16. X-RAY MINERALOGY STUDIES – LEG 3

R. W. Rex, University of California, Riverside, California

METHODS

Semi-quantitative analyses of the crystalline components in sediments can be made by the use of X-ray powder diffraction techniques. The method used for this study is called the method of mutual standards, mutual ratios, or multiple ratios. It has been in use approximately twenty years by a number of industry and governmental laboratories, and is particularly useful for semi-quantitative ranking of relative mineral abundances. The percentage given in the analyses constitutes the percentage of those crystalline components defined to constitute 100 per cent of the sediment in question. Consequently, minerals not included in the calibration matrix may be present in the sediment, but they are ignored in calibrating the sum of the components. In addition, amorphous materials are excluded.

The bulk mineralogy analytical data presented here are obtained from carefully ground sediment samples that have been washed free of sea salts. Consequently, diffraction patterns show little or no trace of halite and gypsum. The samples were ground under *n*-butanol for two hours in alumina, motor-driven mortar and pestle grinders. The samples were then moistened with water and treated with tri-*n*-hexyl amine acetate according to the method of Rex and Bauer (1965). Moistening the specimen prior to the use of amine reagent was essential as water acts as a catalyst. The X-ray diffraction spacing for montmorillonite produced by the use of the amine reagent was 18.0 Å which is the same value obtained with glycerol. This reagent expanded corrensite and rectorite in the same fashion as does glycerol.

The calibration factor for plagioclase was based on the assumption that they are intermediate in composition. The mica calibration was based on very fine grained sedimentary K-mica, such as that which is typical of the acid insoluble fractions of limestone called illite by some workers. The phillipsite used was obtained from the horizon nodule. The clinoptilolite was provided by Dr. R. Hay. The cristobalite standard was a diagenetic alteration product of the recrystallization of diatomite from the Monterey Formation, Lompoc, California. The remainder of the standard mineral specimens were from relatively conventional sources of mineral standards, such as, museums, Ward's Scientific Supply and personal collections.

The presence or absence of a mineral in these computer prepared lists does not necessarily indicate that the mineral is truly present or absent from the sediment in question. It instead represents the present degree of development of recognition criteria in the computer programs employed at this point in time to interpret the digital X-ray diffraction patterns obtained of the specimens under analysis. Further improvement in the computer software should improve our ability to recognize and measure mineral abundances. However, all of the analog diffraction patterns interpreted here have been checked by direct inspection to monitor the progress of the computer program development.

Intermineral interferences were handled by spectrum stripping techniques with a sequency of successive steps based on interpeak intensity ratios directly analogous to those used in manual calculations. This technique is dependent upon minimizing preferred orientation, which is primarily controlled by careful particle size control and by the specimen mounting technique.

RESULTS

Sierra Leone Rise

The minerals of the sediments of the Sierra Leone Rise are dominated by a terrigenous suite. The lower portion of the Upper Cretaceous is mainly quartz (Hole 13A) with accessory kaolinite, mica and feldspar. The upper portion of the Upper Cretaceous recovered shows increasing calcite, decreasing quartz and domination of the clay fraction by montmorillonite. Cristobalite abundance increases with the increase in montmorillonite abundance. Clinoptilolite is the zeolite present, and it appears most abundantly in the Middle Eocene associated with cristobalite and in the more calcareous ooze (Hole 13A). Occasional dolomite and siderite traces occur in the Cretaceous.

The non-calcareous middle Eocene of Site 13 is dominated by amorphous silica that does not appear to have recrystallized to cristobalite as has both younger and older opaline silica. Quartz and kaolinite dominate the small amount of crystalline components.

The Lower Pliocene is non-calcareous, low in amorphous scattering components, and contains the common terrigenous suite of quartz, feldspars, kaolinite and micas. The surprising anomaly here is that these non-calcareous sediments contain abundant cristobalite.

The Middle and Upper Pliocene by contrast are similar to the lower Pliocene but diluted by major amounts of calcite and lacking in cristobalite.

Spot samples of buffered (pH=4.5) acetic acid-treated samples were run to check the bulk mineralogy. The acid treatment removed the calcite and the small amounts of dolomite present, but it left the siderite and confirmed the other bulk sample identifications without disclosing any additional important phases.

The main mineralogical conclusions from this site are that there have been no significant provenance changes from the Upper Cretaceous to the present, and that there is no evidence for subsurface hydrothermal activity nor major diagenetic changes.

South Mid-Atlantic Ridge Province

Sites 16, 15, 18, 17, 14, 19 and 20, listed in the order of their distance from the Mid-Atlantic Ridge crest, are mineralogically uniform. Calcite is predominant and varies inversely with the typical South Atlantic terrigenous suite of quartz, feldspar, kaolinite, mica, associated with lesser amounts of chlorite, montmorillonite, siderite, and variable amounts of clinoptilolite and amorphous silica. The bulk samples usually show only calcite with minor amounts of quartz and kaolinite; but, after calcite removal, the full range of the terrestrial suite plus lesser traces of volcanic ash residues and alteration products are evident.

Sample recovery in this leg was so large that composites were made of several samples from each core for the calcite-free fraction studies.

Variations in relative calcite dissolution are evident in the quartz-calcite abundance variations shown in the Core X-ray Mineralogy Logs (Figures 1-11).

Cristobalite appears to be missing from the samples studied suggesting minimal diagenesis in this area. Siderite is of increasing importance in the calcite-free fraction in the Oligocene of Site 20.

Rio Grande Rise

The bulk mineralogy of the Rio Grande Rise, Sites 21 and 22, is typical of the South Atlantic studied to date and is dominated by calcite with lesser amounts of quartz, kaolinite, mica, and feldspars. The calcite-free fractions suggest a close terrigenous suite of gross similarity from the Pleistocene to the Cretaceous.

Montmorillonite occurs scattered throughout the section. Clinoptilolite is abundant only in the Oligocene and Eocene studied. Siderite and occasional dolomite are common in the Eocene and Cretaceous but not in the younger sediments. Cristobalite was sampled in the Oligocene of Site 22 but not in the Eocene or Cretaceous of Site 21. The barite in Site 21 is thought to be valid because no drilling mud was used in drilling this hole.

SUMMARY

The sediments of the Leg 3 profile show remarkable mineralogical uniformity with time and lateral extent. There appear to have been no major provenance changes for both suspended sediment and for eolian contributions. Volcanic ash does not appear to be of major importance.

Calcareous oozes with lesser amounts of opaline siliceous oozes dominate the lithologic assemblage. Relative fluctuations of the sea floor with respect to the carbonate compensation depth appear to account for the first order effects on the sediment mineralogy.

Major diagenesis and clear evidence for hydrothermal alteration were not evident, although, there is an increasing abundance of a high iron rhombohedral carbonate–here called siderite–in the lower Tertiary and Cretaceous.

REFERENCE

Rex, R. W. and Bauer, W. R., 1965. New amine reagents for X-ray determination of expandable clays in dry samples. In *Clays and Clay Minerals*. W. R. Bradley and S. W. Bailey (Eds.). Great Britain (Pergammon Press) **13**, 411.

