6.	21.	5.		20.L	4.
6002	4	1	48	50	.100L	7.6	90.	17.00	6.	120.	41.		20.L	38.
6002	5	1	0	20	.100L	7.0	90.	11.00	8.	120.	31.		20.L	42.
6002	6	1	10	13				2.00						46.
6002	6	1	30	32	1.000L		90.	3.90	8.	120.	38.		40.	
6002	7	2	50	70	.630	4.7	100.	12.00	7.	190.	38.		50.	11.
6002	9	2	80	81	.290	6.1	30.	.38	6.	93.	8.		20.L	17.
6002	10	2	20	40	.200	5.5	40.	1.30	7.	150.	13.		20.L	35.
6002	11	1	0	5	.210	5.7	60.	1.60	10.	170.	9.		20.L	22.
6002	12	2	40	60	.088	3.1	50.	.52	12.	130.	10.		20.L	23.
6002	13	1	45	48	.076	4.3	70.	.77	12.	160.	9.		20.L	32.
6002	14	1	87	90	.098	2.8	50.	.50	13.	160.	9.		20.L	24.
6002	15	1	8	12	.083	2.9	50.	.50	13.	140.	9.		20.L	20.
6002	16	2	32	53	.180	3.0	50.	.54	11.	87.	5.		20.L	10.
6002	16	2	83		.066	2.5	50.	.46	9.	50.	3.		20.L	6.
6002	16	3	44	98	.073		30.		12.	29.	5.		20.L	
6002	17	3	120	122	.700	3.0		.20	6.	89.	10.	9.	210.	49.
6002	17	3	130	150	.940	5.6	50.	.68	13.	44.	6.		30.	14.
6002	19	1	15	18	1.000L	1.6	20.L	1.60	6.	30.	2.L		20.L	7.
6002	20	3	40	45	.200	2.1	30.	2.90	8.	52.	3.		20.L	18.
6002	22	1	40	60	1.000L	1.2	20.L	.75	8.	19.	2.		20.L	8.
6002	23	2	11	32	.550	.9	20.L	.77	7.	18.	3.		20.L	6.
6002	24	1	50	55	.340	1.5	20.L	3.80	5.	15.	3.		20.L	6.
6002	24	1	110	112	2.000	2.0		1.00	6.	52.	23.	8.	160.	18.
6002	27	CC			.057	1.6	20.L	.96	9.	17.	2.L		20.L	6.
6002	33	1	7	27	.061	2.5	20.L	4.40	8.	22.	2.L		20.L	27.
6002	33	1	80	95	.061	2.4	40.	.48	6.	26.	2.L		20.L	210.
6004	1	1	120	140	.049	5.6		2.80	2.L	55.	14.		40.L	16.
6004	6	1	50	73	1.000L	3.2		.88	2.L	20.	6.		40.L	8.
6004	7	4	30	50	.150	2.7		4.10	2.L	33.	8.		40.L	17.
6004	10	3	71	90	.140	3.0		9.20	2.L	70.	16.		40.L	15.
6004	14	6	33	60	.170	2.3		4.60	2.L	62.	7.		40.L	8.
6004B	2	1	30	50	.150	2.1		.34	2.L	41.	10.		40.L	4.
6004B	2	1	69	71	.400	2.0		.20	5.	100.	16.	8.	180.	13.
6004B	4	1	110		.800	3.0		.30	5.	220.	21.	11.	140.	38.
6004B	5	1	112	121	1.000	7.3		16.00	2.L	130.	24.		40.L	18.
6004B	6	2	30	50	1.000L	2.9		.38	4.	58.	11.		40.L	17.
6004B	7	1	80		.400L	8.0		.30	4.	130.	11.	11.	25.	49.
6004B	11	1	45	63	1.000L	2.1		1.60	2.L	80.	14.		40.L	23.
6004B	15	1	45	74	.082	2.2		3.10	2.L	89.	18.		40.L	22.
6004B	19	6	80		.500	17.0		.80	8.	270.	19.	18.	110.	95.
6004B	20	1	86	114	.170	33.0		9.20	2.L	190.	30.		50.	20.
6005	2	1	50	70	.046	.7	20.	4.40	8.	8.	2.L		20.L	4.
6005	4	2	80	85	.013	1.2	20.L	.84	4.	8.	2.L		20.L	4.
6005	5	1	145		.400L	8.0		.70	4.	300.	9.	14.	75.	34.
6005	6	1	80		1.000L	1.7	80.	11.00	5.	97.	3.		20.L	9.
6005B	2	2	10	20	1.000L	2.5	20.	.15	5.	2.L	2.L		20.L	7.
6005B	2	2	20	40	.050	.5	20.L	.56	6.	2.L	2.L		20.L	4.
6006	6	6	20	40	.044	4.2	20.L	.50	6.	17.	2.L		20.L	7.
6006	6	6	56	58	.055	2.1	20.	3.90	9.	43.	5.		20.L	16.
6007	2	2	115	119	.051	2.3	40.	.32	6.	13.	5.		20.L	13.
6007	2	2	124	126		11.0		.28						53.
6007	5	1	30	45	.073		100.		11.	62.	30.		20.L	
6007	10	1	115	142	1.000L	5.6	40.	.54	6.	15.	10.		20.L	19.
6007B	1	1	117	122	.120	9.7	100.	12.00	9.	40.	28.		20.L	51.
6007B	2	2	120	140	.054	12.0	70.	.32	7.	38.	17.		20.L	37.
6007B	4	2	55	58	.085	8.8	110.	.24	9.	52.	325.		20.L	43.
6007B	8	1	140		.037	33.0	40.	.57	7.	.	11.		20.L	10.

HOLE	CORE	SEC	PB	MN	MO	NI	RB	SN	TH	U	V	W	ZN	ZR
6002	1	1	16.0	73.	.7L	4.L	6.		4.3	1.15	10.	.5L	5.	160.
6002	2	1	48.0	290.	10.0	6.	19.		25.5	5.50	60.	.9	36.	230.
6002	3	1	3.0	71.	5.6	4.L	2.		17.8	6.97	20.	.5L	12.	340.
6002	4	1	8.6	150.	6.8	26.			15.0	8.25	90.	.6	130.	80.
6002	5	1	13.0	220.	6.3	20.	52.		19.1	3.45	110.	.7	90.	90.
6002	6	1	16.0	260.			38.						55.	
6002	6	1	5.8	130.		22.	23.				50.		65.	70.
6002	7	2	3.6	32.	10.0	28.	5.		148.0	51.40	40.	.5L	130.	40.
6002	9	2	4.8	71.	33.0	11.	13.		61.2	10.60	40.	.5L	41.	110.
6002	10	2	6.5	110.	13.0	28.	23.		113.0	3.17	60.	.8	68.	50.
6002	11	1	7.5	94.	12.0	22.	15.		49.1	21.20	60.	.5	62.	160.
6002	12	2	7.0	57.	5.6	17.	12.		12.8	3.47	40.	.7	43.	50.
6002	13	1	5.9	56.	8.8	17.	14.		16.6	3.54	50.	.8	54.	50.
6002	14	1	5.9	53.	7.0	19.	12.		11.2	3.43	40.	.7	43.	50.
6002	15	1	4.8	50.	7.0	22.	9.		10.8	4.00	30.	.5	39.	50.
6002	16	2	12.0	62.	2.2	10.	8.		7.9	7.09	20.	.5L	31.	140.
6002	16	2	.8	58.	1.0	4.	3.		5.1	7.05	10.	.5L	20.	100.
6002	16	3				11.			12.8	5.77	20.		20.	
6002	17	3	4.0	480.	3.0	42.	49.	4.L			70.	11.0	11.	54.
6002	17	3	3.8	360.	3.4	26.	8.		15.9	8.58	30.	.6	40.	50.
6002	19	1	2.7	81.	.8	5.	.		5.5	1.64	20.	.5L	20.	90.
6002	20	3	3.5	74.	1.1	10.	10.		7.1	1.41	30.	.5L	36.	170.
6002	22	1	1.2	39.	.4	7.	2.		3.3	1.91	10.	.5L	13.	10.
6002	23	2	1.2	37.	.3	6.	2.		2.4	1.98	20.	.5L	11.	20.
6002	24	1	1.7	54.	1.4	4.	26.	4.L			41.	5.0L	4.	98.
6002	24	1	6.0	120.	3.5	14.	25.	4.L			44.	5.0L	4.	98.
6002	27	CC	3.0	44.	.8	8.	3.		3.1	1.43	10.	.5L	18.	60.
6002	33	1	4.2	69.	1.0	9.	5.		6.3	2.27	10.	.5L	19.	70.
6002	33	1	13.0	63.	.6	9.	17.		15.8	3.02	20.	.5L	31.	80.
6004	1	1	33.0	140.	1.3	11.	11.		8.4	7.09	30.	.5L	30.	320.
6004	6	1	2.6	110.	4.2	5.	6.		3.6	4.70	10.	.5L	12.	320.
6004	7	4	12.0	170.	5.4	7.	73.		5.6	4.41	20.	.7	63.	230.
6004	10	3	4.4	100.	12.0	19.	17.		5.2	6.32	30.	.9	25.	190.
6004	14	6	2.0	150.	3.2	8.	11.		4.6	5.66	50.	.5L	32.	110.
6004B	2	1	4.4	150.	1.8	10.	5.		4.5	5.01	20.	.5L	25.	110.
6004B	2	1	3.0	220.	3.0	20.	24.	4.L			54.	9.0	7.	22.
6004B	4	1	2.0	270.	8.0	34.	56.	4.L			110.	5.0L	13.	96.
6004B	5	1	4.0	110.	5.4	31.	11.		6.6	8.78	60.	.5	120.	120.
6004B	6	2	9.0	130.	1.5	17.	29.		4.0	2.33	30.	1.3	47.	150.
6004B	7	1	8.0	140.	6.0	22.	75.	4.L			72.	5.0L	15.	210.
6004B	11	1	5.6	120.	1.5	12.	36.		3.9	1.78	30.	1.0	55.	150.
6004B	15	1	8.0	110.	1.9	17.	35.		4.1	2.33	40.	1.0	78.	150.
6004B	19	6	15.0	300.	15.0	48.	91.	4.L			130.	5.0L	15.	580.
6004B	20	1	79.0	130.	2.7	18.	37.		5.7	11.20	100.	.8	46.	230.
6005	2	1	11.0	150.	.5	4.	20.		4.2	.90	10.	.5L	8.	110.
6005	4	2	9.2	170.	.4	4.	15.		4.3	1.60	10.	.5L	9.	250.
6005	5	1	10.0	160.	4.5	24.	62.	4.L			99.	5.0L	15.	390.
6005	6	1	20.0	120.	2.4	7.	28.		10.0	2.10	20.	1.6	30.	760.
6005B	2	2	8.2	110.	1.0	4.L	17.		3.1	86.00	10.L	.5L	11.	230.
6005B	2	2	23.0	110.	.2	4.L	19.		3.7	.64	10.L	.5L	8.	80.
6006	6	6	7.6	140.	.9	4.	9.		5.6	.83	20.	.5L	13.	130.
6006	6	6	7.8	280.	.5	14.	27.		7.2	.78	30.	.5L	31.	190.
6007	2	2	11.0	300.	.3	8.	34.		4.8	1.28	20.	.5L	25.	560.
6007	2	2	16.0	330.	2.0		86.					1.4	76.	
6007	5	1				37.			10.0	3.08	60.			520.
6007	10	1	8.8	180.	.8	8.	31.		10.1	1.08	20.	.8	31.	230.
6007B	1	1	15.0	260.	1.1	29.	80.		14.9	2.86	60.	1.1	64.	480.
6007B	2	2	13.0	210.	1.0	19.	57.		11.0	2.42	40.	1.1	52.	390.
6007B	4	2	14.0	220.	2.0	30.	74.		12.1	3.15	60.	.9	60.	850.
6007B	8	1	25.0	220.	1.0	6.	24.		6.7	.88	40.	.8	26.	480.



HOLE	CORE	SEC	UCM	LCM	AG	AS	B	CD	CO	CR	CU	GA	LA	LI
6007B	10	6	40	60	.048	6.3	70.	.41	7.	40.	16.		20.L	39.
6007B	11	22	10	30	.063	30.0	280.	.33	6.	110.	19.		20.L	29.
6007B	13	CC			.045	8.2	80.	2.80	8.	48.	19.		20.L	53.
6008	1	2	45	65	.054	6.4	30.	.41	10.	59.	33.		20.L	35.
6008	5	1	80	100	.020		20.	.13	4.	7.	5.		20.L	6.
6008	10	CC			.032	4.6	20.	.98	8.	39.	10.		20.L	18.
6009	1	1	132	137	.190	4.9	40.	15.00	7.	42.	48.		20.L	25.
6009	6	1	7		.053	25.0	40.	2.50	7.	42.	25.		20.L	20.
6009	9	1	80	110	.070	7.3	20.L	.73	9.	7.	4.		20.L	5.
6009	13	3	40	60	.068	11.0	50.	1.50	14.	84.	42.		20.L	43.
6009B	11	1	140	150	.087	9.3	110.	.85	22.	97.	41.		30.	63.
6009B	12	1	70	90	.100	16.0	100.	.92	16.	79.	51.		20.L	60.
6009B	14	1	118	140	.052	10.0	80.	1.10	15.	47.	25.		30.	40.
6009B	21	3	10	15	.094	17.0	100.	.27	10.	54.	31.		20.L	51.
6009B	23	2	40	100	.036	1.3	20.	.18	7.	2.L	3.		20.L	5.
6009B	27	1	50	70	.036	1.2	70.	.36	7.	56.	11.		20.L	28.
6009B	27	2	20	25	.040	1.6	80.	.18	7.	53.	21.		20.L	45.
6009B	31	1	110	125	.046	1.2	20.L	.17	7.	2.L	2.L		20.L	5.
6009B	31	2	40	70	.120	1.2	20.L	.18	7.	2.L	3.		20.L	45.
6010	20	5	35	65	.070	11.0	100.	.51	20.	90.	50.		20.L	54.
6010	22	6	100	120	.069	29.0	350.	.42	14.	82.	34.		30.	41.
6010	26	2	10	30	.087		90.		12.	68.	25.		20.L	
6010	26	2	52	70	.110	12.0		.23	4.	74.	36.		40.L	73.
6010	27	1	77	82	.078	18.0	170.	1.60	3.	36.	12.		20.L	61.
6010	27	1	84	108	.049	20.0	110.	6.10	8.	58.	29.		20.L	17.
6010	27	1	115	120	.074	17.0	110.	2.40	9.	80.	22.		20.L	53.
6010	33	2	10	30	.087	4.8	90.	.02	5.	29.	22.		20.L	50.
6011	1	1	86	100	.160	12.0	40.	12.00	19.	110.	39.		20.L	49.
6011	8	4	40	55	.120	15.0	80.	.81	6.	67.	21.		20.L	51.
6011	14	2	25	50	1.000L	12.0	80.	.98	4.	37.	13.		20.L	41.
6011	15	2	42	46	.130	12.0	80.	2.40	4.	67.	15.		20.L	44.
6011	16	1	90	95	.160	.9	30.	.14	2.L	19.	27.		20.L	7.
6011	17	2	140		.210	1.1	20.L	.18	2.L	6.	24.		20.L	5.
6011	20	1	110	134	.086	1.6	70.	.37	2.L	17.	11.		20.L	6.
6011	23	1	144	148	.072	11.0	250.	1.20	2.L	69.	13.		20.L	11.
6011	28	4	45	70	.100	14.0	140.	1.80	2.L	68.	15.		20.L	40.
6012	3	4	10	30	.078	14.0	60.	.23	43.	85.	43.		20.L	61.
6012	3	4	80	130	.800	22.0		.40	23.	150.	39.	42.	72.	95.
6012	12	6	25	50	.086	17.0	70.	.32	43.	51.	27.		20.L	55.
6012	33	4	76	80	.140	10.0	100.	.02	56.	59.	35.		20.L	57.
6012	33	4	100	120	.087	17.0	340.	.42	41.	160.	29.		20.L	36.
6013	4	1	96	113	.360	28.0	90.	5.40	13.	61.	37.		20.L	47.
6013	4	1	120	150	.600	20.0		5.00	16.	140.	29.	26.	44.	75.
6013	7	3	50	100	.600	23.0		.30	18.	160.	63.	33.	53.	75.
6013B	13	1	115	140	.068	12.0	80.	2.90	7.	51.	27.		20.L	38.
6013B	26	1	145	146	.400	11.0		.80	8.	120.	16.	18.	44.	38.
6014	2	2	65	90	21.00	3.0	20.L	.05	2.L	2.L	5.		20.L	7.
6014	7	2	48	98	.600	14.0		.20	9.	110.	20.	21.	34.	38.
6014	7	2	125	130	.049	11.0	80.	2.90	8.	68.	27.		20.L	35.
6014	7	5	40	65	2.100	7.5	70.	2.70	8.	53.	49.		20.L	34.
6015	4	1	95	100	.150	29.0	120.	1.10	9.	86.	36.		20.L	82.
6015	6	1	95	145	.700	9.0		.80	14.	82.	26.	22.	34.	42.
6016B	2	1	85	150	.025	3.0	50.	.44	2.L	17.	13.		20.L	7.
6017	1	2	50	100	1.000	10.0		.60	13.	84.	20.	28.	51.	42.
6017	5	1	95	115	.069	13.0	70.	.12	17.	83.	83.		20.L	58.
6017	5	1	122	150	.700	14.0		.30	19.	130.	40.	38.	61.	58.
6017	6	1	100	120	.072	11.0	70.	1.40	16.	76.	89.		20.L	45.
6018	6	2	50	70	.097	1.1	60.	.20	2.L	2.L	2.L		20.L	5.
6019	1	2	10	30	.150	9.1	130.	2.00	9.	81.	85.		20.L	32.
6019	1	2	30	50	.160	8.4		1.70	2.	82.	40.		40.L	31.

