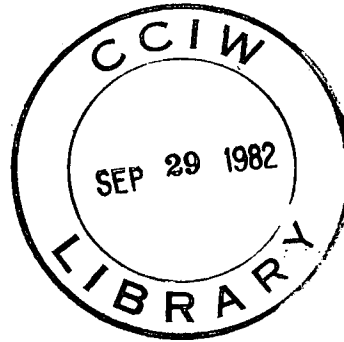


HYDRAULICS DIVISION
TECHNICAL NOTE



DATE: September 1982 **REPORT NO:** 82-20

TITLE: Particle Size Data Report - Lake Erie Core

AUTHOR: G. A. Duncan

REASON FOR REPORT: This report responds to a request for particle size data from John Coakley, Hydraulics Division under Study HD 343.

CORRESPONDENCE FILE NO:
5690 (Study No. 343)

1.0 INTRODUCTION

John Coakley, Hydraulics Division, submitted 21 samples from a Lake Erie core requesting sand, silt and clay percentages.

The samples were analysed using standard laboratory procedures (Duncan and LaHaie, 1979) by Keith Salisbury.

2.0 PROCEDURES

The Sieve Short Pipette and Sedigraph Analyses, which provide sand, silt and clay percentages with 1/2 PHI resolution on the silt and clay classes, was used to analyse the samples.

Briefly the procedure consists of:

1. Splitting the sample to 20 g.
2. Dispersing sample in 50 ml of Calgon solution (50 g/l) and mixing it for 15 minutes.
3. Recovering pipette aliquots of 25 ml for (a) sedigraph analysis (b) clay percentage.
4. Automatic analysis with the Sedigraph.
5. Processing the results with SIZDIST: a FORTRAN IV computer program (Sandilands and Duncan, 1980).

3.0 RESULTS

(1) For the Sieve, Short Pipette and Sedigraph Analysis, the output consists of:

1. A histogram of the frequency distribution.
2. The percentage and cumulative percentages of the material occurring within each 1/2 PHI unit.
3. Moment measure statistics (Krumbein & Pettijohn, 1938).
4. Percentiles.
5. Percent gravel, sand, silt and clay. Percentages of silt and clay are expressed as "(PIPETTE)" and "(SEDIGRAPH)" to show reproducibility of the two methods.

6. Ratios used to plot Folk's Ternary Classification.
7. Shepard (1954) and Folk (1968) Ternary Classification.

REFERENCES

- Duncan, G. A. and LaHaie, G. G., 1979. "Size Analysis Procedures Used in the Sedimentology Laboratory, NWRI". NWRI, CCIW, Hydraulics Division Manual, September 1979.
- Folk, R. L., 1968. "Petrology of Sedimentary Rocks". Hemphill Publishing Co., Austin, Texas 182 p.
- Folk, R. L. and Ward, W. C., 1957. "Brazos River Bar: A Study in the Significance of Grain Size Parameters". Jour. Sed. Petrology, V. 27, pp. 3-26.
- Krumbein, W. C. and Pettijohn, F. J., 1938. "Manual of Sedimentary Petrography". Appleton-Century-Crofts, New York, 549 p.
- Sandilands, R. G. and Duncan, G. A., 1980. "SIZDIST - A Computer Program for Size Analysis". NWRI, CCIW, Hydraulics Division Technical Note, Report No. 80-08.
- Shepard, F. P., 1954. "Nomenclature Based on Sand-Silt Ratios". Jour. Sed. Petrology, V. 24, pp. 151-158.

APPENDIX 1
SIZDIST OUTPUT

UW 62-1 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 13.9580

09/02/82

PHI PCT. CUMFCT.