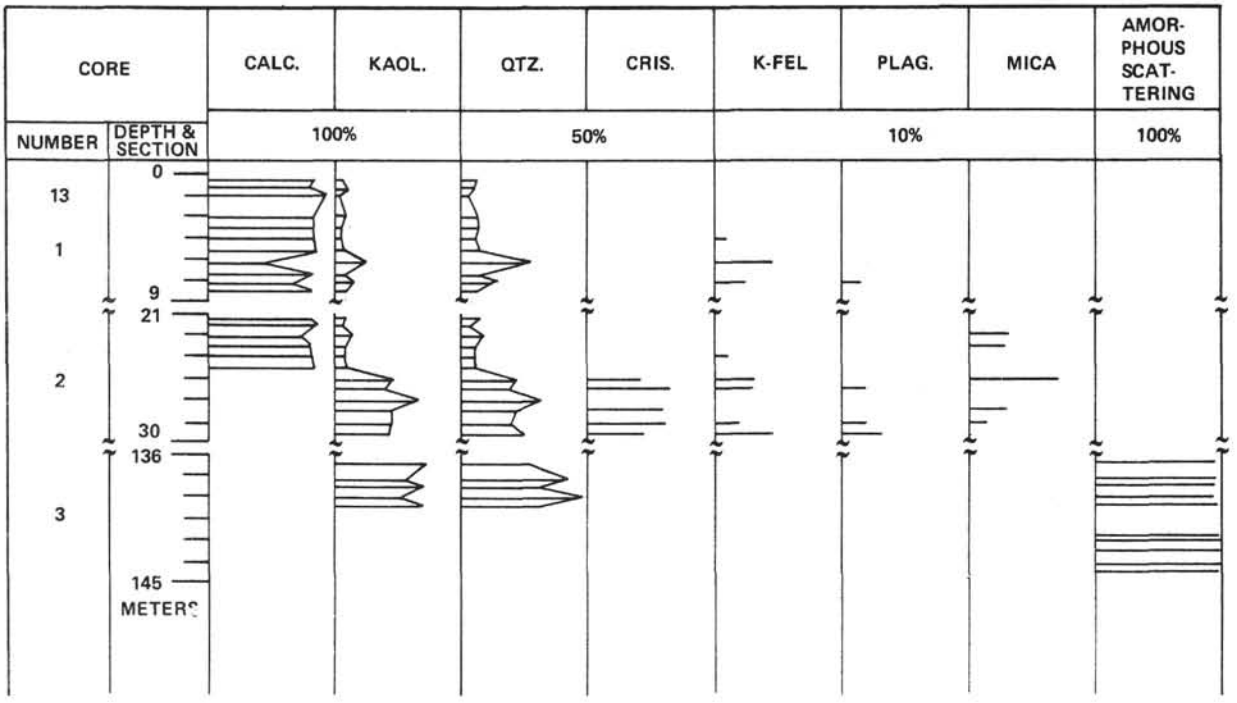


Figure 1A. *Hole 13. (Bulk)*

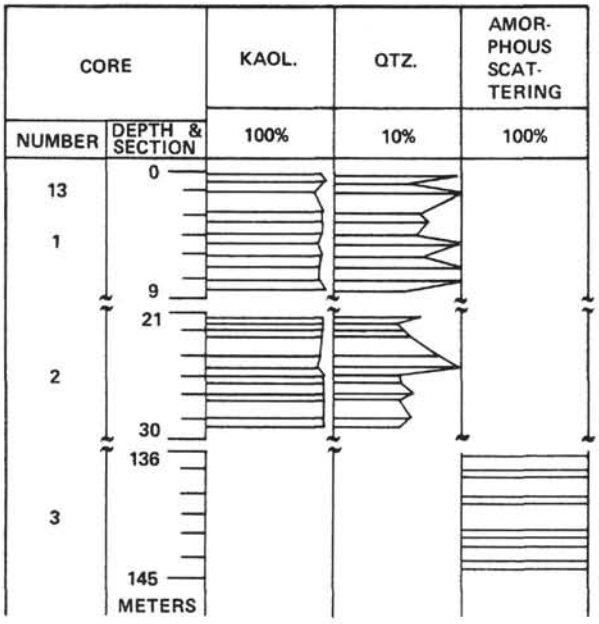


Figure 1B. *Hole 13. (Minor Fractions)*

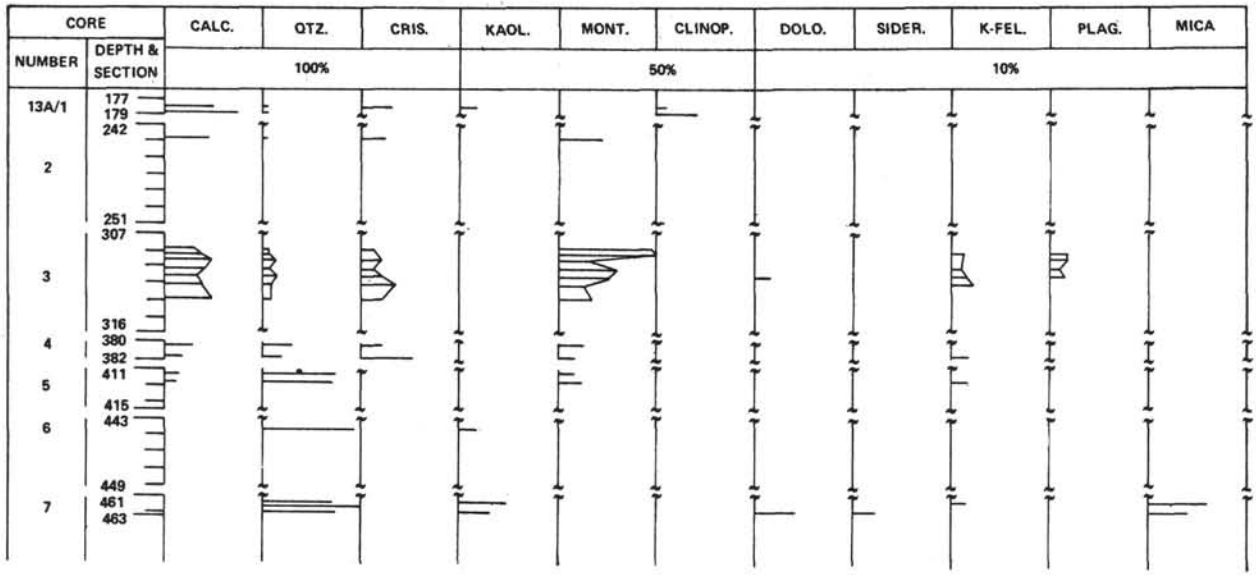


Figure 2A. *Hole 13A. (Bulk)*

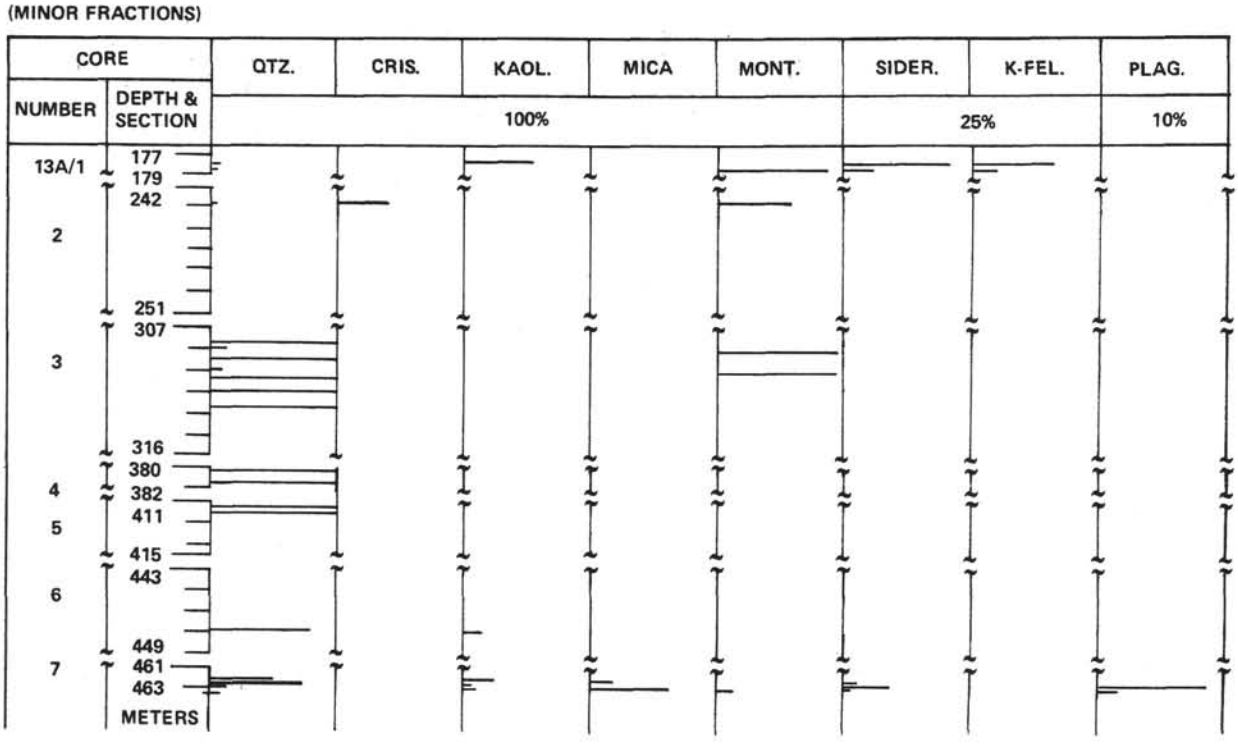


Figure 2B. *Hole 13A. (Minor Fractions)*

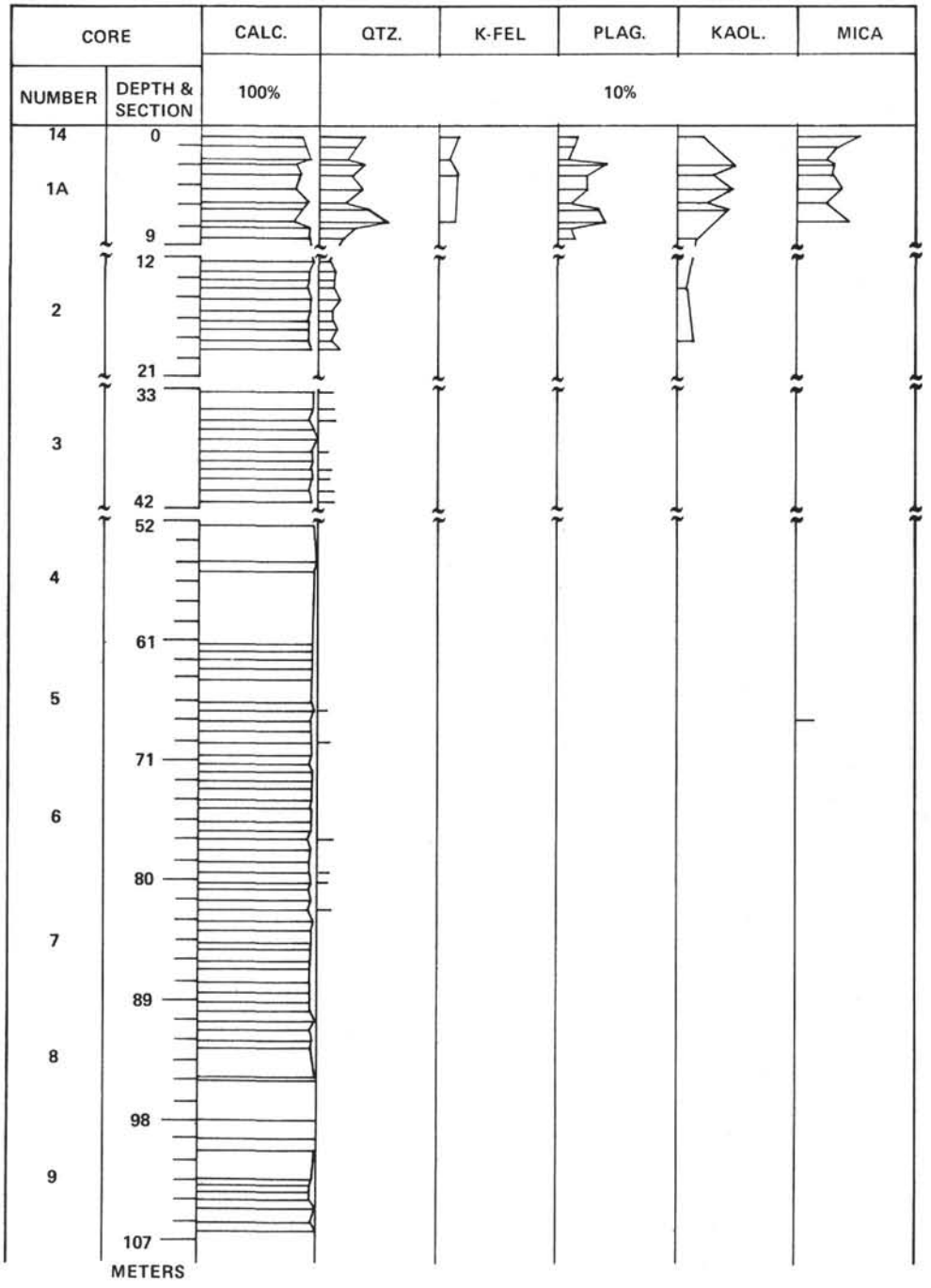


Figure 3A. *Hole 14. (Bulk)*

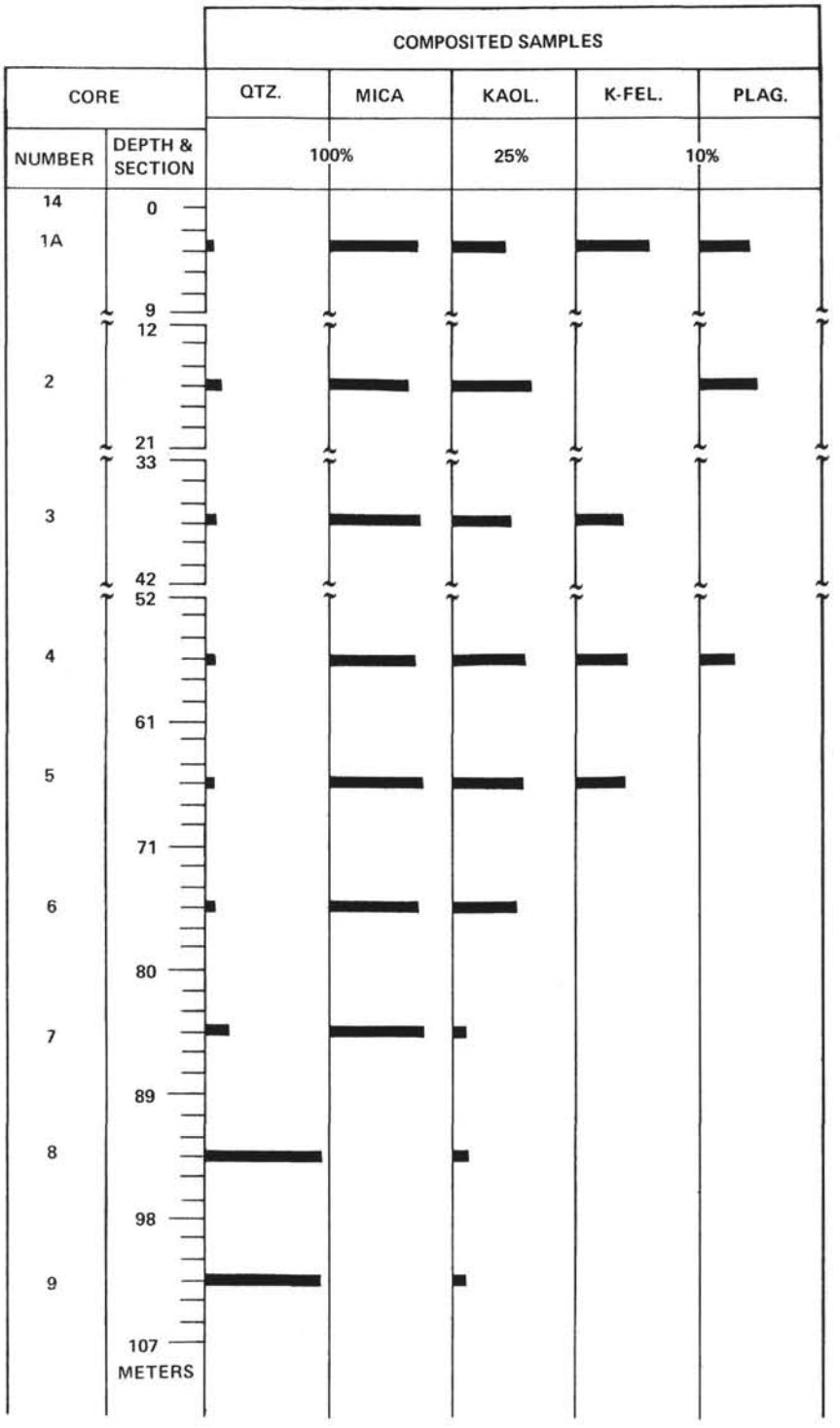
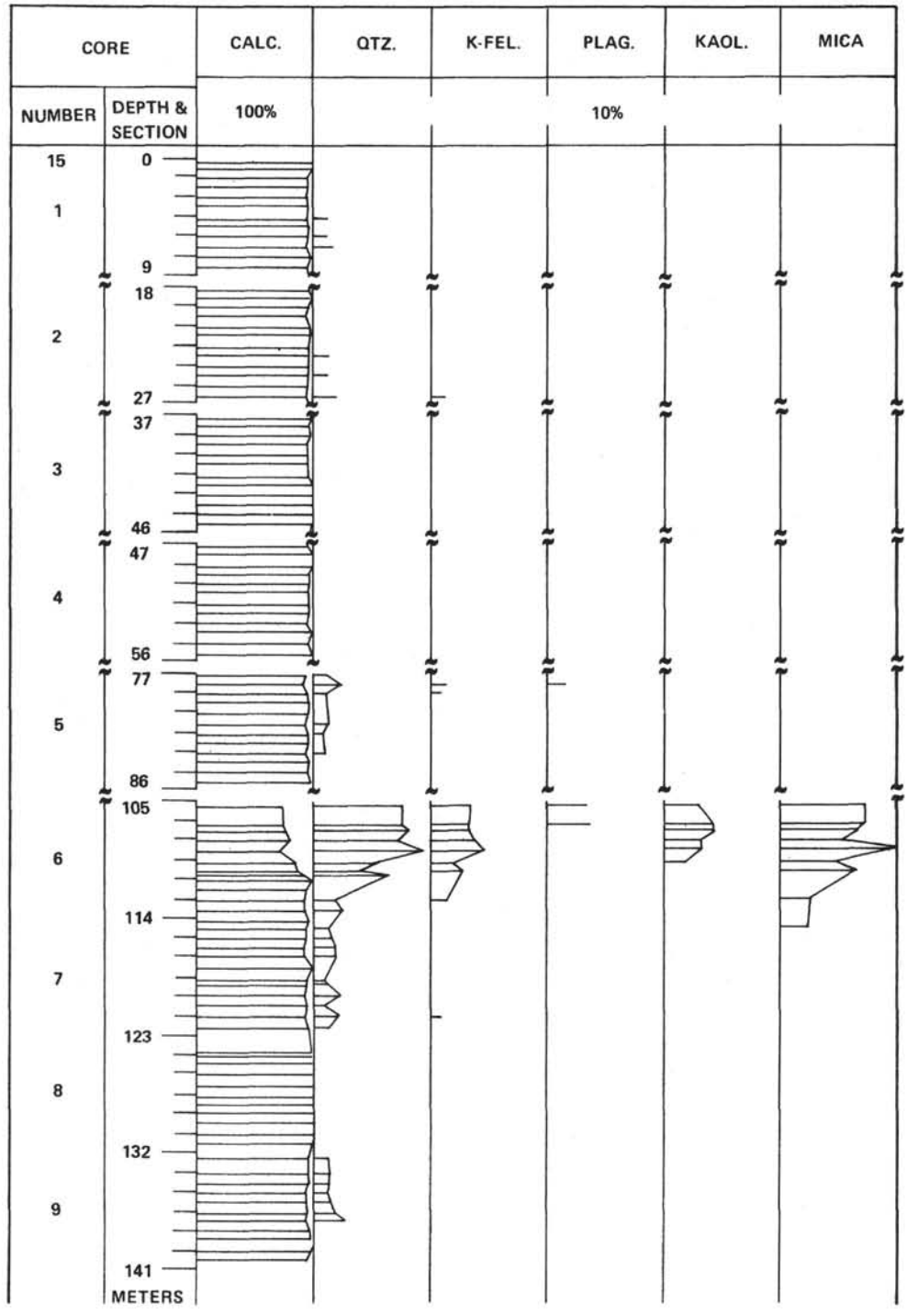


Figure 3B. *Hole 14. (Minor Fractions)*



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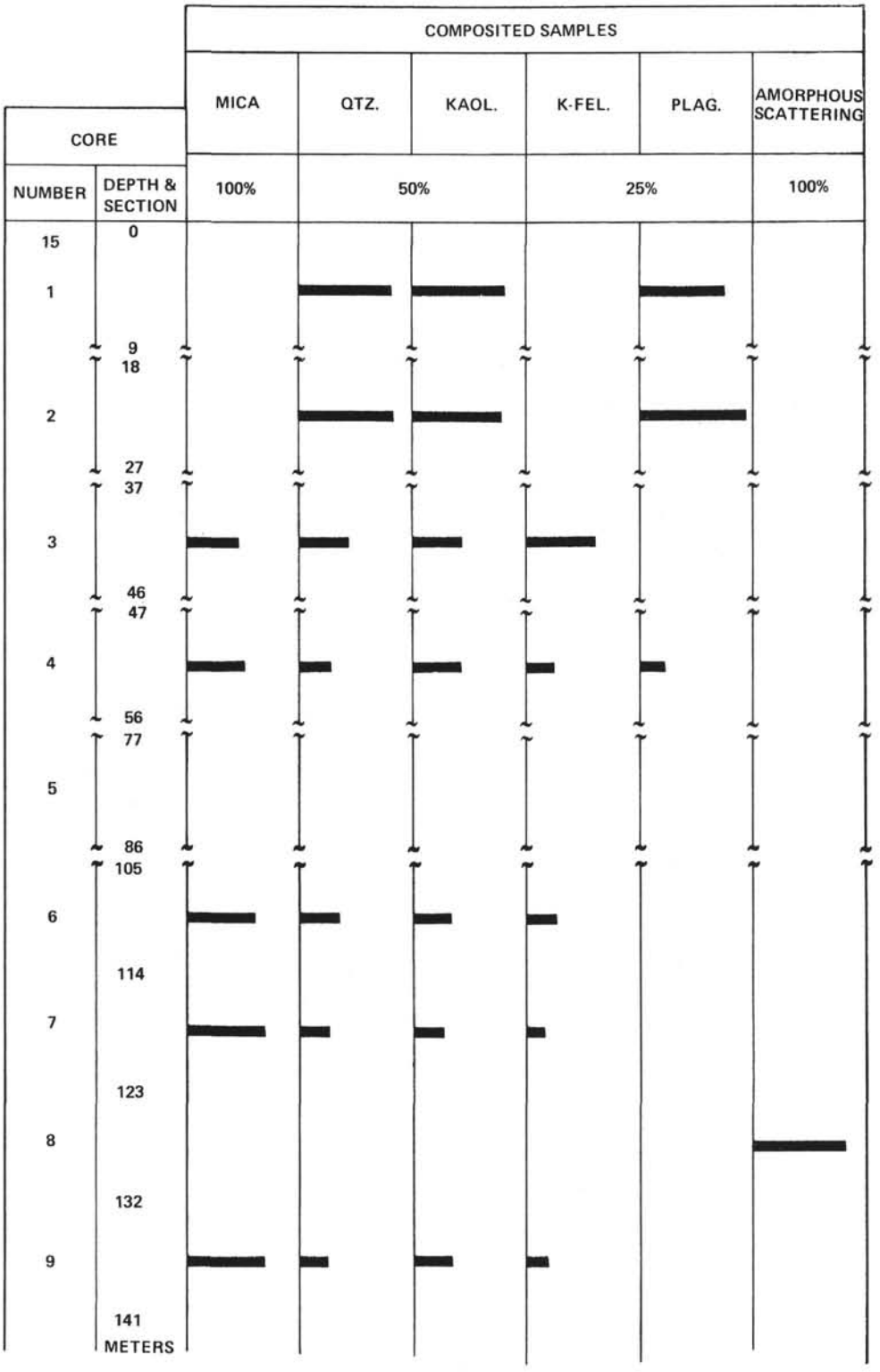

