

GRADATION ANALYSIS REPORT  
TOWN OF PALM BEACH  
TESTED BY: RW            ON: 6-9-1999

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SAMPLE NO.: VC99 28#1  
SAMPLE ELEV. (FT. NGVD): -40.9  
SAMPLE DEPTH (FT.): 2.0  
SAMPLE TYPE: CORE SAMPLE  
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USCS DESCRIPTION: SP  
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DRY SAMPLE WEIGHT (GRAMS): 221.77  
SAMPLE WEIGHT AFTER WASH (GRAMS): 218.94  
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| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | RETAINED (GRAMS) | RETAINED (%) | PASSED (%) |
|------------|----------|----------------|------------------|--------------|------------|
| 5/8        | -4.00    | 16.000         | 0.00             | 0.00         | 100.00     |
| 5/16       | -3.00    | 8.000          | 0.00             | 0.00         | 100.00     |
| 5          | -2.00    | 4.000          | 0.96             | 0.43         | 99.57      |
| 7          | -1.50    | 2.800          | 1.15             | 0.52         | 99.48      |
| 10         | -1.00    | 2.000          | 1.92             | 0.87         | 99.13      |
| 14         | -0.50    | 1.400          | 2.57             | 1.16         | 98.84      |
| 18         | 0.00     | 1.000          | 3.24             | 1.46         | 98.54      |
| 25         | 0.50     | 0.710          | 4.44             | 2.00         | 98.00      |
| 35         | 1.00     | 0.500          | 6.51             | 2.94         | 97.06      |
| 45         | 1.50     | 0.355          | 9.57             | 4.32         | 95.68      |
| 60         | 2.00     | 0.250          | 18.90            | 8.52         | 91.48      |
| 80         | 2.50     | 0.180          | 41.83            | 18.86        | 81.14      |
| 120        | 3.00     | 0.125          | 139.42           | 62.87        | 37.13      |
| 170        | 3.50     | 0.090          | 216.80           | 97.76        | 2.24       |
| 200        | 3.75     | 0.075          | 218.58           | 98.56        | 1.44       |
| 230        | 4.00     | 0.063          | 220.24           | 99.31        | 0.69       |
| PAN        |          |                | 221.76           | 100.00       | 0.00       |

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PHI (5): 1.58            PHI (16): 2.36            PHI (25): 2.57  
PHI (50): 2.85            PHI (75): 3.17            PHI (84): 3.30  
PHI (95): 3.46  
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SIEVE LOSS (g): 0.01            SILT/CLAY: 1.44%  
SKEWNESS: -0.707            KURTOSIS: 1.275  
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GRAPHIC METHOD

MEAN (PHI): 2.71            SORTING: 0.47  
MEAN (mm) : 0.15            MEDIAN (mm): 0.14

NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD  
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MOMENT METHOD

MEAN (PHI): 2.73            SORTING: 0.73  
MEAN (mm) : 0.15  
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DATA FILE NAME: vc99-28#1.tab

GRADATION ANALYSIS REPORT  
TOWN OF PALM BEACH  
TESTED BY: RW ON: 6-9-1999

SAMPLE NO.: VC99 28#2  
SAMPLE ELEV. (FT. NGVD): -41.7  
SAMPLE DEPTH (FT.): 2.8  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 230.95  
SAMPLE WEIGHT AFTER WASH (GRAMS): 228.60

| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | RETAINED (GRAMS) | RETAINED (%) | PASSED (%) |
|------------|----------|----------------|------------------|--------------|------------|
| 5/8        | -4.00    | 16.000         | 0.00             | 0.00         | 100.00     |
| 5/16       | -3.00    | 8.000          | 0.35             | 0.15         | 99.85      |
| 5          | -2.00    | 4.000          | 2.19             | 0.95         | 99.05      |
| 7          | -1.50    | 2.800          | 3.96             | 1.71         | 98.29      |
| 10         | -1.00    | 2.000          | 6.64             | 2.88         | 97.12      |
| 14         | -0.50    | 1.400          | 12.03            | 5.21         | 94.79      |
| 18         | 0.00     | 1.000          | 19.85            | 8.59         | 91.41      |
| 25         | 0.50     | 0.710          | 31.31            | 13.56        | 86.44      |
| 35         | 1.00     | 0.500          | 51.25            | 22.19        | 77.81      |
| 45         | 1.50     | 0.355          | 71.68            | 31.04        | 68.96      |
| 60         | 2.00     | 0.250          | 92.85            | 40.20        | 59.80      |
| 80         | 2.50     | 0.180          | 119.90           | 51.92        | 48.08      |
| 120        | 3.00     | 0.125          | 187.52           | 81.20        | 18.80      |
| 170        | 3.50     | 0.090          | 227.35           | 98.44        | 1.56       |
| 200        | 3.75     | 0.075          | 228.27           | 98.84        | 1.16       |
| 230        | 4.00     | 0.063          | 229.67           | 99.45        | 0.55       |
| PAN        |          |                | 230.93           | 99.99        | 0.01       |

