

VIBRACORE LOG

Project: TOWN OF PALM BEACH Core No: 20

Coordinates:

N = 870188.2E = 818438.8Date: 12-18-87Start Time 0806End Time 0825Water Depth 34 NGVDDriller M.L. CLARKEClient Rep. JEFF ANDREWS
FRED KAUB

| | Elev. | Depth | Legend | Description | Samp. No. | Remarks |
|--------------------------------------|-------|-------|--------|-------------|-----------|---------|
| | | | | | | |
| Core Diam. <u>3.0"</u> | | 0 | | | | |
| Length of Barrel <u>20'</u> | | | | | | |
| Penetration Depth <u>20'</u> | | | | | | |
| Length Recovered <u>18'8"</u> | | | | | | |
| Length Retained <u>18'8"</u> | | | | | | |
| Remarks: | | | | | | |
| Support Vessel <u>G.W. PIERCE</u> | | 5 | | | | |
| Positioning System <u>TRISponder</u> | | | | | | |
| Positioning Remarks: | | | | | | |
| Weather <u>Clear</u> | | 10 | | | | |
| Wind | | | | | | |
| Dir: <u>NW</u> | | | | | | |
| Est. Speed <u>10-15K</u> | | | | | | |
| Waves | | | | | | |
| Dir: <u>NW</u> | | | | | | |
| Height <u>2-4'</u> | | | | | | |
| Current | | | | | | |
| Dir: <u>N/A</u> | | | | | | |
| Est. Speed: | | | | | | |
| Analysis By: <u>FK</u> | | 15 | | | | |
| Date: <u>12-21-87</u> | | | | | | |
| Analysis Method: | | | | | | |
| <u>VISUAL LOG</u> | | | | | | |
| <u>MECHANICAL SIEVE</u> | | | | | | |
| | | 20 | | | | |

GREY, QUARTZ
SAND SP
(10YR 7/1)

3.0'

9.0'

SHELL LAYER

GREY QUARTZ

SAND

SP

(10YR 7/1)

14.0'

18.0'

GRADATION ANALYSIS REPORT
PALM BEACH VIBRACORE SAMPLES DECEMBER 1987

FOR: X SOIL CLASSIFICATION X CORING SAMPLES BEACH SAMPLES CONCRETE AGGREGATES
ENVIRONMENTAL STATION NATURAL SOIL FILL SAMPLES PIT SAMPLES