Figure 4B. *Hole 15. (Minor Fractions)*

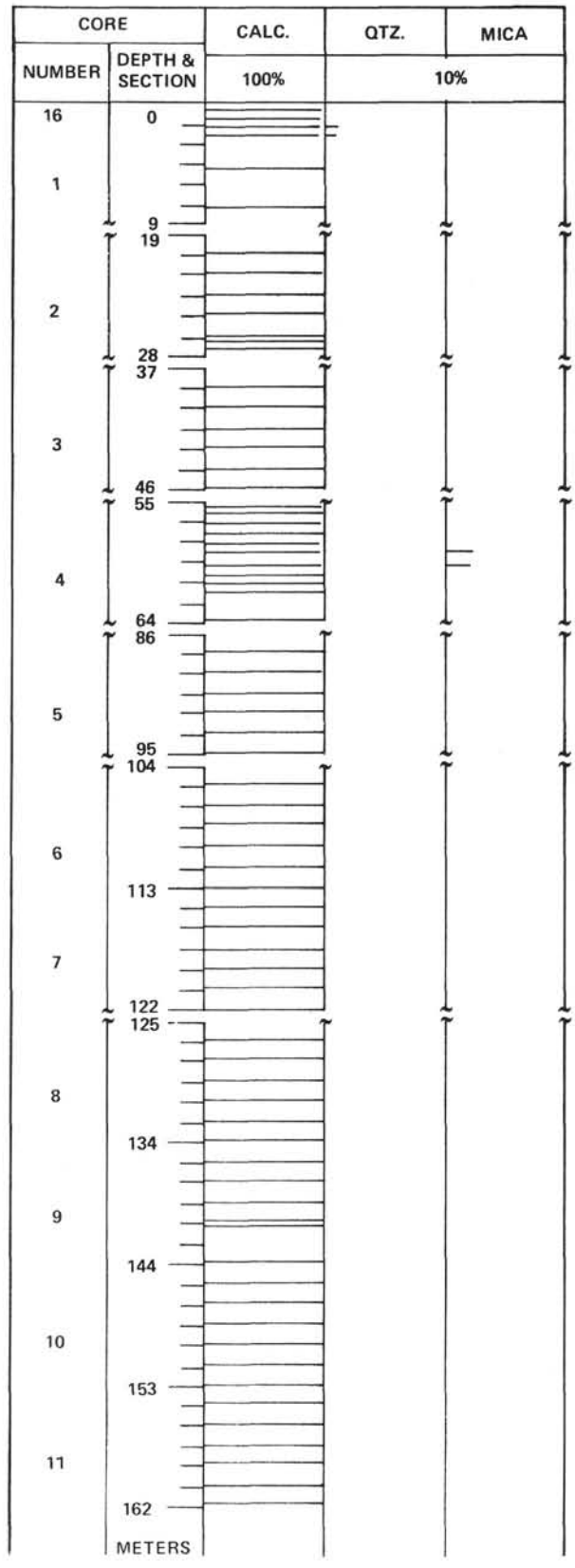

Figure 5A. *Hole 16. (Bulk)*

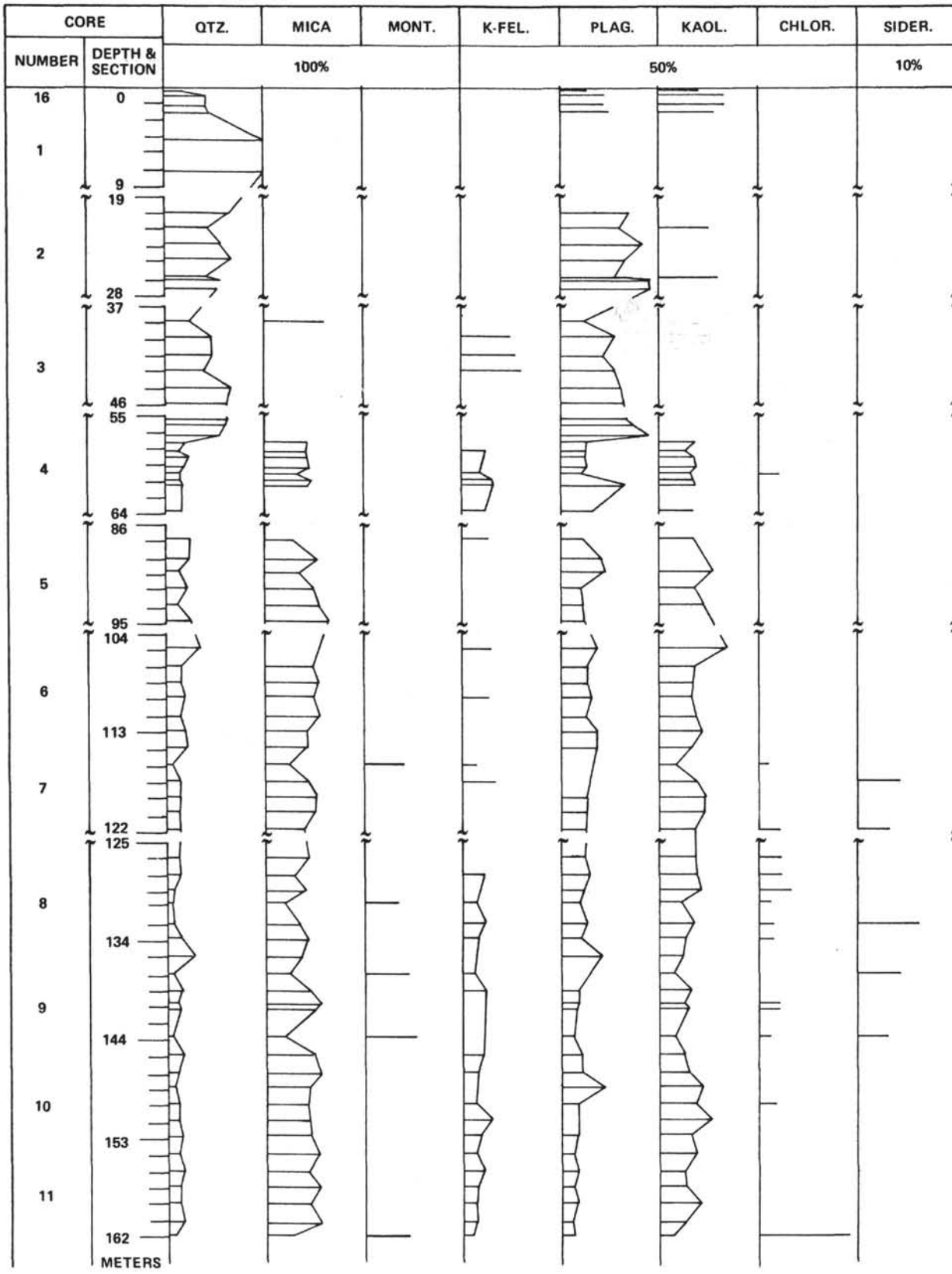

Figure 5B. *Hole 16. (Minor Fractions)*

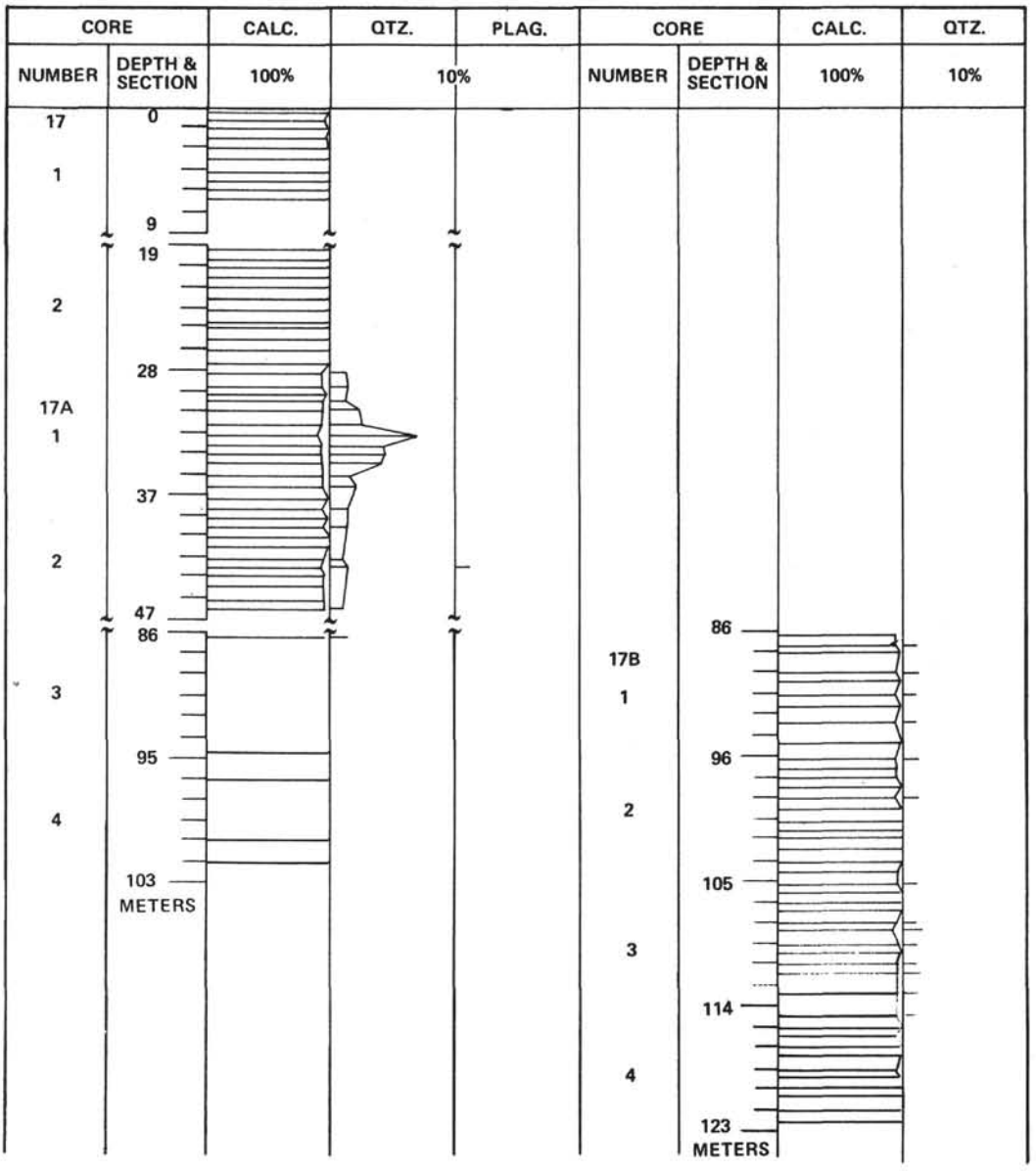

Figure 6A. *Holes 17–17A–17B. (Bulk)*

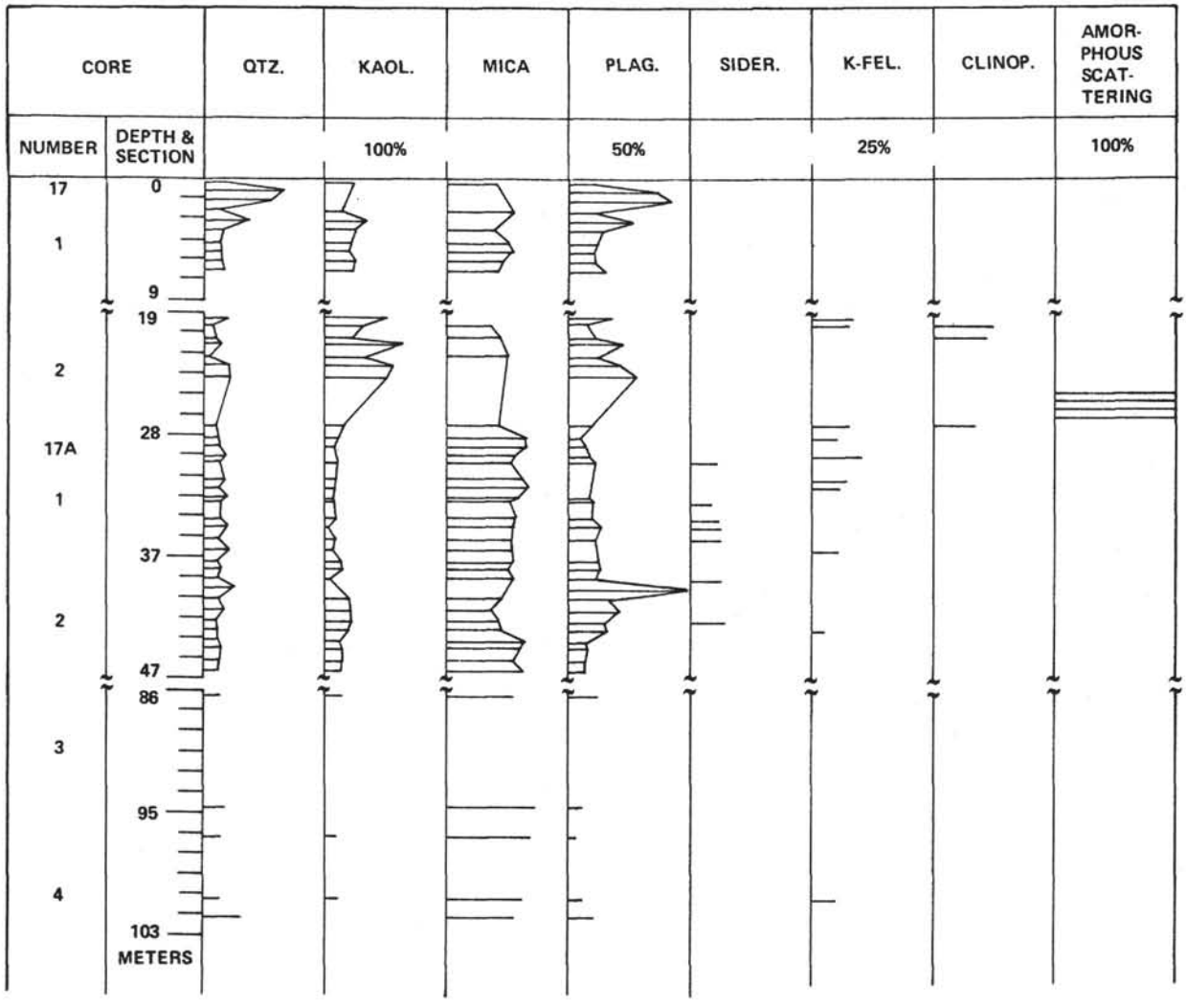

Figure 6B. *Holes 17–17A. (Minor Fractions)*

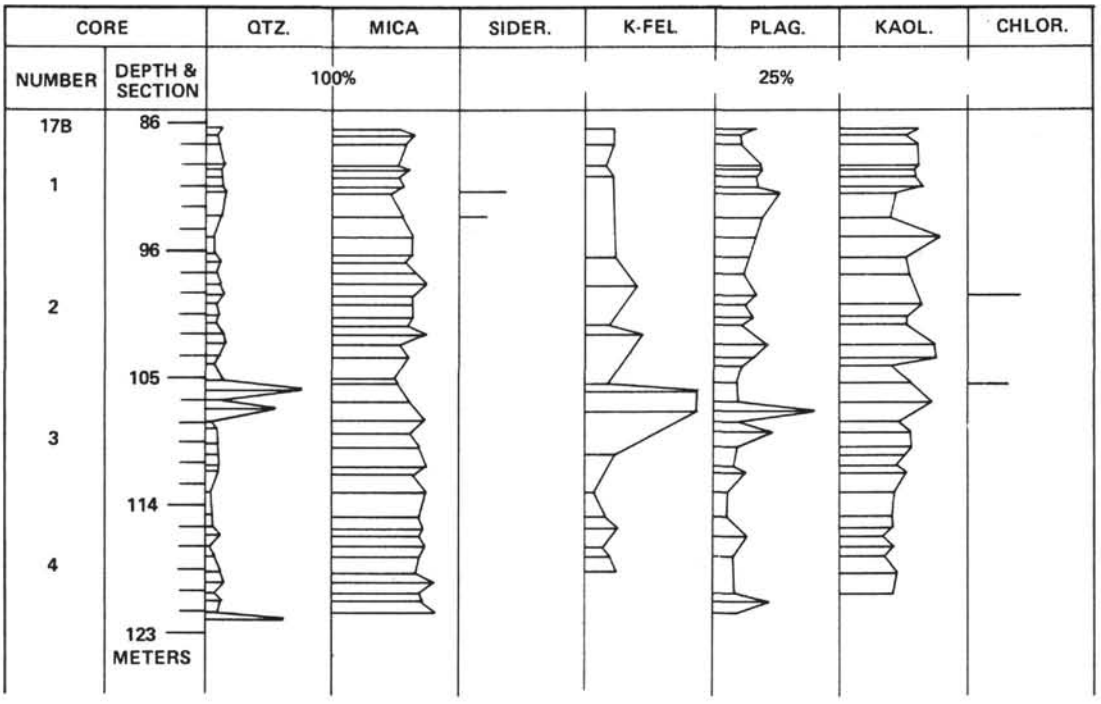

Figure 6C. *Hole 17B. (Minor Fractions)*

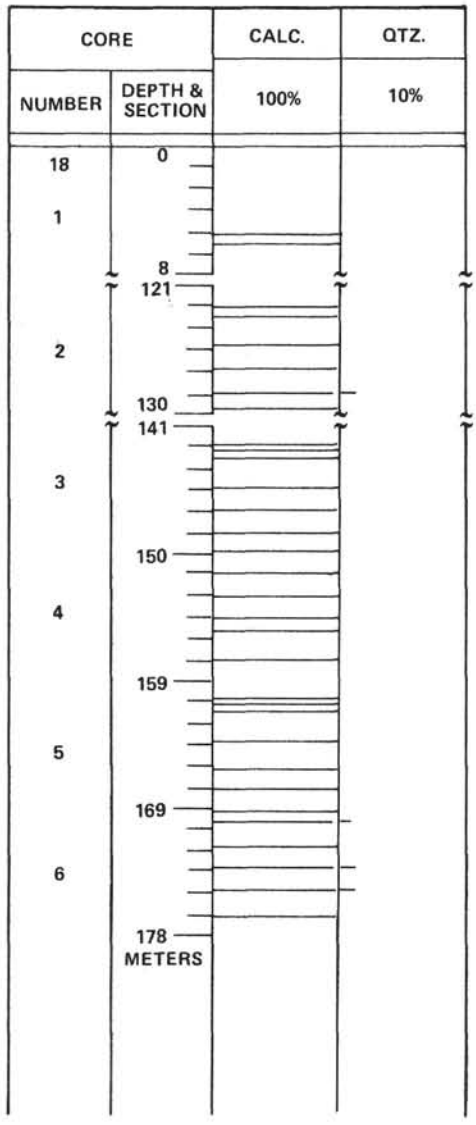

Figure 7A. *Hole 18. (Bulk)*

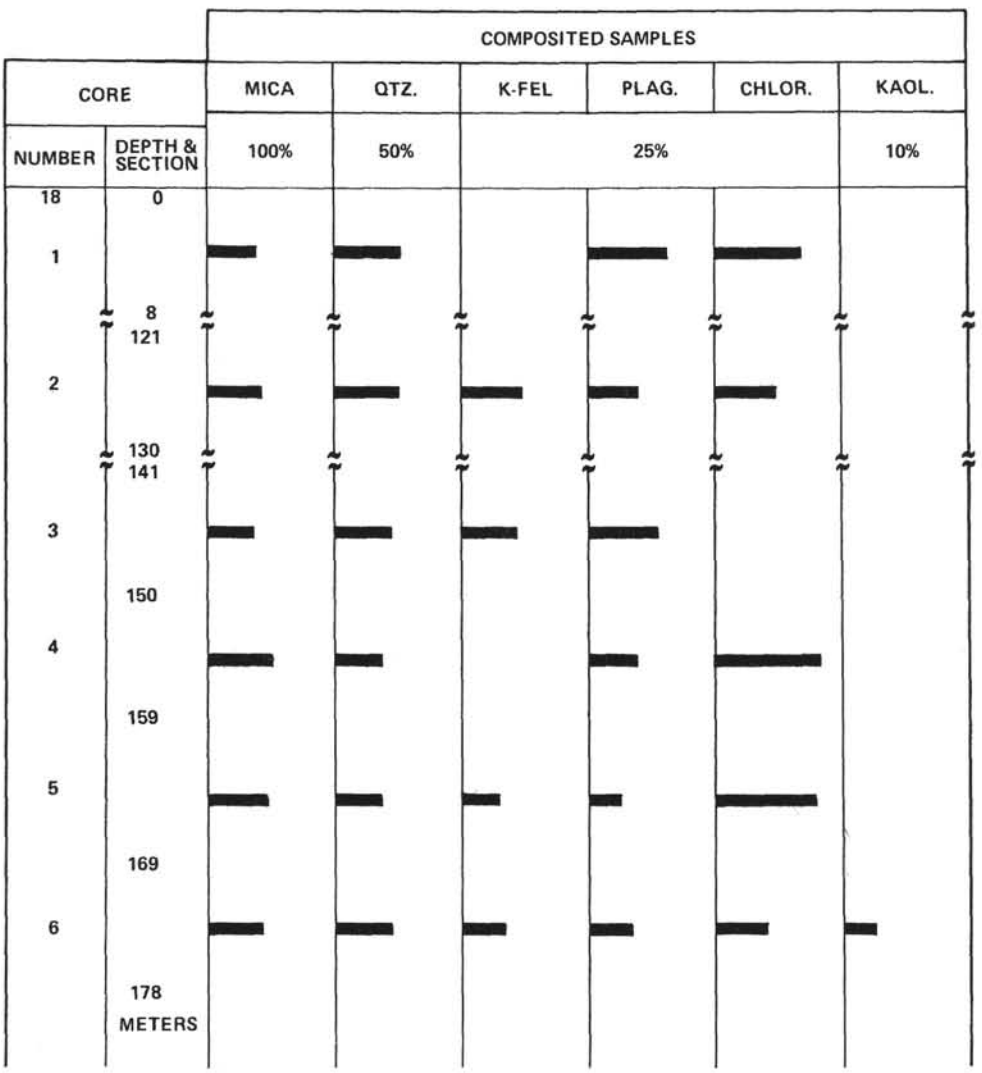

Figure 7B. *Hole 18. (Minor Fractions)*

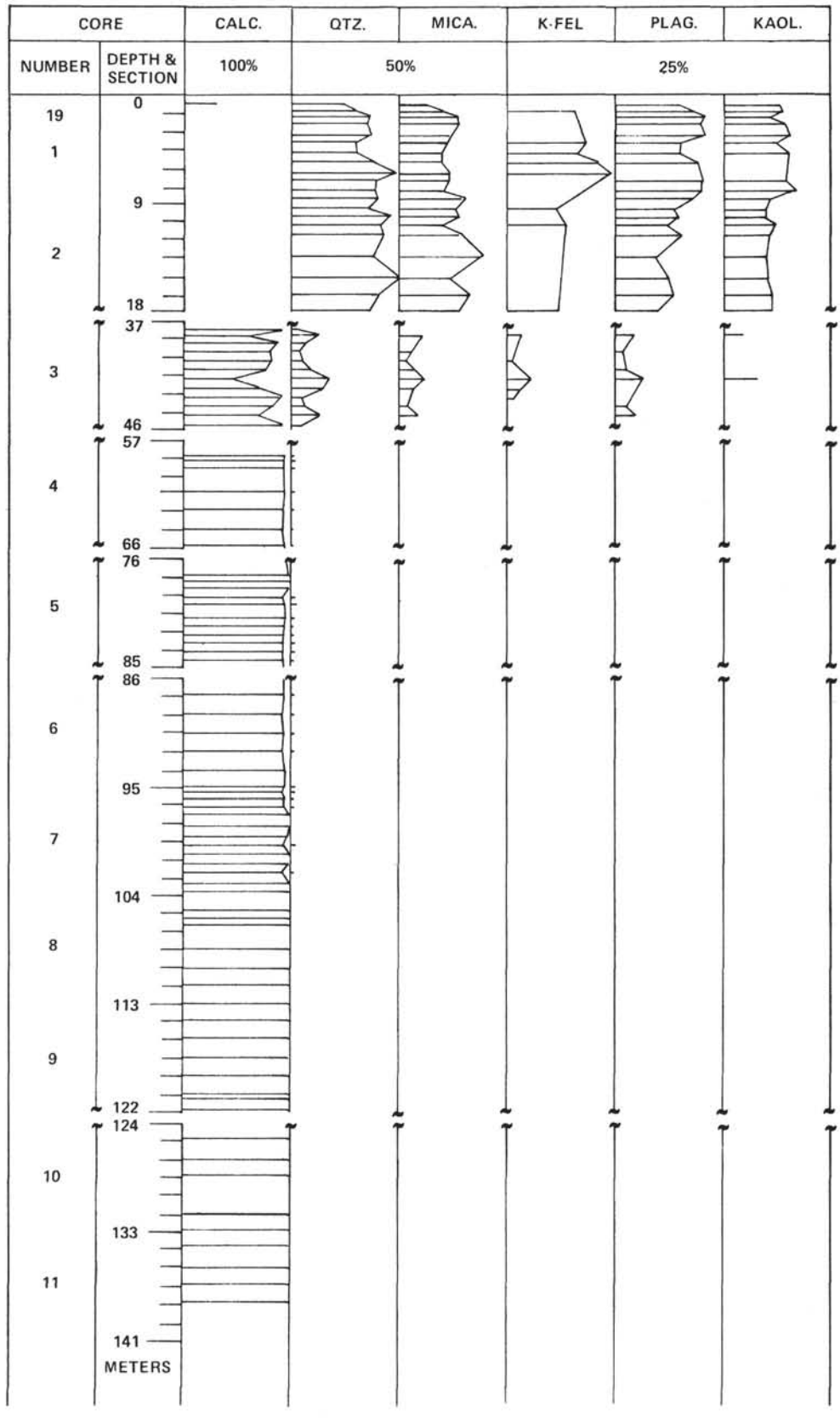

Figure 8A. *Hole 19. (Bulk)*

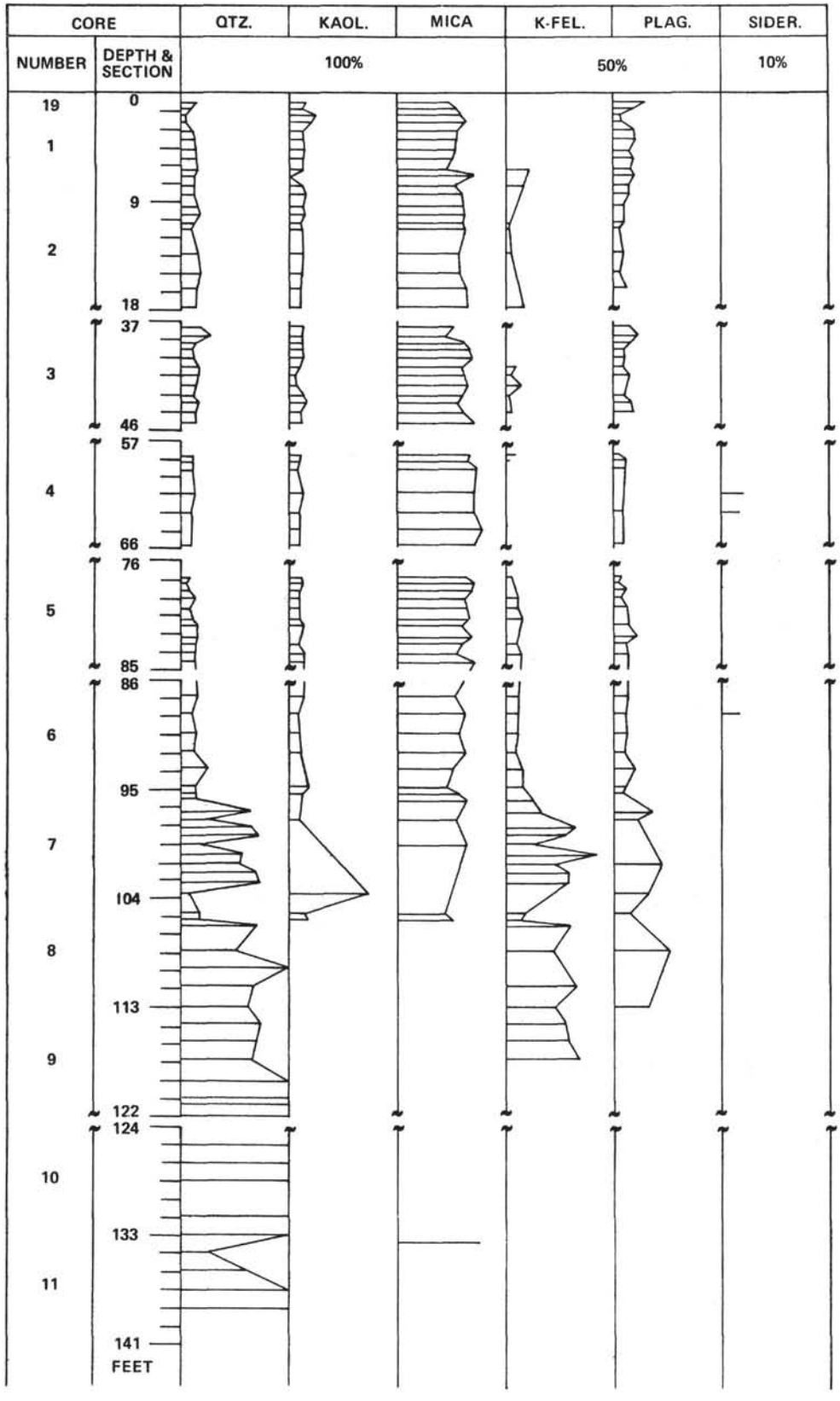

Figure 8B. *Hole 19. (Minor Fractions)*

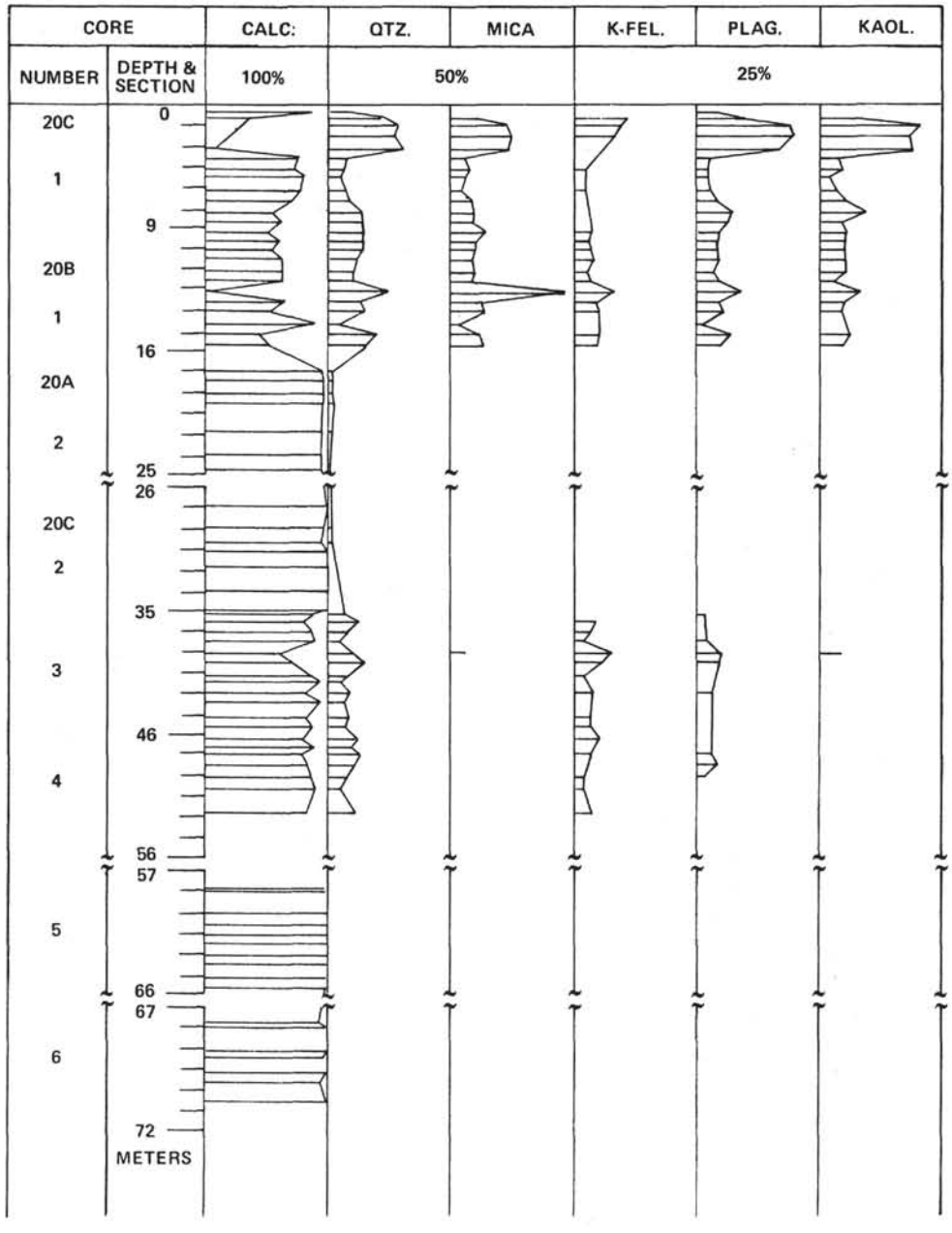

Figure 9A. *Holes 20A–20B–20C. (Bulk)*

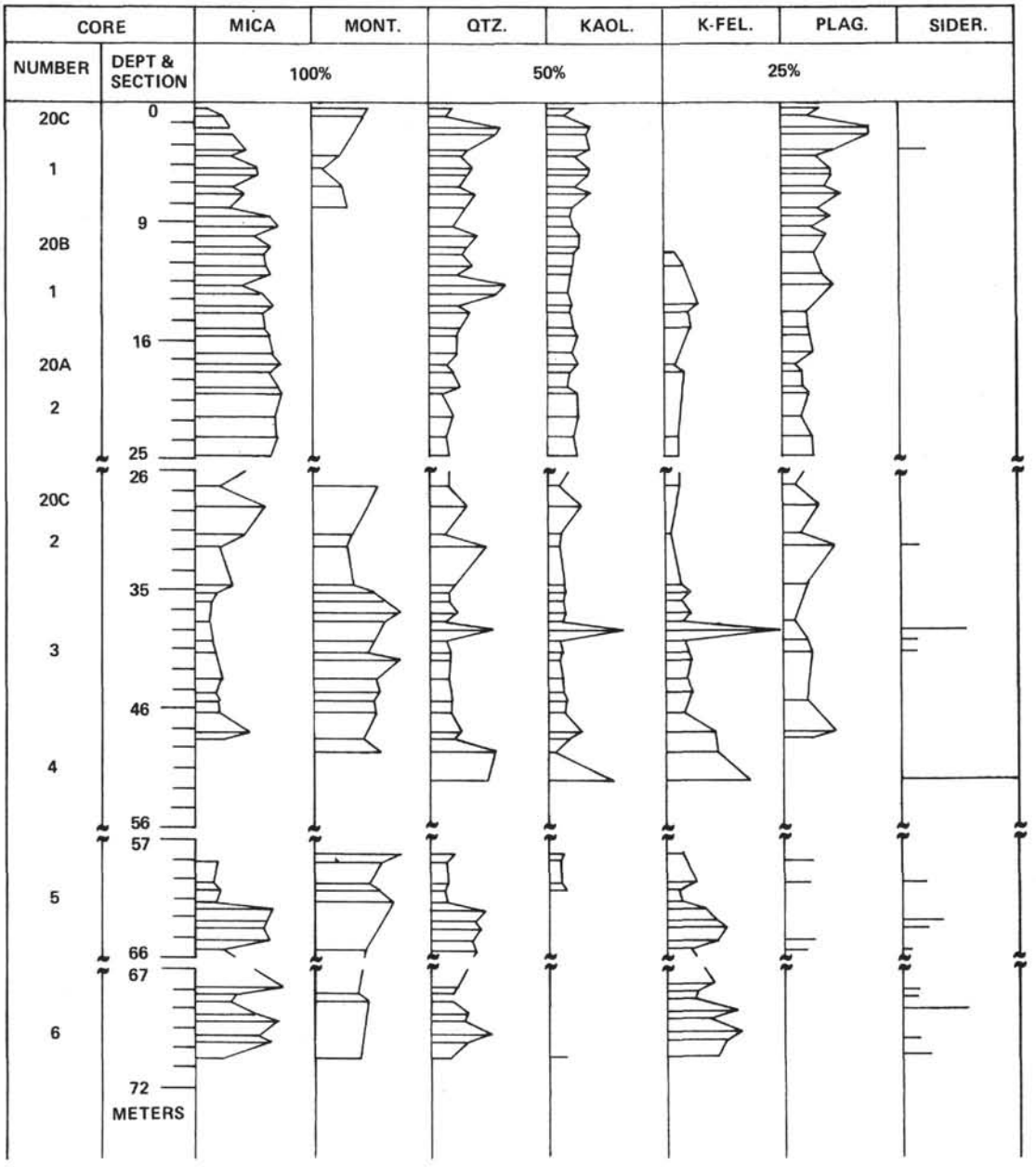

Figure 9B. *Holes 20A,B,C. (Minor Fractions)*

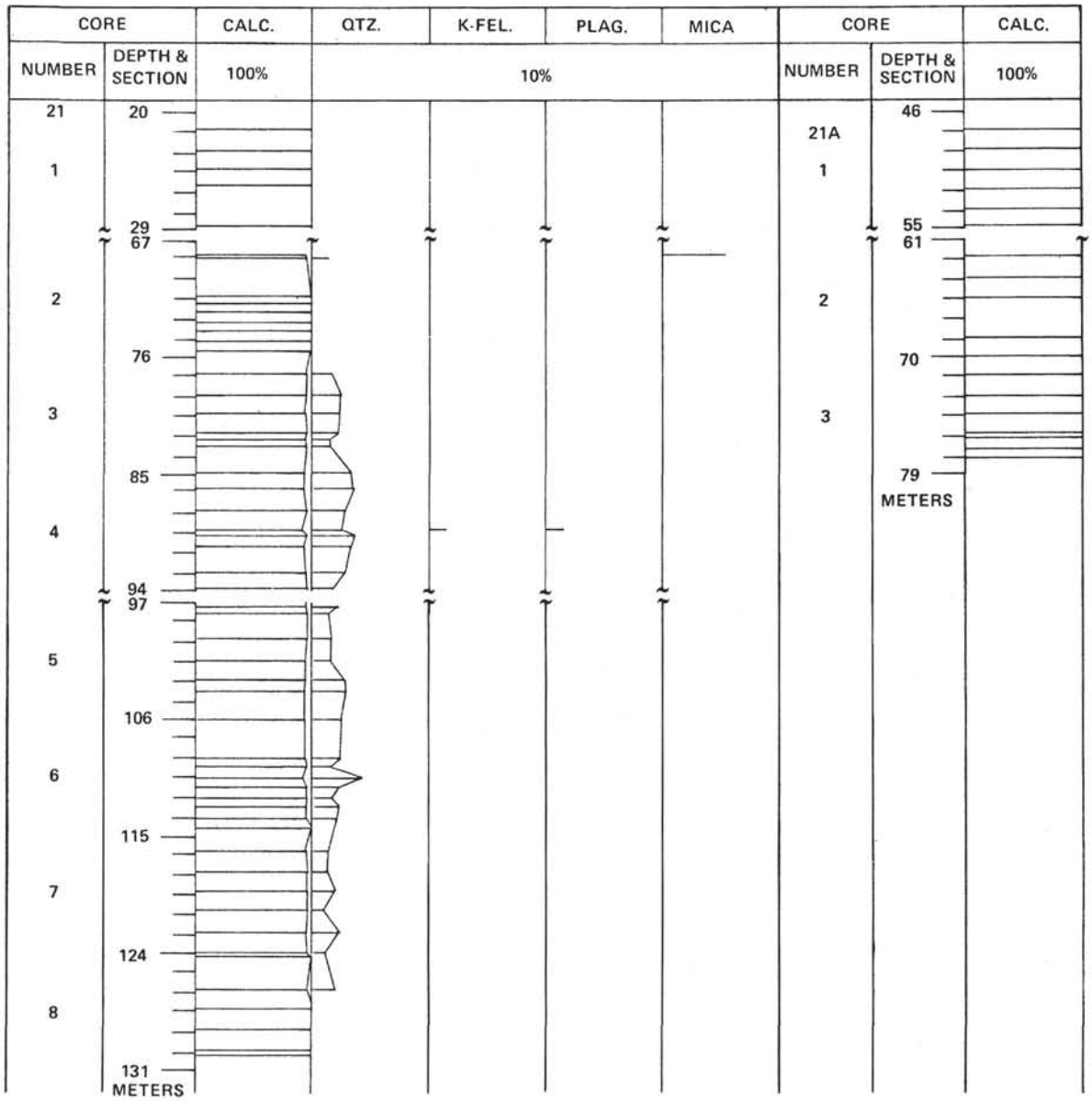

Figure 10A. *Holes 21–21A. (Bulk)*

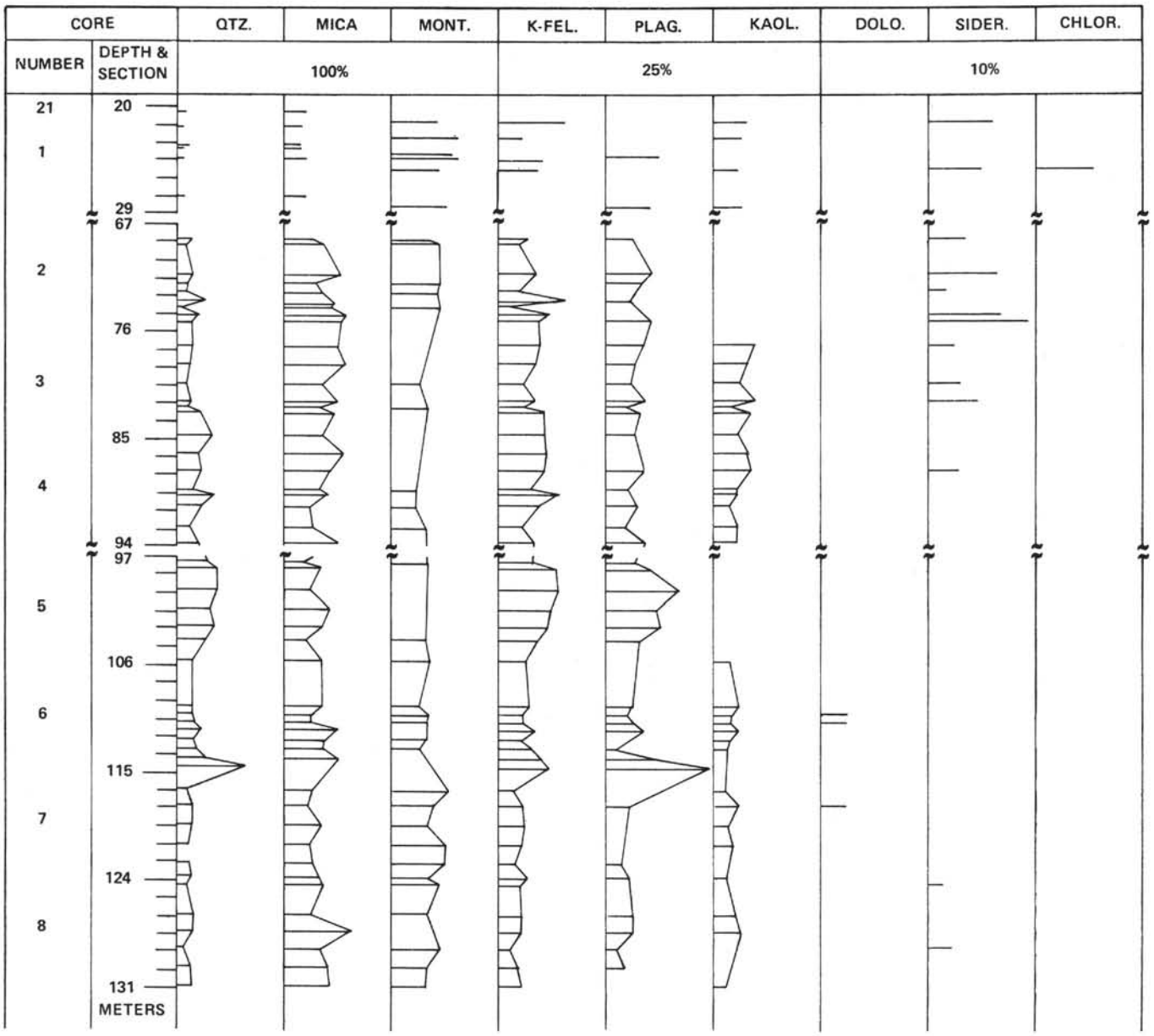

Figure 10B. *Hole 21.*

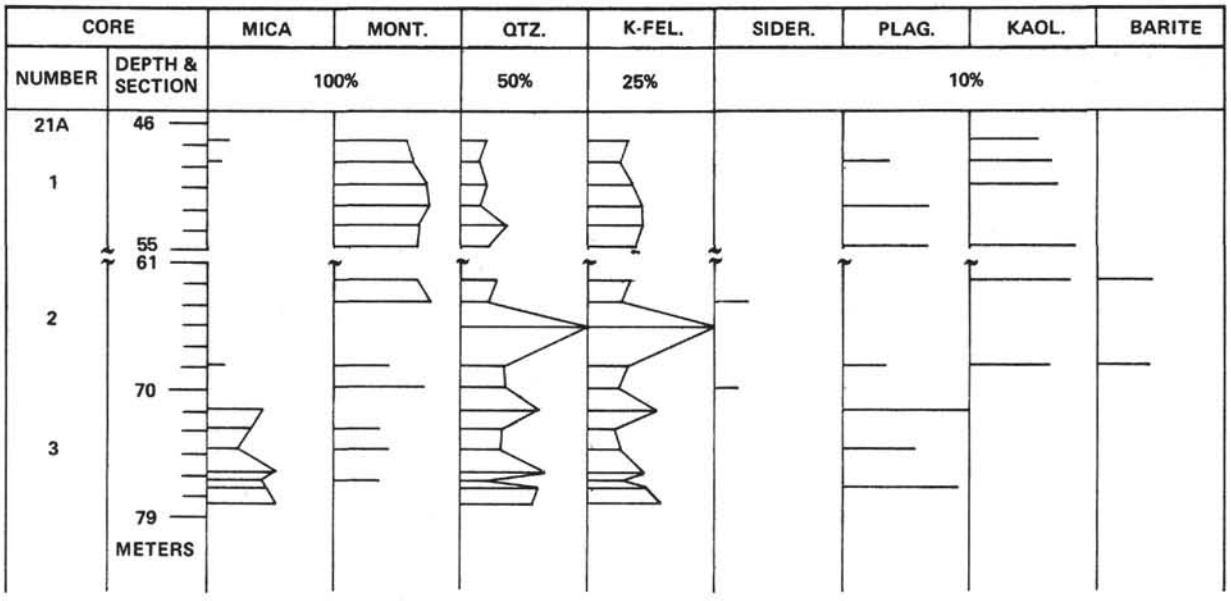

Figure 10C. *Hole 21A. (Minor Fractions)*

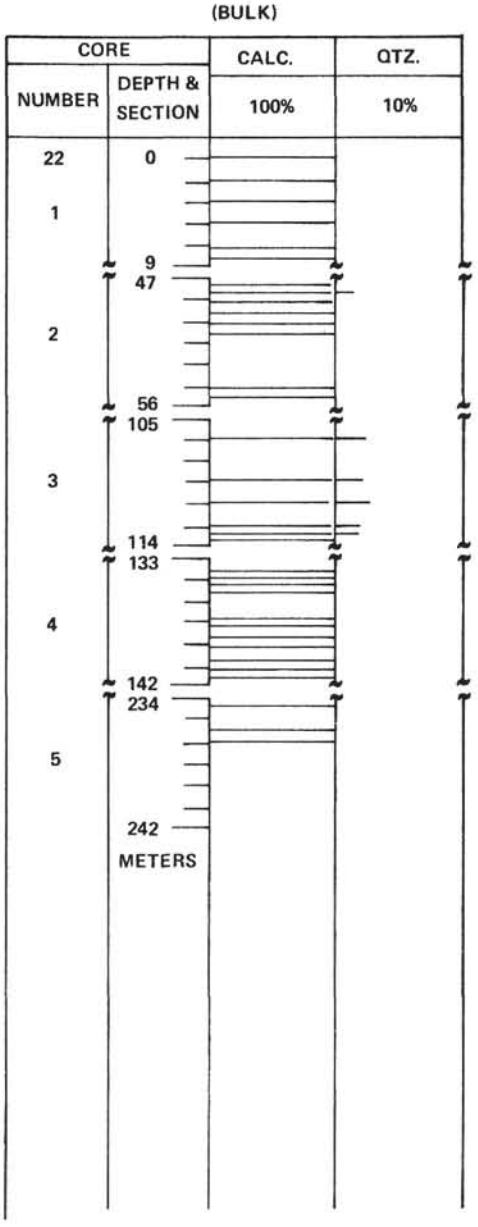

Figure 11A. *Hole 22 (Bulk)*

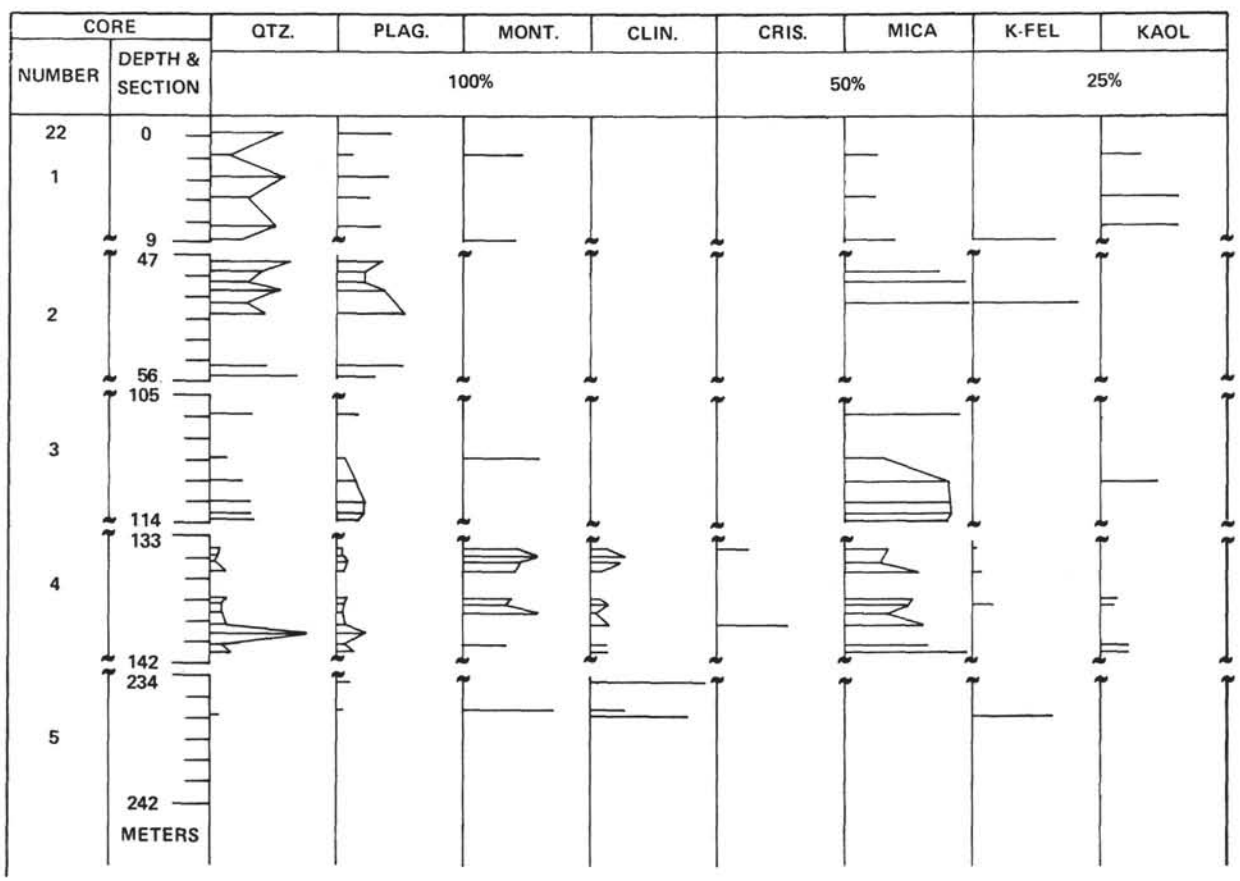

Figure 11B. *Hole 22. (Minor Fractions)*

TABLE 1
Tabulation of Results of X-ray Diffraction Analysis of Samples from Leg 3: Bulk Samples[a]

Hole 13											
	Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica	Cris.	% Amorphous Scattering
	1	1	10-12	80.2	84.5	7.7	0.0	0.0	7.8	0.0	0.0	0.0
	1	1	18	81.0	83.3	6.4	0.0	0.0	9.4	0.0	0.0	0.0
	1	2	8-10	76.5	93.1	3.0	0.0	0.0	3.9	0.0	0.0	0.0
	1	3	9-11	81.7	83.7	7.1	0.0	0.0	9.2	0.0	0.0	0.0
	1	3	84-86	81.2	84.3	7.6	0.0	0.0	8.1	0.0	0.0	0.0
	1	4	10-12	81.2	84.7	6.2	1.1	0.0	8.0	0.0	0.0	0.0
	1	4	80-82	79.1	85.5	6.5	0.0	0.0	8.0	0.0	0.0	0.0
	1	5	26-28	89.8	41.3	27.6	4.6	0.0	25.4	0.0	0.0	0.0
	1	5	90-92	80.0	83.6	7.2	0.0	0.0	9.2	0.0	0.0	0.0
	1	6	9-11	86.7	65.7	14.5	2.5	1.6	15.1	0.0	0.0	0.0
	1	6	80-82	80.7	83.2	7.3	0.0	0.0	9.5	0.0	0.0	0.0
	2	1	42-44	82.2	81.3	8.7	0.0	0.0	10.0	0.0	0.0	0.0
	2	1	90-92	78.3	88.2	4.3	0.0	0.0	7.5	0.0	0.0	0.0
	2	2	12-14	85.7	75.2	8.0	0.0	0.0	13.6	3.2	0.0	0.0
	2	2	85-87	83.4	79.4	6.3	0.0	0.0	11.4	2.9	0.0	0.0
	2	3	8-10	83.0	81.2	6.8	1.2	0.0	10.8	0.0	0.0	0.0