HOLE	CORE	SEC	PB	MN	MO	NI	RB	SN	TH	U	V	W	ZN	ZR
6007B	10	6	13.0	200.	.9	12.	52.		13.2	2.34	20.	1.0	47.	930.
6007B	11	22	13.0	150.	.7	10.	110		7.7	2.64	50.	.6	53.	410.
6007B	13	CC	19.0	260.	1.0	14.	59.		12.1	2.03	30.	.9	57.	260.
6008	1	2	14.0	450.	1.1	24.	63.		9.6	1.20	20.	.5	61.	120.
6008	5	1	4.6	140.	.4	4.L	9.				10.	.5L	10.	360.
6008	10	CC	5.8	140.	1.2	6.	13.		5.4	1.27	10.	.5	30.	570.
6009	1	1	22.0	450.	.4	12.	49.		8.5	1.05	30.	.5	47.	180.
6009	6	1	11.0	460.	1.0	11.	33.		7.5	1.88	20.	.5L	40.	120.
6009	9	1	4.8	53.	2.0	4.L	2.		2.6	.85	20.	.5L	7.	70.
6009	13	3	15.0	700.	3.6	36.	88.		16.0	1.76	40.	.8	90.	110.
6009B	11	1	20.0	400.	4.0	42.	100		19.8	1.72	100.	1.0	90.	370.
6009B	12	1	22.0	330.	2.0	31.	95.		18.1	2.22	70.	1.4	89.	310.
6009B	14	1	14.0	190.	3.9	18.	52.		16.4	1.87	60.	.7	59.	380.
6009B	21	3	16.0	160.	1.4	26.	82.		10.8	3.20	60.	1.3	70.	360.
6009B	23	2	3.4	92.	.8	4.L	4.		2.4	.49	10.L	.5L	7.	200.
6009B	27	1	15.0	400.	.6	7.	53.		12.7	1.39	40.	.9	28.	460.
6009B	27	2	17.0	95.	.5	9.	65.		11.3	2.03	70.	1.1	33.	450.
6009B	31	1	3.6	73.	.3	4.L	5.		2.0	.20	40.	.5L	5.	120.
6009B	31	2	4.4	67.	.5	4.L	2.		2.1	.18	10.L	.5L	5.	90.
6010	20	5	20.0	460.	1.9	50.	110		10.9	3.22	80.	.9	150.	450.
6010	22	6	14.0	230.	1.3	25.	100		13.6	3.19	70.	.7	67.	210.
6010	26	2				32.			14.9	3.66	90.			180.
6010	26	2	25.0	300.	1.9	29.	120		12.4	3.40	110.	1.3	100.	210.
6010	27	1	24.0	250.	1.0	7.	110		15.2	2.84	30.	1.3	83.	420.
6010	27	1	17.0	170.	2.0	23.	44.		11.5	2.55	70.	.5	39.	230.
6010	27	1	21.0	200.	2.0	28.	90.		10.7	3.41	70.	1.3	74.	350.
6010	33	2	16.0	750.	.9	12.	110		13.5	1.84	20.	1.0	77.	2.
6011	1	1	29.0	750.	2.0	56.	120		14.8	2.43	90.	.8	130.	180.
6011	8	4	17.0	150.	3.0	26.	80.		13.7	2.95	70.	1.3	100.	220.
6011	14	2	16.0	150.	3.0	18.	58.		12.0	2.86	40.	1.1	78.	420.
6011	15	2	17.0	120.	3.0	21.	58.		20.1	2.50	50.	1.1	84.	380.
6011	16	1	7.0	200.		5.	11.		2.7	1.44	10.	.5L	16.	970.
6011	17	2	5.2	200.		4.L	5.		2.4	1.09	10.	.5L	12.	650.
6011	20	1	6.2	250.	.8	8.	6.		4.7	2.07	10.	.9	34.	1300
6011	23	1	17.0	190.	2.3	4.	65.		7.1	3.20	30.	.9	71.	550.
6011	28	4	13.0	160.	4.8	12.	72.		8.8	4.01	20.	.9	84.	360.
6012	3	4	26.0	750.	1.3	37.	140		18.4	2.85	80.	1.7	99.	180.
6012	3	4	35.0	990.	3.0	54.	170	4.L			130.	5.0L	10.	550.
6012	12	6	24.0	510.	2.0	25.	110		20.1	3.14	50.	1.8	84.	180.
6012	33	4	19.0	440.	.4	32.	110		12.3	3.57	50.	1.3	75.	230.
6012	33	4	12.0	300.	.9	25.	110		13.0	5.55	60.	.9	65.	230.
6013	4	1	17.0	380.	2.2	45.	85.				60.	1.3	60.	220.
6013	4	1	13.0	860.	1.0L	65.	130	4.L			120.	5.0L	14.	540.
6013	7	3	46.0	810.	1.0L	74.	150	4.L			120.	5.0L	19.	630.
6013B	13	1	24.0	230.	1.4	21.	68.		13.6	1.11	50.	1.0	42.	290.
6013B	26	1	6.0	560.	5.0	36.	76.	4.L			88.	5.0L	36.	760.
6014	2	2	6.6	140.	.6	4.L	5.		2.5	.96	20.	.1L	10.	100.
6014	7	2	13.0	540.	1.0L	40.	76.	4.L			110.	5.0L	14.	830.
6014	7	2	15.0	250.	.9	26.	60.		9.9	1.63	50.	1.1	44.	360.
6014	7	5	15.0	210.	1.0	25.	63.		9.2	2.04	50.	1.3	45.	360.
6015	4	1	40.0	330.	2.9	31.	97.		15.3	3.24	80.	1.5	110.	150.
6015	6	1	13.0	830.	1.0L	38.	91.	4.L			110.	5.0L	26.	560.
6016B	2	1	19.0	290.	.8	4.L	18.		4.3	1.95	20.	.7	14.	570.
6017	1	2	16.0	900.	1.0L	40.	100	4.L			110.	5.0L	21.	700.
6017	5	1	25.0	740.	1.1	40.	120		11.7	3.27	80.	6.7	93.	200.
6017	5	1	29.0	1000	1.0L	42.	140	4.L			130.	5.0L	21.	800.
6017	6	1	22.0	650.	1.1	35.	94.		10.1	3.20	80.	3.7	76.	220.
6018	6	2	3.2	140.	.2	4.L	10.		1.9	.50	40.	.5L	6.	240.
6019	1	2	66.0	400.	5.7	26.	72.		10.1	4.45	70.	1.2	53.	670.
6019	1	2	50.0	400.	5.9	20.	72.		9.3	4.14	70.	1.3	54.	480.

HOLE	CORE	SEC	UCM	LCM	AG	AS	B	CD	CO	CR	CU	GA	LA	LI
6019B	1	2	100	137	.700	14.0		2.00	8.	120.	13.	20.	73.	53.
6020	1	1	70	100	.600	15.0		3.00	18.	120.	36.	28.	66.	62.
6020	3	2	100	137	.800	12.0		22.00	23.	140.	45.	40.	96.	65.
6020	6	1	55	90	.400L	15.0		12.00	33.	130.	36.	30.	64.	84.
6021C	9	3	35	55	.140	10.0	80.	2.60	14.	76.	75.		20.L	53.
6021C	30	2	25	46	.130	6.6	80.	1.10	13.	69.	66.		20.L	41.

HOLE	CORE	SEC	PB	MN	MO	NI	RB	SN	TH	U	V	W	ZN	ZR
6019B	1	2	210.	840.	10.0	39.	110	4.L			110.	5.0L	21.	810.
6020	1	1	38.0	1700	1.0L	66.	150	4.L			130.	5.0L	14.	760.
6020	3	2	27.0	1800	1.0L	72.	150	4.L			140.	5.0L	17.	630.
6020	6	1	28.0	960.	3.0	77.	200	4.L			130.	5.0L	35.	840.
6021C	9	3	21.0	650.	1.5	32.	120		17.9	2.66	70.	1.6	86.	220.
6021C	30	2	17.0	590.	1.6	33.	98.		13.1	2.27	70.	1.0	79.	370.

## CHAPTER VI

### GEOTECHNICAL PROPERTIES

by James S. Booth

#### Explanation of Headings

SAL	Salinity (0/00)
BLK	Lab bulk density (g/cm <sup>3</sup> )
H2O	Water content corrected (%)
VDR	Void ratio
POR	Porosity (%)
LL	Liquid limit (%)
PL	Plastic limit (%)
LI	Liquidity index
PI	Plasticity index (%)
SG	Specific gravity (g/cm <sup>3</sup> )
TOR	Shear strength torvane (kPa)
SSLU	Shear strength labvane undisturbed (kPa)
SSLR	Shear strength labvane remolded (kPa)
SENS	Sensitivity

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HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6002	1-1	6											5.0			
6002	2-1	5											2.0			
6002	3-1	5											5.0			
6002	3-3	5											10.0			
6002	3-4	20												3.0	1.5	2.0
6002	3-5	5											2.0			
6002	3-5	115												13.0	6.9	1.9
6002	3-6	113											21.0			
6002	4-1	85											53.0			
6002	4-1	91												42.0		
6002	4-2	10											24.0			
6002	4-3	45											55.0			
6002	4-4	44											62.0			
6002	4-5	5											19.0			
6002	4-6	5											34.0			
6002	4-6	137	32.0					200.0	87.0		11	2.39				
6002	5-1	5											21.0			
6002	7-1	5											5.0			
6002	7-2	117	33.4					156.0	79.0		77	2.53	54.0	11.0	4.7	
6002	7-2	145											53.0			
6002	8-1	35											24.0			
6002	8-2	5											24.0			
6002	8-3	5											34.0			
6002	8-3	137	33.4					203.0	103.0		10	2.38				
6002	9-1	15											43.0			
6002	9-2	10											43.0			
6002	9-3	5											48.0			
6002	9-4	5											48.0			
6002	9-5	5											48.0			
6002	9-6	5											57.0			
6002	9-6	137						106.0	40.0		66	2.58				
6002	10-2	5											14.0			
6002	10-2	113	34.3					143.0	53.0		90	2.55				
6002	11-2	5											14.0			
6002	11-2	113						114.0	36.0		78	2.52				
6002	12-1	100											29.0			
6002	12-2	5											67.0			
6002	12-3	5											53.0			
6002	13-1	10											29.0			
6002	14-6	1											19.0			
6002	14-6	150											34.0			
6002	15-3	84											48.0			
6002	15-4	11											38.0			
6002	16-1	41											34.0			
6002	16-2	5											24.0			
6002	17-1	130											10.0			
6004	1-1	104											10.0			
6004	1-1	150		1.65	59.0								10.0			
6004	1-2	10											7.0			
6004	1-2	127				1.56	.61					2.65				
6004	2-2	107	36.1			1.43	.59					2.66				
6004	2-2	135											29.0			
6004	2-2	150		1.69	54.0											
6004	3-1	132	36.0			1.29	.56					2.74				
6004	3-1	150			47.0											
6004	4-1	140											14.0			
6004	4-3	150											12.0			
6004	4-4	100											22.0			
6004	4-4	110												6.5	.7	9.0
6004	4-4	150											19.0			
6004	5-2	137										2.69				
6004	5-4	99										2.64	12.0			
6004	5-4	135												7.2	.4	20.0
6004	5-4	150											22.0			
6004	6-2	75										2.65	12.0			
6004	6-3	20											19.0			
6004	6-3	150											10.0			
6004	6-4	125										.69	12.0			
6004	6-5	5											14.0			
6004	6-5	135												4.8	1.3	3.7

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6004	6-5	150											14.0			
6004	6-6	5											19.0			
6004	6-6	144		1.80	51.0								29.0			
6004	7-1	107												9.7	1.3	7.5
6004	7-1	125						43.0	41.0		2	2.64	22.0			
6004	7-1	150											29.0			
6004	7-2	5											24.0			
6004	7-2	150											34.0			
6004	7-3	110											24.0			
6004	7-3	125						42.0	41.0		1	2.68		14.0	2.6	5.4
6004	7-3	150											27.0			
6004	7-4	110											29.0			
6004	7-4	150											29.0			
6004	7-5	150											38.0			
6004	7-6	110											29.0			
6004	7-6	125						48.0	40.0		8	2.65		29.0	.9	32.0
6004	7-6	150											29.0			
6004	8-1	120											24.0			
6004	8-2	144		1.87	49.0											
6004	9-1	80												5.7	1.3	4.4
6004	9-1	125										2.68	17.0			
6004	9-4	125										2.75				
6004	9-6	110											24.0			
6004	10-2	145											17.0			
6004	10-3	5		1.70	46.0											
6004	10-3	105											29.0			
6004	10-3	150											36.0			
6004	10-4	130											17.0			
6004	10-4	145		1.60	68.0											
6004	10-4	150											36.0			
6004	11-1	112										2.63	9.0			
6004	11-2	90											9.0			
6004	11-3	90											5.0			
6004	11-4	112										2.65	9.0			
6004	11-5	95											9.0			
6004	11-6	100											9.0			
6004	11-6	150											43.0			
6004	12-4	150											29.0			
6004	13-2	82											48.0			
6004	13-3	64											14.0			
6004	13-4	115											10.0			
6004	13-5	105											7.0			
6004	13-6	80											12.0			
6004	13-6	150											33.0			
6004	14-2	37											14.0			
6004	14-3	74											12.0			
6004	14-4	78											5.0			
6004	14-5	56											10.0			
6004	14-6	5	35.9	1.41	95.0	2.54	.72	101.0	79.0	1.38	22	2.60				
6004	14-6	100											29.0			
6004	15-1	110											5.0			
6004	15-2	110											5.0			
6004	15-3	110											5.0			
6004	15-4	110											10.0			
6004B	2-2	110											10.0			
6004B	2-3	110											10.0			
6004B	2-4	110											10.0			
6004B	2-5	110											19.0			
6004B	2-6	132		1.50	86.0								19.0			
6004B	2-6	150											31.0			
6004B	4-1	110											53.0			
6004B	4-1	145		1.54	65.0								96.0			
6004B	6-5	145											42.0			
6004B	13-2	135		1.60	64.0											
6004B	14-6	145											34.0			
6004B	16-3	145											31.0			
6004B	19-1	145		1.84	33.0											
6005	2-1	75										2.65				
6006	3-2	75										2.65				
6006	3-4	25										2.64				