PHI (5): -0.54                      PHI (16): 0.64                      PHI (25): 1.16  
PHI (50): 2.42                      PHI (75): 2.89                      PHI (84): 3.08  
PHI (95): 3.40

SIEVE LOSS (g): 0.02                      SILT/CLAY: 1.16%  
SKEWNESS: -0.812                      KURTOSIS: 0.932

GRAPHIC METHOD

MEAN (PHI): 1.80                      SORTING: 1.22  
MEAN (mm): 0.29                      MEDIAN (mm): 0.19  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 1.95                      SORTING: 1.27  
MEAN (mm): 0.26

DATA FILE NAME: VC99-28#2.TAB



GRADATION ANALYSIS REPORT  
TOWN OF PALM BEACH  
TESTED BY: RW ON: 6/10/99

SAMPLE NO.: VC99 28#4  
SAMPLE ELEV. (FT. NGVD): -48.9  
SAMPLE DEPTH (FT.): 10.0  
SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 220.68  
SAMPLE WEIGHT AFTER WASH (GRAMS): 212.33

| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | RETAINED (GRAMS) | RETAINED (%) | PASSED (%) |
|------------|----------|----------------|------------------|--------------|------------|
| 5/8        | -4.00    | 16.000         | 0.00             | 0.00         | 100.00     |
| 5/16       | -3.00    | 8.000          | 0.00             | 0.00         | 100.00     |
| 5          | -2.00    | 4.000          | 0.00             | 0.00         | 100.00     |
| 7          | -1.50    | 2.800          | 0.00             | 0.00         | 100.00     |
| 10         | -1.00    | 2.000          | 0.12             | 0.05         | 99.95      |
| 14         | -0.50    | 1.400          | 0.35             | 0.16         | 99.84      |
| 18         | 0.00     | 1.000          | 0.72             | 0.33         | 99.67      |
| 25         | 0.50     | 0.710          | 1.21             | 0.55         | 99.45      |
| 35         | 1.00     | 0.500          | 2.43             | 1.10         | 98.90      |
| 45         | 1.50     | 0.355          | 4.61             | 2.09         | 97.91      |
| 60         | 2.00     | 0.250          | 9.51             | 4.31         | 95.69      |
| 80         | 2.50     | 0.180          | 26.02            | 11.79        | 88.21      |
| 120        | 3.00     | 0.125          | 134.34           | 60.88        | 39.12      |
| 170        | 3.50     | 0.090          | 205.41           | 93.08        | 6.92       |
| 200        | 3.75     | 0.075          | 211.04           | 95.63        | 4.37       |
| 230        | 4.00     | 0.063          | 216.13           | 97.94        | 2.06       |
| PAN        |          |                | 220.66           | 99.99        | 0.01       |

PHI (5): 2.05                      PHI (16): 2.54                      PHI (25): 2.63  
PHI (50): 2.89                      PHI (75): 3.22                      PHI (84): 3.36  
PHI (95): 3.69

SIEVE LOSS (g): 0.02                      SILT/CLAY: 4.37%  
SKEWNESS: -0.054                      KURTOSIS: 1.151

GRAPHIC METHOD

MEAN (PHI): 2.91                      SORTING: 0.41  
MEAN (mm): 0.13                      MEDIAN (mm): 0.13  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.86                      SORTING: 0.51  
MEAN (mm): 0.14