| CORE NO. | 19 | | | | | 20 | | | | | | 20 |
|-----------------------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| SAMPLE DEPTH (FT) | 19.0 | | | | | 3.0 | | | | | | 9.0 |
| U.S.C.S. DESCRIPTION | SP | | | | | SP | | | | | | SP |
| DRY SAMPLE WT (GRAMS) | 296.21 | | | | | 271.32 | | | | | | 281.50 |
| SAMPLE WT AFTER WASH | 288.72 | | | | | 267.62 | | | | | | 278.71 |
| SIEVE SIZE | PHI | MESH SIZE (mm) | GRAMS | % RET. | % PASS | GRAMS | % RET. | % PASS | GRAMS | % RET. | % PASS | |
| 5 | -2.00 | 4 | 0.28 | 0.09 | 99.91 | 1.00 | 0.37 | 99.63 | 0.25 | 0.09 | 99.91 | |
| 7 | -1.50 | 2.8 | 0.28 | 0.09 | 99.91 | 1.40 | 0.52 | 99.48 | 0.43 | 0.15 | 99.85 | |
| | -1.00 | 2 | 0.65 | 0.22 | 99.78 | 1.87 | 0.69 | 99.31 | 0.55 | 0.20 | 99.80 | |
| 14 | -0.50 | 1.4 | 0.75 | 0.25 | 99.75 | 2.68 | 0.99 | 99.01 | 0.91 | 0.32 | 99.68 | |
| 18 | 0.00 | 1 | 0.84 | 0.28 | 99.72 | 3.12 | 1.15 | 98.85 | 1.27 | 0.45 | 99.55 | |
| 25 | 0.50 | 0.71 | 1.39 | 0.47 | 99.53 | 3.82 | 1.41 | 98.59 | 20.10 | 7.14 | 92.86 | |
| 35 | 1.00 | 0.5 | 1.69 | 0.57 | 99.43 | 5.13 | 1.89 | 98.11 | 4.93 | 1.75 | 98.25 | |
| 45 | 1.50 | 0.355 | 3.08 | 1.04 | 98.96 | 8.85 | 3.26 | 96.74 | 12.65 | 4.49 | 95.51 | |
| 60 | 2.00 | 0.25 | 10.32 | 3.48 | 96.52 | 24.80 | 9.14 | 90.86 | 45.25 | 16.07 | 83.93 | |
| 80 | 2.50 | 0.18 | 96.30 | 32.51 | 67.49 | 137.65 | 50.73 | 49.27 | 160.71 | 57.09 | 42.91 | |
| 120 | 3.00 | 0.125 | 175.80 | 59.35 | 40.65 | 226.36 | 83.43 | 16.57 | 243.62 | 86.54 | 13.46 | |
| 170 | 3.50 | 0.09 | 284.90 | 96.18 | 3.82 | 265.65 | 97.91 | 2.09 | 276.72 | 98.30 | 1.70 | |
| 200 | 3.75 | 0.075 | 287.15 | 96.94 | 3.06 | 266.04 | 98.05 | 1.95 | 277.85 | 98.70 | 1.30 | |
| 230 | 4.00 | 0.063 | 287.56 | 97.08 | 2.92 | 266.97 | 98.40 | 1.60 | 278.25 | 98.85 | 1.15 | |
| PAN | | | 288.16 | 97.28 | | 267.12 | 98.45 | | 278.33 | 98.87 | | |
| LOSS | | | 0.56 | | | 0.50 | | | 0.38 | | | |
| WEIGHTED AVE (mm) | | | 0.140 | | | 0.170 | | | 0.185 | | | |
| SILT-CLAY % | | | 2.87 | | | 1.76 | | | 1.16 | | | |