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6006	5CC			2.00	23.0											
6006	5-2	75										2.65				
6007	2-3	100											9.0			
6007	3-5	145		1.49	42.0								67.0			
6007	3-6	150											72.0			
6007	4-5	150		1.91	36.0											
6007	5-1	150											53.0			
6007	5-2	75											43.0			
6007	5-2	115	23.6			.89	.47	54.0	27.0	0.22	27	2.70				
6007	5-2	150		1.78	33.0											
6007	6-2	90											67.0			
6007	6-2	124	23.5					55.0	28.0		27	2.68				
6007	6-2	150											72.0			
6007	6-3	80											86.0	57.0	19.0	3.0
6007	6-3	100														
6007	6-3	145		1.80	39.0								83.0			
6007	8-1	145		2.05	30.0											
6007	9-1	125						58.0	22.0		36	2.67	67.0			
6007	10-1	25											10.0			
6007	10-1	145		1.88	32.0								21.0			
6007B	1-1	150		1.77	33.0								57.0			
6007B	2-3	150											101.			
6007B	4-3	80											57.0			
6007B	4-3	147		2.01	25.0								48.0			
6007B	5CC			1.63	45.0											
6007B	5-1	140											42.0			
6007B	8-2	110											5.0			
6007B	10-2	110											48.0			
6007B	10-3	45											77.0			
6007B	10-4	100											67.0			
6007B	10-5	50											57.0			
6007B	10-5	145	30.7					39.0	21.0		18	2.68	24.0			
6007B	10-6	100											38.0			
6007B	10-6	150											24.0			
6007B	11-2	110											29.0			
6007B	11-5	145		1.67	41.0								19.0			
6007B	12-4	145		1.57	43.0											
6007B	12-5	70											24.0			
6008	1-1	100											22.0			
6008	1-2	63												11.0	3.0	4.0
6008	1-2	123	27.6			.78	.44	25.0	13.0	1.33	12	2.68				
6008	1-2	149		1.90	29.0								16.0			
6008	1-3	150											21.0			
6008	1-4	125	27.6			.79	.44	59.0	27.0	0.09	22	2.66				
6008	1-4	150		1.92	30.0								27.0			
6008	2-1	150		1.86	27.0											
6008	3-1	145		1.87	27.0								26.0			
6008	4-2	105	9.7			1.16	.54	52.0	19.0	0.73	33	2.69				
6008	4-2	150		1.76	43.0											
6008	5-1	125										2.64				
6008	6-1	115	1.6			.62	.38	20.0	17.0	3.00	3	2.69				
6008	6-1	150		2.02	23.0											
6008	9-2	150											20.0			
6008	12-2	25										2.62				
6008	13-1	125										2.64				
6009	1-1	143											22.0			
6009	1-1	150		2.14	15.0								57.0			
6009	2-1	150		1.82	32.0											
6009	3-2	150											50.0			
6009	3-3	4											56.0			
6009	3-3	131											57.0			
6009	3-3	150											91.0			
6009	5CC			1.96	29.0											
6009B	1-1	81	33.3					31.0	18.0		13	2.65				
6009B	1-1	100											19.0			
6009B	1-1	141											56.0			
6009B	1-1	149		2.07	25.0											
6009B	2-1	125										2.69				
6009B	3CC			1.84	38.0											
6009B	3-2	60											62.0			



HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6009B	4-1	115	10.5					58.0	24.0		34	2.71	34.0			
6009B	4-1	150											52.0			
6009B	4-2	48											31.0			
6009B	4-2	139		1.78	43.0											
6009B	4-2	150											34.0			
6009B	5-1	149		1.91	32.0								91.0			
6009B	5CC			1.93	29.0											
6009B	8-1	146											34.0			
6009B	8-1	150											22.0			
6009B	8-2	150											32.0			
6009B	8-3	48											25.0			
6009B	8-3	115	6.9			.83	.45	37.0	25.0	0.50	12	2.68				
6009B	8-3	150											44.0			
6009B	8CC			1.96	31.0											
6009B	9-2	48											32.0			
6009B	9-2	65	7.2			.89	.47	38.0	26.0	0.58	12	2.68				
6009B	9-2	150											29.0			
6009B	9CC			1.90	33.0											
6009B	10-2	105	7.5			.78	.44	44.0	23.0	0.29	21	2.70	19.0			
6009B	10-2	150											43.0			
6009B	10-3	47											41.0			
6009B	10-3	150											50.0			
6009B	10CC			1.93	29.0											
6009B	11-1	105						51.0	23.0		28	2.67	25.0			
6009B	11-1	150											40.0			
6009B	11-2	99											62.0			
6009B	11-2	150											54.0			
6009B	12-1	100											31.0			
6009B	12-2	100											45.0			
6009B	12-3	100											59.0			
6009B	12-4	150											73.0			
6009B	12-5	46											53.0			
6009B	12-5	150											71.0			
6009B	12-6	52											61.0			
6009B	12-6	150											59.0			
6009B	13CC			1.80	37.0											
6009B	13-1	42											38.0			
6009B	13-1	57											14.0			
6009B	13-1	150											91.0			
6009B	14-1	140											10.0			
6009B	14-2	100											46.0			
6009B	14-3	47											43.0			
6009B	14-4	46											36.0			
6009B	14-5	47											25.0			
6009B	14CC			1.94	28.0											
6009B	15-1	100											41.0			
6009B	15-2	100											40.0			
6009B	20CC			1.90	27.0											
6009B	21-2	100											91.0			
6009B	21-3	8											91.0			
6009B	22CC			2.10	16.0											
6009B	27-1	47											55.0			
6009B	27-2	47											89.0			
6009B	27-2	100											81.0			
6009B	27-2	129											15.0			
6009B	28-1	100											36.0			
6009B	28-2	100											25.0			
6009B	29-1	142											86.0			
6009B	30-1	150											96.0			
6009B	30-2	70											91.0			
6009B	30-2	150											34.0			
6010	1CC			1.86	40.0											
6010	1-1	150											10.0			
6010	1-2	150											16.0			
6010	1-3	80											17.0			
6010	1-3	150											14.0			
6010	2-1	149		1.81	40.0								8.0			
6010	2-2	100											17.0			
6010	2-2	119	27.5			1.05	.51	47.0	24.0	0.65	23	2.69				
6010	2-2	149		1.81	38.0								16.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6010	2CC			1.86	37.0											
6010	3-1	134											8.0			
6010	3-1	150											10.0			
6010	3-2	105	26.7			1.04	.51					2.54	8.0			
6010	3-2	149		1.86	41.0								91.0			
6010	3-2	150											43.0			
6010	3CC			2.08	19.0											
6010	4-1	140											13.0			
6010	4-2	105	25.1			.88	.47	38.0	19.0	0.74	19	2.67	32.0			
6010	4-2	149		1.79	33.0								48.0			
6010	5-1	85	23.5			.79	.44	58.0	24.0	0.15	34	2.75		5.0	3.6	1.4
6010	5-1	100											52.0			
6010	5-1	150											19.0			
6010	5CC			1.95	29.0											
6010	6-1	144											39.0			
6010	6-2	75	23.5					41.0	21.0		20	2.71				
6010	6-2	150											48.0			
6010	6-3	143											34.0			
6010	6-3	150											19.0			
6010	7-2	105	23.4									2.66				
6010	7-3	100											54.0			
6010	7-3	150											56.0			
6010	7-4	47											77.0			
6010	7-4	124												37.0	7.2	5.1
6010	7-4	125	23.4			.75	.43	33.0	17.0	0.69	16	2.67				
6010	7-4	140											62.0			
6010	7-4	150											56.0			
6010	7CC			1.99	28.0											
6010	8-1	100											53.0			
6010	8CC			1.89	33.0											
6010	9-2	85	23.3					33.0	19.0		14	2.67				
6010	9-3	47											29.0			
6010	9-3	150											34.0			
6010	9CC			2.05	22.0											
6010	10-1	120											59.0			
6010	11-2	75	24.3									2.64				
6010	11-2	144											36.0			
6010	11-2	150											40.0			
6010	11-3	47											50.0			
6010	11-3	141		1.86	23.0								46.0			
6010	12-2	100											14.0			
6010	12-2	150											61.0			
6010	12-3	47											27.0			
6010	12-3	150											36.0			
6010	13-1	123											43.0			
6010	13-1	150											59.0			
6010	13-2	100											36.0			
6010	13-2	140											59.0			
6010	14-2	100											29.0			
6010	14-2	150											13.0			
6010	14-3	100											36.0			
6010	14-3	150											34.0			
6010	14-4	100											38.0			
6010	14-4	150											50.0			
6010	14-5	47											19.0			
6010	14-5	135											7.0			
6010	14-5	150											33.0			
6010	14-6	45											48.0			
6010	14-6	140											69.0			
6010	15-1	120											48.0			
6010	16-1	65											43.0			
6010	16-2	100											38.0			
6010	16-2	150											48.0			
6010	16-3	90											34.0			
6010	16-3	150											77.0			
6010	16-4	46											67.0			
6010	16-4	139											86.0			
6010	18-1	100											58.0			
6010	19-1	25											34.0			
6010	19-1	40											51.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6010	19-1	150											72.0			
6010	19-2	47											31.0			
6010	19-2	150											67.0			
6010	19-3	47											50.0			
6010	19-3	150											72.0			
6010	19-4	100											67.0			
6010	19-4	150											88.0			
6010	19-5	47											67.0			
6010	19-5	150											91.0			
6010	19-6	100											57.0			
6010	19-6	130											91.0			
6010	19-6	139		1.93	28.0											
6010	20-1	140											24.0			
6010	20-2	150											91.0			
6010	20-3	100											38.0			
6010	20-3	150											91.0			
6010	20-4	150											48.0			
6010	20-5	12											67.0			
6010	20-5	150											38.0			
6010	20-6	47											53.0			
6010	20-6	150											91.0			
6010	21-2	5											7.0			
6010	21CC			1.98	23.0											
6010	22-1	100											64.0			
6010	22-1	150											91.0			
6010	22-2	150											79.0			
6010	22-3	142											53.0			
6010	22-3	150											88.0			
6010	22-4	150											91.0			
6010	22-5	100											72.0			
6010	22-5	150											91.0			
6010	22-6	150											31.0			
6010	23-1	142											72.0			
6010	23CC			2.18	18.0											
6010	24-4	5											57.0			
6010	25CC			1.85	25.0											
6010	26-1	100											96.0			
6010	26-2	47											91.0			
6010	26-4	145											91.0			
6010	26-6	46											86.0			
6010	27-1	87											26.0			
6010	27-1	137											91.0			
6011	1-1	100											63.0			
6011	1-1	125	28.9			1.33	.57	65.0	31.0	0.53	34	2.71	62.0			
6011	1-1	149		1.69	49.0											
6011	7-1	142											34.0			
6011	8-1	75	1.5					75.0	40.0		35	2.60				
6011	8-1	100											29.0			
6011	8-2	150											46.0			
6011	8-3	75	1.5					77.0	47.0		30	2.63				
6011	8-3	150											43.0			
6011	8-5	75	1.5					97.0	58.0		39	2.55				
6011	8-5	150											27.0			
6011	9-1	125	2.2			.94	.48	87.0	47.0		40	2.67				
6011	9-2	47											29.0			
6011	9-2	149		1.68	35.0											
6011	11-2	75						85.0	59.0		26	2.52				
6011	11-5	75						94.0	64.0		30	2.61				
6011	13-1	100											38.0			
6011	14-2	75						66.0	39.0		27	2.62				
6011	16-2	100											38.0			
6011	16-2	115						39.0	26.0		13	2.61				
6012	1-1	150											10.0			
6012	1-2	135											19.0			
6012	1-3	80											34.0			
6012	1-4	149		1.89	37.0								16.0			
6012	1-5	43											29.0			
6012	1-5	95	32.7			.95	.49	53.0	23.0	0.40	30	2.71				
6012	1-5	140											34.0			
6012	1CC			1.85	35.0											