DATA FILE NAME: VC99-28#4.TAB

GRADATION ANALYSIS REPORT  
 TOWN OF PALM BEACH  
 TESTED BY: RW ON: 6/10/99

SAMPLE NO.: VC99 28#5  
 SAMPLE ELEV. (FT. NGVD): -51.4  
 SAMPLE DEPTH (FT.): 12.5  
 SAMPLE TYPE: CORE SAMPLE

USCS DESCRIPTION: SP

DRY SAMPLE WEIGHT (GRAMS): 231.64  
 SAMPLE WEIGHT AFTER WASH (GRAMS): 228.25

| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | RETAINED (GRAMS) | RETAINED (%) | PASSED (%) |
|------------|----------|----------------|------------------|--------------|------------|
| 5/8        | -4.00    | 16.000         | 0.00             | 0.00         | 100.00     |
| 5/16       | -3.00    | 8.000          | 0.00             | 0.00         | 100.00     |
| 5          | -2.00    | 4.000          | 0.00             | 0.00         | 100.00     |
| 7          | -1.50    | 2.800          | 0.14             | 0.06         | 99.94      |
| 10         | -1.00    | 2.000          | 0.14             | 0.06         | 99.94      |
| 14         | -0.50    | 1.400          | 0.35             | 0.15         | 99.85      |
| 18         | 0.00     | 1.000          | 2.08             | 0.90         | 99.10      |
| 25         | 0.50     | 0.710          | 3.43             | 1.48         | 98.52      |
| 35         | 1.00     | 0.500          | 5.62             | 2.43         | 97.57      |
| 45         | 1.50     | 0.355          | 10.31            | 4.45         | 95.55      |
| 60         | 2.00     | 0.250          | 28.76            | 12.42        | 87.58      |
| 80         | 2.50     | 0.180          | 86.92            | 37.52        | 62.48      |
| 120        | 3.00     | 0.125          | 181.75           | 78.46        | 21.54      |
| 170        | 3.50     | 0.090          | 226.63           | 97.84        | 2.16       |
| 200        | 3.75     | 0.075          | 227.94           | 98.40        | 1.60       |
| 230        | 4.00     | 0.063          | 229.86           | 99.23        | 0.77       |
| PAN        |          |                | 231.64           | 100.00       | 0.00       |

PHI(5): 1.53                      PHI(16): 2.07                      PHI(25): 2.25  
 PHI(50): 2.65                      PHI(75): 2.96                      PHI(84): 3.14  
 PHI(95): 3.43

SIEVE LOSS(g): 0.00                      SILT/CLAY: 1.60%  
 SKEWNESS: -0.321                      KURTOSIS: 1.097

GRAPHIC METHOD

MEAN (PHI): 2.57                      SORTING: 0.54  
 MEAN (mm) : 0.17                      MEDIAN (mm): 0.16  
 NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD

MOMENT METHOD

MEAN (PHI): 2.56                      SORTING: 0.62  
 MEAN (mm) : 0.17

DATA FILE NAME: VC99-28#5.TAB

GRADATION ANALYSIS REPORT  
TOWN OF PALM BEACH  
TESTED BY: RW            ON: 6/10/99

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SAMPLE NO.: VC99 28#6  
SAMPLE ELEV. (FT. NGVD): -54.9  
SAMPLE DEPTH (FT.): 16.0  
SAMPLE TYPE: CORE SAMPLE  
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USCS DESCRIPTION: SP  
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DRY SAMPLE WEIGHT (GRAMS): 238.84  
SAMPLE WEIGHT AFTER WASH (GRAMS): 233.15  
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| SIEVE SIZE | PHI SIZE | MESH SIZE (mm) | RETAINED (GRAMS) | RETAINED (%) | PASSED (%) |
|------------|----------|----------------|------------------|--------------|------------|
| 5/8        | -4.00    | 16.000         | 0.00             | 0.00         | 100.00     |
| 5/16       | -3.00    | 8.000          | 0.00             | 0.00         | 100.00     |
| 5          | -2.00    | 4.000          | 0.43             | 0.18         | 99.82      |
| 7          | -1.50    | 2.800          | 0.83             | 0.35         | 99.65      |
| 10         | -1.00    | 2.000          | 1.16             | 0.49         | 99.51      |
| 14         | -0.50    | 1.400          | 1.38             | 0.58         | 99.42      |
| 18         | 0.00     | 1.000          | 1.58             | 0.66         | 99.34      |
| 25         | 0.50     | 0.710          | 1.97             | 0.82         | 99.18      |
| 35         | 1.00     | 0.500          | 2.65             | 1.11         | 98.89      |
| 45         | 1.50     | 0.355          | 3.80             | 1.59         | 98.41      |
| 60         | 2.00     | 0.250          | 8.51             | 3.56         | 96.44      |
| 80         | 2.50     | 0.180          | 22.76            | 9.53         | 90.47      |
| 120        | 3.00     | 0.125          | 89.60            | 37.51        | 62.49      |
| 170        | 3.50     | 0.090          | 228.22           | 95.55        | 4.45       |
| 200        | 3.75     | 0.075          | 231.70           | 97.01        | 2.99       |
| 230        | 4.00     | 0.063          | 235.17           | 98.46        | 1.54       |
| PAN        |          |                | 238.82           | 99.99        | 0.01       |