	2	3	83-85	83.7	83.5	6.5	0.0	0.0	10.0	0.0	0.0	0.0
	2	4	7-9	91.1	0.0	22.7	3.3	0.0	45.7	7.3	20.9	0.0
	2	4	76-78	88.9	0.0	19.9	3.1	2.1	40.6	0.0	33.5	0.0
	2	5	6-8	90.5	0.0	32.7	0.0	0.0	67.0	0.0	0.0	0.0
	2	5	75-77	91.4	0.0	21.8	0.0	0.0	45.9	2.6	29.7	0.0
	2	6	6-8	89.8	0.0	19.5	2.1	2.3	43 4	1.6	31.1	0.0
	2	6	75-77	89.6	0.0	25.1	4.7	3.3	43.7	0.0	23.2	0.0
	3	1	68-70	98.0	0.0	27.4	0.0	0.0	72.6	0.0	0.0	98.0
	3	2	15-17	98.5	0.0	42.4	0.0	0.0	57.6	0.0	0.0	98.5
	3	2	80-82	98.0	0.0	30.1	0.0	0.0	69.1	0.0	0.0	98.0

TABLE 1 - *Continued*

Hole 13 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica	Cris.	% Amorphous Scattering
3	3	10-12	97.5	0.0	49.2	0.0	0.0	50.8	0.0	0.0	97.5
3	3	83-85	99.0	0.0	31.5	0.0	0.0	68.5	0.0	0.0	99.0
3	4	135-37	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
3	5	7-9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
3	5	80-82	99.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.8
3	6	7-9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
3	6	83-85	99.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	99.7

Hole 13A Core	Section	Depth	Diff.	Calc.	Dolo.	Side	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Clin.	Cris.
1	1	70-72	91.8	50.5	0.0	0.0	4.5	0.0	0.0	7.9	0.0		5.8	31.3
1	1	124-26	84.6	76.3	0.0	0.0	3.5	0.0	0.0	0.0	0.0		20.2	0.0
2	1	124-26	85.8	44.2	0.0	0.0	4.9	0.0	0.0	0.0	0.0	21.6	0.0	28.6
3	1	119-21	86.4	29.0	0.0	0.0	9.7	0.0	0.0	0.0	0.0	46.6	0.0	14.7
3	2	8-10	85.6	37.1	0.0	0.0	9.4	1.2	1.8	0.0	0.0	50.0	0.0	0.0
3	2	80-82	87.4	45.9	0.0	0.0	12.2	0.0	1.7	0.0	0.0	16.2	0.0	24.0
3	3	7-9	85.4	43.7	0.0	0.0	8.5	1.1	1.1	0.0	0.0	30.4	0.0	14.6
3	3	78-80	86.5	32.2	1.6	0.0	12.3	1.5	1.3	0.0	0.0	25.9	0.0	25.3
3	4	8-10	85.7	38.4	0.0	0.0	9.9	1.9	0.0	0.0	0.0	14.0	0.0	35.8
3	4	130-32	86.0	48.1	0.0	0.0	8.8	0.0	0.0	0.0	0.0	16.2	0.0	27.0
4	1	15	83.0	28.9	0.0	0.0	29.6	0.0	0.0	0.0	0.0	13.2	0.0	27.2
4	1	120	83.2	19.5	0.0	0.0	17.9	1.6	0.0	0.0	0.0	8.0	0.0	53.0
5	1	31-33	75.0	18.0	0.0	0.0	74.1	0.0	0.0	0.0	0.0	7.2	0.0	0.0
5	1	94-96	78.0	15.8	0.0	0.0	70.8	1.5	0.0	0.0	0.0	11.6	0.0	0.0
6	1	CTCH*	67.6	0.0	0.0	0.0	92.5	0.0	0.0	7.5	0.0	0.0	0.0	0.0
7	1	80	77.8	0.0	0.0	0.0	70.1	1.5	0.0	22.5	5.8	0 0	0.0	0.0
7	1	120	60.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	1	140	82.5	0.0	3.8	2.2	74.0	0.0	0.0	16.0	4.0	0.0	0.0	0.0