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLR	SSLR	SEWS
6012	2-1	147		1.60	52.0											
6012	2-6	75	32.9			1.02	.50	61.0	26.0	0.34	35					
6012	2-6	142											29.0			
6012	2-6	150											23.0			
6012	2CC			1.88	38.0											
6012	3-2	95											22.0			
6012	3-2	149	31.8	1.68	60.0	1.61	.62	59.0	26.0	1.03	33	2.68		20.0	5.7	3.5
6012	3-3	116											27.0			
6012	3-3	146											15.0			
6012	3-4	105	31.8			1.30	.57	60.0	25.0	0.69	35	2.66				
6012	3-4	148		1.76	49.0								29.0			
6012	3-5	100											31.0			
6012	3-5	150											12.0			
6012	3-6	85	31.8			.82	.45	49.0	27.0	0.18	22	2.67				
6012	3-6	100											29.0			
6012	3-6	148		1.93	31.0								48.0			
6012	3CC			1.94	29.0											
6012	4-1	100											19.0			
6012	4-1	150											18.0			
6012	4-3	2		1.91	32.0											
6012	4-3	99	30.2			.87	.46	49.0	15.0	0.50	34	2.70	36.0			
6012	4-3	140											20.0			
6012	5-1	100											35.0			
6012	5-2	100											43.0			
6012	5-3	140											59.0			
6012	5-4	105	30.8					50.0	28.0		22	2.70	40.0			
6012	5-5	142											38.0			
6012	5-5	150											19.0			
6012	5-6	9											49.0			
6012	6-1	105	30.8					49.0	24.0		25	2.70	54.0			
6012	7-1	100											38.0			
6012	7-1	148		1.88	34.0								75.0			
6012	8-1	143											48.0			
6012	8-1	150											48.0			
6012	8-2	100											53.0			
6012	8-2	115	31.7			.92	.48	68.0	27.0	0.17	41	2.69				
6012	8-2	150											54.0			
6012	8-3	94											77.0			
6012	8-3	150											54.0			
6012	9-1	100											19.0			
6012	9-2	100											53.0			
6012	9-2	115				.79	.44	64.0	29.0	0.03	35	2.66				
6012	9-2	150											81.0			
6012	9CC			1.93	30.0											
6012	10-1	57											44.0			
6012	11-1	47											50.0			
6012	11-1	148		1.71	42.0											
6012	11-2	70											53.0			
6012	11-2	100											43.0			
6012	11-3	47											53.0			
6012	11-3	150											62.0			
6012	11-4	75											53.0			
6012	11-4	148		1.79	41.0								57.0			
6012	11-5	47											44.0			
6012	11-5	150											38.0			
6012	11CC			1.90	34.0											
6012	12-1	130											34.0			
6012	12-2	70											54.0			
6012	12-2	150											43.0			
6012	12-3	32											45.0			
6012	12-4	100											53.0			
6012	12-4	150											63.0			
6012	12-5	100											43.0			
6012	12-5	150											34.0			
6012	12-6	100											53.0			
6012	12-6	150											48.0			
6012	13-1	150											67.0			
6012	13-2	100											53.0			
6012	13-2	150											40.0			
6012	13-3	100											77.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6012	13-3	148		1.89	33.0								56.0			
6012	13-4	47											67.0			
6012	13-4	150											57.0			
6012	13-5	100											38.0			
6012	13-5	150											56.0			
6012	13-6	47											57.0			
6012	13-6	150											73.0			
6012	14-1	100											53.0			
6012	14-2	100											38.0			
6012	14-2	150											57.0			
6012	14-3	100											57.0			
6012	14-3	150											67.0			
6012	14-4	100											43.0			
6012	14-4	150											77.0			
6012	14-5	100											62.0			
6012	14-6	47											72.0			
6012	14-6	140											62.0			
6012	14CC			1.86	35.0											
6012	15-1	100											72.0			
6012	16-1	98											51.0			
6012	16-1	150											47.0			
6012	16-2	100											53.0			
6012	16-2	150											52.0			
6012	16-3	100											67.0			
6012	16-3	150											66.0			
6012	16-4	47											57.0			
6012	16-4	150											61.0			
6012	16-5	100											19.0			
6012	16-5	129		2.07	24.0											
6012	18-1	100											72.0			
6012	18-1	150											75.0			
6012	18-2	100											67.0			
6012	18-2	150											61.0			
6012	18-3	100											62.0			
6012	18-3	150		1.96	31.0								63.0			
6012	18-4	100											77.0			
6012	18-4	150											48.0			
6012	18-5	100											57.0			
6012	18-5	150											43.0			
6012	18-6	47											62.0			
6012	18-6	140											79.0			
6012	19-1	100											24.0			
6012	19-1	150											57.0			
6012	19-2	47											34.0			
6012	19-2	140											67.0			
6012	19CC			2.04	25.0											
6012	21-1	100											19.0			
6012	21-2	100											38.0			
6012	22-1	47											14.0			
6012	22-1	136		2.00	27.0											
6012	25-1	100											72.0			
6012	25-2	100											81.0			
6012	25-3	100											86.0			
6012	25-4	100											77.0			
6012	25-5	100											67.0			
6012	25-6	100											72.0			
6012	26-6	100											86.0			
6012	27-1	100											86.0			
6012	28-1	100											72.0			
6012	28-2	100											43.0			
6012	28-3	100											62.0			
6012	28-4	100											72.0			
6012	28-5	100											86.0			
6012	28-6	47											77.0			
6012	29-1	47											62.0			
6012	29-2	100											86.0			
6012	29-3	47											86.0			
6012	29-4	46											82.0			
6012	29-5	46											86.0			
6012	29-6	47											77.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6012	30-1	100											38.0			
6012	30-2	100											86.0			
6012	30-3	98											71.0			
6012	30-4	47											86.0			
6012	31-1	130											53.0			
6012	31-2	100											77.0			
6012	31-3	47											29.0			
6012	32-1	80											38.0			
6012	32-1	120											48.0			
6012	33-1	100											53.0			
6012	33-2	47											67.0			
6012	33-3	47											86.0			
6012	33-4	47											86.0			
6012	33-4	137											86.0			
6012	33-5	100											86.0			
6012	33-6	47											86.0			
6013	4-1	135	33.9			.59	.37	44.0	22.0		21	2.69				
6013	4-1	150											86.0			
6013	4-2	132		1.96	22.0											
6013	4-2	150											56.0			
6013	5-2	2						27.0	24.0		3	2.70	14.0			
6013	6-2	125	34.0			.64	.39	26.0	19.0	0.86	7	2.66				
6013	6-2	152		2.03	24.0											
6013	6-3	75	34.0			.71	.41	27.0	22.0	1.00	5	2.63				
6013	6-3	149		1.96	27.0											
6013	7-1	100											48.0			
6013	7-2	148		1.80	42.0											
6013	7-3	75	34.0			1.11	.53	56.0	29.0	0.48	27	2.65				
6013	7-3	100											67.0			
6013	7-4	47											53.0			
6013	7-4	148		1.82	39.0											
6013	7-5	35	34.0			1.03	.51	50.0	27.0	0.52	23	2.64				
6013	7-5	113											72.0			
6013	7-6	53											86.0			
6013	7-6	138		1.94	26.0											
6013	8-2	105				.61	.38					2.65				
6013	8-2	131		1.99	23.0											
6013B	17-1	143											57.0			
6013B	19-2	47											34.0			
6013B	24-2	139		1.66	36.0											
6014	6-2	85										2.64				
6014	7-2	85	30.2					30.0	20.0		10	2.63				
6014	7-2	115											14.0			
6014	7-3	107											5.0			
6014	7-4	81	30.2			.72	.42	32.0	25.0	0.29	7	2.68				
6014	7-5	45											10.0			
6014	7-5	147		1.95	27.0											
6014	10-1	125											43.0			
6015	4-1	100											91.0			
6015	4-1	125	34.8					64.0	30.0		34	2.66				
6015	4-1	150											91.0			
6015	4-2	150											91.0			
6015	6-1	120	32.7			.49	.33	28.0	19.0		9	2.71	91.0			
6015	6CC			2.13	18.0											
6016B	6-1	40												34.0		
6016B	6-1	47											48.0			
6016B	6-1	68											53.0			
6016B	6-1	100											53.0			
6017	1-1	149		1.77	46.0								.0			
6017	1-2	75	34.6			1.43	.59	27.0	17.0	3.90	10	2.61		2.3	.4	5.8
6017	1-2	149		1.37	55.0											
6017	2-1	100											10.0		1.4	7.1
6017	2-1	149		1.94	28.0								.0			
6017	2-3	48											17.0			
6017	2-3	75												27.0	6.5	4.1
6017	2-3	100											10.0			
6017	2-3	139		1.98	25.0								29.0			
6017	3-1	149		2.00	23.0											
6017	4-1	123												25.0	5.7	4.4
6017	4-1	143											22.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6017	4-1	149		2.01	23.0								24.0			
6017	4-2	131		2.04	20.0											
6017	4-2	150		1.95	21.0								10.0			
6017	4-3	25												14.0	4.3	3.2
6017	4-3	47											19.0			
6017	4-3	67												17.0	5.0	3.2
6017	4-3	100											36.0			
6017	4-3	127												53.0	11.0	4.8
6017	4-3	149	1.86	24.0												
6017	5-1	38											31.0			
6017	5-1	110											10.0			
6017	5-1	136						41.0	20.0		21	2.70				
6017	6-2	0		1.94	30.0											
6017	6-2	141		1.84	32.0											
6017	6-2	150		1.84	34.0											
6017	7-1	45						65.0	27.0		38	2.68				
6017	7-1	55											3.0			
6017	7-1	70												36.0	5.7	6.3
6017	8-1	90											21.0			
6017	8-1	115	22.4					35.0	17.0		18	2.67				
6017	8-1	150											67.0			
6017	9-1	100											48.0			
6017	9-1	134						37.0	14.0		23	2.69				
6018	6-2	25	31.8			.47	.32					2.72				
6018	6-2	91		1.69	17.0											
6019	1-1	46												.7		
6019	1-1	96	4.6											2.3	.5	4.6
6019	1-1	141		1.49	91.0											
6019	1-2	45												2.7	1.1	2.5
6019	1-2	115												1.9	.4	4.8
6019	1-2	149		1.48	89.0											
6019	1CC		34.9					100.0	31.0		69					
6019	2-2	50												4.2		
6019	2-2	100												3.7	1.0	3.7
6019	2-2	118	32.5			2.23	.69	99.0	44.0	0.80	55	2.57				
6019	2-2	139		1.49	87.0											
6019	2-3	122	32.5			1.68	.63	89.0	37.0	0.46	52	2.76		1.0	.3	3.3
6019	2-3	149		1.68	61.0											
6019	3-2	0		1.47	90.0											
6019	3-2	132		1.97	90.0											
6019	3-2	149		2.05	25.0											
6019	3-2	150		2.02	26.0											
6019	4-1	19												1.8	.4	4.5
6019	4-1	30	30.5					47.0	20.0		27	2.67				
6019	4-4	116												1.2	.3	4.0
6019	4CC			1.84	35.0											
6019	5-1	75												21.0		
6019	5-1	112												35.0		
6019	5CC			1.99	32.0											
6019	6CC			1.92	31.0											
6019	7-1	141		1.80	20.0											
6019	8-1	149			25.0											
6019B	1-2	100														
6019B	1-2	118						104.0	42.0		62	2.55		3.6	1.4	2.6
6019B	1CC			1.44	54.0	1.37	.58			0.19						
6020	1-1	85						39.0	19.0		20	2.70				
6020	1-1	95												20.0		
6020	1CC			1.66	46.0											
6020	2-1	149		1.86	34.0											
6020	2-2	25	26.3			.79	.44	50.0	23.0	0.26	27	2.66				
6020	2-2	37														
6020	2-2	47												31.0		
6020	2-2	140											15.0			
6020	2-2	149		2.02	30.0								18.0			
6020	2-3	0		1.94	30.0								12.0			
6020	2-3	140														
6020	2CC			1.87	33.0								11.0			
6020	3-2	47														
6020	3-2	110											21.0			
6020	3-2	115	23.4			.90	.47	53.0	25.0	0.32	28	2.67	57.0			

HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SEXS
6020	3-2	125											62.0			
6020	3-2	140											40.0			
6020	3CC			1.68	34.0											
6020	4-2	15						59.0	35.0		24	2.70				
6020	4-2	50											40.0			
6020	4-2	90				.83	.45	46.0	26.0	0.25	20	2.70				
6020	4-2	100											38.0			
6020	4CC			1.88	31.0											
6020	5CC			1.94	28.0											
6020	6-1	60											52.0			
6020	6-1	72	5.8			.51	.34	37.0	17.0	0.10	20	2.68				
6020	6-1	85											60.0			
6020	6-1	129		2.05	19.0											
6021	1-1	149		1.70	68.0											
6021	1-2	149		1.78	49.0											
6021	1-3	10	30.8			1.31	.57	55.0	27.0		28	2.69				
6021	1-3	40												3.1	.1	31.0
6021	1-3	75											42.0			
6021	1-3	100											45.0			
6021	1-3	110											50.0			
6021	1-3	115	30.8					34.0	18.0		16	2.74				
6021	1-3	129		2.06	22.0											
6021	2-1	149		1.69	57.0											
6021	2-2	135											59.0			
6021	2-2	149		2.01	23.0											
6021	2-3	5											57.0			
6021	2-3	48											57.0			
6021	2-3	90												55.0		
6021	2-3	100											20.0			
6021	2-3	125	32.1					44.0	22.0		22	2.72				
6021	2-3	135												32.0		
6021	2-3	143											25.0			
6021	2-3	150											34.0			
6021	2-4	3											29.0			
6021	2-4	48											32.0			
6021	2-4	70												23.0		
6021	2-4	100											48.0			
6021	2-4	106												80.0		
6021	2-4	128	32.1	1.95	25.0			38.0	21.0		17	2.67				
6021	2-4	130											57.0			
6021C	1-1	75												2.9	1.1	2.6
6021C	1-1	125												4.2	.7	6.0
6021C	1-1	139		1.79	46.0											
6021C	1-2	12	32.1	1.89	33.0	.53	.47	34.0	16.0		18	2.67				
6021C	1-2	35												2.9	1.4	2.1
6021C	1-2	103											56.0			
6021C	1-2	112	32.1			.53	.35	55.0	24.0	0.13	31	2.67				
6021C	1-2	122												52.0		
6021C	1-2	135											75.0			
6021C	1-2	139		1.86	20.0											
6021C	2-1	149		1.81	43.0											
6021C	2-2	112				.60	.37	44.0	21.0	0.09	23	2.62				
6021C	3-1	118											24.0			
6021C	3-1	125											38.0			
6021C	3-1	149		1.88	36.0											
6021C	3-2	115	21.7					55.0	18.0		37	2.70				
6021C	6-1	100											15.0			
6021C	6-1	113	31.5			1.00	.50	44.0	18.0	0.73	26	2.70				
6021C	6-1	139		1.85	37.0											
6021C	7-1	38	31.4					48.0	22.0		26	2.69				
6021C	7-1	47											7.0			
6021C	8-3	27	31.5			1.31	.57	47.0	21.0	1.08	26	2.69				
6021C	8-3	149		1.75	49.0											
6021C	9-1	118											5.0			
6021C	9-1	149		1.89	37.0											
6021C	9-2	25	31.5			1.00	.50	50.0	24.0	0.50	26	2.70				
6021C	9-3	129		1.80	38.0											
6021C	10-1	91											17.0			
6021C	10-1	149		1.87	36.0											
6021C	10-2	5											29.0			



HOLE	SEC	CM	SAL	BLK	H2O	VDR	POR	LL	PL	LI	PI	SG	TOR	SSLU	SSLR	SENS
6021C	10-2	100											34.0			
6021C	10-2	127				.96	.49	56.0	25.0	0.35	39	2.68	8.0			
6021C	10-2	143											24.0			
6021C	11-1	114														
6021C	11-1	149		1.97	27.0											
6021C	11-2	4											27.0			
6021C	11-2	116											34.0			
6021C	11-2	142											40.0			
6021C	11-2	149		1.95	28.0											
6021C	11-3	5											31.0			
6021C	11-3	55											40.0			
6021C	11-3	90											31.0			
6021C	11-3	120						35.0	21.0		14	2.73				
6021C	12-1	149		1.88	39.0											
6021C	12-2	149		1.72	48.0											
6021C	12-3	48											9.0			
6021C	12-3	70				1.28	.56	40.0	21.0	1.42	19	2.67				
6021C	12-3	140											38.0			
6021C	13-1	130											29.0			
6021C	14-1	83											24.0			
6021C	14-1	125											34.0			
6021C	14-1	139		1.82	29.0											
6021C	15-1	142											57.0			
6021C	16-1	90											38.0			
6021C	16-1	149		1.80	23.0											
6021C	17-1	127											26.0			
6021C	18-1	133											22.0			
6021C	18-2	40											55.0			
6021C	18-2	139		1.81	37.0											
6021C	19-1	145											46.0			
6021C	19-2	47											73.0			
6021C	19-2	100											61.0			
6021C	19-2	103											56.0			
6021C	20-1	130											9.0			
6021C	20-1	149		1.93	22.0											
6021C	21-1	142											55.0			
6021C	21-2	40											61.0			
6021C	21-2	129		1.92	26.0											
6021C	23-1	110											18.0			
6021C	23-2	40											36.0			
6021C	23-2	140											39.0			
6021C	23-3	100											45.0			
6021C	24-1	90											38.0			
6021C	24-1	110											34.0			
6021C	26-1	130											17.0			
6021C	26-3	100											52.0			
6021C	26-4	100											62.0			
6021C	27-1	50											88.0			
6021C	27-1	80											91.0			
6021C	27-1	100											40.0			
6021C	28-1	115											75.0			
6021C	30-2	40											81.0			
6021C	32-1	80											91.0			

## CHAPTER VII

### ORGANIC CARBON, NITROGEN, AND CALCIUM CARBONATE CONTENTS

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A method described by Kolpack and Bell (1968) was used to obtain the organic carbon results. The percent nitrogen was determined by volumetric determination of aminoid nitrogen using the micro Kjeldahl method (Kabat and Mayer, 1948). Calcium carbonate was determined by a method devised by P. Lohmann (1971, unpub. data).

#### Explanation of Headings

ORCAR	Total carbon measured in percent, after the removal of calcium carbonate
NITR%	Nitrogen content in percent
CARNIT	Ratio of organic carbon content to nitrogen content.
CALCAR	Calcium Carbonate content in percent.