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PHI (5): 2.12            PHI (16): 2.62            PHI (25): 2.78  
PHI (50): 3.11            PHI (75): 3.32            PHI (84): 3.40  
PHI (95): 3.50  
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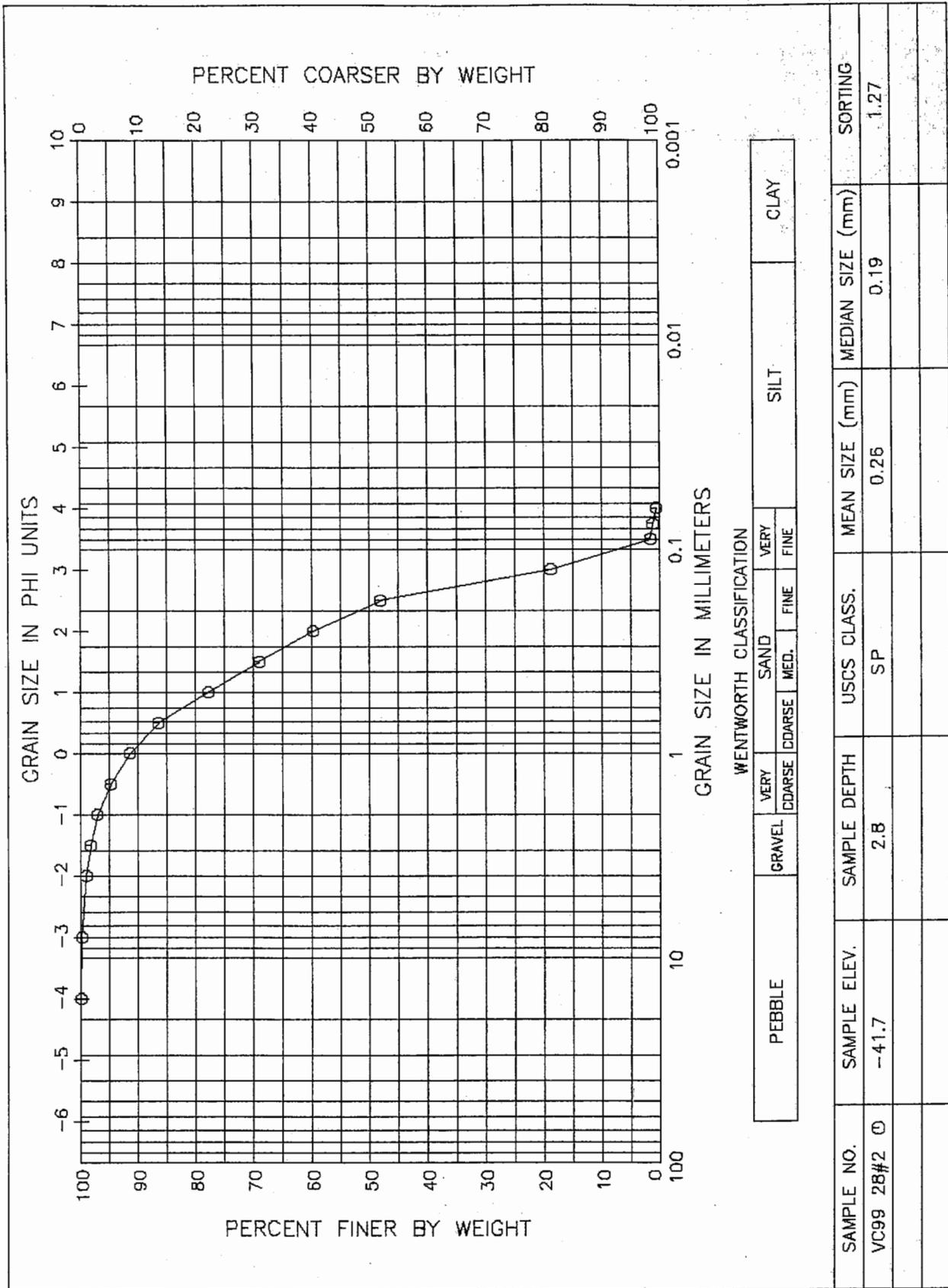
SIEVE LOSS (g): 0.02            SILT/CLAY: 2.99%  
SKEWNESS: -0.764            KURTOSIS: 1.031  
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GRAPHIC METHOD  