*CTCH = core catcher

TABLE 1 - *Continued*

Hole 14									
Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
1A	1	58	79.0	84.5	4.1	1.7	1.8	2.3	5.6
1A	2	4-7	77.1	91.4	3.3	0.0	1.6	0.0	3.8
1A	2	80-82	75.5	92.3	2.6	1.0	1.1	0.0	2.9
1A	3	8	79.4	83.4	4.0	0.0	4.1	5.1	3.4
1A	3	80	78.1	86.4	3.0	1.7	2.5	3.1	3.2
1A	4	29	80.5	85.0	3.7	0.0	2.7	4.5	4.0
1A	4	132	74.3	91.5	2.2	0.0	1.2	2.6	2.6
1A	5	7-9	77.5	88.7	4.2	0.0	2.7	4.3	0.0
1A	5	94-96	81.1	80.3	5.0	1.3	4.0	5.0	4.5
1A	6	8-10	78.1	95.6	3.3	0.0	1.2	0.0	0.0
1A	6	76-78	74.0	94.6	2.2	0.0	1.4	1.9	0.0
2	1	8	69.3	98.8	1.2	0.0	0.0	0.0	0.0
2	1	76	70.5	98.5	1.5	0.0	0.0	0.0	0.0
2	2	7	69.8	98.2	1.5	0.0	0.0	0.0	0.0
2	2	80	69.5	96.1	1.5	0.0	0.0	1.1	0.0
2	3	7-9	71.5	97.3	2.0	0.0	0.0	0.0	0.0
2	3	85-87	70.6	98.7	1.3	0.0	0.0	0.0	0.0
2	4	7-9	71.2	98.3	1.4	0.0	0.0	0.0	0.0
2	4	80-82	70.3	97.7	1.6	0.0	0.0	0.0	0.0
2	5	7-9	70.5	97.3	1.2	0.0	0.0	1.6	0.0
2	5	80-82	71.2	97.6	1.8	0.0	0.0	0.0	0.0
3	1	6-8	70.2	98.1	1.3	0.0	0.0	0.0	0.0
3	2	7-9	70.3	98.5	1.5	0.0	0.0	0.0	0.0
3	2	74-76	69.5	98.3	1.7	0.0	0.0	0.0	0.0
3	3	6-8	69.7	99.2	0.0	0.0	0.0	0.0	0.0
3	3	74-76	69.5	99.9	0.0	0.0	0.0	0.0	0.0
3	4	6-8	68.7	99.0	1.0	0.0	0.0	0.0	0.0
3	4	74-76	68.7	99.4	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 14 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
3	5	7-9	70.3	98.5	1.2	0.0	0.0	0.0	0.0
3	5	74-76	69.4	99.0	1.0	0.0	0.0	0.0	0.0
3	6	2-4	68.6	98.6	1.4	0.0	0.0	0.0	0.0
3	6	74-76	69.1	98.2	1.4	0.0	0.0	0.0	0.0
4	1	45	68.4	98.8	0.0	0.0	0.0	0.0	0.0
4	3	3	68.5	99.3	0.0	0.0	0.0	0.0	0.0
4	3	70	64.6	99.6	0.0	0.0	0.0	0.0	0.0
5	1	8-10	68.7	98.7	0.0	0.0	0.0	0.0	0.0
5	1	74-76	68.9	99.5	0.0	0.0	0.0	0.0	0.0
5	2	6-8	69.0	98.8	0.0	0.0	0.0	0.0	0.0
5	2	74-76	68.7	98.7	0.0	0.0	0.0	0.0	0.0
5	3	12-14	69.4	98.9	0.0	0.0	0.0	0.0	0.0
5	4	9-11	69.7	98.7	0.0	0.0	0.0	0.0	0.0
5	4	74-76	69.3	98.9	1.0	0.0	0.0	0.0	0.0
5	5	10-12	69.7	97.8	0.0	0.0	0.0	0.0	1.8
5	5	74-76	69.4	98.5	0.0	0.0	0.0	0.0	0.0
5	6	6-8	70.3	98.2	1.1	0.0	0.0	0.0	0.0
5	6	74-76	68.7	98.4	0.0	0.0	0.0	0.0	0.0
6	1	6-8	69.5	98.7	0.0	0.0	0.0	0.0	0.0
6	1	74-76	69.7	99.0	0.0	0.0	0.0	0.0	0.0
6	2	7-9	69.6	99.0	0.0	0.0	0.0	0.0	0.0
6	2	74-76	70.0	98.4	0.0	0.0	0.0	0.0	0.0
6	3	6-8	68.4	99.0	0.0	0.0	0.0	0.0	0.0
6	3	74-76	69.7	98.6	0.0	0.0	0.0	0.0	0.0
6	4	6-8	69.4	98.4	0.0	0.0	0.0	0.0	0.0
6	4	74-76	68.6	98.4	0.0	0.0	0.0	0.0	0.0
6	5	6-8	69.7	98.4	1.5	0.0	0.0	0.0	0.0
6	5	74-76	69.0	98.7	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 14 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
6	6	6-8	68.8	99.2	0.0	0.0	0.0	0.0	0.0
6	6	74-76	69.6	98.3	1.1	0.0	0.0	0.0	0.0
7	1	6-8	69.7	98.9	1.0	0.0	0.0	0.0	0.0
7	1	74-76	68.7	98.5	0.0	0.0	0.0	0.0	0.0
7	2	7-9	68.8	99.2	0.0	0.0	0.0	0.0	0.0
7	2	74-76	70.4	98.3	1.2	0.0	0.0	0.0	0.0
7	3	6-8	69.8	98.7	0.0	0.0	0.0	0.0	0.0
7	3	74-76	68.6	99.0	0.0	0.0	0.0	0.0	0.0
7	4	6-8	70.4	98.5	0.0	0.0	0.0	0.0	0.0
7	4	74-76	68.8	98.7	0.0	0.0	0.0	0.0	0.0
7	5	6-8	71.6	99.0	0.0	0.0	0.0	0.0	0.0
7	5	74-76	70.0	98.5	0.0	0.0	0.0	0.0	0.0
7	6	6-8	69.5	99.3	0.0	0.0	0.0	0.0	0.0
7	6	74-76	68.2	99.1	0.0	0.0	0.0	0.0	0.0
8	1	6-8	68.5	98.4	0.0	0.0	0.0	0.0	0.0
8	1	74-76	69.5	99.1	0.0	0.0	0.0	0.0	0.0
8	2	7-9	69.0	99.5	0.0	0.0	0.0	0.0	0.0
8	2	74-76	69.1	99.2	0.0	0.0	0.0	0.0	0.0
8	3	6-8	70.1	99.3	0.0	0.0	0.0	0.0	0.0
8	3	74-76	68.3	99.0	0.0	0.0	0.0	0.0	0.0
8	4	144-146	67.3	99.7	0.0	0.0	0.0	0.0	0.0
8	5	6-8	68.4	99.3	0.0	0.0	0.0	0.0	0.0
8	6	148-150	67.9	99.8	0.0	0.0	0.0	0.0	0.0
9	2	7-9	67.2	100.0	0.0	0.0	0.0	0.0	0.0
9	2	74-76	70.0	99.5	0.0	0.0	0.0	0.0	0.0
9	3	148-150	68.3	98.8	0.0	0.0	0.0	0.0	0.0
9	4	23-25	69.4	98.6	0.0	0.0	0.0	0.0	0.0
9	4	75-77	68.7	98.9	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 14									
Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
9	5	12-14	68.9	99.8	0.0	0.0	0.0	0.0	0.0
9	5	84-86	71.1	99.8	0.0	0.0	0.0	0.0	0.0
9	6	12-14	69.9	98.7	0.0	0.0	0.0	0.0	0.0
9	6	74-76	72.4	100.0	0.0	0.0	0.0	0.0	0.0
Hole 15									
1	1	6-8	71.7	98.8	0.0	0.0	0.0	0.0	0.0
1	1	74-76	70.1	99.5	0.0	0.0	0.0	0.0	0.0
1	2	6-8	72.3	99.1	0.0	0.0	0.0	0.0	0.0
1	2	74-76	70.3	99.3	0.0	0.0	0.0	0.0	0.0
1	3	6-8	73.1	98.5	0.0	0.0	0.0	0.0	0.0
1	3	78-80	75.7	98.5	0.0	0.0	0.0	0.0	0.0
1	4	6-8	72.9	98.0	1.2	0.0	0.0	0.0	0.0
1	4	74-76	71.5	98.2	0.0	0.0	0.0	0.0	0.0
1	5	6-8	72.7	98.2	1.1	0.0	0.0	0.0	0.0
1	5	74-76	74.8	97.8	1.9	0.0	0.0	0.0	0.0
1	6	6-8	69.1	99.7	0.0	0.0	0.0	0.0	0.0
1	6	74-76	71.2	99.1	0.0	0.0	0.0	0.0	0.0
2	1	6-8	69.5	98.9	0.0	0.0	0.0	0.0	0.0
2	1	74-76	68.6	100.0	0.0	0.0	0.0	0.0	0.0
2	2	6-8	68.1	98.5	0.0	0.0	0.0	0.0	0.0
2	2	74-76	69.0	98.3	0.0	0.0	0.0	0.0	0.0
2	3	6-8	69.7	99.0	0.0	0.0	0.0	0.0	0.0
2	3	74-76	70.0	99.5	0.0	0.0	0.0	0.0	0.0
2	4	6-8	69.3	99.1	0.0	0.0	0.0	0.0	0.0
2	4	74-76	70.3	97.9	1.2	0.0	0.0	0.0	0.0
2	5	6-8	68.8	98.8	0.0	0.0	0.0	0.0	0.0
2	5	74-76	70.6	97.7	1.2	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 15 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
2	6	6-8	70.1	98.9	0.0	0.0	0.0	0.0	0.0
2	6	74-76	75.2	95.9	2.1	1.4	0.0	0.0	0.0
3	1	6-8	69.5	99.1	0.0	0.0	0.0	0.0	0.0
3	1	74-76	69.5	99.0	0.0	0.0	0.0	0.0	0.0
3	2	6-8	69.1	98.8	0.0	0.0	0.0	0.0	0.0
3	2	74-76	70.9	99.1	0.0	0.0	0.0	0.0	0.0
3	3	6-8	68.9	98.7	0.0	0.0	0.0	0.0	0.0
3	3	74-76	67.5	99.3	0.0	0.0	0.0	0.0	0.0
3	4	6-8	66.8	99.5	0.0	0.0	0.0	0.0	0.0
3	4	74-76	66.1	100.0	0.0	0.0	0.0	0.0	0.0
3	5	6-8	66.0	100.0	0.0	0.0	0.0	0.0	0.0
3	5	74-76	67.0	100.0	0.0	0.0	0.0	0.0	0.0
3	6	6-8	66.2	100.0	0.0	0.0	0.0	0.0	0.0
3	6	74-76	67.8	99.6	0.0	0.0	0.0	0.0	0.0
4	1	6-8	68.6	99.2	0.0	0.0	0.0	0.0	0.0
4	1	74-76	68.6	100.0	0.0	0.0	0.0	0.0	0.0
4	2	6-8	67.6	99.7	0.0	0.0	0.0	0.0	0.0
4	2	74-76	68.6	99.6	0.0	0.0	0.0	0.0	0.0
4	3	6-8	67.6	99.5	0.0	0.0	0.0	0.0	0.0
4	3	74-76	68.0	99.8	0.0	0.0	0.0	0.0	0.0
4	4	6-8	67.5	99.3	0.0	0.0	0.0	0.0	0.0
4	4	74-76	68.4	99.1	0.0	0.0	0.0	0.0	0.0
4	5	6-8	67.3	99.1	0.0	0.0	0.0	0.0	0.0
4	5	74-76	68.7	99.8	0.0	0.0	0.0	0.0	0.0
4	6	6-8	69.3	98.9	0.0	0.0	0.0	0.0	0.0
4	6	74-76	70.1	99.7	0.0	0.0	0.0	0.0	0.0
5	1	6-8	73.8	98.0	1.3	0.0	0.0	0.0	0.0
5	1	74-76	78.6	94.0	2.5	1.6	1.6	0.0	0.0

TABLE 1 - *Continued*

Hole 15 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
5	2	6-8	72.8	97.2	1.3	1.1	0.0	0.0	0.0
5	2	74-76	72.2	98.2	0.0	0.0	0.0	0.0	0.0
5	3	6-8	69.4	99.3	0.0	0.0	0.0	0.0	0.0
5	3	74-76	72.3	98.0	1.5	0.0	0.0	0.0	0.0
5	4	6-8	71.3	98.7	1.0	0.0	0.0	0.0	0.0
5	4	74-76	71.9	98.9	0.0	0.0	0.0	0.0	0.0
5	5	6-8	70.6	98.8	1.0	0.0	0.0	0.0	0.0
5	5	74-76	70.5	99.1	0.0	0.0	0.0	0.0	0.0
5	6	6-8	69.8	98.6	0.0	0.0	0.0	0.0	0.0
5	6	74-76	68.6	99.5	0.0	0.0	0.0	0.0	0.0
6	1	16-18	86.9	74.3	7.9	3.7	3.5	3.2	7.4
6	2	22-24	86.1	73.4	7.7	3.5	3.8	4.1	7.5
6	2	74-76	86.3	76.8	8.2	3.5	0.0	4.6	6.9
6	3	6-8	84.9	79.6	7.4	4.1	0.0	3.4	5.4
6	3	74-76	86.0	70.7	9.5	4.8	0.0	3.5	10.5
6	4	6-8	82.5	85.5	5.4	2.0	0.0	2.0	4.9
6	4	74-76	82.5	86.5	4.0	2.8	0.0	0.0	6.6
6	4	124-26	77.0	93.5	6.5	0.0	0.0	0.0	0.0
6	5	6-8	74.2	99.3	0.0	0.0	0.0	0.0	0.0
6	5	74-76	75.7	99.1	0.0	0.0	0.0	0.0	0.0
6	6	6-8	76.7	92.7	1.9	1.4	0.0	0.0	2.8
6	6	74-76	74.0	96.8	2.3	0.0	0.0	0.0	0.0
7	1	6-8	72.6	99.2	0.0	0.0	0.0	0.0	0.0
7	1	74-76	72.5	95.8	1.4	0.0	0.0	0.0	2.2
7	2	8-10	73.2	98.0	1.6	0.0	0.0	0.0	0.0
7	2	74-76	74.3	98.0	1.9	0.0	0.0	0.0	0.0
7	3	6-8	73.0	98.0	1.8	0.0	0.0	0.0	0.0
7	3	74-76	70.7	99.3	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 15 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag	Kaol.	Mica
7	4	6-8	68.8	98.8	1.0	0.0	0.0	0.0	0.0
7	4	74-76	71.7	98.4	1.3	0.0	0.0	0.0	0.0
7	5	6-8	75.3	96.9	2.4	0.0	0.0	0.0	0.0
7	5	74-76	71.4	98.3	1.0	0.0	0.0	0.0	0.0
7	6	6-8	75.7	96.3	2.3	1.0	0.0	0.0	0.0
7	6	74-76	71.6	98.1	1.3	0.0	0.0	0.0	0.0
8	1	148-50	74.2	100.0	0.0	0.0	0.0	0.0	0.0
8	2	6-8	71.4	100.0	0.0	0.0	0.0	0.0	0.0
8	2	74-76	72.5	100.0	0.0	0.0	0.0	0.0	0.0
8	3	6-8	73.2	100.0	0.0	0.0	0.0	0.0	0.0
8	3	74-76	71.9	100.0	0.0	0.0	0.0	0.0	0.0
8	4	6-8	70.9	100.0	0.0	0.0	0.0	0.0	0.0
8	5	6-8	72.5	100.0	0.0	0.0	0.0	0.0	0.0
8	5	74-76	72.5	100.0	0.0	0.0	0.0	0.0	0.0
8	6	6-8	71.3	100.0	0.0	0.0	0.0	0.0	0.0
8	6	74-76	74.0	100.0	0.0	0.0	0.0	0.0	0.0
9	1	51-53	71.6	98.0	1.3	0.0	0.0	0.0	0.0
9	2	10-12	71.2	98.0	1.4	0.0	0.0	0.0	0.0
9	2	74-76	72.1	98.0	1.4	0.0	0.0	0.0	0.0
9	3	6-8	72.4	98.0	1.1	0.0	0.0	0.0	0.0
9	3	74-76	73.3	98.0	1.4	0.0	0.0	0.0	0.0
9	4	6-8	73.5	98.3	1.7	0.0	0.0	0.0	0.0
9	4	74-76	75.4	97.0	2.9	0.0	0.0	0.0	0.0
9	5	6-8	73.2	98.9	0.0	0.0	0.0	0.0	0.0
9	5	74-76	72.4	99.5	0.0	0.0	0.0	0.0	0.0
9	6	6-8	73.7	99.4	0.0	0.0	0.0	0.0	0.0
9	6	74-76	70.2	98.8	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 16 Core	Section	Depth	Diff.	Calc.	Quar.	Mica
1	1	6-8	70.2	99.7	0.0	0.0
1	1	74-76	71.0	99.0	0.0	0.0
1	2	6-8	71.0	98.3	1.1	0.0
1	2	74-76	70.9	98.9	1.0	0.0
1	4	0-3	67.8	100.0	0.0	0.0
1	6	6-8	67.5	100.0	0.0	0.0
2	1	150	70.7	100.0	0.0	0.0
2	2	150	70.0	100.0	0.0	0.0
2	3	150	69.9	100.0	0.0	0.0
2	4	150	68.7	100.0	0.0	0.0
2	5	150	68.4	99.1	0.0	0.0
2	6	6-8	67.5	100.0	0.0	0.0
2	6	74-76	67.8	99.2	0.0	0.0
3	1	150	69.4	99.3	0.0	0.0
3	2	150	67.1	100.0	0.0	0.0
3	3	150	67.1	99.0	0.0	0.0
3	4	150	68.1	100.0	0.0	0.0
3	5	150	67.1	100.0	0.0	0.0
3	6	150	68.0	99.6	0.0	0.0
4	1	6-8	66.9	100.0	0.0	0.0
4	1	74-76	66.7	99.7	0.0	0.0
4	2	6-8	67.8	98.8	0.0	0.0
4	2	74-76	67.7	100.0	0.0	0.0
4	3	6-8	68.1	100.0	0.0	0.0
4	3	74-76	68.2	97.0	0.0	2.3
4	4	7-9	68.0	97.9	0.0	2.1
4	4	74-76	69.3	100.0	0.0	0.0

TABLE 1 - *Continued*

Hole 16 Core	Section	Depth	Diff.	Calc.	Quar.	Mica
4	5	7-9	68.4	100.0	0.0	0.0
4	5	74-76	69.1	99.7	0.0	0.0
4	6	150	66.4	100.0	0.0	0.0
5	1	150	68.4	99.4	0.0	0.0
5	2	150	68.7	99.6	0.0	0.0
5	3	150	55.5	100.0	0.0	0.0
5	4	150	67.6	100.0	0.0	0.0
5	5	150	66.3	99.7	0.0	0.0
5	6	150	67.3	100.0	0.0	0.0
6	1	150	67.8	99.7	0.0	0.0
6	2	150	66.2	100.0	0.0	0.0
6	3	150	66.2	99.6	0.0	0.0
6	4	150	66.8	99.4	0.0	0.0
6	5	150	66.9	100.0	0.0	0.0
6	6	150	66.7	99.7	0.0	0.0
7	1	150	66.7	100.0	0.0	0.0
7	2	150	66.3	100.0	0.0	0.0
7	3	150	68.2	99.7	0.0	0.0
7	4	150	65.7	99.7	0.0	0.0
7	5	150	66.7	100.0	0.0	0.0
7	6	150	67.7	100.0	0.0	0.0
8	1	150	67.1	100.0	0.0	0.0
8	2	150	67.4	100.0	0.0	0.0
8	3	150	68.0	100.0	0.0	0.0
8	4	150	68.5	99.5	0.0	0.0
8	5	150	68.6	100.0	0.0	0.0
8	6	150	67.7	100.0	0.0	0.0

TABLE 1 - *Continued*

Hole 16						
Core	Section	Depth	Diff.	Calc.	Quar.	Mica
9	1	150	66.9	99.6	0.0	0.0
9	2	150	68.5	100.0	0.0	0.0
9	3	150	68.0	100.0	0.0	0.0
9	4	150	68.6	100.0	0.0	0.0
9	5	6-8	67.0	100.0	0.0	0.0
9	6	150	67.4	100.0	0.0	0.0
10	1	150	67.3	99.8	0.0	0.0
10	2	150	67.8	99.6	0.0	0.0
10	3	150	67.5	100.0	0.0	0.0
10	4	150	69.2	100.0	0.0	0.0
10	5	150	68.2	99.5	0.0	0.0
10	6	150	68.1	99.2	0.0	0.0
11	1	150	68.1	99.4	0.0	0.0
11	2	150	67.7	99.5	0.0	0.0
11	3	150	68.1	100.0	0.0	0.0
11	4	150	67.6	100.0	0.0	0.0
11	5	150	67.4	99.2	0.0	0.0
11	6	150	68.9	100.0	0.0	0.0

Hole 17					
Core	Section	Depth	Diff.	Calc.	Kaol.
1	1	2-4	70.3	99.8	0.0
1	1	77-79	69.2	98.9	0.0
1	2	2-4	69.0	100.0	0.0
1	2	98-80	71.4	99.0	0.0
1	3	2-4	68.6	99.7	0.0
1	3	78-80	64.4	100.0	0.0
1	4	3-5	69.1	100.0	0.0

TABLE 1 - *Continued*

Hole 17					
Core	Section	Depth	Diff.	Calc.	Kaol.
1	4	78-80	67.6	100.0	0.0
1	5	3-5	68.7	99.1	0.0
1	5	78-80	69.2	100.0	0.0
2	1	15-17	66.6	100.0	0.0
2	1	90-92	67.8	100.0	0.0
2	2	3-5	65.8	99.7	0.0
2	2	78-80	66.2	100.0	0.0
2	3	3-5	65.1	100.0	0.0
2	3	78-80	66.5	100.0	0.0
2	4	8-10	66.2	98.1	1.1
2	4	110-112	66.6	100.0	0.0
2	5	10-12	69.1	100.0	0.0
2	5	90-92	86.4	100.0	0.0
2	6	2-4		100.0	0.0
2	6	85-87	66.3	100.0	0.0

Hole 17A						
Core	Section	Depth	Diff.	Calc.	Quar.	Plag.
1	1	3-5	71.9	98.5	1.5	0.0
1	1	78-80	72.6	98.3	1.7	0.0
1	2	3-5	69.9	99.1	0.0	0.0
1	2	78-80	73.6	98.6	1.4	0.0
1	3	10-12	73.6	97.6	2.4	0.0
1	3	80-82	74.5	97.1	2.9	0.0
1	4	3-5	81.9	93.1	6.9	0.0
1	4	78-80	78.5	95.4	4.6	0.0
1	5	3-5	79.6	95.2	4.8	0.0
1	5	80-82	80.0	95.6	4.4	0.0

TABLE 1 - *Continued*

Hole 17A						
	Core	Section	Depth	Diff.	Calc.	Quar.	Plag.
	1	6	8-10	74.4	98.3	1.7	0.0
	1	6	80-82	75.2	97.9	2.1	0.0
	2	1	8-10	71.6	99.0	0.0	0.0
	2	1	85-87	73.6	98.4	1.6	0.0
	2	2	10-12	72.5	99.1	0.0	0.0
	2	2	88-90	74.4	96.6	1.6	0.0
	2	3	8-10	70.8	99.2	0.0	0.0
	2	3	88-90	71.7	99.7	0.0	0.0
	2	4	8-10	72.6	98.5	1.2	0.0
	2	4	88-90	73.2	95.8	1.3	1.5
	2	5	8-10	70.7	98.8	0.0	0.0
	2	5	80-82	71.4	98.0	0.0	0.0
	2	6	10-12	71.8	98.5	0.0	0.0
	2	6	85-87	70.7	98.9	1.1	0.0
	3	1	30-32	74.1	97.7	1.4	0.0
	3	6	148-150	69.7	100.0	0.0	0.0
	4	2	5-7	69.1	100.0	0.0	0.0
	4	5	0-2	69.1	100.0	0.0	0.0
	4	6	8-10	70.3	100.0	0.0	0.0

Hole 18					
Core	Section	Depth	Diff.	Calc.	Quar.
1	5	10-12	67.8	100.0	0.0
1	5	78-80	69.5	100.0	0.0
2	1	0-2	71.2	100.0	0.0
2	2	10-12	71.6	99.4	0.0
2	2	78-80	71.6	99.4	0.0
2	3	148-150	70.8	100.0	0.0

TABLE 1 - *Continued*

Hole 18 Core	Section	Depth	Diff.	Calc.	Quar.
2	4	148-150	77.7	100.0	0.0
2	5	145-150	73.2	97.1	1.4
2	6	CTCH	71.2	100.0	0.0
3	1	148-150	78.9	100.0	0.0
3	2	10-12	67.9	100.0	0.0
3	2	78-80	68.4	100.0	0.0
3	3	148-150	79.8	100.0	0.0
3	4	148-150	70.7	99.3	0.0
3	5	148-150	68.4	100.0	0.0
3	6	148-150	79.8	100.0	0.0
4	2	0-2	68.1	100.0	0.0
4	3	0-2	70.3	100.0	0.0
4	4	10-12	77.6	100.0	0.0
4	4	78-80	70.0	99.4	0.0
4	5	148-150	69.8	100.0	0.0
5	1	148-150	67.9	100.0	0.0
5	2	10-12	67.5	100.0	0.0
5	2	78-80	69.0	100.0	0.0
5	3	148-150	70.4	100.0	0.0
5	5	0-2	69.3	99.1	0.0
5	6	0-2	70.3	100.0	0.0
6	1	10-12	70.8	99.3	0.0
6	1	78-80	70.0	99.0	1.0
6	2	148-150	69.9	99.4	0.0
6	3	148-150	70.2	98.8	1.2
6	4	148-150	70.5	98.8	1.2
6	6	8-10	70.1	99.2	0.0