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ENVIRONMENTAL STATION NATURAL SOIL FILL SAMPLES PIT SAMPLES

| | | |
|-------------------|------|------|
| CORE NO. | 20 | 20 |
| SAMPLE DEPTH (FT) | 14.0 | 18.0 |

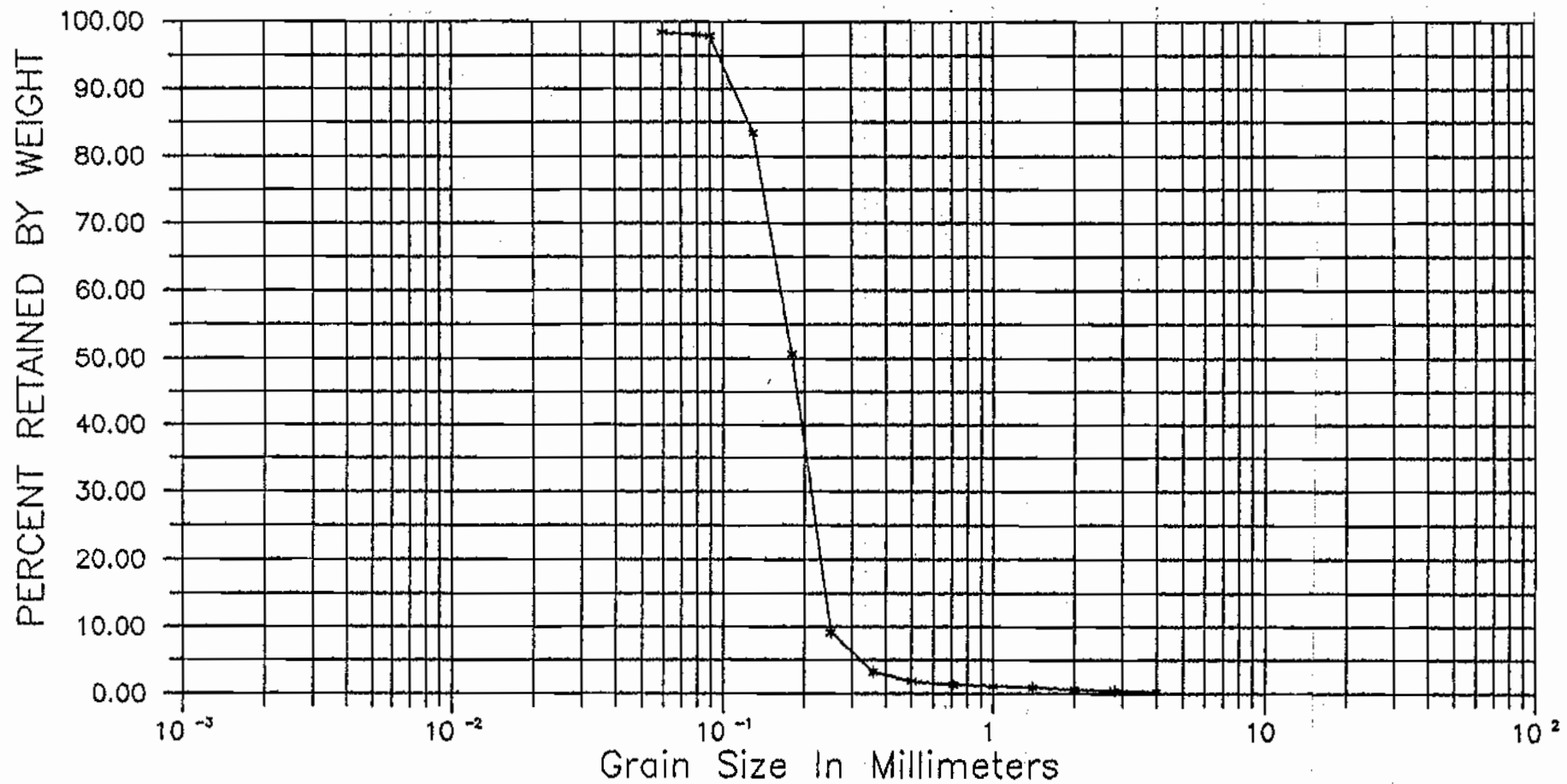
| | | |
|-------------|----|----|
| U.S.C.S. | SP | SP |
| DESCRIPTION | | |

| | | |
|-----------------------|--------|--------|
| DRY SAMPLE WT (GRAMS) | 348.42 | 269.79 |
| SAMPLE WT AFTER WASH | 341.34 | 265.91 |

| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | GRAMS | % RET. | % PASS | | GRAMS | % RET. | % PASS | | GRAMS | % RET. | % PASS |
|------------|----------|----------------|--------|--------|--------|---|--------|--------|--------|---|-------|--------|--------|
| 5 | -2.00 | 4 | 1.94 | 0.56 | 99.44 | , | 0.22 | 0.08 | 99.92 | , | | | |
| 7 | -1.50 | 2.8 | 3.65 | 1.05 | 98.95 | , | 1.10 | 0.41 | 99.59 | , | | | |
| 10 | -1.00 | 2 | 5.85 | 1.68 | 98.32 | , | 1.74 | 0.64 | 99.36 | , | | | |