3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	1.02	1.02	*
6.00	1.02	2.04	*
6.50	5.10	7.14	*****
7.00	6.12	13.27	*****
7.50	7.14	20.41	*****
8.00	6.12	26.53	*****
8.50	8.16	34.69	*****
9.00	7.14	41.84	*****
9.50	6.12	47.96	*****
10.00	7.14	55.10	*****
10.50	6.12	61.22	*****
11.00	5.10	66.33	*****
11.50	6.12	72.45	*****
12.00	4.08	76.53	*****
****	23.47	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

2.91 1.70 .01 -1.01 KEUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	9.64	5TH	6.29	16TH	7.19	25TH	7.88
			75TH	11.81	84TH	*****	95TH	*****

PCT. GRAVEL 0.00 SAND .00 SILT (PIPETTE) 29.39 CLAY (PIPETTE) 70.61 (SEDIGRAPH) 26.53 (SEDIGRAPH) 73.47

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 26.53PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD (SCS)-CLAY

UW 82-3 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 13.7611

09/02/82

PHI PCT. CUMFCT.

3.50

0.00

0.00

4.00

0.00

0.00

4.50

0.00

0.00

5.00

0.00

0.00

5.50

1.49

1.49

6.00

1.49

2.99

6.50

4.48

7.46

7.00

7.46

14.93

7.50

8.96

23.88

8.00

5.97

29.85

8.50

7.46

37.31

9.00

7.46

44.78

9.50

5.97

50.75

10.00

4.48

55.22

10.50

4.48

59.70

11.00

5.97

65.67

11.50

4.48

70.15

12.00

29.85

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

8.94

1.60

.06

-.36

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN

9.94

5TH

6.73

16TH

7.56

25TH

8.09

75TH*****

84TH*****

95TH*****

PCT.

GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

19.19

CLAY (PIPETTE)

80.81

(SEDIGRAPH) 23.88

(SEDIGRAPH) 76.12

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

23.88PCT.GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD -CLAY

FOLK(GMS)-MUD

(SCS)-CLAY

UW 82-4 250682

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 11.6900

09/02/82

PHI FCT. CUMFCT.

3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	0.00	0.00	
6.00	1.25	0.00	*
6.50	2.50	1.25	***
7.00	6.25	3.75	*****
7.50	6.25	10.00	*****
8.00	7.50	16.25	*****
8.50	7.50	23.75	*****
9.00	8.75	31.25	*****
9.50	7.50	40.00	*****
10.00	7.50	47.50	*****
10.50	6.25	55.00	*****
11.00	6.25	61.25	*****
11.50	5.00	67.50	*****
12.00	27.50	72.50	*****
****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

9.28 1.46 -.02 -.96 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN 10.17	5TH 7.10	16TH 7.98	25TH 8.50
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	0.00	SAND	-.00	SILT (PIPETTE)	15.53	CLAY (PIPETTE)	84.47
				(SEDIGRAPH)	16.25	(SEDIGRAPH)	83.75
GRAVEL+SAND	-.00	SILT/(SILT+CLAY)	16.25	PCT.GRAV+SAND/SILT+CLAY			-.00
LABELS SHEPARD	-CLAY	FOLK(3MS)	-MUD	(SCS)	-CLAY		

UW 82-5 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 12.3700

09/02/82

PHI PCT. CUMFCT.

3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	0.00	0.00	
6.00	4.88	0.00	*****
6.50	4.88	4.88	*****
7.00	7.32	9.76	*****
7.50	7.32	17.07	*****
8.00	6.10	24.39	*****
8.50	7.32	30.49	*****
9.00	7.32	37.80	*****
9.50	6.10	45.12	*****
10.00	6.10	51.22	*****
10.50	4.88	57.32	*****
11.00	4.88	62.20	*****
11.50	4.88	67.07	*****
12.00	28.05	71.95	*****
*****	100.00		*****

MEAN ST.DEV. SKEWNESS KURTOSIS

8.92 1.62 .05 -1.06 KRUMBEIN + PETTICORN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	9.90	5TH	6.51	16TH	7.43	25TH	8.05
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 20.13 CLAY (PIPETTE) 79.87 (SEDIGRAPH) 24.39 (SEDIGRAPH) 75.61

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 24.39PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -CLAY FOLK(GMS)-MUD (SCS)-CLAY

UW 82-6 250882

SIEVE, SH. PIP., SEDIGRAF SAMPLE WT. = 16.3400

09/02/82

PHI PCT. CUM PCT.