HOLE	SEC	CM	ORCAR	NITR%	CARNIT	CALCAR
6002	1-1	6	.160	.030	5.30	8.210
6002	2-1	11	1.000	.080	12.70	18.790
6002	4-6	137	5.500			24.110
6002	7-2	117	2.750			18.360
6002	8-3	137	3.420	.530	6.80	18.300
6002	9-6	137	1.370	.190	7.20	35.950
6002	10-2	113	1.680	.320	5.20	37.630
6002	11-2	113	1.650	.270	6.10	47.960
6002	15-2	134	1.080	.140	7.80	71.700
6002	17-2	87	.620	.100	6.20	86.850
6002	17-3	121	.660	.100	6.30	38.820
6002	19-2	105	.200	.050	4.00	82.410
6002	23-2	21	.250	.040	6.20	88.790
6002	24-1	111	.520	.090	5.30	90.900
6002	28-1	129	.200	.040	5.00	54.710
6004	1-2	127	.250	.050	5.00	48.170
6004	2-2	107	.230	.080	3.10	66.790
6004	3-1	132	.220	.010	22.00	70.710
6004	5-2	137	.360	.030	12.20	74.080
6004	5-4	99	.360	.030	10.60	50.080
6004	6-2	75	.360			82.190
6004	6-4	125	.400	.020	20.00	31.350
6004	7-1	125	.460	.030	13.30	65.200
6004	7-3	125	.400	.040	10.10	56.530
6004	7-6	125	.580	.050	11.70	54.550
6004	9-1	125	.450	.020	18.00	59.310
6004	9-4	125	.340	.020	17.70	76.200
6004	11-1	112	.740	.090	8.30	55.800
6004	11-4	112	.700	.070	9.40	62.260
6004	14-6	5				73.000
6004B	2-1	70	.350	.020	17.50	83.580
6004B	4-1	110	.980	.160	6.10	43.650
6004B	7-1	80	.370	.030	10.60	35.480
6004B	12-2	70	.510		5.10	54.470
6004B	14-2	97	.250	.050	4.60	34.270
6004B	15-1	99	.400	.050	8.10	35.700
6004B	19-6	80	.570	.060	9.60	46.580
6005	2-1	25	.110	.010	11.00	1.090
6005	5-1	145	.950	.070	12.70	17.360
6005	6-1	140	.340	.010	34.00	24.650
6006	3-2	75	.080			11.930
6006	3-4	25	.050	.010	5.00	10.210
6006	5-2	75	.060		15.00	9.710
6006	6-6	65	.240	.030	6.90	3.730

HOLE	SEC	CM	ORCAR	NITR%	CARNIT	CALCAR
6006	9CC		.030	.020	3.00	84.250
6007	2-2	125	.080		8.50	
6007	4-5	120	.360	.060	5.50	14.390
6007	5-2	115	.590	.070	8.40	2.720
6007	6-2	124	.380	.060	6.30	7.130
6007	8-1	135	.110	.030	3.30	9.620
6007	9-1	125	.460	.090	5.10	3.740
6007B	1-1	130	.410	.060	6.90	9.410
6007B	5-1	130	.650	.130	5.00	3.940
6007B	10-1	133	.310	.030	8.90	2.070
6007B	10-5	145	.240	.060	3.80	13.570
6007B	18-3	79	.040	.010	4.00	16.660
6008	1-2	123	.300	.030	10.00	12.210
6008	1-4	125	.520	.080	6.60	22.800
6008	3-1	136	.480	.050	9.70	8.930
6008	4-2	105	.390	.060	6.00	13.620
6008	5-1	125	.080	.030	2.30	17.440
6008	6-1	115	.170	.040	3.90	11.630
6008	10-1	115	.100	.030	3.30	6.900
6008	12-2	25	.090	.020	4.70	17.250
6008	13-1	125	.080	.070	1.10	30.280
6008	13-2	120	.100	.020	5.00	19.680
6009B	1-1	81	.590	.020		7.010
6009B	3-1	125	.050	.020	2.50	3.400
6009B	4-1	115	.510	.050	9.40	11.870
6009B	8-3	115	.460	.060	7.10	3.370
6009B	9-2	65	.520	.080	6.10	3.020
6009B	10-2	105	.730	.110	6.60	7.120
6009B	11-1	105	.610	.080	7.20	1.470
6009B	14-4	97	.630	.110	5.50	6.430
6009B	16-1	120	.070	.010	7.50	2.890
6009B	19-1	91	.040	.010	4.00	1.790
6009B	20-1	130	.850	.090	9.00	17.460
6009B	23-1	110	.050	.010	5.00	2.290
6009B	27-1	40	.070	.050		2.860
6009B	30-2	51	.840			2.600
6009B	31-1	100	.020	.050		5.390
6010	2-2	119	.440	.080	5.50	21.150
6010	3-2	105	.430	.090	4.60	21.620
6010	4-2	105	.390	.060	6.00	20.990
6010	5-1	85	.460	.090	5.10	7.410
6010	6-2	2	.320	.090	3.60	15.310
6010	7-2	105	.060	.050		1.960
6010	7-4	125	.260	.050	4.70	16.480

HOLE	SEC	CM	ORCAR	NITR%	CARNIT	CALCAR
6010	8-1	100	.310	.110	2.70	14.920
6010	9-2	85	.270	.060	5.40	10.150
6010	11-2	75	.030	.010	3.00	.630
6010	13-2	111	.300	.070	4.00	3.650
6010	16-2	90	.330	.080	4.20	2.680
6010	17-1	140	.300			4.000
6010	19-1	50	.290	.070	4.20	4.110
6010	21-2	100	.440	.100	4.40	1.850
6010	25-1	100	.780	.110	6.80	1.640
6010	26-2	100	.620	.210	2.90	4.490
6010	27-1	75	.070	.020	3.50	1.920
6010	27-1	130	.800	.110	7.30	2.810
6011	23-1	130	.160	.040	4.00	3.660
6011	26-2	70	.050	.030		3.610
6011	28-6	69	1.820	.280		5.430
6012	1-5	95	.370	.400		3.120
6012	2-6	75	.420	.640		2.930
6012	3-2	95	.410	.520		2.600
6012	3-4	105	.590	.440		3.270
6012	3-6	85	.950	.520		2.340
6012	4-3	99	.460	.790		3.580
6012	5-4	105	.590	.980		2.500
6012	6-1	105	.480	.060	8.10	4.500
6012	8-2	105	.800	.100	8.00	1.770
6012	9-2	115	.820	.080	9.60	1.100
6012	12-6	50	.650	.070	9.40	1.400
6012	18-4	124	.470	.050	6.30	2.550
6012	25-4	50	.350	.050	7.10	2.860
6012	28-2	50	.490	.070	7.00	9.410
6012	33-4	35	.520	.070	7.40	2.430
6012	33-4	97	.250	.040	5.70	9.330
6013	4-1	135	.290	.060	4.80	3.490
6013	5-2	2	.300	.050	6.00	3.520
6013	6-2	125	.280	.060	4.80	2.040
6013	6-3	85	.340	.070	4.90	2.400
6013	7-3	75	.410	.120	5.50	3.840
6013	7-5	35	.350	.090	3.90	7.580
6013	7-6	138	.390	.090	4.40	6.920
6013	8-2	105	.330	.080	4.10	4.090
6013	11-2	110	.060	.010	6.50	3.910
6013	11-4	115	.080	.020		3.860
6013	15-1	110	.290	.080	3.70	6.090
6013B	16-2	12	.560	.060	5.10	7.790
6013B	18-2	21	.610	.050	6.40	7.680

HOLE	SEC	CM	ORCAR	NITR%	CARNIT	CALCAR
6013B	22-2	88	.430	.080	5.30	5.610
6013B	26-1	145	.700	.120	5.80	7.270
6013B	28-1	110	.500	.080	6.20	6.090
6013B	31-1	140	.270	.050	5.40	2.850
6014	2-3	116	.390			4.730
6014	2-3	139	.410	.070	5.90	12.590
6014	6-2	85	.060	.040		
6014	7-2	85	.300	.050	6.10	1.630
6014	7-4	81	.290	.040	6.40	
6014	9-1	100	.080	.030		19.210
6014	10-1	120	.530	.090	5.90	1.180
6015	2-1	143	.160	.030		.050
6015	4-1	125	.050	.100		2.350
6015	6-1	120	.450	.090	5.10	3.610
6015	6-1	125	.190	.030	6.50	2.790
6016B	1-1	130	.060	.030		3.130
6016B	2-1	140	.080	.040		3.580
6016B	6-1	75	.900	.110	7.80	1.150
6017	1-2	75	.360	.040	9.00	1.900
6017	2-3	60	.400	.050	6.70	3.400
6017	5-1	136	.050	.050	9.20	
6017	7-1	45	.780	.080	9.80	
6017	8-1	145	.410	.070	5.90	
6017	9-1	134	.460	.060	7.60	
6018	6-2	25	.170	.040	6.00	
6019	1-1	150	2.070	.370	5.50	3.820
6019	2-2	118	1.820			1.840
6019	2-3	122	1.130			.970
6019	3-1	140	1.830	.350	5.30	1.220
6019	4-1	30	.780	.130	6.00	2.030
6019	4-2	73	.320	.050	6.40	1.030
6019	4-6	41	.730	.110	6.60	2.700
6019	5-1	81	.580			
6019	7-1	104		.190		
6019	8-1	30	.210			90.730
6019B	1-2	118				1.640
6020	1-1	85	.610	.090	6.80	
6020	2-2	25	.310	.050	6.30	2.440
6020	3-2	118	.490	.060	8.20	.060
6020	4-2	15	.600	.080	7.10	6.910
6020	4-2	40	.840	.100	8.40	1.740
6020	6-1	72	.410	.080	5.10	2.360
6021	1-3	115	.390	.070	5.20	6.520
6021	2-3	125	.460	.070	6.60	5.680

HOLE	SEC	CM	ORCAR	NITR%	CARNIT	CALCAR
6021	2-4	50	.400	.060	6.70	5.640
6021C	1-2	12	.540	.080	6.70	8.720
6021C	1-2	112	.340	.050	6.80	5.060
6021C	2-2	112	.470	.070	6.70	4.140
6021C	3-2	115	.480	.070	6.90	3.970
6021C	6-1	113	.390	.060	6.60	6.350
6021C	7-1	38	.390	.050	7.20	.080
6021C	8-3	27	.400	.060	6.70	.080
6021C	9-2	25	.500	.070	7.20	.160
6021C	10-2	127	.470	.090	5.20	3.950
6021C	11-3	120	.310	.080	3.60	12.560
6021C	12-3	70	.360	.030	10.40	11.390
6021C	14-1	110	.460	.050	8.40	3.070
6021C	17-1	100	.430	.030	14.50	2.600
6021C	21-2	100	.370	.060	6.20	4.480
6021C	26-3	75	.680	.090	7.60	6.300
6021C	29-1	100	.800	.150	5.30	6.340
6021C	32-1	69	.410	.070	5.50	12.910

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## APPENDIX I -- APPROXIMATE DEPTH BELOW SEA FLOOR

The introduction to this report contains a discussion of the uncertainty of sample depth resulting from conditions inherent in the drilling and coring operations. This appendix contains a listing of the nominal and maximum depths (in meters) below the sea floor for most of the samples. The actual location of a given sample may occur anywhere within this range. However, in agreement with the practices established in the Deep Sea Drilling Project Initial Reports, the nominal depths should be used as the official sample depths. The equations used to determine these depths are:

$$DN = CORTOP + ((SEC - 1)1.5) + ((CM).01) - (SECREC(1.5)) - RECOV$$

$$DM = CORBOT - (SECREC - SEC + 1) + ((CM).01)$$

Where:

DN	Nominal Depth (m)
DM	Maximum Depth (m)
CORTOP	Depth of penetration to top of core (m)
CORBOT	Depth of penetration to bottom of core (m)
SEC	Section Number
CM	Depth of sample in the section
SECREC	Number of sections recovered in core
RECOV	Recovery in core (m)

The CORTOP, CORBOT, SECREC and RECOV values can be recovered from tables in Hathaway and others (1976). The values in the CM column are corrected; see APPENDIX II.

HOLE	CORE	SEC	CM	NDM. DEPTH	MAX. DEPTH
6002	1	1	126	.06	7.96
6002	1	1	130	.10	8.00
6002	2	1	125	8.25	17.15
6002	2	1	128	8.28	17.18
6002	2	1	131	8.31	17.21
6002	3	1	5	17.55	17.55
6002	3	1	25	17.75	17.75
6002	3	1	50	18.00	18.00
6002	3	2	49	19.49	19.49
6002	3	3	5	20.55	20.55
6002	3	3	70	21.20	21.20
6002	3	4	20	22.20	22.20
6002	3	5	5	23.55	23.55
6002	3	5	40	23.90	23.90
6002	3	5	115	24.65	24.65
6002	3	5	125	24.75	24.75
6002	3	6	113	26.13	26.13
6002	4	1	49	27.09	27.49
6002	4	1	85	27.45	27.85
6002	4	1	91	27.51	27.91
6002	4	2	10	28.20	28.60
6002	4	3	45	30.05	30.45
6002	4	4	44	31.54	31.94
6002	4	5	5	32.65	33.05
6002	4	6	5	34.15	34.55
6002	4	6	137	35.47	35.87
6002	5	1	105	36.05	40.65
6002	5	1	110	36.10	40.70
6002	6	1	112	41.22	48.12
6002	6	1	131	41.41	48.31
6002	6	2	30	41.90	48.80
6002	7	1	135	50.55	57.45
6002	7	2	60	51.30	58.20
6002	7	2	117	51.87	58.77
6002	7	2	145	52.15	59.05
6002	8	1	70	59.40	65.40
6002	8	1	75	59.45	65.45
6002	8	2	5	60.25	66.25
6002	8	3	5	61.75	67.75
6002	8	3	137	63.07	69.07
6002	9	1	15	69.25	69.75
6002	9	1	134	70.44	70.94
6002	9	2	10	70.70	71.20
6002	9	2	80	71.40	71.90
6002	9	3	5	72.15	72.65
6002	9	4	5	73.65	74.15
6002	9	5	5	75.15	75.65
6002	9	5	5	76.65	77.15
6002	9	5	137	77.97	78.47
6002	10	2	5	78.95	86.65
6002	10	2	30	79.20	86.90
6002	10	2	113	80.03	87.73
6002	11	1	143	86.63	94.73
6002	11	1	113	87.83	95.93
6002	11	2	5	88.25	95.35

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6002	11	2	113	89.33	97.43
6002	12	1	130	97.90	104.10
6002	12	1	140	98.00	104.20
6002	12	2	5	98.15	104.40
6002	12	2	50	98.60	104.80
6002	12	3	5	99.70	105.90
6002	13	1	50	107.40	115.70
6002	13	1	87	107.80	116.10
6002	14	1	88	117.10	118.10
6002	14	6	1	123.70	124.70
6002	14	6	30	124.00	125.00
6002	14	6	150	125.20	126.20
6002	15	1	140	126.60	131.00
6002	15	2	134	128.00	132.40
6002	15	3	84	129.00	133.40
6002	15	4	11	129.80	134.20
6002	16	1	41	136.00	141.00
6002	16	1	71	136.30	141.30
6002	16	2	5	137.10	142.10
6002	16	2	43	137.50	142.50
6002	16	2	100	138.10	143.10
6002	16	3	71	139.30	144.30
6002	16	2	100	138.10	143.10
6002	16	3	81	139.40	144.40
6002	17	1	130	146.10	150.10
6002	17	2	87	147.20	151.20
6002	17	3	121	149.00	153.00
6002	17	3	140	149.20	153.20
6002	19	1	146	164.40	169.20
6002	19	2	105	165.40	170.30
6002	20	2	81	175.90	178.00
6002	20	3	43	177.00	179.10
6002	20	3	91	177.50	179.60
6002	22	1	50	192.90	201.10
6002	22	1	80	193.20	201.40
6002	23	2	21	203.80	208.70
6002	23	3	85	206.00	210.90
6002	24	1	111	211.70	220.90
6002	25	CC		221.40	230.60
6002	27	CC		240.10	249.50
6002	28	1	129	249.90	258.90
6002	32	CC		287.60	297.10
6002	33	1	17	297.40	303.50
6002	33	1	72	297.90	304.00
6002	33	1	88	298.10	304.20
6004	1	1	104	.34	7.14
6004	1	1	130	.60	7.40
6004	1	1	150	.80	7.60
6004	1	2	10	.90	7.70
6004	1	2	127	2.07	8.87
6004	2	2	107	13.17	14.77
6004	2	2	135	13.45	15.05
6004	2	2	150	13.60	15.20
6004	3	1	103	16.23	24.23
6004	3	1	132	16.52	24.52