MEAN (PHI): 2.95            SORTING: 0.39  
MEAN (mm) : 0.13            MEDIAN (mm): 0.12  
NOTE: MEAN WAS CALCULATED USING 5 POINT METHOD  
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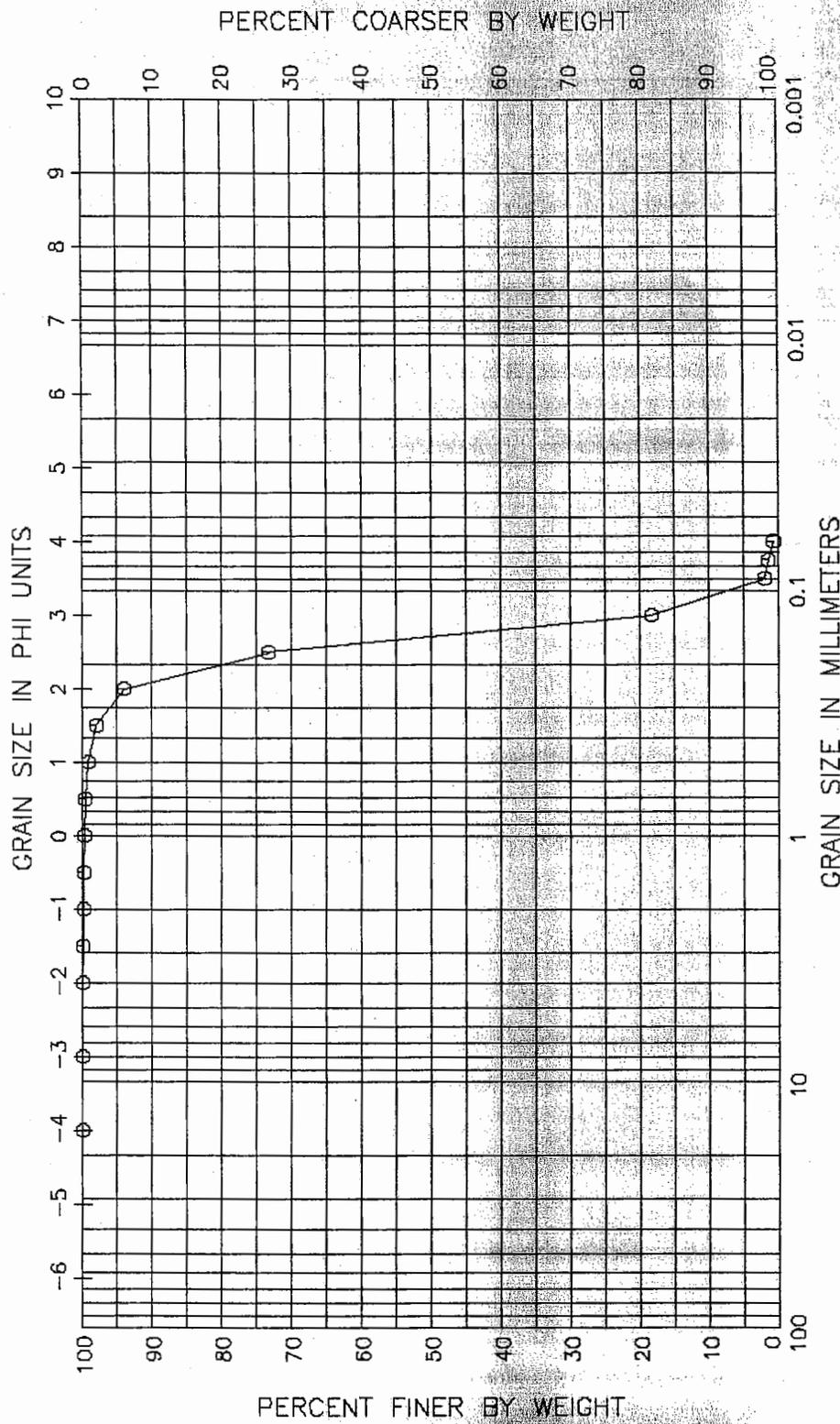
MOMENT METHOD  
MEAN (PHI): 2.98            SORTING: 0.57  
MEAN (mm) : 0.13  
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DATA FILE NAME: VC99-28#6.TAB