3.50

0.00

0.00

4.00

0.00

0.00

4.50

0.00

0.00

5.00

0.00

0.00

5.50

0.00

0.00

6.00

2.35

2.35

**

6.50

2.35

4.71

**

7.00

5.88

10.59

7.50

7.06

17.65

8.00

8.24

25.88

8.50

8.24

34.12

9.00

7.06

41.18

9.50

8.24

49.41

10.00

7.06

56.47

10.50

4.71

61.18

11.00

4.71

65.88

11.50

2.35

68.24

**

12.00

31.76

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

9.04

1.41

.01

-.83

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN 10.04

5TH 7.03

16TH 7.88

25TH 8.45

75TH*****

84TH*****

95TH*****

PCT. GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

23.23

CLAY (PIPETTE)

76.77

(SEDIGRAF) 17.65

(SEDIGRAF) 82.35

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

17.65 PCT. GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD -CLAY

FOLK(SMS)-MUD

(SCS)-CLAY

UW 82-7A 250682

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT. = 15.3485

09/02/82

PHI PCT. CUMFCT.

3.50

0.00

4.00

0.00 0.00

4.50

0.00 0.00

5.00

0.00 0.00

5.50

0.00 0.00

2.17

**

6.00

3.26 2.17

6.50

5.43 5.43

7.00

6.52 11.95

7.50

6.70 20.65

7.61

8.00

6.52 28.26

8.50

6.52 34.78

9.00

6.52 41.30

9.50

7.61 48.91

5.43

10.00

5.43 54.35

10.50

4.35 59.78

11.00

3.26 64.13

11.50

3.26 67.39

12.00

3.26 70.65

29.35 100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

8.64

1.60

.10

-.91

KRUMBEIN + PETTICORN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN 9.50

5TH 6.43

16TH 7.23

25TH 7.79

75TH*****

84TH*****

95TH*****

PCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 29.64 CLAY (PIPETTE) 70.36

(SEDIGRAPH) 28.26 (SEDIGRAPH) 71.74

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 28.26 PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD (SCS)-CLAY

UW 82-7C 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 18.6407

PHI FCT. CUMFCT.

09/02/32

3.50

0.00

4.00

0.00

4.50

.58

.58

5.00

0.00

.58

5.50

2.34

2.92

6.00

3.51

6.43

6.50

5.85

12.28

7.00

4.68

16.96

7.50

9.36

26.32

8.00

5.85

32.16

8.50

7.02

39.18

9.00

7.02

46.20

9.50

7.02

53.22

10.00

4.68

57.89

10.50

5.85

63.74

11.00

3.51

67.25

11.50

4.68

71.93

12.00

2.34

74.27

25.73

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

8.40

1.76

.02

-.84

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN 9.27

5TH 5.80

16TH 6.90

25TH 7.43

75TH*****

84TH*****

95TH*****

PCT. GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

33.08

CLAY (PIPETTE)

66.92

(SEDIGRAPH) 32.16

(SEDIGRAPH) 67.84

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

32.16PCT.GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD

-SILTY CLAY

FOLK(GMS)-MUD

(SCS)-CLAY

UW 82-7D

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 16.8452

09/01/82

PHI	PCT.	CUMFCT.	
3.50	0.00	0.00	
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	1.19	1.19	*
6.00	4.76	5.95	*****
6.50	5.95	11.90	*****
7.00	8.33	20.24	*****
7.50	8.33	28.57	*****
8.00	7.14	35.71	*****
8.50	4.76	40.48	*****
9.00	7.14	47.62	*****
9.50	4.76	52.38	*****
10.00	4.76	57.14	*****
10.50	5.95	63.10	*****
11.00	3.57	66.67	****
11.50	3.57	70.24	****
12.00	3.57	73.81	****
*****	26.19	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