| 14 | -0.50 | 1.4 | 8.15 | 2.34 | 97.66 | , | 2.63 | 0.97 | 99.03 | , | | | |
| 18 | 0.00 | 1 | 12.00 | 3.44 | 96.56 | , | 3.74 | 1.39 | 98.61 | , | | | |
| 25 | 0.50 | 0.71 | 19.50 | 5.60 | 94.40 | , | 4.70 | 1.74 | 98.26 | , | | | |
| 35 | 1.00 | 0.5 | 39.26 | 11.27 | 88.73 | , | 7.00 | 2.59 | 97.41 | , | | | |
| 45 | 1.50 | 0.355 | 71.00 | 20.38 | 79.62 | , | 13.49 | 5.00 | 95.00 | , | | | |
| 60 | 2.00 | 0.25 | 114.50 | 32.86 | 67.14 | , | 28.06 | 10.40 | 89.60 | , | | | |
| 80 | 2.50 | 0.18 | 219.26 | 62.93 | 37.07 | , | 127.40 | 47.22 | 52.78 | , | | | |
| 120 | 3.00 | 0.125 | 305.89 | 87.79 | 12.21 | , | 213.30 | 79.06 | 20.94 | , | | | |
| 170 | 3.50 | 0.09 | 337.80 | 96.95 | 3.05 | , | 263.29 | 97.59 | 2.41 | , | | | |
| 200 | 3.75 | 0.075 | 339.03 | 97.30 | 2.70 | , | 264.83 | 98.16 | 1.84 | , | | | |
| 230 | 4.00 | 0.063 | 339.59 | 97.47 | 2.53 | , | 265.13 | 98.27 | 1.73 | , | | | |
| PAN | | | 340.30 | 97.67 | | , | 265.51 | 98.41 | | , | | | |