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6004	3	1	150	16.70	24.70
6004	4	1	140	25.00	29.00
6004	4	3	89	27.49	31.49
6004	4	3	150	28.10	32.10
6004	4	4	100	29.10	33.10
6004	4	4	110	29.20	33.20
6004	4	4	150	29.60	33.60
6004	5	1	91	34.51	38.21
6004	5	2	137	36.47	40.17
6004	5	4	99	39.09	42.79
6004	5	4	135	39.45	43.15
6004	5	4	150	39.60	43.30
6004	6	1	61	43.91	44.31
6004	6	2	75	45.55	45.95
6004	6	3	20	46.50	46.90
6004	6	3	150	47.80	48.20
6004	6	4	125	49.05	49.45
6004	6	5	5	49.35	49.75
6004	6	5	135	50.65	51.05
6004	6	5	150	50.80	51.20
6004	6	6	5	50.85	51.25
6004	6	6	144	52.24	52.64
6004	7	1	107	53.47	54.17
6004	7	1	125	53.65	54.35
6004	7	1	150	53.90	54.60
6004	7	2	5	53.95	54.65
6004	7	2	150	55.40	56.10
6004	7	3	110	56.50	57.20
6004	7	3	125	56.65	57.35
6004	7	3	150	56.90	57.60
6004	7	4	40	57.30	58.00
6004	7	4	110	58.00	58.70
6004	7	4	150	58.40	59.10
6004	7	5	47	58.87	59.57
6004	7	5	150	59.90	60.60
6004	7	6	110	61.00	61.70
6004	7	6	125	61.15	61.85
6004	7	6	150	61.40	62.10
6004	8	1	120	62.70	69.70
6004	8	2	144	64.44	71.44
6004	9	1	58	71.98	72.78
6004	9	1	80	72.20	73.00
6004	9	1	125	72.65	73.45
6004	9	4	125	77.15	77.95
6004	9	6	110	80.00	80.80
6004	10	1	121	81.71	85.81
6004	10	2	145	83.45	87.55
6004	10	3	5	83.55	87.65
6004	10	3	50	84.00	88.10
6004	10	3	80	84.30	88.40
6004	10	3	105	84.55	88.65
6004	10	3	150	85.00	89.10
6004	10	4	130	86.30	90.40
6004	10	4	145	86.45	90.55
6004	10	4	150	86.50	90.60

HOLE	CORE	SEC	CM	VCM. DEPTH	MAX. DEPTH
6004	11	1	55	91.15	91.55
6004	11	1	112	91.72	92.12
6004	11	2	90	93.00	93.40
6004	11	3	90	94.50	94.90
6004	11	4	112	96.22	96.62
6004	11	5	95	97.55	97.95
6004	11	6	100	99.10	99.50
6004	11	6	150	99.60	100.00
6004	12	1	118	100.50	104.60
6004	12	3	85	103.20	107.30
6004	12	4	150	105.30	109.40
6004	13	2	25	110.40	111.60
6004	13	2	82	111.00	112.10
6004	13	3	64	112.30	113.40
6004	13	4	115	114.30	115.40
6004	13	5	105	115.70	116.90
6004	13	5	70	116.90	118.00
6004	13	5	80	117.00	118.10
6004	13	6	150	117.70	118.80
6004	14	2	37	119.40	121.10
6004	14	2	59	119.60	121.30
6004	14	3	74	121.20	122.90
6004	14	4	78	122.80	124.50
6004	14	5	56	124.10	125.80
6004	14	6	5	125.10	126.80
6004	14	6	47	125.50	127.20
6004	14	6	100	126.00	127.70
6004	15	1	110	129.40	130.50
6004	15	2	110	130.90	132.00
6004	15	3	110	132.40	133.50
6004	15	4	110	133.90	135.00
6004B	2	1	40	147.90	149.70
6004B	2	1	70	148.20	149.00
6004B	2	2	110	150.10	150.90
6004B	2	3	110	151.60	152.40
6004B	2	4	110	153.10	153.90
6004B	2	5	110	154.60	155.40
6004B	2	6	6	155.10	155.90
6004B	2	6	80	155.80	156.60
6004B	2	6	132	156.30	157.10
6004B	2	6	150	156.50	157.30
6004B	4	1	110	167.00	175.40
6004B	4	1	145	167.40	175.80
6004B	5	1	117	176.30	185.00
6004B	5	1	132	176.40	185.10
6004B	5	1	141	176.50	185.20
6004B	5	CC		176.60	185.30
6004B	6	2	40	187.20	189.20
6004B	6	5	145	192.80	194.80
6004B	7	1	80	195.70	196.60
6004B	7	6	5	202.40	203.30
6004B	7	6	65	203.00	203.90
6004B	8	6	69	211.60	210.40
6004B	10	1	135	214.40	213.80
6004B	11	1	54	219.30	222.40

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6004B	11	1	75	219.50	222.60
6004B	12	2	70	225.00	232.10
6004B	13	2	135	236.20	240.60
6004B	14	2	97	244.70	245.60
6004B	14	5	145	251.20	252.10
6004B	15	1	60	252.60	260.30
6004B	15	1	99	253.00	260.70
6004B	16	3	93	263.90	270.10
6004B	16	3	145	264.50	270.70
6004B	19	1	46	290.20	290.20
6004B	19	1	20	289.90	289.90
6004B	19	1	83	290.50	290.50
6004B	19	1	145	291.10	291.20
6004B	19	2	80	292.00	292.00
6004B	19	6	80	298.00	298.00
6004B	20	1	102	299.00	307.40
6004B	20	1	133	299.30	307.70
6004B	20	1	145	299.50	307.90
6005	2	1	35	9.55	16.85
6005	2	1	70	9.90	17.20
6005	4	2	92	29.72	37.52
6005	4	2	110	29.90	37.70
6005	5	1	145	38.25	47.55
6005	6	1	140	47.50	44.50
6005B	2	2	20	29.90	36.80
6005B	2	2	30	30.00	36.90
6005B	2	2	130	31.00	37.90
6006	3	2	75	26.15	28.55
6006	3	4	25	28.65	31.05
6006	5	CC		47.90	51.10
6006	5	2	75	44.15	47.45
6006	6	3	139	53.59	56.09
6006	6	6	30	57.00	59.50
6006	6	6	57	57.27	59.77
6006	6	6	65	57.35	59.85
6006	8	CC		70.50	79.80
6006	9	CC		79.90	89.30
6007	1	1	1	.99	7.31
6007	2	2	117	9.97	15.57
6007	2	2	125	10.05	15.65
6007	2	3	100	11.30	16.90
6007	3	5	145	23.75	24.35
6007	3	6	19	23.99	24.59
6007	3	6	150	33.80	35.40
6007	4	5	120	32.60	35.10
6007	4	5	150	32.90	35.40
6007	5	1	38	35.68	40.68
6007	5	1	150	36.80	41.80
6007	5	2	75	37.55	42.55
6007	5	2	115	37.95	42.95
6007	5	2	150	38.30	43.30
6007	5	3	19	38.49	43.49
6007	6	1	120	44.90	51.00
6007	6	2	90	46.10	52.20
6007	6	2	124	46.44	52.54

HOLE	CORE	SEC	CM	NO. DEPTH	MAX. DEPTH
6007	6	2	150	46.70	52.80
6007	6	3	80	47.50	53.60
6007	6	3	100	47.70	53.80
6007	6	3	145	48.15	54.25
6007	7	1	130	54.50	63.50
6007	8	1	110	66.90	72.80
6007	8	1	135	67.15	73.05
6007	8	1	145	67.25	73.15
6007	9	1	125	74.05	82.65
6007	10	1	129	83.29	92.19
6007	10	1	145	83.45	92.35
6007	11	2	11	93.11	100.40
6007B	1	1	120	121.00	130.20
6007B	1	1	130	121.10	130.30
6007B	1	1	150	121.30	130.50
6007B	2	2	118	132.90	137.50
6007B	2	2	130	133.00	137.60
6007B	2	3	105	134.20	138.80
6007B	2	3	150	134.70	139.30
6007B	3	1	105	139.30	146.40
6007B	4	2	57	149.20	155.20
6007B	4	3	70	150.80	156.80
6007B	4	3	80	150.90	156.90
6007B	4	3	147	151.60	157.60
6007B	5	CC		158.00	167.60
6007B	5	1	130	157.80	167.40
6007B	5	1	140	157.90	167.50
6007B	6	2	55	169.60	176.10
6007B	7	1	112	181.60	186.10
6007B	7	1	145	182.00	186.50
6007B	8	1	140	186.80	194.70
6007B	8	2	30	187.20	195.10
6007B	8	2	110	188.00	195.90
6007B	10	1	133	206.10	207.80
6007B	10	2	110	207.40	209.10
6007B	10	3	45	208.30	210.00
6007B	10	4	100	210.30	212.00
6007B	10	5	50	211.30	213.00
6007B	10	5	145	212.30	214.00
6007B	10	6	50	212.80	214.50
6007B	10	6	100	213.30	215.00
6007B	10	6	150	213.80	215.50
6007B	11	2	20	217.00	218.00
6007B	11	2	70	217.50	218.50
6007B	11	2	110	217.90	218.90
6007B	11	3	86	219.20	220.20
6007B	11	5	145	222.80	223.80
6007B	12	3	132	229.80	230.00
6007B	12	4	145	231.50	231.70
6007B	12	5	70	232.20	232.40
6007B	15	1	95	253.60	261.90
6007B	18	3	79	284.90	290.40
6008	1	1	100	.20	4.10
6008	1	2	55	1.25	5.15
6008	1	2	63	1.33	5.23

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6008	1	2	123	1.93	5.83
6008	1	2	149	2.19	6.09
6008	1	3	99	3.19	7.09
6008	1	3	150	3.70	7.60
6008	1	4	125	4.95	8.85
6008	1	4	150	5.20	9.10
6008	2	1	150	10.10	18.20
6008	3	1	136	19.26	25.76
6008	3	1	145	19.35	25.85
6008	3	2	11	19.51	26.01
6008	4	2	105	29.55	36.15
6008	4	2	150	30.00	36.60
6008	5	1	90	40.30	46.70
6008	5	1	125	40.65	47.05
6008	6	1	115	49.05	57.85
6008	6	1	150	49.40	58.20
6008	8	1	130	62.50	71.70
6008	9	1	127	72.57	79.67
6008	9	1	143	72.73	79.83
6008	9	2	54	73.34	80.44
6008	9	2	150	74.30	81.40
6008	10	1	115	81.95	90.45
6008	10	CC		82.30	90.80
6008	11	2	90	93.20	99.70
6008	12	2	25	100.90	108.40
6008	12	2	129	101.90	109.50
6008	13	1	50	110.30	117.00
6008	13	1	125	111.00	117.80
6008	13	2	120	112.50	119.20
6009	1	1	135	.15	8.95
6009	1	1	143	.23	9.03
6009	1	1	150	.30	9.10
6009	2	1	150	9.70	18.30
6009	3	2	150	20.10	25.90
6009	3	3	4	20.14	25.94
6009	3	3	50	20.60	26.40
6009	3	3	131	21.41	27.21
6009	3	3	150	21.60	27.40
6009	5	CC		38.40	46.30
6009	6	1	127	46.37	55.57
6009B	1	1	81	.41	6.91
6009B	1	1	112	.72	7.22
6009B	1	1	100	.60	7.10
6009B	1	1	141	1.01	7.51
6009B	1	1	149	1.09	7.59
6009B	2	1	125	8.45	13.75
6009B	3	CC		17.20	24.70
6009B	3	1	125	15.45	22.95
6009B	3	1	147	15.67	23.17
6009B	3	2	60	16.30	23.80
6009B	4	1	115	25.35	32.25
6009B	4	1	150	25.70	32.60
6009B	4	2	48	26.18	33.08
6009B	4	2	139	27.09	33.99
6009B	4	2	150	27.20	34.10



HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
60098	5	CC		35.70	43.60
60098	5	1	9	34.29	42.19
60098	5	1	149	35.69	43.59
60098	6	CC		44.50	53.00
60098	8	CC		66.10	72.20
60098	8	1	146	63.06	69.16
60098	8	1	150	63.10	69.20
60098	8	2	9	63.19	69.29
60098	8	2	150	64.60	70.70
60098	8	3	48	65.08	71.18
60098	8	3	115	65.75	71.85
60098	8	3	150	66.10	72.20
60098	9	CC		74.10	81.70
60098	9	1	120	72.30	79.90
60098	9	2	48	73.08	80.68
60098	9	2	65	73.25	80.85
60098	9	2	150	74.10	81.70
60098	10	CC		85.10	91.10
60098	10	2	105	83.15	89.15
60098	10	2	150	83.60	89.60
60098	10	3	47	84.07	90.07
60098	10	3	150	85.10	91.10
60098	11	1	105	91.75	98.65
60098	11	1	145	92.15	99.05
60098	11	1	150	92.20	99.10
60098	11	2	99	93.19	100.10
60098	11	2	150	93.70	100.60
60098	12	1	80	100.90	102.10
60098	12	1	100	101.10	102.30
60098	12	2	100	102.60	103.80
60098	12	3	100	104.10	105.30
60098	12	4	17	104.80	106.00
60098	12	4	150	106.10	107.30
60098	12	5	46	106.60	107.80
60098	12	5	150	107.60	109.80
60098	12	6	52	108.10	109.30
60098	12	6	150	109.10	110.30
60098	13	CC		111.50	119.80
60098	13	1	57	110.60	118.90
60098	13	1	72	110.70	119.00
60098	13	1	140	111.40	119.70
60098	14	CC		126.40	129.20
60098	14	1	129	120.20	123.00
60098	14	1	140	120.30	123.10
60098	14	2	100	121.40	124.20
60098	14	3	47	122.40	125.20
60098	14	4	46	123.90	126.70
60098	14	4	97	124.40	127.20
60098	14	5	47	125.40	128.20
60098	15	1	100	130.20	135.20
60098	15	2	100	131.70	136.70
60098	15	3	61	132.80	137.80
60098	16	1	120	139.30	147.80
60098	19	1	38	167.10	175.40
60098	19	1	121	167.90	176.20

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6009B	20	CC		175.80	185.60
6009B	20	1	130	176.60	185.40
6009B	21	2	61	187.20	192.60
6009B	21	2	100	187.60	193.00
6009B	21	3	8	188.20	193.60
6009B	21	3	12	188.20	193.60
6009B	22	CC		197.40	204.50
6009B	23	1	110	205.00	212.10
6009B	23	2	70	206.10	213.20
6009B	24	1	120	214.30	223.40
6009B	24	1	145	214.60	223.70
6009B	27	1	40	243.20	249.20
6009B	27	1	47	243.30	249.30
6009B	27	1	60	243.40	249.40
6009B	27	1	135	244.20	250.10
6009B	27	2	22	244.50	250.50
6009B	27	2	47	244.80	250.80
6009B	27	2	100	245.30	251.30
6009B	27	2	129	245.60	251.60
6009B	28	1	100	252.20	259.50
6009B	28	2	41	253.10	260.40
6009B	28	2	100	253.70	261.00
6009B	29	1	142	262.50	270.90
6009B	30	1	150	272.50	278.90
6009B	30	2	51	273.00	279.40
6009B	30	2	70	273.20	279.60
6009B	30	2	150	274.00	280.40
6009B	31	1	100	281.50	288.20
6009B	31	1	111	281.60	288.30
6009B	31	2	55	282.60	289.30
6009B	32	1	122	291.40	299.50
6010	1	CC		3.40	8.20
6010	1	1	150	.40	5.20
6010	1	2	119	1.59	6.39
6010	1	2	150	1.90	6.70
6010	1	3	80	2.70	7.50
6010	1	3	150	3.40	8.20
6010	2	CC		10.60	16.80
6010	2	1	119	8.79	14.99
6010	2	1	149	9.09	15.29
6010	2	2	100	10.10	16.30
6010	2	2	119	10.29	16.49
6010	2	2	149	10.59	16.79
6010	3	CC		18.90	26.20
6010	3	1	134	17.24	24.54
6010	3	1	150	17.40	24.70
6010	3	2	20	17.60	24.90
6010	3	2	105	18.45	25.75
6010	3	2	149	18.89	26.19
6010	3	2	150	18.90	26.20
6010	4	1	140	26.40	34.10
6010	4	2	105	27.55	35.25
6010	4	2	149	27.99	35.69
6010	5	CC		36.90	45.10
6010	5	1	85	36.25	44.45