8.35 1.77 .13 -1.00 KRUMBEIN + PETTICORN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	9.25	5TH	5.90	16TH	6.75	25TH	7.29
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL	0.00	SAND	-.00	SILT (PIPETTE)	39.45	CLAY (PIPETTE)	60.55
				(SEDIGRAPH)	35.71	(SEDIGRAPH)	64.29
GRAVEL+SAND	-.00	SILT/(SILT+CLAY)	35.71	PCT.GRAV+SAND/SILT+CLAY			-.00
LABELS SHEPARD		-SILTY CLAY		FOLK(GMS)-MUD		(SCS)-MUD	

UW 82-7D 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 14.0237

09/02/62

PHI PCT. CUMECT.

3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	2.29	2.29	**
5.50	3.05	5.34	***
6.00	6.11	11.45	*****
6.50	10.69	22.14	*****
7.00	7.63	29.77	*****
7.50	7.63	37.40	*****
8.00	6.11	43.51	*****
8.50	4.58	48.09	*****
9.00	6.11	54.20	*****
9.50	4.58	58.78	*****
10.00	3.05	61.83	*****
10.50	4.58	66.41	*****
11.00	2.29	68.70	**
11.50	3.82	72.52	***
12.00	3.05	75.57	*****
****	24.43	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.90 1.89 .21 -.83 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	8.66	5TH	5.44	16TH	6.21	25TH	6.69
			75TH	11.91	84TH	*****	95TH	*****

FCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 43.22 CLAY (PIPETTE) 56.78 (SEDIGRAPH) 43.51 (SEDIGRAPH) 56.49

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 43.51 PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUJ (SCS)-MUD

UW 32-7F 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT. = 22.1654

09/02/82

PHI FCT. CUMFCT.

3.50

0.00

4.00

0.00 0.00

4.50

0.00 0.00

5.00

2.04 2.04

**

5.50

3.06 5.10

6.00

4.08 9.18

6.50

6.12 15.31

7.00

5.10 20.41

7.50

12.24 32.65

8.00

7.14 39.80

8.50

6.12 45.92

9.00

7.14 53.06

9.50

5.10 58.16

10.00

4.08 62.24

10.50

4.08 66.33

11.00

4.08 70.41

11.50

4.08 74.49

12.00

3.06 77.55

22.45

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

8.17

1.83

.11

-.30

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN

8.79

5TH

5.48

16TH

6.57

25TH

7.19

75TH 11.58

84TH*****

95TH*****

PCT. GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

48.79

CLAY (PIPETTE)

51.21

(SEDIGRAPH) 39.80

(SEDIGRAPH) 60.20

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

39.80PCT.GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD

-SILTY CLAY

FOLK(3MS)-NUD

(SCS)-NUD

UW 82-88 250892

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 18.3986

09/02/82

PHI PCT. CUMFCT.

3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	*
5.00	1.02	1.02	****
5.50	4.08	5.10	*****
6.00	8.16	13.27	*****
6.50	11.22	24.49	*****
7.00	9.18	33.67	*****
7.50	13.27	46.94	*****
8.00	9.18	56.12	*****
8.50	7.14	63.27	*****
9.00	4.08	67.35	****
9.50	4.08	71.43	****
10.00	3.06	74.49	***
10.50	3.06	77.55	**
11.00	2.04	79.59	**
11.50	3.06	82.65	***
12.00	2.04	84.69	**
****	15.31	100.00	*****

MEAN ST.DEV. SKEWNESS KUFTOSIS

7.64 1.58 .35 -.19 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	7.67	5TH	5.49	16TH	6.12	25TH	6.53
			75TH	10.03	84TH	11.83	95TH	*****

PCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 58.81 CLAY (PIPETTE) 41.19 (SEDIGRAPH) 56.12 (SEDIGRAPH) 43.88

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 56.12 PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -CLAYEY SILT FOLK(3MS)-MUD (SCS)-MUD

UW 82-80 250852

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 14.0540

09/02/82

PHI	PCT.	CUMFCT.	
3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	2.56	2.56	***
5.50	7.69	10.26	*****
6.00	7.69	17.95	*****
6.50	10.26	28.21	*****
7.00	7.69	35.90	*****
7.50	10.26	46.15	*****
8.00	7.69	53.85	*****
8.50	7.69	61.54	*****
9.00	7.69	69.23	*****
9.50	2.56	71.79	***
10.00	5.13	76.92	*****
10.50	5.13	82.05	*****
11.00	2.56	84.62	***
11.50	2.56	87.18	***
12.00	5.13	92.31	*****
****	7.69	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.81 1.92 .23 -.73

~~KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI~~

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	7.75	5TH	5.16	16TH	5.87	25TH	6.34
			75TH	9.81	84TH	10.83	95TH	*****

PCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 71.17 CLAY (PIPETTE) 28.83
 (SEDIGRAPH) 53.85 (SEDIGRAPH) 46.15

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 53.85 PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -CLAYEY SILT FOLK(IMS)-MUD (SCS)-MUD

UW 82-8E 250862

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 19.2543

PHI PCT. CUMFCT.

09/01/82

3.50

0.00

4.00

0.00

0.00

4.50

1.22

0.00

5.00

7.32

1.22

5.50

12.20

8.54

6.00

14.63

20.73

6.50

12.20

35.37

7.00

13.41

47.56

7.50

7.32

60.98

8.00

3.66

68.29

8.50

3.66

71.95

9.00

3.66

75.61

9.50

1.22

79.27

10.00

2.44

80.49

10.50

1.22

82.93

11.00

1.83

84.15

11.50

1.83

85.98

12.00

12.20

87.80

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

7.18

1.59

.54

.74

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN 7.09

5TH 5.26

16TH 5.81

25TH 6.15

75TH 8.92

84TH 10.94

95TH*****

PCT. GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

77.40

CLAY (PIPETTE)

22.60

(SEDIGRAPH) 68.29

(SEDIGRAPH)

31.71

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

68.29

PCT.GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD

-CLAYEY SILT FOLK(3MS)-MUD

(SCS)-SILT

UW 82 -8F 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 12.9000

09/02/82

PHI PCT. CUMFCT.

3.50

0.00

4.00

0.00

0.00

4.50

0.00

0.00

5.00

2.00

2.00

**

5.50

12.00

14.00

6.00

26.00

40.00

6.50

14.00

54.00

7.00

10.00

64.00

7.50

6.00

70.00

8.00

6.00

76.00

8.50

4.00

80.00

9.00

2.00

82.00

**

9.50

3.00

85.00

10.00

3.00

88.00

10.50

2.00

90.00

**

11.00

2.00

92.00

**

11.50

2.00

94.00

**

12.00

2.00

96.00

**

4.00

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

6.98

1.71

.63

.71

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

7.08

1.95

.60

1.23

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES

MEDIAN 6.36

5TH 5.13

16TH 5.54

25TH 5.71

75TH 7.92

84TH 9.33

95TH 11.75

PCT. GRAVEL

0.00

SAND

-.00

SILT (PIPETTE)

83.32

CLAY (PIPETTE)

16.68

(SEDIGRAPH) 76.00

(SEDIGRAPH) 24.00

GRAVEL+SAND

-.00

SILT/(SILT+CLAY)

76.00

PCT.GRAV+SAND/SILT+CLAY

-.00

LABELS SHEPARD -SILT

FOLK(GMS)-MUD

(SCS)-SILT

UW 82-86 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 13.8440

09/02/82

PHI FCT. CUMPCT.