| | | |
|------------------|-------|-------|
| SIEVE LOSS | 1.04 | 0.40 |
| WEIGHTED AVE(mm) | 0.276 | 0.141 |
| SILT-CLAY % | 2.40 | 1.69 |

MECHANICAL ANALYSIS CHART



| SILT OR CLAY | SAND | | | GRAVEL | |
|--------------|------|--------|--------|--------|--------|
| | FINE | MEDIUM | COARSE | FINE | COARSE |

| SAMPLE NO. | CLASSIFICATION | | |
|------------|--------------------------------|--------|---------|
| 20 | MEAN | MEDIAN | SORTING |
| 3' | .18 mm | .18 mm | .44 |
| | .17 mm | .18 mm | .38 |
| | GREY POORLY GRADED SAND - (SP) | | |

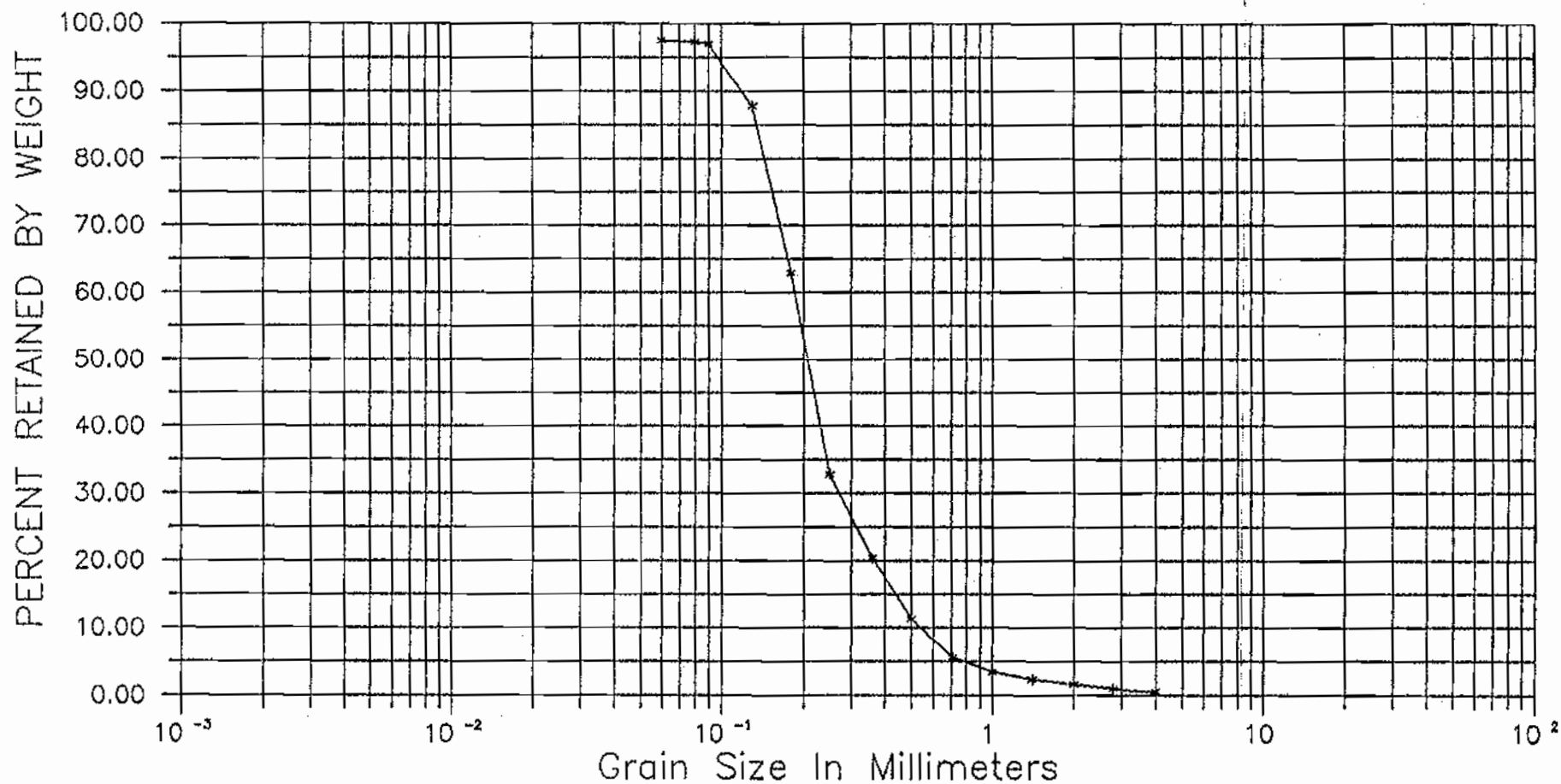
The graph displays the grain size distribution of a sample. The y-axis represents the percentage of material retained by weight, ranging from 0.00 to 100.00 in increments of 10.00. The x-axis represents the grain size in millimeters on a logarithmic scale, with major ticks at 10^{-2} , 10^{-1} , 1, and 10^2 . The curve starts at 100% retention for grain sizes down to approximately 0.075 mm, then drops sharply to about 16% at 0.25 mm, and continues to decrease more gradually, reaching near 0% retention for grain sizes greater than 1 mm.