HOLE	CORE	SEC	CM	VCM. DEPTH	MAX. DEPTH
6010	5	1	100	36.40	44.60
6010	5	1	150	36.90	45.10
6010	6	1	144	45.74	51.84
6010	6	2	2	45.82	51.92
6010	6	2	19	45.99	52.09
6010	6	2	150	47.30	53.40
6010	6	3	143	48.73	54.83
6010	6	3	150	48.80	54.90
6010	7	CC		61.10	64.30
6010	7	2	105	57.65	60.85
6010	7	3	100	59.10	62.30
6010	7	3	120	59.30	62.50
6010	7	3	150	59.60	62.80
6010	7	4	47	60.07	63.27
6010	7	4	124	60.84	64.04
6010	7	4	125	60.85	64.05
6010	7	4	140	61.00	64.20
6010	7	4	150	61.10	64.30
6010	8	CC		67.30	73.80
6010	8	1	100	65.30	71.80
6010	8	2	29	66.09	72.59
6010	9	CC		77.20	83.20
6010	9	1	136	74.06	80.06
6010	9	2	85	75.05	81.05
6010	9	3	47	76.17	82.17
6010	9	3	150	77.20	83.20
6010	10	1	120	83.80	92.40
6010	11	1	124	92.74	99.14
6010	11	2	75	93.75	100.10
6010	11	2	144	94.44	100.80
6010	11	2	150	94.50	100.90
6010	11	3	47	94.97	101.40
6010	11	3	141	95.91	102.30
6010	12	1	130	102.90	108.70
6010	12	2	47	103.60	109.40
6010	12	2	100	104.10	109.90
6010	12	2	150	104.60	110.40
6010	12	3	47	105.10	110.90
6010	12	3	54	105.10	110.90
6010	12	3	150	106.10	111.90
6010	13	1	123	113.00	119.50
6010	13	1	150	113.30	119.80
6010	13	2	100	114.30	120.80
6010	13	2	111	114.40	120.90
6010	13	2	140	114.70	121.20
6010	14	2	100	122.60	124.30
6010	14	2	150	123.10	124.80
6010	14	3	92	124.00	125.70
6010	14	3	100	124.10	125.80
6010	14	3	150	124.60	126.30
6010	14	4	100	125.60	127.30
6010	14	4	150	126.10	127.80
6010	14	5	47	126.60	128.30
6010	14	5	135	127.40	129.10
6010	14	5	150	127.60	129.30

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6010	14	6	45	128.10	129.80
6010	14	6	90	128.50	130.20
6010	14	6	140	129.00	130.70
6010	15	1	120	131.40	140.20
6010	16	1	65	140.90	144.40
6010	16	1	120	141.50	144.90
6010	16	2	90	142.70	146.10
6010	16	2	100	142.90	146.20
6010	16	2	150	143.30	146.70
6010	16	3	90	144.20	147.60
6010	16	3	150	144.80	148.20
6010	16	4	46	145.30	148.70
6010	16	4	139	146.20	149.60
6010	17	1	140	149.80	159.30
6010	18	1	90	159.40	168.00
6010	18	1	100	159.50	168.10
6010	19	1	25	169.00	169.00
6010	19	1	40	169.10	169.10
6010	19	1	50	169.20	169.20
6010	19	1	150	170.20	170.20
6010	19	2	47	170.70	170.70
6010	19	2	150	171.70	171.70
6010	19	3	47	172.20	172.20
6010	19	3	150	173.20	173.20
6010	19	4	100	174.20	174.20
6010	19	4	150	174.70	174.70
6010	19	5	47	175.20	175.20
6010	19	5	150	176.20	176.20
6010	19	6	100	177.20	177.20
6010	19	6	130	177.50	177.50
6010	19	6	139	177.60	177.60
6010	20	1	140	178.10	179.90
6010	20	2	150	179.70	181.50
6010	20	3	100	180.70	182.50
6010	20	3	120	180.90	182.70
6010	20	3	150	181.20	183.00
6010	20	4	30	181.50	183.30
6010	20	4	150	182.70	184.50
6010	20	5	12	182.80	184.60
6010	20	5	50	183.20	185.00
6010	20	5	150	184.20	186.00
6010	20	6	47	184.70	186.50
6010	20	6	56	184.80	186.60
6010	20	6	150	185.70	187.50
6010	21	CC		192.80	196.90
6010	21	2	5	188.30	192.40
6010	21	2	100	189.30	193.40
6010	22	1	100	197.40	198.40
6010	22	1	150	197.90	198.90
6010	22	2	150	199.40	200.40
6010	22	3	142	200.80	201.80
6010	22	3	150	200.90	201.90
6010	22	4	150	202.40	203.40
6010	22	5	100	203.40	204.40
6010	22	5	135	203.80	204.80

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6010	22	5	150	203.90	204.90
6010	22	6	60	204.50	205.50
6010	22	6	110	205.00	206.00
6010	22	6	150	205.40	206.40
6010	23	CC		207.00	215.80
6010	23	1	142	206.90	215.70
6010	25	CC		226.70	234.70
6010	25	1	100	226.20	234.20
6010	26	1	100	235.90	236.20
6010	26	2	20	236.60	236.90
6010	26	2	47	236.90	237.20
6010	26	2	61	237.00	237.30
6010	26	2	100	237.40	237.70
6010	26	4	145	240.90	241.20
6010	26	6	46	242.90	243.20
6010	27	1	75	244.50	252.90
6010	27	1	80	244.50	252.30
6010	27	1	87	244.60	253.00
6010	27	1	105	244.80	253.10
6010	27	1	118	244.90	253.30
6010	27	1	130	245.00	253.40
6010	27	1	137	245.10	253.50
6011	1	1	93	.83	8.53
6011	1	1	100	.90	8.60
6011	1	1	149	1.39	9.09
6011	4	1	140	27.60	32.50
6011	7	1	0	51.40	59.90
6011	7	1	123	52.63	61.03
6011	7	1	142	52.82	61.22
6011	8	1	75	62.15	62.45
6011	8	1	100	62.40	62.70
6011	8	2	7	62.97	63.27
6011	8	2	20	63.10	63.40
6011	8	2	150	64.40	64.70
6011	8	3	75	65.15	65.45
6011	8	3	150	65.90	66.20
6011	8	4	47	66.37	66.67
6011	8	5	75	68.15	68.45
6011	8	5	150	68.90	69.20
6011	9	1	125	71.65	78.75
6011	9	2	47	72.37	79.47
6011	9	2	149	73.39	80.49
6011	10	1	140	80.80	89.80
6011	11	1	20	90.20	90.30
6011	11	2	75	92.25	92.35
6011	11	4	100	95.50	95.60
6011	11	5	129	97.29	97.39
6011	12	1	125	99.90	108.30
6011	13	1	100	108.90	110.00
6011	13	1	130	109.20	110.30
6011	13	3	15	111.00	112.10
6011	13	4	100	113.40	114.50
6011	13	6	60	116.00	117.10
6011	14	2	75	119.30	125.40
6011	14	3	98	121.00	127.20

HOLE	CORE	SEC	CM	NDM. DEPTH	MAX. DEPTH
6011	15	2	44	128.20	136.10
6011	16	2	28	138.10	145.40
6011	16	2	100	138.80	146.10
6011	16	2	115	139.00	146.30
6011	17	2	110	148.00	155.70
6011	20	1	110	176.00	184.30
6011	20	1	140	176.30	184.60
6011	21	1	135	184.90	194.10
6011	22	1	140	194.40	203.50
6011	23	1	130	203.70	212.60
6011	26	2	70	232.70	240.30
6011	28	6	69	258.70	259.20
6012	1	CC		7.30	9.10
6012	1	1	150	1.30	3.10
6012	1	2	40	1.70	3.50
6012	1	2	135	2.65	4.45
6012	1	2	142	2.72	4.52
6012	1	3	80	3.60	5.40
6012	1	4	24	4.54	6.34
6012	1	4	149	5.79	7.59
6012	1	5	43	6.23	8.03
6012	1	5	95	6.75	8.55
6012	1	5	140	7.20	9.00
6012	2	CC		18.40	20.10
6012	2	1	147	10.87	12.57
6012	2	6	75	17.65	19.35
6012	2	6	142	18.32	20.02
6012	2	6	150	18.40	20.10
6012	3	CC		29.40	29.60
6012	3	2	95	22.85	23.05
6012	3	2	149	23.39	23.59
6012	3	3	116	24.56	24.76
6012	3	3	146	24.86	25.06
6012	3	4	105	25.95	26.15
6012	3	4	148	26.38	26.58
6012	3	5	100	27.40	27.60
6012	3	5	150	27.90	28.10
6012	3	6	85	28.75	28.95
6012	3	6	100	28.90	29.10
6012	3	6	148	29.38	29.58
6012	4	1	100	30.20	35.50
6012	4	1	150	30.70	36.00
6012	4	2	144	32.14	37.44
6012	4	3	2	32.22	37.52
6012	4	3	63	32.83	38.13
6012	4	3	99	33.19	38.49
6012	4	3	109	33.29	38.59
6012	4	3	140	33.60	38.90
6012	5	1	61	39.71	39.81
6012	5	1	100	40.10	40.20
6012	5	2	100	41.60	41.70
6012	5	3	140	43.50	43.60
6012	5	4	105	44.65	44.75
6012	5	5	142	46.52	46.62
6012	5	5	150	46.60	46.70

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6012	5	5	9	46.69	46.79
6012	6	1	105	49.15	57.15
6012	7	1	81	48.91	56.91
6012	7	1	100	49.10	57.10
6012	7	1	148	49.58	57.58
6012	8	1	143	68.03	73.43
6012	8	1	150	68.10	73.50
6012	8	2	100	69.10	74.50
6012	8	2	105	69.15	74.55
6012	8	2	115	69.25	74.65
6012	8	2	150	69.60	75.00
6012	8	3	94	70.54	75.94
6012	8	3	150	71.10	76.50
6012	9	CC		79.20	85.70
6012	9	1	100	77.20	83.70
6012	9	2	100	78.70	85.20
6012	9	2	115	78.85	85.35
6012	9	2	150	79.20	85.70
6012	10	1	127	86.27	94.57
6012	11	CC		101.50	104.50
6012	11	1	47	94.47	97.47
6012	11	1	148	95.48	99.48
6012	11	2	70	96.20	99.20
6012	11	2	95	96.45	99.45
6012	11	2	100	96.50	99.50
6012	11	3	47	97.47	100.50
6012	11	3	70	97.70	100.70
6012	11	3	150	98.50	101.50
6012	11	4	75	99.30	102.30
6012	11	4	100	99.50	102.50
6012	11	4	148	100.00	103.00
6012	11	5	47	100.50	103.50
6012	11	5	150	101.50	104.50
6012	12	1	70	105.50	105.60
6012	12	1	130	106.10	106.20
6012	12	2	150	107.80	107.90
6012	12	3	32	108.10	108.20
6012	12	4	100	110.30	110.40
6012	12	4	150	110.80	110.90
6012	12	5	100	111.80	111.90
6012	12	5	150	112.30	112.40
6012	12	5	37	112.70	112.80
6012	12	6	50	112.80	112.90
6012	12	6	100	113.30	113.40
6012	12	6	150	113.80	113.90
6012	13	1	150	115.70	115.90
6012	13	2	34	116.00	116.20
6012	13	2	100	116.70	116.90
6012	13	2	150	117.20	117.40
6012	13	3	100	118.20	118.40
6012	13	3	148	118.70	118.90
6012	13	4	47	119.20	119.40
6012	13	4	150	120.20	120.40
6012	13	5	100	121.20	121.40
6012	13	5	150	121.70	121.90

HOLE	CORE	SEC	CM	NJM. DEPTH	MAX. DEPTH
6012	13	6	47	122.20	122.40
6012	13	6	150	123.20	123.40
6012	14	CC		132.70	132.90
6012	14	1	100	124.70	124.90
6012	14	2	100	126.20	126.40
6012	14	2	150	126.70	126.90
6012	14	3	100	127.70	127.90
6012	14	3	150	128.20	128.40
6012	14	4	100	129.20	129.40
6012	14	4	150	129.70	129.90
6012	14	5	100	130.70	130.90
6012	14	6	47	131.70	131.90
6012	14	6	140	132.60	132.80
6012	15	1	100	133.40	141.80
6012	16	1	98	142.80	142.90
6012	16	1	150	143.30	143.40
6012	16	2	100	144.30	144.40
6012	16	2	150	144.80	144.90
6012	16	3	100	145.80	145.90
6012	16	3	150	146.30	146.40
6012	16	4	47	146.80	146.90
6012	16	4	150	147.80	147.90
6012	16	5	100	148.80	148.90
6012	16	5	129	149.10	149.20
6012	18	1	100	153.00	153.20
6012	18	1	150	153.50	153.70
6012	18	2	100	154.50	154.70
6012	18	2	150	155.00	155.20
6012	18	3	100	156.00	156.20
6012	18	3	150	156.50	156.70
6012	18	4	100	157.50	157.70
6012	18	4	124	157.70	157.90
6012	18	4	150	158.00	158.20
6012	18	5	100	159.00	159.20
6012	18	5	150	159.50	159.70
6012	18	6	47	160.00	160.20
6012	18	6	140	160.90	161.10
6012	19	CC		163.80	170.70
6012	19	1	100	161.80	168.70
6012	19	1	150	162.30	169.20
6012	19	2	47	162.80	169.70
6012	19	2	140	163.70	170.60
6012	21	1	100	180.70	187.60
6012	21	2	100	182.20	189.10
6012	22	1	47	190.30	198.30
6012	22	1	136	191.20	199.20
6012	25	1	100	219.60	219.70
6012	25	2	100	221.10	221.20
6012	25	3	100	222.60	222.70
6012	25	4	50	223.60	223.70
6012	25	4	100	224.10	224.20
6012	25	5	100	225.60	225.70
6012	25	5	100	227.10	227.20
6012	25	2	20	228.20	229.80
6012	26	5	100	235.00	236.60



HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6012	27	1	100	237.90	246.40
6012	28	1	100	248.20	248.30
6012	28	2	50	249.20	249.30
6012	28	2	100	249.70	249.80
6012	28	3	100	251.20	251.30
6012	28	4	100	252.70	252.80
6012	28	5	100	254.20	254.30
6012	28	6	47	255.20	255.30
6012	29	1	47	257.10	257.30
6012	29	2	100	259.10	259.30
6012	29	3	47	260.10	260.30
6012	29	4	46	261.60	261.80
6012	29	4	100	262.10	262.30
6012	29	5	46	263.10	263.30
6012	29	6	47	264.60	264.80
6012	30	1	100	265.60	270.20
6012	30	1	130	265.90	270.50
6012	30	2	100	267.10	271.70
6012	30	3	98	268.60	273.20
6012	30	3	120	268.80	273.40
6012	30	4	47	269.60	274.20
6012	30	4	70	269.80	274.40
6012	31	1	130	275.50	281.80
6012	31	2	100	277.70	283.00
6012	31	3	47	278.70	284.00
6012	32	1	90	285.70	293.80
6012	32	1	130	286.10	294.20
6012	33	1	100	295.00	295.90
6012	33	2	47	296.00	296.90
6012	33	2	100	296.50	297.40
6012	33	2	113	296.60	297.50
6012	33	3	47	297.50	298.40
6012	33	4	35	298.90	299.80
6012	33	4	47	299.00	299.90
6012	33	4	78	299.30	300.20
6012	33	4	97	299.50	300.40
6012	33	4	110	299.60	300.50
6012	33	4	137	299.90	300.80
6012	33	5	100	301.00	301.90
6012	33	6	47	302.00	302.90
6013	3	1	143	19.43	28.23
6013	4	1	104	28.84	35.14
6013	4	1	135	29.15	36.45
6013	4	1	150	29.30	36.60
6013	4	2	52	29.82	37.12
6013	4	2	132	30.52	37.92
6013	4	2	150	30.80	38.10
6013	5	2	2	38.42	46.12
6013	5	2	48	38.88	46.58
6013	6	2	125	50.25	55.25
6013	6	2	152	50.52	55.52
6013	6	3	75	51.25	56.25
6013	6	3	85	51.35	56.35
6013	6	3	149	51.99	56.99
6013	7	1	100	58.10	58.80