3.50

0.00

4.00

0.00

0.00

4.50

0.00

0.00

5.00

0.00

0.00

5.50

1.22

1.22

*

3.66

4.88

6.00

3.66

8.54

6.50

4.88

13.41

7.00

7.32

20.73

7.50

6.10

26.83

8.00

6.10

32.93

8.50

6.10

39.02

9.00

4.88

43.90

9.50

4.88

48.78

10.00

4.88

53.66

10.50

3.66

57.32

11.00

6.10

63.41

11.50

7.32

70.73

12.00

29.27

100.00

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

6.82

1.88

.01

-1.13

KEUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES

MEDIAN 10.13

5TH 6.02

16TH 7.18

25TH 7.85

75TH*****

84TH*****

95TH*****

PCT. GRAVEL 0.00 SAND -.00 SILT (PIPETTE) 29.36 CLAY (PIPETTE) 70.64 (SEDIGRAPH) 26.83 (SEDIGRAPH) 73.17

GRAVEL+SAND -.00 SILT/(SILT+CLAY) 26.83PCT.GRAV+SAND/SILT+CLAY -.00

LABELS SHEPARD -SILTY CLAY FOLK(5MS)-MUD (SCS)-CLAY

UW 82-9 250382

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 19.5220

09/02/82

PHI	PCT.	CUM.PCT.	
3.50	0.00		
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	0.00	0.00	
6.00	1.00	1.00	*
6.50	1.00	2.00	*
7.00	2.00	4.00	**
7.50	3.00	7.00	***
8.00	5.00	12.00	*****
8.50	5.00	17.00	*****
9.00	8.00	25.00	*****
9.50	10.00	35.00	*****
10.00	7.00	42.00	*****
10.50	8.00	50.00	*****
11.00	6.00	56.00	*****
11.50	6.00	62.00	*****
12.00	5.00	67.00	*****
****	33.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

9.41 1.45 -0.15 -0.51 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN 10.50	5TH 7.17	16TH 8.40	25TH 9.00
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	0.00	SAND -.00	SILT (PIPETTE) 34.92	CLAY (PIPETTE) 65.08
			(SEDIGRAPH) 12.00	(SEDIGRAPH) 88.00
GRAVEL+SAND	-.00	SILT/(SILT+CLAY)	12.00PCT.GRAV+SAND/SILT+CLAY	-.00
LABELS SHEPARD	-CLAY	FOLK(GMS)-MUD		(SCS)-CLAY

23722

UW 82-10 250882

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 16.7663

09/02/82

PHI	PCT. CUMPCT.	
3.50	0.00	
4.00	0.00	0.00
4.50	0.00	0.00
5.00	0.00	0.00
5.50	0.00	0.00
6.00	1.04	1.04
6.50	0.00	1.04
7.00	2.08	3.13
7.50	3.13	6.25
8.00	4.17	10.42
8.50	6.25	16.67
9.00	8.33	25.00
9.50	8.33	33.33
10.00	10.58	47.92
10.50	1.04	48.96
11.00	6.25	55.21
11.50	5.21	60.42
12.00	4.17	64.58
*****	35.42	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

8.35 1.37 -.09 -.35 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.0 TO 12.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN 10.58	5TH 7.30	16TH 8.45	25TH 9.00
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	0.00	SAND	-.00	SILT (PIPETTE)	10.77	CLAY (PIPETTE)	39.23
				(SEDIGRAPH)	10.42	(SEDIGRAPH)	39.58
GRAVEL+SAND	-.00	SILT/(SILT+CLAY)	10.42	PCT.GRAV+SAND/SILT+CLAY			-.00
LABELS SHEPARD	-CLAY	FOLK(GMS)	-MUD	(SCS)	-CLAY		