TABLE 1 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
1	1	50-52	95.3	33.1	24.6	0.0	14.3	13.0	15.0
1	1	130-132	96.4	0.0	30.4	15.8	17.7	13.7	22.4
1	2	8-10	95.9	0.0	37.6	0.0	21.6	12.0	28.8
1	2	74-76	95.5	0.0	36.9	0.0	19.9	14.8	28.4
1	3	6-8	96.2	0.0	36.5	0.0	21.9	16.4	25.2
1	3	74-76	95.7	0.0	31.1	17.7	16.3	12.5	22.4
1	4	7-9	95.6	0.0	31.1	16.8	15.2	15.5	21.4
1	4	74-76	96.4	0.0	39.4	21.4	19.6	0.0	19.7
1	5	8-10	95.6	0.0	50.0	24.2	0.0	0.0	22.8
1	5	74-76	96.1	0.0	40.7	0.0	20.9	14.5	23.9
1	6	8-10	96.1	0.0	39.6		21.4	17.5	21.5
1	6	74-76	95.0	0.0	39.9	0.0	18.1	11.5	30.4
2	1	20-22	95.0	0.0	36.3	12.0	14.2	10.6	26.9
2	1	74-76	93.8	0.0	45.9	0.0	15.5	10.5	28.1
2	2	8-10	93.8	0.0	41.5	14.0	12.7	12.6	19.3
2	2	74-76	93.7	0.0	42.7	0.0	15.4	11.1	30.8
2	3	148-50	94.5	0.0	38.8	0.0	11.5	10.3	39.4
2	4	148-50	93.4	0.0	51.1	0.0	13.0	10.7	25.2
2	5	148-50	94.3	0.0	39.5	0.0	14.2	11.9	34.4
2	6	148-50	95.6	0.0	35.7	12.1	10.8	12.1	29.3
3	1	44-46	77.0	95.8	4.2	0.0	0.0	0.0	0.0
3	1	118-20	88.7	60.5	12.5	4.5	4.9	5.5	12.1
3	2	8-10	82.7	91.2	7.3	0.0	0.0	0.0	0.0
3	2	74-76	83.6	84.7	5.4	0.0	2.3	0.0	6.1
3	3	7-9	81.7	87.4	6.0	2.1	0.0	0.0	4.5
3	3	74-76	86.2	80.9	9.2	0.0	3.2	0.0	6.7
3	4	7-9	92.8	46.9	17.8	6.2	6.9	8.0	14.2
3	4	74-76	90.1	74.0	15.4	3.3	0.0	0.0	7.3

TABLE 1 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
3	5	7-9	80.2	92.8	6.0	1.2	0.0	0.0	0.0
3	5	74-76	84.8	85.3	7.0	0.0	3.0	0.0	4.8
3	6	8-10	90.2	70.4	14.7	0.0	5.1	0.0	9.9
3	6	78-80	79.9	95.9	4.1	0.0	0.0	0.0	0.0
4	1	148-50	74.4	97.1	2.9	0.0	0.0	0.0	0.0
4	2	6-8	73.7	97.9	2.1	0.0	0.0	0.0	0.0
4	2	74-76	73.9	97.6	2.4	0.0	0.0	0.0	0.0
4	3	148-50	72.0	98.1	1.9	0.0	0.0	0.0	0.0
4	4	148-50	72.9	98.6	1.4	0.0	0.0	0.0	0.0
4	5	148-50	69.9	98.9	1.1	0.0	0.0	0.0	0.0
4	6	148-50	70.5	98.6	1.4	0.0	0.0	0.0	0.0
5	1	148-50	69.6	99.3	0.0	0.0	0.0	0.0	0.0
5	2	8-10	70.8	99.1	0.0	0.0	0.0	0.0	0.0
5	2	74-76	70.7	99.1	0.0	0.0	0.0	0.0	0.0
5	3	10-12	75.9	97.3	2.7	0.0	0.0	0.0	0.0
5	3	75-77	78.4	97.1	2.9	0.0	0.0	0.0	0.0
5	4	22-24	71.3	98.9	1.1	0.0	0.0	0.0	0.0
5	4	75-77	72.5	98.7	1.3	0.0	0.0	0.0	0.0
5	5	6-8	72.1	99.0	1.0	0.0	0.0	0.0	0.0
5	5	75-77	77.5	97.7	2.3	0.0	0.0	0.0	0.0
5	6	7-9	73.8	98.2	1.8	0.0	0.0	0.0	0.0
5	6	75-77	73.9	98.4	1.6	0.0	0.0	0.0	0.0
6	1	148-50	74.1	98.9	1.1	0.0	0.0	0.0	0.0
6	2	148-50	75.8	98.4	1.6	0.0	0.0	0.0	0.0
6	3	148-50	74.9	98.2	1.8	0.0	0.0	0.0	0.0
6	4	148-50	74.1	98.5	1.5	0.0	0.0	0.0	0.0
6	5	148-50	72.1	98.8	0.0	0.0	0.0	0.0	0.0
6	6	148-50	77.7	98.1	1.9	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
7	1	8-10	78.1	98.1	1.9	0.0	0.0	0.0	0.0
7	1	75-77	73.2	98.2	1.3	0.0	0.0	0.0	0.0
7	2	6-8	76.3	98.9	1.1	0.0	0.0	0.0	0.0
7	2	75-77	72.8	99.2	0.0	0.0	0.0	0.0	0.0
7	3	7-9	73.2	99.0	0.0	0.0	0.0	0.0	0.0
7	3	75-77	75.3	99.0	0.0	0.0	0.0	0.0	0.0
7	4	7-9	82.9	97.0	3.0	0.0	0.0	0.0	0.0
7	4	75-77	74.4	100.0	0.0	0.0	0.0	0.0	0.0
7	5	7-9	75.3	100.0	0.0	0.0	0.0	0.0	0.0
7	5	73-75	77.8	98.8	1.1	0.0	0.0	0.0	0.0
7	6	6-8	74.6	100.0	0.0	0.0	0.0	0.0	0.0
7	6	75-77	70.7	100.0	0.0	0.0	0.0	0.0	0.0
8	1	148-50	73.9	100.0	0.0	0.0	0.0	0.0	0.0
8	2	6-8	71.4	99.7	0.0	0.0	0.0	0.0	0.0
8	2	75-77	73.0	99.1	0.0	0.0	0.0	0.0	0.0
9	1	148-50	74.1	100.0	0.0	0.0	0.0	0.0	0.0
9	2	148-50	73.7	100.0	0.0	0.0	0.0	0.0	0.0
9	3	148-50	74.4	99.6	0.0	0.0	0.0	0.0	0.0
9	4	148-50	72.0	99.7	0.0	0.0	0.0	0.0	0.0
9	5	148-50	74.8	99.4	0.0	0.0	0.0	0.0	0.0
9	6	3-5	75.0	99.0	0.0	0.0	0.0	0.0	0.0
9	6	148-50	72.3	100.0	0.0	0.0	0.0	0.0	0.0
10	1	148-50	73.5	100.0	0.0	0.0	0.0	0.0	0.0
10	2	148-50	74.7	100.0	0.0	0.0	0.0	0.0	0.0
10	3	148-50	72.8	100.0	0.0	0.0	0.0	0.0	0.0
10	5	148-50	74.3	100.0	0.0	0.0	0.0	0.0	0.0
10	6	148-50	73.9	100.0	0.0	0.0	0.0	0.0	0.0
11	1	148-50	76.5	98.7	1.3	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 19									
Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
11	2	148-50	76.2	100.0	0.0	0.0	0.0	0.0	0.0
11	3	148-50	73.1	99.5	0.0	0.0	0.0	0.0	0.0
11	4	148-50	73.6	100.0	0.0	0.0	0.0	0.0	0.0

Hole 20A					
Core	Section	Depth	Diff.	Calc.	Quar.
2	2	7-9	74.9	97.2	2.8
2	2	64-66	71.4	98.4	1.6
2	3	13-15	74.4	98.2	1.8
2	3	79-81	75.0	97.7	2.3
2	4	148-50	72.5	98.5	1.5
2	5	148-50	73.6	99.0	1.0
2	6	148-50	73.9	98.7	1.3

Hole 20B									
Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
1	1	7-9	89.3	52.8	15.4	4.6	5.5	6.5	15.2
1	1	75	89.7	60.0	14.1	3.8	5.2	5.9	11.0
1	2	11-13	89.4	58.5	14.6	4.0	5.4	5.9	11.6
1	2	75-77	89.2	61.3	13.6	4.5	4.8	5.4	10.4
1	3	7-9	88.6	64.3	11.8	3.1	4.2	5.9	10.7
1	3	75-77	86.3	65.5	10.9	4.3	4.9	4.0	10.4
1	4	7-9	94.1	3.7	24.9	8.0	9.0	8.0	46.4
1	4	75-77	90.0	57.5	14.0	4.9	4.9	5.6	13.1
1	5	3-5	89.5	53.6	15.3	5.7	5.7	5.4	14.3
1	5	72-74	81.4	89.7	5.5	0.0	1.5	0.0	3.3
1	6	4-6	90.9	46.2	20.1	6.0	7.2	7.0	13.5
1	6	74-76	90.7	52.2	16.1	5.8	6.1	6.1	13.7

TABLE 1 - *Continued*

Hole 20C Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
1	1	6-8	85.8	88.0	8.5	0.0	3.6	0.0	0.0
1	1	74-76	94.2	37.9	21.8	11.6	10.5	7.4	10.8
1	2	5-7	94.2	0.0	27.6	10.0	18.2	20.9	23.3
1	2	74-76	95.0	0.0	27.9	8.7	20.1	18.7	24.7
1	3	5-7	94.2	10.3	29.2	0.0	17.4	19.0	24.2
1	3	74-76	81.8	78.0	8.1	0.0	3.2	4.3	6.4
1	4	6-8	83.1	73.8	7.4	3.2	3.0	4.8	7.8
1	4	74-76	80.7	82.4	5.3	0.0	2.8	2.8	6.7
1	5	7-9	84.0	79.8	6.9	2.3	2.7	3.1	5.2
1	5	74-76	85.8	72.4	8.1	0.0	4.5	5.7	9.3
1	6	7-9	90.3	57.7	14.4	0.0	7.6	10.1	10.1
1	6	74-76	89.9	62.3	15.2	0.0	7.2	5.5	9.7
2	1	148-50	69.5	99.4	0.0	0.0	0.0	0.0	0.0
2	2	148-50	70.6	98.6	1.4	0.0	0.0	0.0	0.0
2	3	74-76	70.3	98.8	1.2	0.0	0.0	0.0	0.0
2	4	10-12	69.5	99.4	0.0	0.0	0.0	0.0	0.0
2	4	110-12	70.5	100.0	0.0	0.0	0.0	0.0	0.0
2	5	148-50	69.4	99.5	0.0	0.0	0.0	0.0	0.0
2	6	148-50	70.7	100.0	0.0	0.0	0.0	0.0	0.0
3	1	7-9	86.9	90.2	7.8		2.0	0.0	0.0
3	1	74-76	92.7	82.6	12.7	4.7	0.0	0.0	0.0
3	2	7-9	89.7	87.9	8.5	3.6	0.0	0.0	0.0
3	2	74-76	87.6	89.2	6.1	2.3	2.5	0.0	0.0
3	3	6-8	91.8	64.0	11.1	7.7	5.7	5.0	6.5
3	3	74-76	93.0	73.9	14.8	6.6	4.7	0.0	0.0
3	4	17-19	88.2	89.3	8.2	2.6	0.0	0.0	0.0
3	4	74-76	87.3	94.8	5.2	0.0	0.0	0.0	0.0
3	5	5-7	88.4	84.2	8.6	4.1	3.1	0.0	0.0

TABLE 1 - *Continued*

Hole 20C Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Kaol.	Mica
3	5	74-76	88.3	93.9	6.1	0.0	0.0	0.0	0.0
3	6	7-9	89.3	87.3	9.0	3.7	0.0	0.0	0.0
3	6	74-76	88.1	88.4	8.0	3.6	0.0	0.0	0.0
4	1	15-17	90.8	81.1	12.7	6.2	0.0	0.0	0.0
4	1	74-76	90.7	90.5	9.5	0.0	0.0	0.0	0.0
4	2	7-9	91.0	80.6	12.6	3.4	3.4	0.0	0.0
4	2	74-76	89.0	84.3	11.6	0.0	4.1	0.0	0.0
4	3	6-8	86.2	86.5	8.5	2.7	2.3	0.0	0.0
4	3	74-76	86.0	91.2	6.5	2.3	0.0	0.0	0.0
4	4	148-50	0.9	85.6	10.9	3.5	0.0	0.0	0.0
5	1	148-50	72.8	99.0	0.0	0.0	0.0	0.0	0.0
5	2	10-12	71.3	99.4	0.0	0.0	0.0	0.0	0.0
5	3	6-8	72.3	100.0	0.0	0.0	0.0	0.0	0.0
5	3	74-76	70.2	99.6	0.0	0.0	0.0	0.0	0.0
5	4	6-8	70.2	99.5	0.0	0.0	0.0	0.0	0.0
5	4	74-76	69.9	99.5	0.0	0.0	0.0	0.0	0.0
5	5	8-10	68.4	100.0	0.0	0.0	0.0	0.0	0.0
5	5	74-76	68.4	100.0	0.0	0.0	0.0	0.0	0.0
5	6	6-8	68.9	100.0	0.0	0.0	0.0	0.0	0.0
5	6	74-76	69.2	100.0	0.0	0.0	0.0	0.0	0.0
6	1	148-50	76.0	98.3	1.7	0.0	0.0	0.0	0.0
6	2	5-7	73.1	99.1	0.0	0.0	0.0	0.0	0.0
6	2	74-76	72.4	99.3	0.0	0.0	0.0	0.0	0.0
6	3	5-7	71.3	99.0	0.0	0.0	0.0	0.0	0.0
6	3	74-76	69.5	100.0	0.0	0.0	0.0	0.0	0.0
6	4	8-10	70.5	99.3	0.0	0.0	0.0	0.0	0.0
6	4	74-76	75.4	98.8	1.2	0.0	0.0	0.0	0.0
6	5	73-75	71.9	99.2	0.0	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 21 Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Mica
1	1	148-150	68.2	100.0	0.0	0.0	0.0	0.0
1	2	148-150	68.2	100.0	0.0	0.0	0.0	0.0
1	3	148-150	68.8	100.0	0.0	0.0	0.0	0.0
1	4	84-86	68.3	100.0	0.0	0.0	0.0	0.0
1	6	148-150	67.7	100.0	0.0	0.0	0.0	0.0
2	1	148-150	73.1	94.6	0.0	0.0	0.0	5.4
2	2	0-2	73.0	98.6	1.4	0.0	0.0	0.0
2	3	148-150	70.1	99.5	0.0	0.0	0.0	0.0
2	4	33-35	69.7	100.0	0.0	0.0	0.0	0.0
2	4	84-86	69.2	99.3	0.0	0.0	0.0	0.0
2	5	30-32	69.5	100.0	0.0	0.0	0.0	0.0
2	5	84-86	70.8	99.5	0.0	0.0	0.0	0.0
2	6	8-10	69.5	99.3	0.0	0.0	0.0	0.0
2	6	90-92	71.5	99.4	0.0	0.0	0.0	0.0
3	1	148-150	73.6	98.1	1.9	0.0	0.0	0.0
3	2	148-150	74.4	97.5	2.5	0.0	0.0	0.0
3	3	148-150	73.7	97.7	2.3	0.0	0.0	0.0
3	4	148-150	73.7	97.8	2.2	0.0	0.0	0.0
3	5	11-13	74.5	98.2	1.8	0.0	0.0	0.0
3	5	78-80	74.9	98.3	1.7	0.0	0.0	0.0
3	6	148-150	75.5	96.7	3.3	0.0	0.0	0.0
4	1	148-150	74.4	94.4	3.7	0.0	0.0	0.0
4	2	148-150	73.7	97.0	3.0	0.0	0.0	0.0
4	3	148-150	73.4	94.2	2.8	1.6	1.4	0.0
4	4	11-13	77.5	96.1	3.9	0.0	0.0	0.0
4	4	135-137	77.0	94.9	3.7	1.4	0.0	0.0
4	5	148-150	74.8	96.1	3.0	0.0	0.0	0.0
4	6	148-150	71.7	98.2	1.8	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 21								
Core	Section	Depth	Diff.	Calc.	Quar.	K-Fe	Plag.	Mica
5	1	26-28	72.9	97.5	2.5	0.0	0.0	0.0
5	1	90-92	71.0	98.4	1.6	0.0	0.0	0.0
5	2	148-150	70.4	98.4	1.6	0.0	0.0	0.0
5	3	148-150	69.7	98.3	1.7	0.0	0.0	0.0
5	4	148-150	72.4	97.2	2.8	0.0	0.0	0.0
5	5	72-74	73.0	96.9	3.1	0.0	0.0	0.0
5	6	148-150	72.6	96.3	2.8	0.0	0.0	0.0
6	3	10-12	71.6	97.6	2.4	0.0	0.0	0.0
6	3	75-77	73.1	98.2	1.8	0.0	0.0	0.0
6	4	6-8	75.5	94.6	4.3	0.0	0.0	0.0
6	4	73-75	71.2	97.8	2.2	0.0	0.0	0.0
6	5	6-8	72.7	98.2	1.8	0.0	0.0	0.0
6	5	75-77	72.7	97.6	2.4	0.0	0.0	0.0
6	6	6-8	72.9	97.8	2.2	0.0	0.0	0.0
6	6	74-76	71.8	99.2	0.0	0.0	0.0	0.0
7	1	145-150	72.8	98.5	1.5	0.0	0.0	0.0
7	2	148-150	70.0	98.5	1.5	0.0	0.0	0.0
7	3	148-150	71.2	98.0	2.0	0.0	0.0	0.0
7	4	148-150	74.4	97.9	1.1	0.0	1.0	0.0
7	5	148-150	74.2	97.6	2.4	0.0	0.0	0.0
7	6	148-150	71.0	98.8	1.2	0.0	0.0	0.0
8	1	0-2	70.8	99.3	0.0	0.0	0.0	0.0
8	2	148-150	71.6	97.9	2.1	0.0	0.0	0.0
8	3	148-150	71.9	99.1	0.0	0.0	0.0	0.0
8	4	148-150	70.3	100.0	0.0	0.0	0.0	0.0
8	5	148-150	71.0	99.3	0.0	0.0	0.0	0.0
8	6	29-31	70.5	99.4	0.0	0.0	0.0	0.0

TABLE 1 - *Continued*

Hole 21A

Core	Section	Depth	Diff.	Calc.
1	1	148-150	69.3	100.0
1	2	148-150	69.3	100.0
1	3	148-150	68.2	100.0
1	4	148-150	70.0	100.0
1	5	148-150	67.7	100.0
1	6	148-150	68.1	100.0
2	1	148-150	69.1	100.0
2	2	148-150	66.8	100.0
2	3	148-150	70.0	99.9
2	5	148-150	69.5	100.0
2	6	148-150	66.9	100.0
3	1	148-150	70.3	100.0
3	2	148-150	72.2	100.0
3	3	148-150	70.3	100.0
3	4	148-150	69.6	100.0
3	5	3-5	72.8	99.1
3	5	96-98	71.9	100.0
3	6	40-42	71.3	99.3

Hole 22

Core	Section	Depth	Diff.	Calc.	Quar.
1	1	148-150	73.2	100.0	0.0
1	2	148-150	72.4	100.0	0.0
1	3	148-150	73.1	99.0	0.0
1	4	148-150	72.0	100.0	0.0
1	6	29-31	72.0	100.0	0.0
1	6	108-110	71.5	100.0	0.0
2	1	11-13	72.9	98.1	0.0

TABLE 1 - *Continued*

Hole 22 Core	Section	Depth	Diff.	Calc.	Quar.
2	1	85-87	72.4	98.1	1.4
2	2	13-15	70.2	98.2	0.0
2	2	85-87	70.4	100.0	0.0
2	3	16-18	70.3	99.2	0.0
2	3	85-87	70.6	100.0	0.0
2	6	10-12	69.3	100.0	0.0
2	6	85-87	69.4	100.0	0.0
3	1	148-150	72.5	97.9	2.1
3	3	148-150	74.6	97.8	2.2
3	4	148-150	74.4	97.3	2.7
3	5	148-150	73.8	98.0	2.0
3	6	40-42	73.2	98.2	1.8
3	6	110-112	0.0	100.0	0.0
4	1	74-76	0.0	100.0	0.0
4	1	126-128	0.0	100.0	0.0
4	2	8-10	0.0	100.0	0.0
4	2	80-82	0.0	100.0	0.0
4	3	148-150	0.0	100.0	0.0
4	4	8-10	0.0	100.0	0.0
4	4	74-76	0.0	100.0	0.0
4	5	10-12	0.0	100.0	0.0
4	5	78-80	0.0	100.0	0.0
4	6	18-20	0.0	100.0	0.0
4	6	75-77	0.0	100.0	0.0
5	1	8-10	0.0	100.0	0.0
5	2	90-92	0.0	100.0	0.0
5	2	146-147	0.0	100.0	0.0

[a]Abbreviations for X-ray mineralogy results: Calc.-calcium; Quar.-quartz; K-Fe-K-feldspar; Plag.-plagioclase; Kaol.-kaolinite; Cris.-cristobalite; Dolo.-dolomite; Side.-siderite; Mont.-montmorillonite; Clin.-clinoptilolite.