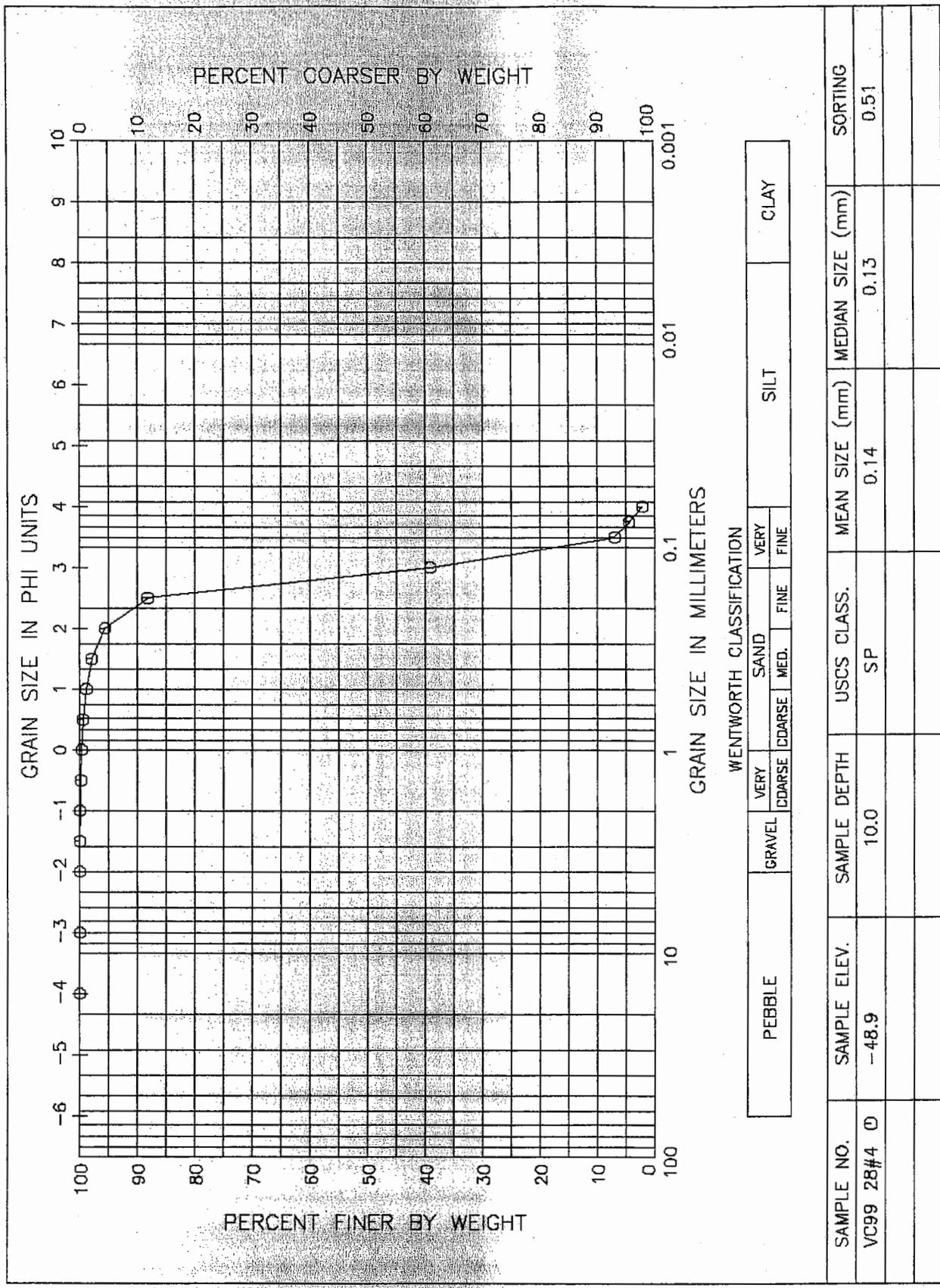


GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH

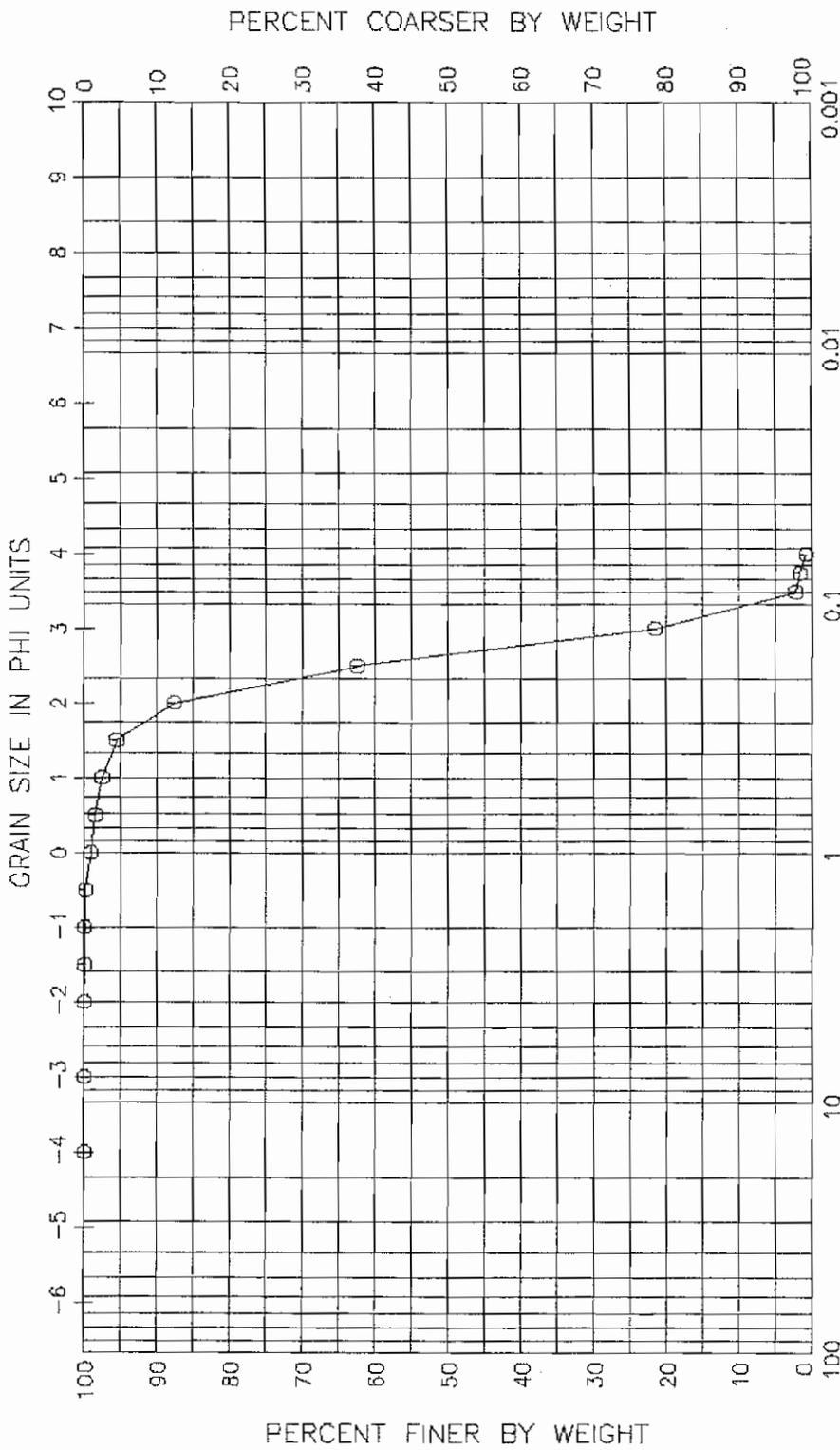


| SAMPLE NO.  | SAMPLE ELEV. | SAMPLE DEPTH | USCS CLASS. | MEAN SIZE (mm) | MEDIAN SIZE (mm) | SORTING |
|-------------|--------------|--------------|-------------|----------------|------------------|---------|
| VC99 28#3 0 | -44.9        | 6.0          | SP          | 0.16           | 0.15             | 0.48    |
|             |              |              |             |                |                  |         |
|             |              |              |             |                |                  |         |

GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH



GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH

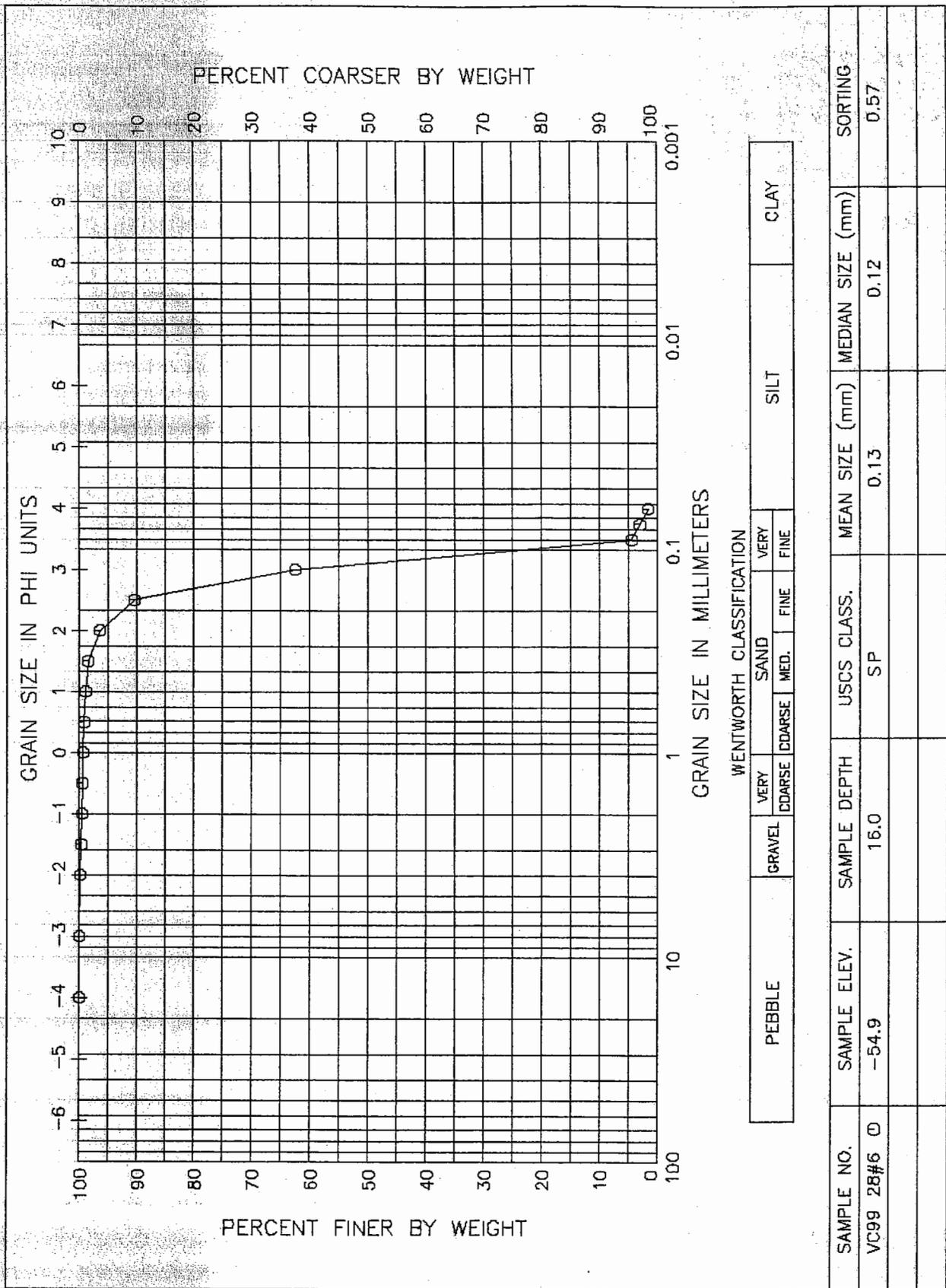


WENTWORTH CLASSIFICATION

|        |        |             |           |           |      |
|--------|--------|-------------|-----------|-----------|------|
| PEBBLE | GRAVEL | SAND        |           | CLAY      |      |
|        |        | VERY COARSE | MED. FINE | VERY FINE | CLAY |

| SAMPLE NO.  | SAMPLE ELEV. | SAMPLE DEPTH | USCS CLASS. | MEAN SIZE (mm) | MEDIAN SIZE (mm) | SORTING |
|-------------|--------------|--------------|-------------|----------------|------------------|---------|
| VC99 28#5 0 | -51.4        | 12.5         | SP          | 0.17           | 0.16             | 0.62    |
|             |              |              |             |                |                  |         |
|             |              |              |             |                |                  |         |

GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH



GRAIN SIZE DISTRIBUTION CURVE  
TOWN OF PALM BEACH