| Grain Size (mm) | Percent Retained (%) |
|-----------------|----------------------|
| 0.075 | 98.00 |
| 0.10 | 97.00 |
| 0.15 | 87.00 |
| 0.25 | 57.00 |
| 0.425 | 16.00 |
| 0.6 | 5.00 |
| 1.0 | 1.00 |
| 2.0 | 0.50 |
| 4.75 | 0.20 |
| 10.0 | 0.10 |

| SILT OR CLAY | SAND | | | GRAVEL | |
|--------------|------|--------|--------|--------|--------|
| | FINE | MEDIUM | COARSE | FINE | COARSE |

| SAMPLE NO. | CLASSIFICATION | | |
|------------|--------------------------------|------------------|---------------|
| | MEAN | MEDIAN | SORTING |
| 20 | | | |
| 9' | 19 mm | 19 mm | 45 |
| | 18 mm | 19 mm | 41 |
| | GREY POORLY GRADED SAND - (SP) | | |

MECHANICAL ANALYSIS CHART

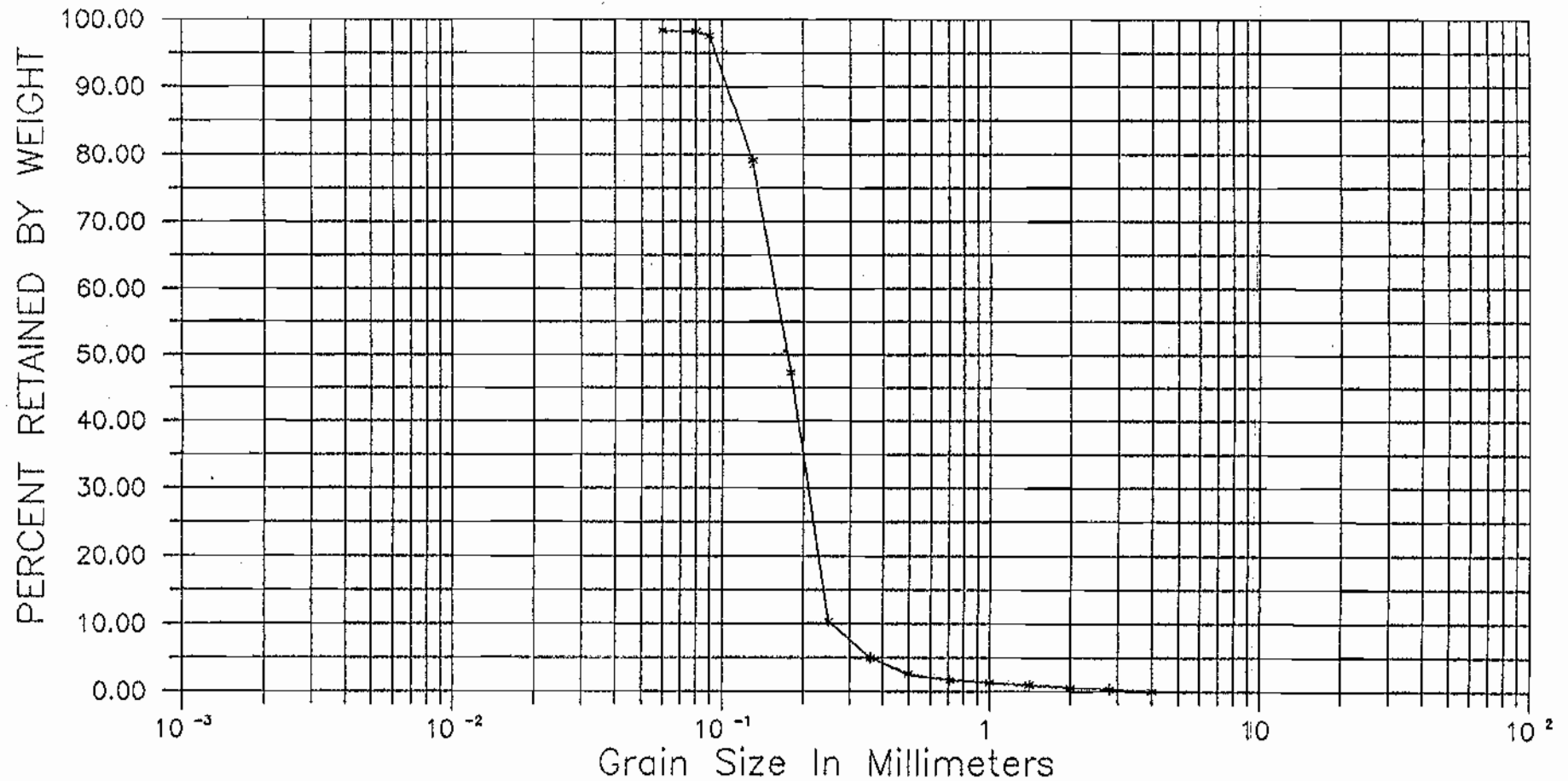


| SILT OR CLAY | SAND | | | GRAVEL | |
|--------------|------|--------|--------|--------|--------|
| | FINE | MEDIUM | COARSE | FINE | COARSE |

| SAMPLE NO. | CLASSIFICATION | | |
|------------|--------------------------------|--------|---------|
| 20 | MEAN | MEDIAN | SORTING |
| 14' | .23mm | .21mm | .81 |
| | .22mm | .21mm | .81 |
| | GREY POORLY GRADED SAND - (SP) | | |

(24)

MECHANICAL ANALYSIS CHART



| SILT OR CLAY | SAND | | | GRAVEL | |
|--------------|------|--------|--------|--------|--------|
| | FINE | MEDIUM | COARSE | FINE | COARSE |

SAMPLE NO.

CLASSIFICATION

| 20 | MEAN | MEDIAN | SORTING |
|-----|--------------------------------|--------|---------|
| 18' | 0.17mm | 0.18mm | 0.44 |
| | GREY POORLY GRADED SAND - (SP) | | |