TABLE 2
Tabulation of Results of X-ray Diffraction Analysis of Samples from Leg 3: Glycerated "Calcite-Free" Fractions[a]

Hole 13

Core	Section	Depth	Diff.	Quar.	Plag.	Kaol.	% Amorphous Scattering
1	1	10-12	84.5	10.11	0.5	89.4	0.0
1	1	78	87.2	6.0	0.0	94.0	0.0
1	2	8-10	85.1	12.0	0.7	87.3	0.0
1	3	9-11	87.0	7.1	0.0	92.9	0.0
1	3	84-86	87.4	7.7	0.0	92.1	0.0
1	4	10-12	87.2	6.7	0.0	93.3	0.0
1	4	80-82	86.5	10.0	0.0	90.0	0.0
1	5	26-28	87.3	7.0	0.0	93.0	0.0
1	5	90-92	86.0	10.1	0.0	89.9	0.0
1	6	9-11	87.2	10.0	0.0	90.0	0.0
1	6	80-82	87.5	5.5	0.0	94.5	0.0
2	1	42-44	87.4	6.9	0.0	93.1	0.0
2	1	90-92	86.8	5.2	0.0	94.8	0.0
2	2	12-14	87.6	5.7	0.0	94.3	0.0
2	2	85-87	87.3	6.0	0.0	94.0	0.0
2	3	8-10	88.4	8.4	0.0	91.6	0.0
2	3	83-85	88.8	10.0	0.0	90.0	0.0
2	4	7-9	87.1	5.4	0.0	94.6	0.0
2	4	76-78	86.8	5.3	0.0	94.7	0.0
2	5	6-8	87.6	6.5	0.0	93.5	0.0
2	5	75-77	87.1	5.5	0.0	94.5	0.0
2	6	6-8	86.7	6.2	0.0	93.8	0.0
2	6	75-77	86.8	5.4	0.0	94.6	0.0
3	1	68-70	90.1	0.0	0.0	0.0	100.0
3	2	15-17	88.2	0.0	0.0	0.0	100.0

TABLE 2 - *Continued*

Hole 13

Core	Section	Depth	Diff.	Quar.	Plag.	Kaol.	% Amorphous Scattering
3	2	80-82	89.0	0.0	0.0	0.0	100.0
3	3	10-12	89.4	0.0	0.0	0.0	100.0
3	3	83-85	89.0	0.0	0.0	0.0	100.0
3	4	135-137	88.0	0.0	0.0	0.0	100.0
3	5	7-9	87.2	0.0	0.0	0.0	100.0
3	5	80-82	88.8	0.0	0.0	0.0	100.0
3	6	7-9	89.6	0.0	0.0	0.0	100.0
3	6	83-85	94.5	0.0	0.0	0.0	100.0

Hole 13A

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Side.	Cris.
1	1	70-72	89.2	9.5	15.7	0.0	53.9	0.0	0.0	20.9	0.0
1	1	124-126	89.3	2.1	4.8	0.0	0.0	0.0	86.8	6.3	0.0
2	1	124-126	90.6	2.5	0.0	0.0	0.0	0.0	58.2	0.0	39.3
3	1	119-121	92.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	2	8-10	87.5	5.3	0.0	0.0	0.0	0.0	94.7	0.0	0.0
3	2	80-82	89.9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	3	7-9	89.8	5.3	0.0	0.0	0.0	0.0	94.7	0.0	0.0
3	3	78-80	91.2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	4	8-10	90.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	4	130-132	89.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1	15	86.9	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	1	120	86.1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1	31-33	85.5	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	1	94-96	85.1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	1	CTCH	83.8	81.3	0.0	0.0	18.7	0.0	0.0	0.0	0.0

TABLE 2 - *Continued*

Hole 13A

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Side.	Cris.
7	1	80	88.2	49.5	0.0	0.0	27.7	20.3	0.0	2.5	0.0
7	1	120	85.0	75.8	0.0	8.3	6.8	0.0	0.0	9.1	0.0
7	1	140	87.7	12.5	0.0	1.5	10.0	61.3	13.3	1.5	0.0

Hole 14

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica
1			82.6	7.4	6.1	4.5	11.1	70.9
2			85.8	11.8	0.0	4.8	15.9	67.5
3			85.7	9.6	4.0	0.0	11.8	74.6
4			84.1	8.3	4.0	3.0	14.2	70.6
5			85.0	8.8	4.1	0.0	13.6	73.5
6			90.2	10.4	0.0	0.0	13.5	76.1
7			90.7	20.7	0.0	0.0	0.0	79.3
9			86.0	100.0	0.0	0.0	0.0	0.0

Hole 15

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica
1			81.7	40.9	0.0	17.9	41.2	0.0
2			86.9	39.9	0.0	21.7	38.5	0.0
3			88.3	20.8	15.6	0.0	20.8	42.6
4			85.5	14.7	6.0	5.8	22.6	50.8
6			89.1	16.3	7.3	0.0	16.2	60.0
7			92.7	13.5	4.5	0.0	13.6	68.4
8			93.4	0.0	0.0	0.0	0.0	0.0
9			89.5	12.4	3.8	0.0	16.4	67.5

TABLE 2 - *Continued*

Hole 16 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
1	1	6-8	90.4	19.5	0.0	13.2	19.5	32.0	15.6	0.0	0.0
1	1	74-76	88.4	44.3	0.0	22.8	32.9	0.0	0.0	0.0	0.0
1	2	6-8	89.1	44.8	0.0	20.9	34.3	0.0	0.0	0.0	0.0
1	2	74-76	88.7	47.6	0.0	25.1	27.3	0.0	0.0	0.0	0.0
1	4	0-3	87.6	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	6	6-8	86.1	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	1	150	86.7	65.9	0.0	34.1	0.0	0.0	0.0	0.0	0.0
2	2	150	88.1	44.4	0.0	30.6	25.0	0.0	0.0	0.0	0.0
2	3	150	86.9	58.4	0.0	41.6	0.0	0.0	0.0	0.0	0.0
2	4	150	86.6	66.3	0.0	33.7	0.0	0.0	0.0	0.0	0.0
2	5	150	87.5	42.4	0.0	27.4	0.0	0.0	0.0	0.0	0.0
2	6	6-8	87.4	55.4	0.0	44.6	0.0	0.0	0.0	0.0	0.0
2	6	74-76	87.5	54.0	0.0	46.0	0.0	0.0	0.0	0.0	0.0
3	1	150	87.9	25.7	0.0	12.8	0.0	61.5	0.0	0.0	0.0
3	2	150	87.3	47.5	25.1	27.4	0.0	0.0	0.0	0.0	0.0
3	3	150	87.5	48.1	28.2	23.7	0.0	0.0	0.0	0.0	0.0
3	4	150	86.7	40.9	30.9	28.2	0.0	0.0	0.0	0.0	0.0
3	5	150	86.8	67.6	0.0	32.4	0.0	0.0	0.0	0.0	0.0
3	6	150	87.7	66.6	0.0	33.4	0.0	0.0	0.0	0.0	0.0
4	1	6-8	87.6	66.3	0.0	33.7	0.0	0.0	0.0	0.0	0.0
4	1	74-76	87.1	62.4	0.0	37.6	0.0	0.0	0.0	0.0	0.0
4	2	6-8	86.5	55.0	0.0	45.0	0.0	0.0	0.0	0.0	0.0
4	2	74-76	87.6	19.1	0.0	14.4	19.1	47.2	0.0	0.0	0.0
4	3	6-8	87.1	14.1	12.7	12.7	14.1	46.3	0.0	0.0	0.0
4	3	74-76	87.7	22.5	0.0	13.5	17.9	46.0	0.0	0.0	0.0
4	4	7-9	88.1	19.2	0.0	14.4	19.2	47.2	0.0	0.0	0.0
4	4	74-76	88.0	13.4	10.0	12.0	16.0	37.6	10.7	0.0	0.0
4	5	7-9	87.2	17.5	15.7	0.0	17.5	49.0	0.0	0.0	0.0

TABLE 2 - *Continued*

Hole 16 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
4	5	74-76	87.3	18.9	15.7	32.0	18.9	46.5	0.0	0.0	0.0
4	6	150	88.9	17.5	13.1	15.8	17.5	35.9	0.0	0.0	0.0
5	1	150	89.4	26.2	14.1	13.4	16.6	29.6	0.0	0.0	0.0
5	2	150	87.7	25.7	0.0	20.7	0.0	53.6	0.0	0.0	0.0
5	3	150	89.5	14.8	0.0	22.5	26.0	36.7	0.0	0.0	0.0
5	4	150	87.5	21.4	0.0	10.8	17.8	50.0	0.0	0.0	0.0
5	5	150	88.4	11.1	0.0	11.5	21.6	55.8	0.0	0.0	0.0
5	6	150	87.6	24.0	0.0	11.6	0.0	64.3	0.0	0.0	0.0
6	1	150	87.6	32.7	15.0	18.0	34.4	0.0	0.0	0.0	0.0
6	2	150	88.3	17.9	0.0	14.4	17.9	49.8	0.0	0.0	0.0
6	3	150	88.4	16.4	0.0	14.0	16.3	53.3	0.0	0.0	0.0
6	4	150	88.7	19.9	13.7	0.0	15.8	50.7	0.0	0.0	0.0
6	5	150	88.1	14.1	0.0	11.7	19.5	54.7	0.0	0.0	0.0
6	6	150	88.2	19.7	0.0	16.8	21.2	42.3	0.0	0.0	0.0
7	1	150	88.9	22.2	0.0	18.4	15.5	43.8	0.0	0.0	0.0
7	2	150	89.6	6.9	6.8	0.0	7.8	28.6	5.6	42.1	0.0
7	3	150	88.6	13.8	16.6	0.0	19.4	45.2	0.0	0.0	4.58
7	4	150	88.2	13.9	0.0	12.5	22.2	51.3	0.0	0.0	0.0
7	5	150	88.6	13.9	0.0	12.5	22.2	51.3	0.0	0.0	0.0
7	6	150	88.8	12.7	0.0	12.4	17.8	41.7	11.8	0.0	3.6
8	1	150	87.7	11.4	0.0	12.9	18.3	46.8	10.6	0.0	0.0
8	2	150	90.5	12.5	10.4	15.0	20.0	30.7	11.6	0.0	0.0
8	3	150	89.1	9.3	0.0	12.5	20.4	41.8	16.0	0.0	0.0
8	4	150	90.1	7.9	7.1	10.1	11.1	22.2	6.3	35.2	0.0
8	5	150	88.2	8.6	11.0	14.1	17.1	35.1	8.0	0.0	6.2
8	6	150	90.4	13.7	9.3	11.3	13.7	44.8	7.2	0.0	0.0
9	1	150	87.4	29.1	0.0	20.6	12.9	37.4	0.0	0.0	0.0
9	2	150	88.2	5.8	7.8	0.0	8.1	27.5	0.0	46.3	4.4

TABLE 2 - *Continued*

Hole 16

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
9	3	150	89.7	14.5	12.1	9.6	16.8	47.0	0.0	0.0	0.0
9	4	150	88.7	13.1	0.0	9.8	13.1	53.6	10.5	0.0	0.0
9	5	6-8	89.4	12.7	0.0	9.5	15.2	52.0	10.5	0.0	0.0
9	6	150	88.3	4.9	0.0	6.6	7.8	20.0	5.2	52.2	3.2
10	1	150	91.1	14.2	11.7	10.8	12.9	50.4	0.0	0.0	0.0
10	2	150	90.1	10.8	9.7	11.3	15.1	53.1	0.0	0.0	0.0
10	3	150	88.6	8.6	0.0	21.8	21.8	47.8	0.0	0.0	0.0
10	4	150	89.9	11.8	7.1	8.9	19.0	43.7	9.5	0.0	0.0
10	5	150	88.1	11.6	15.6	0.0	25.4	47.4	0.0	0.0	0.0
10	6	150	89.9	16.4	9.8	8.9	16.4	48.4	0.0	0.0	0.0
11	1	150	89.8	13.9	7.9	7.6	17.8	53.4	0.0	0.0	0.0
11	2	150	91.1	17.8	12.1	9.4	14.2	46.5	0.0	0.0	0.0
11	3	150	90.2	14.6	8.9	7.4	14.5	54.6	0.0	0.0	0.0
11	4	150	89.9	13.2	7.9	9.0	21.1	48.7	0.0	0.0	0.0
11	5	150	89.8	14.8	7.9	6.5	13.6	57.1	0.0	0.0	0.0
11	6	150	91.0	8.8	6.0	6.7	7.0	24.7	46.9	0.0	0.0

Hole 17

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Clin.	% Amór-phous Scattering
1	1	2-4	88.3	18.0	0.0	12.3	25.3	44.4	0.0	0.0
1	1	77-79	86.9	63.7	0.0	36.3	0.0	0.0	0.0	0.0
1	2	2-4	87.0	57.7	0.0	42.3	0.0	0.0	0.0	0.0
1	2	78-80	88.9	13.9	0.0	10.8	16.8	58.5	0.0	0.0
1	3	2-4	87.8	39.3	0.0	25.8	34.8	0.0	0.0	0.0
1	3	78-80	88.5	17.9	0.0	14.5	27.1	40.5	0.0	0.0
1	4	3-5	88.4	13.4	0.0	11.9	22.7	52.0	0.0	0.0

TABLE 2 - *Continued*

Hole 17

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Clin.	% Amorphous Scattering
1	4	78-80	88.2	15.0	0.0	10.3	21.0	53.6	0.0	0.0
1	5	3-5	89.2	14.7	0.0	11.2	25.9	48.3	0.0	0.0
1	5	78-80	87.4	17.0	0.0	15.6	24.2	43.2	0.0	0.0
2	1	15-17	86.8	22.2	8.8	17.9	51.1	0.0	0.0	0.0
2	1	90-92	87.7	9.3	0.0	8.4	31.7	38.2	12.4	0.0
2	2	3-5	87.9	11.2	0.0	10.0	22.2	45.6	11.0	0.0
2	2	78-80	87.6	14.0	0.0	22.4	63.6	0.0	0.0	0.0
2	3	3-5	87.3	6.0	0.0	11.0	32.9	50.1	0.0	0.0
2	3	78-80	86.3	20.5	0.0	21.9	57.6	0.0	0.0	0.0
2	4	8-10	88.8	22.4	0.0	26.5	51.2	0.0	0.0	0.0
2	4	110-112	90.9	0.0	0.0	0.0	0.0	0.0	0.0	100.0
2	5	10-12	89.6	0.0	0.0	0.0	0.0	0.0	0.0	100.0
2	5	90-92	91.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0
2	6	2-4	90.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0
2	6	85-87	89.0	11.0	7.5	9.9	17.6	45.0	9.1	0.0

Hole 17A

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
1	1	3-5	89.2	13.0	5.4	5.1	11.2	65.3	0.0
1	1	78-80	89.8	15.0	0.0	7.0	10.9	67.0	0.0
1	2	3-5	89.4	20.7	10.5	9.1	0.0	59.7	0.0
1	2	78-80	88.6	17.0	0.0	11.2	10.9	55.7	5.3
1	3	10-12	90.1	19.3	7.4	0.0	11.7	61.6	0.0
1	3	80-82	90.1	15.5	5.6	0.0	10.6	68.3	0.0
1	4	3-5	90.0	21.4	0.0	9.0	9.6	60.0	0.0
1	4	78-80	89.7	20.1	0.0	10.7	12.1	52.7	4.4

TABLE 2 - *Continued*

Hole 17A

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
1	5	3-5	87.3	15.2	0.0	10.4	12.2	56.2	6.0
1	5	80-82	88.8	19.6	0.0	74.1	4.5	55.2	6.5
1	6	8-10	88.5	16.0	0.0	12.0	10.3	55.1	6.6
1	6	80-82	90.4	23.1	11.4	0.0	10.3	55.3	0.0
2	1	8-10	90.3	14.3	0.0	12.7	16.7	56.3	0.0
2	1	85-87	90.9	17.6	0.0	13.8	17.9	50.7	0.0
2	2	10-12	87.9	15.2	0.0	13.7	8.1	56.2	6.7
2	2	88-90	85.1	27.7	0.0	72.3	0.0	0.0	0.0
2	3	8-10	89.6	13.0	0.0	17.5	22.0	47.6	0.0
2	3	88-90	89.8	19.2	0.0	21.5	22.6	36.7	0.0
2	4	8-10	88.0	11.2	0.0	15.2	24.7	41.5	7.4
2	4	88-90	89.8	12.8	2.6	16.2	22.7	45.7	0.0
2	5	8-10	88.8	12.7	0.0	7.6	13.9	65.8	0.0
2	5	80-82	90.4	16.1	0.0	8.4	14.5	61.0	0.0
2	6	10-12	89.5	15.9	0.0	8.3	16.7	59.1	0.0
2	6	85-87	88.6	14.1	0.0	8.2	15.7	62.0	0.0
3	1	30-32	90.1	15.9	0.0	13.1	14.7	56.2	0.0
3	6	148-150	87.0	19.6	0.0	6.1	0.0	74.3	0.0
4	2	5-7	89.9	15.4	0.0	3.8	10.5	70.5	0.0
4	5	0-2	88.9	14.0	5.3	6.3	11.2	63.2	0.0
4	6	8-10	88.5	33.5	0.0	10.3	0.0	56.2	0.0

Hole 17B

Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Side.
1	1	8-10	89.3	15.0	5.9	8.0	15.9	55.2	0.0	0.0
1	1	80-82	88.5	11.4	5.1	6.3	13.4	63.8	0.0	0.0
1	2	8-10	88.4	11.4	5.2	6.8	16.4	60.2	0.0	0.0
1	3	2-4	89.1	15.9	4.0	9.9	16.7	53.4	0.0	0.0

TABLE 2 - *Continued*

Hole 17B Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Side.
1	3	8-10	89.7	14.3	0.0	9.3	15.2	60.2	0.0	0.0
1	3	78-80	89.4	15.6	6.5	8.3	15.6	54.0	0.0	0.0
1	4	8-10	89.1	14.9	0.0	9.1	16.9	59.2	0.0	0.0
1	4	78-80	87.3	16.8	0.0	13.1	12.1	49.4	0.0	8.7
1	5	70-72	88.0	13.8	0.0	10.3	11.0	58.6	0.0	6.3
1	6	70-72	86.8	7.8	0.0	8.7	19.5	64.0	0.0	0.0
2	1	20-22	87.7	9.5	6.8	7.4	13.5	62.8	0.0	0.0
2	1	90-92	87.0	12.1	0.0	12.4	15.2	60.4	0.0	0.0
2	2	8-10	87.5	11.0	0.0	7.4	13.5	68.1	0.0	0.0
2	2	78-80	86.6	12.7	10.3	0.0	0.0	77.0	0.0	0.0
2	3	10-12	87.7	15.6	0.0	8.3	1.9	64.0	10.3	0.0
2	3	88-90	87.8	10.7	0.0	7.3	17.0	65.1	0.0	0.0
2	4	9-11	87.1	12.5	0.0	8.4	13.3	65.8	0.0	0.0
2	4	80-82	88.1	11.1	6.0	6.0	14.2	62.6	0.0	0.0
2	5	8-10	85.9	14.7	11.3	0.0	0.0	74.1	0.0	0.0
2	5	80-82	87.4	16.1	0.0	11.3	18.6	54.0	0.0	0.0
2	6	10-12	87.1	12.2	0.0	8.7	19.4	59.8	0.0	0.0
2	6	85-87	86.5	9.1	0.0	6.6	10.3	74.0	0.0	0.0
3	1	8-10	88.1	16.4	4.9	4.9	14.4	51.2	8.2	0.0
3	1	78-80	86.2	77.8	22.2	0.0	0.0	0.0	0.0	0.0
3	2	8-10	88.1	14.5	0.0	5.2	17.9	62.4	0.0	0.0
3	2	78-80	86.4	57.5	22.5	20.0	0.0	0.0	0.0	0.0
3	3	8-10	87.0	8.4	0.0	5.6	12.1	73.9	0.0	0.0
3	3	78-80	86.4	10.7	0.0	12.1	14.7	62.5	0.0	0.0
3	4	8-10	88.3	11.0	0.0	5.4	14.6	69.0	0.0	0.0
3	4	78-80	87.3	11.5	6.5	0.0	12.7	69.2	0.0	0.0
3	5	8-10	88.0	12.3	0.0	4.8	11.2	71.7	0.0	0.0
3	5	78-80	86.8	12.3	0.0	7.2	12.9	67.9	0.0	0.0

TABLE 2 - *Continued*

Hole 17B										
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Side.
3	6	70-72	87.0	9.0	2.1	3.3	11.2	74.4	0.0	0.0
4	1	70-72	87.9	10.4	4.2	3.7	10.7	70.9	0.0	0.0
4	2	10-12	87.0	10.3	6.6	0.0	10.6	72.4	0.0	0.0
4	2	78-80	87.5	13.8	0.0	7.2	9.5	69.5	0.0	0.0
4	3	10-12	87.4	9.2	3.6	0.0	11.2	76.0	0.0	0.0
4	3	78-80	87.7	10.0	5.3	5.4	9.2	70.2	0.0	0.0
4	4	10-12	87.7	13.4	6.7	0.0	11.6	68.3	0.0	0.0
4	4	78-80	86.6	18.7	0.0	0.0	0.0	81.3	0.0	0.0
4	5	10-12	87.7	11.9	0.0	6.1	11.1	70.9	0.0	0.0
4	5	78-80	86.6	16.9	0.0	12.0	0.0	71.1	0.0	0.0
4	6	15-17	87.6	12.1	0.0	6.1	0.0	81.8	0.0	0.0
4	6	85-87	87.3	62.8	0.0	37.2	0.0	0.0	0.0	0.0

Hole 18									
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.
1			84.5	27.8	0.0	16.8	0.0	37.5	17.9
2			87.5	24.7	11.1	10.7	0.0	41.7	11.8
3			83.2	21.5	10.9	13.6	0.0	36.5	17.5
4			79.1	19.6	0.0	9.1	0.0	51.1	20.1
5			79.0	18.0	6.7	6.0	0.0	49.2	20.1
6			82.8	22.5	8.2	8.0	2.6	48.0	10.7

Hole 19									
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
1	1	50-52	88.9	16.2	0.0	15.1	18.3	50.4	0.0
1	1	130-32	88.7	14.4	0.0	11.5	16.5	57.7	0.0
1	2	8-10	89.8	8.4	0.0	4.2	26.7	60.6	0.0
1	2	74-76	89.4	7.0	0.0	5.4	21.4	66.2	0.0

TABLE 2 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
1	3	6-8	89.1	12.2	0.0	10.8	17.6	59.4	0.0
1	3	74-76	89.1	14.2	0.0	11.8	15.3	58.6	0.0
1	4	7-9	88.6	14.9	0.0	9.9	17.3	57.8	0.0
1	4	74-76	89.0	15.3	0.0	10.3	17.6	56.8	0.0
1	5	8-10	89.3	17.2	10.7	9.7	13.8	48.4	0.0
1	5	74-76	87.5	15.7	0.0	11.8	1.9	70.7	0.0
1	6	8-10	88.3	15.6	9.7	7.1	14.8	53.6	0.0
1	6	74-76	84.6	15.5	0.0	7.4	16.0	61.1	0.0
2	1	20-22	88.6	18.0	0.0	6.0	13.6	62.3	0.0
2	1	74-76	88.3	19.3	0.0	0.0	15.2	65.4	0.0
2	2	8-10	87.4	14.7	3.5	5.5	14.3	62.2	0.0
2	2	74-76	88.0	12.5	1.7	4.8	14.6	66.5	0.0
2	3	148-50	88.9	18.1	3.3	6.2	13.0	59.3	0.0
2	4	148-50	88.6	19.6	0.0	4.4	14.3	61.7	0.0
2	5	148-50	88.8	15.7	0.0	5.9	10.3	68.0	0.0
2	6	148-50	88.1	13.3	8.4	0.0	11.8	66.5	0.0
3	1	44-46	89.2	19.9	0.0	9.5	15.2	55.5	0.0
3	1	118-20	89.1	28.0	0.0	12.1	12.7	47.2	0.0
3	2	8-10	88.8	16.9	0.0	8.8	12.4	61.9	0.0
3	2	74-76	90.6	12.4	0.0	5.9	12.1	69.6	0.0
3	3	7-9	88.4	12.2	0.0	5.7	12.1	70.0	0.0
3	3	74-76	89.9	16.3	5.6	5.6	10.5	62.0	0 0
3	4	7-9	89.1	19.0	0.0	8.3	9.4	63.3	0.0
3	4	74-76	87.7	14.8	8.3	0.0	9.3	67.7	0.0
3	5	7-9	88.2	13.8	2.5	6.2	13.5	64.1	0.0
3	5	74-76	87.9	17.0	0.0	8.5	14.5	59.9	0.0
3	6	8-10	88.8	14.7	3.4	9.2	11.0	61.6	0.0
3	6	78-80	87.5	13.9	0.0	0.0	10.7	75.4	0.0

TABLE 2 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
4	1	148-50	87.5	10.3	4.2	3.9	11.9	69.7	0.0
4	2	6-8	87.0	11.7	2.8	6.0	10.5	69.1	0.0
4	2	74-76	86.9	10.9	0.0	5.9	9.7	73.4	0.0
4	3	148-50	87.4	12.7	0.0	0.0	14.0	71.2	2.0
4	4	148-50	87.3	9.9	0.0	4.3	10.5	73.6	1.7
4	5	148-50	7.5	0.0	0.0	0.0	10.3	82.2	0.0
4	6	148-50	88.3	9.6	0.0	5.7	12.2	72.5	0.0
5	1	148-50	87.5	9.3	4.4	4.0	12.5	69.9	0.0
5	2	8-10	88.0	7.8	0.0	3.7	14.6	74.0	0.0
5	2	74-76	87.1	9.1	0.0	6.8	12.6	71.5	0.0
5	3	10-12	88.2	12.2	5.3	5.3	11.4	65.9	0.0
5	3	75-77	88.2	9.2	5.2	6.5	11.4	67.7	0.0
5	4	22-24	87.8	11.3	7.9	0.0	11.7	69.1	0.0
5	4	75-77	89.2	15.5	0.0	7.5	13.0	64.0	0.0
5	5	6-8	87.1	16.5	0.0	11.2	0.0	72.3	0.0
5	5	75-77	89.2	14.3	5.1	6.5	12.2	61.8	0.0
5	6	7-9	87.9	13.6	6.9	6.7	14.0	58.8	0.0
5	6	75-77	88.8	12.3	0.0	0.0	13.8	73.9	0.0
6	1	148-50	88.6	17.4	6.5	7.1	14.0	54.9	0.0
6	2	148-50	87.5	10.3	6.2	6.1	10.5	65.2	1.7
6	3	148-50	89.4	16.4	5.9	7.4	11.3	59.0	0.0
6	4	148-50	87.4	12.8	5.1	5.5	12.3	64.4	0.0
6	5	148-50	87.5	26.5	8.7	10.3	0.0	54.4	0.0
6	6	148-50	88.9	16.4	9.0	6.6	18.7	49.2	0.0
7	1	8-10	89.5	15.6	6.6	5.5	13.7	58.6	0.0
7	1	75-77	88.3	18.2	13.1	0.0	0.0	68.7	0.0
7	2	6-8	89.0	64.5	16.6	18.9	0.0	0.0	0.0
7	2	75-77	89.7	19.0	0.0	12.3	11.4	57.3	0.0