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6013	7	2	148	60.08	60.78
6013	7	3	75	60.85	61.55
6013	7	3	100	61.10	61.80
6013	7	4	47	62.07	62.77
6013	7	4	148	63.08	63.78
6013	7	5	35	63.45	64.15
6013	7	5	113	64.23	64.93
6013	7	6	53	65.13	65.83
6013	7	6	138	65.99	66.68
6013	8	1	66	67.46	73.56
6013	8	2	105	69.35	75.45
6013	8	2	131	69.61	75.71
6013	8	2	138	69.68	75.78
6013	9	2	70	78.70	84.60
6013	11	2	110	96.90	97.80
6013	11	4	115	100.00	100.80
6013	13	1	128	119.40	128.10
6013B	14	1	140	129.70	138.00
6013B	15	1	110	138.80	147.10
6013B	16	2	12	148.10	154.10
6013B	16	3	107	150.60	156.60
6013B	17	1	143	157.50	166.60
6013B	18	2	21	168.50	170.40
6013B	19	2	47	177.50	182.80
6013B	19	2	58	177.60	182.90
6013B	19	2	130	178.30	183.60
6013B	22	2	88	205.70	211.90
6013B	24	2	139	226.40	232.80
6013B	26	1	145	242.60	251.80
6013B	28	1	110	262.50	269.10
6013B	28	2	40	263.30	269.90
6013B	31	1	140	290.40	296.30
6014	2	2	78	288.30	294.20
6014	2	2	144	17.94	24.34
6014	2	3	116	19.16	25.56
6014	2	3	139	19.39	25.79
6014	3	1	145	26.55	33.85
6014	4	3	60	38.80	42.70
6014	4	4	140	41.10	45.00
6014	6	2	85	56.15	61.85
6014	7	1	90	64.70	66.90
6014	7	2	73	66.03	68.23
6014	7	2	85	66.15	68.35
6014	7	2	128	66.58	68.78
6014	7	2	115	66.45	68.65
6014	7	3	107	67.87	70.07
6014	7	4	81	69.11	71.31
6014	7	5	45	70.25	72.45
6014	7	5	52	70.32	72.52
6014	7	5	147	71.27	73.47
6014	8	1	67	74.37	82.37
6014	9	1	100	83.70	92.50
6014	10	1	120	93.50	102.10
6014	10	1	125	93.55	102.10
6015	2	1	143	15.73	24.93

HOLE	CORE	SEC	CM	VCM. DEPTH	MAX. DEPTH
6015	3	1	138	25.28	34.28
6015	4	1	100	35.20	41.90
6015	4	1	125	35.45	42.15
6015	4	1	150	35.70	42.40
6015	4	2	42	36.12	42.82
6015	4	2	150	37.20	43.90
6015	6	CC		54.80	62.80
6015	6	1	120	54.50	62.50
6015	6	1	125	54.55	62.55
6016A	1	1	130	12.90	21.40
6016B	2	1	118	12.78	21.28
6016B	2	1	140	22.10	31.00
6016B	6	1	40	59.50	67.80
6016B	6	1	47	59.57	67.87
6016B	6	1	68	59.78	68.08
6016B	6	1	75	59.85	68.15
6016B	6	1	100	60.10	68.40
6017	1	1	120	.80	13.40
6017	1	1	149	1.09	13.69
6017	1	2	15	1.25	13.85
6017	1	2	75	1.85	14.45
6017	1	2	149	2.59	15.19
6017	2	1	100	15.60	20.90
6017	2	1	149	16.09	21.39
6017	2	2	49	16.59	21.89
6017	2	2	150	17.50	22.90
6017	2	3	48	18.08	23.38
6017	2	3	60	18.20	23.50
6017	2	3	75	18.35	23.65
6017	2	3	100	18.60	23.90
6017	2	3	139	18.99	24.29
6017	3	1	149	24.69	33.49
6017	4	1	123	33.83	40.03
6017	4	1	143	34.03	40.23
6017	4	1	149	34.09	40.29
6017	4	2	32	34.42	40.62
6017	4	2	131	35.41	41.61
6017	4	2	150	35.60	41.80
6017	4	3	25	35.85	42.05
6017	4	3	40	36.00	42.20
6017	4	3	47	36.07	42.27
6017	4	3	67	36.27	42.47
6017	4	3	100	36.50	42.80
6017	4	3	127	36.87	43.07
6017	4	3	149	37.09	43.29
6017	5	1	38	43.68	51.58
6017	5	1	105	44.35	52.25
6017	5	1	110	44.40	52.30
6017	5	1	136	44.66	52.56
6017	5	1	110	53.20	66.30
6017	6	2	123	54.83	67.93
6017	6	2	141	55.01	68.11
6017	6	2	150	55.10	68.20
6017	7	1	45	68.65	70.25
6017	7	1	55	68.75	70.35

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6017	7	1	70	68.90	70.50
6017	8	1	90	71.80	80.20
6017	8	1	115	72.05	80.45
6017	8	1	145	72.35	80.75
6017	8	1	150	72.40	80.80
6017	9	1	100	81.10	90.00
6017	9	1	134	81.44	90.34
6018	4	1	144	27.34	36.84
6018	6	2	25	46.85	47.25
6018	6	2	60	47.20	47.60
6018	6	2	91	47.51	47.91
6019	1	CC		2.90	15.90
6019	1	1	46	.36	13.36
6019	1	1	96	.96	13.86
6019	1	1	141	1.31	14.31
6019	1	1	150	1.40	14.40
6019	1	2	20	1.60	14.60
6019	1	2	40	1.80	14.80
6019	1	2	45	1.85	14.85
6019	1	2	115	2.55	15.55
6019	1	2	149	2.89	15.89
6019	2	2	50	16.90	21.00
6019	2	2	100	17.40	21.50
6019	2	2	118	17.58	21.68
6019	2	2	139	17.79	21.89
6019	2	3	100	18.90	23.00
6019	2	3	122	19.12	23.22
6019	2	3	149	19.39	23.49
6019	3	1	140	24.00	31.30
6019	3	2	0	24.10	31.40
6019	3	2	23	24.33	31.63
6019	3	2	132	25.42	32.72
6019	3	2	149	25.59	32.89
6019	3	2	150	25.60	32.90
6019	4	CC		35.50	42.20
6019	4	1	19	26.69	33.39
6019	4	1	30	26.80	33.50
6019	4	2	73	28.73	35.43
6019	4	4	116	32.16	38.86
6019	4	6	41	34.41	41.11
6019	5	CC		43.60	51.80
6019	5	1	75	42.85	51.05
6019	5	1	81	42.91	51.11
6019	5	1	112	43.22	51.42
6019	7	1	104	54.84	60.84
6019	7	1	141	55.21	61.21
6019	8	1	30	61.80	69.50
6019	8	1	149	62.99	70.69
6019B	1	CC		2.10	3.60
6019B	1	2	100	1.60	1.00
6019B	1	2	118	1.78	1.18
6020	1	CC		.90	7.90
6020	1	1	85	.25	7.25
6020	1	1	95	.35	7.35
6020	1	1	119	.59	7.59

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6020	1	3	82	3.22	10.22
6020	2	CC		12.00	16.50
6020	2	1	80	8.30	12.80
6020	2	1	149	8.99	13.49
6020	2	2	25	9.25	13.75
6020	2	2	37	9.37	13.87
6020	2	2	47	9.47	13.97
6020	2	2	140	10.40	14.90
6020	2	2	149	10.49	14.99
6020	2	3	0	10.50	15.00
6020	2	3	140	11.90	16.40
6020	3	CC		18.20	25.30
6020	3	2	47	17.17	24.27
6020	3	2	110	17.80	24.90
6020	3	2	115	17.85	24.95
6020	3	2	118	17.88	24.98
6020	3	2	125	17.95	25.05
6020	3	2	140	18.10	25.20
6020	3	3	119	19.39	26.49
6020	4	CC		27.10	31.40
6020	4	2	15	25.75	30.05
6020	4	2	40	26.00	30.30
6020	4	2	50	26.10	30.40
6020	4	2	90	26.50	30.80
6020	4	2	100	26.60	30.90
6020	5	CC		31.70	34.10
6020	5	1	141	31.61	34.01
6020	5	1	60	34.60	43.00
6020	6	1	72	34.72	43.12
6020	6	1	85	34.85	43.25
6020	6	1	129	35.29	43.69
6021	1	1	149	.59	3.99
6021	1	2	65	1.25	4.65
6021	1	2	149	2.09	5.49
6021	1	3	10	2.20	5.60
6021	1	3	40	2.50	5.90
6021	1	3	47	2.57	5.97
6021	1	3	75	2.85	6.25
6021	1	3	100	3.10	6.50
6021	1	3	110	3.20	6.60
6021	1	3	115	3.25	6.65
6021	1	3	129	3.39	6.79
6021	2	1	149	7.69	10.69
6021	2	2	112	8.82	11.82
6021	2	2	135	9.05	12.05
6021	2	2	149	9.19	12.19
6021	2	3	5	9.25	12.25
6021	2	3	48	9.68	12.68
6021	2	3	90	10.10	13.10
6021	2	3	100	10.20	13.20
6021	2	3	125	10.45	13.45
6021	2	3	135	10.55	13.55
6021	2	3	143	10.63	13.63
6021	2	3	150	10.70	13.70
6021	2	4	3	10.73	13.73

HOLE	CORE	SEC	CM	VCM. DEPTH	MAX. DEPTH
6021	2	4	48	11.18	14.18
6021	2	4	50	11.20	14.20
6021	2	4	70	11.40	14.40
6021	2	4	100	11.70	14.70
6021	2	4	106	11.76	14.76
6021	2	4	128	11.98	14.98
6021	2	4	130	12.00	15.00
6021C	1	1	75	.65	5.35
6021C	1	1	125	1.15	5.85
6021C	1	1	139	1.29	5.99
6021C	1	2	12	1.52	6.22
6021C	1	2	35	1.75	6.45
6021C	1	2	103	2.43	7.13
6021C	1	2	112	2.52	7.22
6021C	1	2	122	2.62	7.32
6021C	1	2	135	2.75	7.45
6021C	1	2	139	2.79	7.49
6021C	2	1	149	8.39	14.29
6021C	2	2	112	9.52	15.42
6021C	3	1	118	15.78	23.78
6021C	3	1	125	15.85	23.85
6021C	3	1	149	16.09	24.09
6021C	3	2	115	17.25	25.25
6021C	4	1	138	25.78	34.98
6021C	6	1	100	45.70	53.50
6021C	6	1	113	45.83	53.63
6021C	6	1	139	46.09	53.89
6021C	7	1	38	53.88	60.78
6021C	7	1	47	53.97	60.87
6021C	7	2	149	56.49	63.39
6021C	8	2	33	64.13	70.13
6021C	8	3	27	65.57	71.57
6021C	8	3	149	66.79	72.79
6021C	9	1	118	72.98	78.98
6021C	9	1	149	73.29	79.29
6021C	9	2	25	73.55	79.55
6021C	9	3	45	75.25	81.25
6021C	9	3	129	76.09	82.09
6021C	10	1	91	82.61	89.61
6021C	10	1	149	83.19	90.19
6021C	10	2	5	83.25	90.25
6021C	10	2	100	84.20	91.20
6021C	10	2	127	84.47	91.47
6021C	10	2	143	84.63	91.63
6021C	11	1	105	92.35	98.05
6021C	11	1	114	92.44	98.14
6021C	11	1	149	92.79	98.49
6021C	11	2	4	92.84	98.54
6021C	11	2	116	93.96	99.66
6021C	11	2	142	94.22	99.92
6021C	11	2	149	94.29	99.99
6021C	11	3	5	94.35	100.10
6021C	11	3	55	94.85	100.60
6021C	11	3	90	95.20	100.90
6021C	11	3	120	95.50	101.20

HOLE	CORE	SEC	CM	NOM. DEPTH	MAX. DEPTH
6021C	12	1	149	102.20	107.00
6021C	12	2	149	103.70	108.50
6021C	12	3	48	104.20	109.00
6021C	12	3	70	104.40	109.20
6021C	12	3	140	105.10	109.90
6021C	13	1	130	102.00	106.80
6021C	14	1	83	120.70	129.10
6021C	14	1	110	121.00	129.40
6021C	14	1	125	121.10	129.50
6021C	14	1	139	121.30	129.70
6021C	15	1	142	130.00	139.50
6021C	15	1	144	130.00	139.50
6021C	16	1	90	140.40	148.50
6021C	16	1	149	141.00	149.10
6021C	17	1	100	150.20	158.00
6021C	17	1	127	150.50	158.30
6021C	18	1	133	158.90	166.60
6021C	18	2	40	159.50	167.20
6021C	18	2	139	160.50	168.20
6021C	19	1	145	168.80	176.20
6021C	19	2	47	169.30	176.70
6021C	19	2	100	169.80	177.20
6021C	19	2	103	169.80	177.20
6021C	20	1	130	178.00	187.00
6021C	20	1	149	178.20	187.50
6021C	21	1	142	187.50	195.30
6021C	21	2	40	188.00	195.80
6021C	21	2	100	188.60	196.40
6021C	21	2	129	188.90	196.70
6021C	23	1	110	206.70	212.40
6021C	23	1	130	206.90	212.60
6021C	23	2	40	207.50	213.20
6021C	23	2	140	208.50	214.20
6021C	23	3	100	209.60	215.30
6021C	24	1	90	216.30	225.00
6021C	24	1	110	216.50	225.20
6021C	26	1	130	241.50	244.30
6021C	26	2	75	242.50	245.30
6021C	26	3	75	244.00	246.80
6021C	26	3	100	244.20	247.00
6021C	26	4	100	245.70	248.50
6021C	27	1	50	244.90	252.90
6021C	27	1	80	245.20	253.20
6021C	27	1	100	245.40	253.40
6021C	28	1	115	254.30	263.10
6021C	29	1	100	264.00	271.10
6021C	29	2	64	265.10	272.20
6021C	30	2	25	275.00	281.30
6021C	30	2	40	275.20	281.50
6021C	32	1	69	292.30	300.00
6021C	32	1	80	292.40	300.10

## APPENDIX II

Some of the samples were incorrectly labeled on board the drill ship. The depth in section (CM) of these samples was measured from the top of the recovered sediment rather than from the top of the section. These sample locations have been corrected in Appendix I, but because of prior sample labeling the sample locations in the data file remain uncorrected. This appendix contains a list of the mislabeled samples and the corrected CM values.

HOLE	CORE	SEC	UNCORRECTED	CORRECTED
			CM	CM
6002	1	1	6	126
6002	1	1	10	130
6002	2	1	5	125
6002	2	1	8	128
6002	2	1	11	131
6002	5	1	5	105
6002	5	1	10	110
6002	6	1	12	112
6002	6	1	31	131
6002	7	1	5	135
6002	8	1	30	70
6002	8	1	35	75
6002	11	1	3	143
6002	12	1	20	130
6002	12	1	100	140
6002	13	1	10	50
6002	13	1	47	87
6002	15	1	10	140



HOLE	CORE	SEC	UNCORRECTED CM	CORRECTED CM
6002	19	1	16	146
6004	12	1	48	118
6005	2	1	25	35
6005	2	1	60	70
6005	4	2	82	92
6007	1	1	1	101
6007B	7	1	2	112
6007B	15	1	25	95
6009	6	1	7	127
6009B	13	1	42	57
6009B	13	1	57	72
6009B	13	1	150	140
6009B	19	1	8	38
6009B	19	1	91	121
6010	11	1	4	124
6012	10	1	57	127
6012	32	1	80	90
6012	32	1	120	130