TABLE 2 - *Continued*

Hole 19 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
7	3	7-9	89.1	67.2	32.6	0.0	0.0	0.0	0.0
7	3	75-77	88.9	71.9	28.1	0.0	0.0	0.0	0.0
7	4	7-9	89.4	18.5	13.1	0.0	0.0	68.3	0.0
7	4	75-77	88.2	57.5	42.5	0.0	0.0	0.0	0.0
7	5	7-9	88.5	52.7	24.8	22.5	0.0	0.0	0.0
7	5	73-75	89.0	70.0	30.0	0.0	0.0	0.0	0.0
7	6	6-8	89.5	70.3	29.7	0.0	0.0	0.0	0.0
7	6	75-77	86.9	9.7	0.0	16.1	74.2	0.0	0.0
8	1	148-50	88.3	17.4	7.7	9.1	18.7	47.1	0.0
8	2	6-8	87.9	17.6	7.0	0.0	20.8	54.5	0.0
8	2	75-77	88.3	70.1	29.9	0.0	0.0	0.0	0.0
8	3	148-50	87.9	51.2	22.6	26.2	0.0	0.0	0.0
8	4	148-50	87.9	100.0	0.0	0.0	0.0	0.0	0.0
8	5	148-50	88.2	67.8	32.2	0.0	0.0	0.0	0.0
8	6	148-50	89.0	60.4	23.3	16.3	0.0	0.0	0.0
9	1	148-50	88.2	71.9	28.1	0.0	0.0	0.0	0.0
9	2	148-50	88.4	70.9	29.1	0.0	0.0	0.0	0.0
9	3	148-50	88.5	67.0	33.0	0.0	0.0	0.0	0.0
9	4	148-50	87.6	100.0	0.0	0.0	0.0	0.0	0.0
9	5	148-50	87.0	100.0	0.0	0.0	0.0	0.0	0.0
9	6	3-5	86.7	100.0	0.0	0.0	0.0	0.0	0.0
9	6	148-50	88.2	100.0	0.0	0.0	0.0	0.0	0.0
10	1	148-50	87.9	100.0	0.0	0.0	0.0	0.0	0.0
10	2	148-50	88.1	100.0	0.0	0.0	0.0	0.0	0.0
10	3	148-50	88.5	100.0	0.0	0.0	0.0	0.0	0.0
10	5	148-50	89.4	100.0	0.0	0.0	0.0	0.0	0.0
10	6	148-50	87.1	100.0	0.0	0.0	0.0	0.0	0.0
11	1	148-50	89.6	23.9	0.0	0.0	0.0	76.1	0.0

TABLE 2 - *Continued*

Hole 19									
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Side.
11	2	148-50	89.2	60.0	40.0	0.0	0.0	0.0	0.0
11	3	148-50	88.2	100.0	0.0	0.0	0.0	0.0	0.0
11	4	148-50	88.8	100.0	0.0	0.0	0.0	0.0	0.0

Hole 20A								
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica
2	1	74-76	87.5	12.0	0.0	6.9	11.3	69.7
2	2	7-9	87.0	8.4	2.6	2.9	13.1	73.0
2	2	64-66	87.0	10.8	3.9	4.7	11.4	69.2
2	3	13-15	87.2	14.2	0.0	4.4	9.1	72.3
2	3	79-81	85.9	5.1	0.0	5.3	13.1	76.4
2	4	148-150	88.6	11.6	0.0	4.3	13.6	70.4
2	5	148-150	87.4	8.0	3.2	6.6	11.5	70.8
2	6	148-150	87.8	9.1	2.6	6.7	13.3	68.3

Hole 20B								
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica
1	1	7-9	87.6	12.0	0.0	5.9	11.2	70.9
1	1	75-77	88.3	21.8	0.0	9.6	14.2	54.3
1	2	11-13	87.8	16.9	0.0	0.0	14.4	68.8
1	2	75-77	87.3	15.6	2.1	7.0	12.6	62.9
1	3	7-9	88.0	19.6	3.7	0.0	12.3	64.5
1	3	75-77	87.5	11.8	0.0	8.3	11.7	68.3
1	4	7-9	89.0	34.0	0.0	11.8	8.6	45.6
1	4	75-77	89.3	29.3	0.0	0.0	9.9	60.8
1	5	3-5	88.3	13.1	7.0	0.0	11.5	68.4
1	5	72-74	88.4	17.6	5.2	5.5	11.4	60.4
1	6	4-6	88.2	14.7	5.7	5.8	12.1	61.7
1	6	74-76	87.6	13.5	0.0	6.5	12.7	67.3

TABLE 2 - *Continued*

Hole 20C Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Side.
1	1	6-8	79.2	11.9	0.0	7.8	11.8	16.3	52.2	0.0
1	1	74-76	80.7	8.5	0.0	6.0	8.5	29.3	47.8	0.0
1	2	5-7	78.1	30.6	0.0	18.4	18.5	32.5	0.0	0.0
1	2	74-76	81.0	28.3	0.0	18.8	16.8	36.0	0.0	0.0
1	3	5-7	75.7	17.2	0.0	11.7	17.2	48.3	0.0	5.7
1	3	74-76	81.3	14.5	0.0	7.5	13.2	35.9	28.9	0.0
1	4	6-8	77.6	17.9	0.0	10.3	19.0	52.8	0.0	0.0
1	4	74-76	78.6	16.2	0.0	10.5	18.6	54.6	0.0	0.0
1	5	7-9	80.8	14.6	0.0	8.0	11.3	36.2	29.8	0.0
1	5	74-76	80.5	20.6	0.0	12.5	19.0	47.9	0.0	0.0
1	6	7-9	79.3	15.8	0.0	7.6	10.8	32.6	33.1	0.0
1	6	74-76	72.4	13.2	0.0	9.9	10.9	66.0	0.0	0.0
2	1	148-150	75.6	8.0	3.1	3.6	6.2	23.8	54.6	0.0
2	2	148-150	74.8	15.4	0.0	7.9	16.2	60.5	0.0	0.0
2	4	10-12	73.7	6.8	1.7	4.7	6.6	44.5	35.7	0.0
2	4	110-112	72.2	24.3	0.0	11.4	5.8	23.8	30.3	4.4
2	6	148-150	82.8	10.4	3.7	5.2	8.8	33.5	38.3	0.0
3	1	7-9	80.9	8.7	6.2	0.0	9.3	20.8	55.0	0.0
3	1	74-76	81.7	8.5	4.1	0.0	8.4	16.9	62.1	0.0
3	2	7-9	80.9	10.3	6.3	0.0	8.4	0.0	75.0	0.0
3	2	74-76	79.9	6.1	4.7	3.2	7.2	15.8	63.0	0.0
3	3	6-8	76.0	26.3	27.6	0.0	31.6	0.0	0.0	14.5
3	3	74-76	83.8	7.0	4.2	5.8	5.6	17.3	56.2	3.9
3	4	17-19	82.2	8.1	6.1	6.7	6.5	20.0	49.0	3.6
3	4	74-76	80.8	10.0	6.5	0.0	6.7	0.0	75.9	0.0
3	5	74-76	81.8	8.7	5.1	0.0	8.6	23.3	54.3	0.0
3	6	7-9	83.0	7.9	5.4	0.0	7.8	19.9	59.0	0.0
3	6	74-76	79.4	9.2	0.0	5.3	9.1	22.2	54.2	0.0

TABLE 2 - *Continued*

Hole 20C										
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Side.
4	1	15-17	83.0	9.1	4.9	0.0	7.4	22.0	56.6	0.0
4	2	7-9	78.7	13.8	11.2	11.2	15.4	48.3	0.0	0.0
4	2	74-76	79.7	9.9	0.0	6.6	10.9	26.3	46.2	0.0
4	3	6-8	80.9	27.1	12.2	0.0	2.4	0.0	58.3	0.0
4	4	148-150	75.7	24.7	18.5	0.0	29.6	0.0	0.0	27.2
5	1	148-150	74.3	10.4	3.9	0.0	7.8	0.0	77.9	0.0
5	2	10-12	78.0	6.3	0.0	7.0	6.8	20.5	29.3	0.0
5	3	6-8	79.9	6.9	7.3	6.2	6.9	17.1	49.4	6.1
5	3	74-76	77.3	5.7	3.6	0.0	9.9	21.6	59.2	0.0
5	4	6-8	75.2	7.5	3.8	0.0	0.0	20.0	68.7	0.0
5	4	74-76	79.0	22.8	9.0	0.0	0.0	68.3	0.0	0.0
5	5	8-10	77.0	18.8	11.3	0.0	0.0	61.6	0.0	8.3
5	5	74-76	81.7	21.3	12.8	0.0	0.0	59.9	0.0	6.0
5	6	6-8	80.6	17.8	12.1	6.8	0.0	63.4	0.0	0.0
5	6	74-76	80.5	18.0	6.5	5.4	0.0	23.5	44.7	2.0
6	1	148-150	80.7	13.1	9.9	0.0	0.0	77.0	0.0	0.0
6	2	5-7	80.6	11.4	6.8	0.0	0.0	37.4	40.6	3.8
6	2	74-76	79.2	11.0	5.8	0.0	0.0	31.0	49.1	3.1
6	3	5-7	75.4	16.6	15.0	0.0	0.0	54.6	0.0	13.8
6	3	74-76	78.9	15.4	9.1	0.0	0.0	75.5	0.0	0.0
6	4	8-10	81.6	26.5	15.8	0.0	0.0	57.7	0.0	0.0
6	4	74-76	77.4	16.5	12.4	0.0	0.0	67.6	0.0	3.6
6	5	73-75	79.2	9.8	10.3	0.0	5.9	24.2	43.8	6.0

Hole 21												
Core	Section	Depth	Diff.	Dolo.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
1	1	148-150	79.7	0.0	10.0	16.5	0.0	8.0	21.0	0.0	44.5	6.0
1	2	148-150	78.0	0.0	6.9	6.2	0.0	6.9	19.4	0.0	62.2	0.0

TABLE 2 - *Continued*

Hole 21 Core	Section	Depth	Diff.	Dolo.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
1	3	148-150	76.1	0.0	12.2	0.0	12.6	0.0	18.0	0.0	57.3	0.0
1	4	6-8	75.8	0.0	8.3	10.7	0.0	0.0	18.6	0.0	62.5	0.0
1	4	84-86	78.7	0.0	8.3	9.3	0.0	6.6	20.5	5.5	44.5	5.0
1	6	148-150	78.2	0.0	9.6	0.0	10.6	6.8	21.3	0.0	51.7	0.0
2	1	148-150	81.6	0.0	15.4	7.4	7.3	0.0	27.8	0.0	38.5	3.4
2	2	0-2	78.1	0.0	11.5	5.7	0.0	0.0	37.3	0.0	45.5	0.0
2	3	148-150	80.3	0.0	18.7	9.8	11.3	0.0	53.9	0.0	0.0	6.2
2	4	33-35	78.3	0.0	11.3	0.0	8.5	0.0	33.1	0.0	47.1	0.0
2	4	84-86	83.9	0.0	10.1	5.5	0.0	0.0	37.4	0.0	45.1	1.9
2	5	30-32	84.5	0.0	28.6	15.5	6.5	0.0	49.3	0.0	0.0	0.0
2	5	84-86	82.8	0.0	2.3	1.7	0.0	0.0	48.5	0.0	47.5	0.0
2	6	8-10	78.6	0.0	20.8	12.5	0.0	0.0	59.8	0.0	0.0	6.9
2	6	90-92	79.5	0.0	16.6	10.0	11.2	0.0	54.8	0.0	0.0	9.4
3	1	148-150	79.8	0.0	16.9	10.2	8.8	10.2	51.4	0.0	0.0	2.4
3	2	148-150	77.7	0.0	16.6	9.6	7.3	8.6	57.8	0.0	0.0	0.0
3	3	148-150	79.0	0.0	11.3	6.8	6.1	7.2	37.3	0.0	28.3	3.0
3	4	148-150	78.0	0.0	16.2	8.9	9.2	10.3	50.5	0.0	0.0	4.7
3	5	11-13	82.8	0.0	13.2	6.6	4.9	4.6	34.5	0.0	36.2	0.0
3	5	78-80	81.3	0.0	23.6	11.5	7.9	8.4	48.7	0.0	0.0	0.0
3	6	148-150	81.6	0.0	34.1	12.0	7.5	6.4	39.5	0.0	0.0	0.0
4	1	148-150	82.1	0.0	22.1	11.9	0.0	8.4	57.6	0.0	0.0	0.0
4	2	148-150	80.6	0.0	23.9	11.0	9.3	9.5	43.1	0.0	0.0	3.0
4	3	148-150	82.0	0.0	18.0	7.9	6.0	6.0	35.5	0.0	26.6	0.0
4	4	11-13	81.3	0.0	37.6	14.2	0.0	6.2	41.7	0.0	0.0	0.0
4	4	135-137	82.2	0.0	26.9	9.3	7.6	3.6	25.7	0.0	26.6	0.0
4	5	148-150	82.8	0.0	14.5	6.5	5.2	5.8	29.7	0.0	36.1	0.0
4	6	148-150	80.0	0.0	19.9	8.5	9.8	5.4	56.4	0.0	0.0	0.0
5	1	26-28	78.9	0.0	28.9	8.3	7.5	0.0	19.0	0.0	36.3	0.0

TABLE 2 - *Continued*

Hole 21 Core	Section	Depth	Diff.	Dolo.	Quar.	K-Fe	Plag.	Kaol.	Mica	Chlo.	Mont.	Side.
5	1	90-92	81.6	0.0	39.2	13.9	10.3	0.0	36.5	0.0	0.0	0.0
5	2	148-150	74.6	0.0	39.8	14.7	17.4	0.0	28.0	0.0	0.0	0.0
5	3	148-150	75.0	0.0	31.9	12.6	12.6	0.0	42.9	0.0	0.0	0.0
5	4	148-150	76.9	0.0	36.5	12.1	13.1	0.0	38.2	0.0	0.0	0.0
5	5	72-74	78.4	0.0	27.5	9.6	7.7	0.0	22.4	0.0	32.8	0.0
5	6	148-150	77.1	0.0	14.5	6.9	0.0	4.2	36.4	0.0	38.0	0.0
6	3	10-12	75.0	0.0	15.3	7.9	6.9	6.7	38.8	0.0	27.3	0.0
6	3	74-77	76.6	2.7	14.1	6.7	5.9	5.0	27.8	0.0	37.7	0.0
6	4	6-8	79.7	2.6	17.6	6.8	7.3	4.9	26.0	0.0	34.5	0.0
6	4	73-75	80.1	0.0	23.0	9.2	9.7	6.3	51.8	0.0	0.0	0.0
6	5	6-8	85.3	0.0	17.4	6.4	0.0	4.2	40.5	0.0	31.4	0.0
6	5	75-77	85.9	0.0	19.4	8.4	0.0	3.7	39.0	0.0	29.4	0.0
6	6	6-8	82.5	0.0	26.1	10.9	11.4	0.0	51.5	0.0	0.0	0.0
6	6	74-76	83.6	0.0	63.1	12.4	24.5	0.0	0.0	0.0	0.0	0.0
7	1	148-150	83.3	0.0	10.7	4.1	0.0	3.7	28.7	0.0	52.9	0.0
7	2	148-150	82.2	2.4	14.9	6.6	6.0	6.0	24.4	0.0	39.9	0.0
7	3	148-150	82.9	0.0	15.7	6.8	0.0	4.5	37.4	0.0	35.6	0.0
7	4	148-150	78.8	0.0	12.6	6.5	0.0	5.0	25.9	0.0	49.8	0.0
7	5	148-150	86.9	0.0	12.2	4.5	4.2	0.0	28.3	0.0	50.7	0.0
7	6	148-150	84.5	0.0	13.7	7.5	6.5	3.6	31.5	0.0	36.2	0.0
8	1	0-2	83.9	0.0	10.2	5.2	0.0	0.0	38.5	0.0	44.5	1.3
8	2	148-150	76.3	0.0	18.8	6.4	7.3	6.0	27.8	0.0	33.7	0.0
8	3	148-150	82.7	0.0	10.4	5.9	7.1	6.8	63.5	0.0	0.0	0.0
8	4	148-150	82.4	0.0	7.8	3.7	3.4	0.0	37.2	0.0	45.5	2.3
8	5	148-150	82.5	0.0	13.6	5.0	4.9	0.0	43.0	0.0	33.4	0.0
8	6	29-31	80.1	0.0	15.4	5.8	0.0	3.3	44.2	0.0	31.2	0.0

TABLE 2 - *Continued*

Hole 21A											
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.		Side.
1	1	148-150	82.5	10.4	8.4	0.0	5.4	18.7	57.2	0.0	0.0
1	2	148-150	83.0	7.7	6.7	3.9	6.8	12.1	62.7	0.0	0.0
1	3	148-150	83.6	9.9	8.8	0.0	7.0	0.0	74.3	0.0	0.0
1	4	148-150	82.9	8.1	10.4	6.7	0.0	0.0	74.8	0.0	0.0
1	5	148-150	83.7	19.4	11.0	0.0	0.0	0.0	69.6	0.0	0.0
1	6	148-150	85.1	11.4	8.8	6.6	8.2	0.0	65.0	0.0	0.0
2	1	148-150	81.3	14.5	8.3	0.0	7.0	0.0	66.2	4.1	0.0
2	2	148-150	80.0	10.7	6.7	0.0	0.0	0.0	79.7	0.0	2.9
2	3	148-150	76.0	68.3	31.7	0.0	0.0	0.0	0.0	0.0	0.0
2	5	148-150	82.0	17.8	8.1	3.3	6.3	14.9	45.6	4.1	0.0
2	6	148-150	82.8	18.7	6.6	0.0	0.0	0.0	72.7	0.0	1.9
3	1	148-150	85.0	30.4	14.5	10.4	0.0	44.7	0.0	0.0	0.0
3	2	148-150	84.9	16.3	6.1	0.0	0.0	38.4	39.2	0.0	0.0
3	3	148-150	83.4	15.7	7.1	5.8	0.0	26.6	44.8	0.0	0.0
3	4	148-150	86.2	33.6	12.1	0.0	0.0	54.3	0.0	0.0	0.0
3	5	3-5	81.7	10.4	7.2	0.0	0.0	44.2	38.2	0.0	0.0
3	5	96-98	83.9	30.6	11.9	9.1	0.0	48.4	0.0	0.0	0.0
3	6	40-42	86.0	29.8	14.5	0.0	0.0	55.7	0.0	0.0	0.0

Hole 22											
Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Clin.	Cris.
1	1	148-150	80.3	57.5	0.0	42.5	0.0	0.0	0.0	0.0	0.0
1	2	148-150	84.0	16.6	0.0	13.7	8.3	13.6	47.7	0.0	0.0
1	3	148-150	81.3	59.8	0.0	40.2	0.0	0.0	0.0	0.0	0.0
1	4	148-150	82.1	30.8	0.0	27.4	16.4	25.4	0.0	0.0	0.0
1	6	29-31	79.9	50.4	0.0	34.1	15.5	0.0	0.0	0.0	0.0
1	6	108-110	80.0	22.1	15.8	0.0	0.0	20.1	42.0	0.0	0.0
2	1	11-13	84.2	63.6	0.0	36.4	0.0	0.0	0.0	0.0	0.0

TABLE 2 - *Continued*

Hole 22 Core	Section	Depth	Diff.	Quar.	K-Fe	Plag.	Kaol.	Mica	Mont.	Clin.	Cris.
2	1	85-87	83.5	42.6	0.0	21.7	0.0	35.7	0.0	0.0	0.0
2	2	13-15	78.5	31.1	0.0	22.5	0.0	46.3	0.0	0.0	0.0
2	2	85-87	78.3	58.7	0.0	41.3	0.0	0.0	0.0	0.0	0.0
2	3	16-18	78.3	31.5	20.4	0.0	0.0	48.1	0.0	0.0	0.0
2	3	85-87	72.0	45.3	0.0	54.7	0.0	0.0	0.0	0.0	0.0
2	6	10-12	73.9	48.0	0.0	52.0	0.0	0.0	0.0	0.0	0.0
2	6	85-87	77.4	70.0	0.0	30.0	0.0	0.0	0.0	00.0	0.0
3	1	148-150	80.0	35.6	0.0	17.8	0.0	46.5	0.0	0.0	0.0
3	3	148-150	77.4	15.2	0.0	7.3	0.0	16.1	61.3	0.0	0.0
3	4	148-150	76.3	28.6	0.0	18.6	11.3	41.5	0.0	0.0	0.0
3	5	148-150	73.0	35.7	0.0	21.7	0.0	42.6	0.0	0.0	0.0
3	6	40-42	75.0	35.7	0.0	21.2	0.0	43.1	0.0	0.0	0.0
3	6	110-112	77.3	38.4	0.0	19.9	0.0	41.7	0.0	0.0	0.0
4	1	74-76	71.0	8.7	1.4	3.5	0.0	17.1	42.5	15.0	11.9
4	1	126-128	69.9	7.1	0.0	5.3	0.0	0.0	59.4	28.2	0.0
4	2	8-10	71.4	5.0	0.0	9.4	0.0	15.7	43.5	26.4	0.0
4	2	86-88	78.3	11.4	2.1	6.5	0.0	29.2	41.2	9.5	0.0
4	3	148-150	74.6	11.9	0.0	7.3	4.7	28.2	37.4	9.8	0.0
4	4	8-10	76.5	10.0	4.4	7.7	3.6	25.3	35.2	13.7	0.0
4	4	74-76	78.6	10.3	0.0	6.4	0.0	16.3	59.9	7.1	0.0
4	5	10-12	74.2	15.7	0.0	7.2	0.0	31.3	0.0	14.2	31.5
4	5	78-80	79.6	77.9	0.0	22.1	0.0	0.0	0.0	0.0	0.0
4	6	18-20	75.2	7.7	0.0	5.7	6.4	34.0	32.6	13.7	0.0
4	6	75-77	77.4	15.6	0.0	12.8	6.3	49.3	0.0	15.8	0.0
5	1	8-10	82.0	0.0	0.0	10.0	0.0	0.0	0.0	90.0	0.0
5	2	90-92	76.3	0.0	0.0	2.6	0.0	0.0	70.5	27.0	0.0
5	2	146-147	83.7	8.2	15.4	0.0	0.0	0.0	0.0	76.5	0.0

[a]Abbreviation for X-ray mineralogy results: Quar.-quartz; Plag.-plagioclase; Kaol.-Kaolinite; K-Fe.-K-feldspar; Mont.-montmorillonite; Side.-Siderite; Cris.-Cristobalite; Chlo.-chlorite; Clin.-clinoptilolite; Dolo.-dolomite.