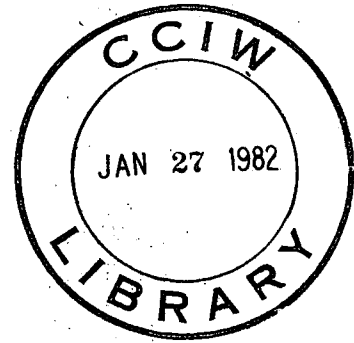


**HYDRAULICS DIVISION
TECHNICAL NOTE**



DATE: January 1982 **REPORT NO:** 82-02

TITLE: Particle Size Data Report 82-02

AUTHOR: G. A. Duncan

REASON FOR REPORT: This report responds to a request for particle size data from R. A. Bourbonniere, AED.

CORRESPONDENCE FILE NO:
5690 (Study No. 2302)

1.0

INTRODUCTION

This report provides the results of particle size analysis on sediments from Lake Huron. R. A. Bourbonniere, AED, submitted 44 samples for the Lake Huron Sediment Bank requesting sand, silt and clay percentages.

The samples were analysed by K. Salisbury and the results checked by G. Duncan.

2.0

PROCEDURE

- (1) The Sieve, Short Pipette and Sedigraph Analyses, which provides sand, silt and clay percentages with PHI resolution on the silt and clay classes, was used to analyse three samples (Duncan & LaHaie, 1979).

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).

- (2) The Sieve and Sedigraph Method which provides sand, silt and clay percentages was used to analyse 41 samples.

Briefly the procedure consists of:

1. Splitting the sample to 2g.
2. Removing particles large enough to block Sedigraph Suction Tube (0.088 mm).
3. Dispersing sample in a Calgon suspension.
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 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.

(2) For the Sieve and Sedigraph Method, the output consists of:

1. A histogram of the frequency distribution.
2. The percentage and cumulative percentages of the material occurring within each PHI unit.
3. Moment measure statistics (Krumbein & Pettijohn, 1938) and graphic (Folk and Ward, 1957) statistics.
4. Percentiles.
5. Percent gravel, sand, silt and clay.

6. Ratios used to plot Folk's Ternary Classification.
7. Shepard (1954) and Folk (1974) Ternary Classifications.

REFERENCES

- Duncan, G. A. and LaHale, 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

ABA 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	2.00	2.00	**
4.50	5.00	7.00	*****
5.00	11.00	18.00	*****
5.50	14.00	32.00	*****
6.00	11.00	43.00	*****
6.50	12.00	55.00	*****
7.00	7.50	62.50	*****
7.50	8.50	71.00	*****
8.00	6.00	77.00	***
8.50	3.00	80.00	***
9.00	3.00	83.00	*****
*****	17.00	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

6.05 1.23 .17 -.66

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 6.29	5TH 4.30	16TH 4.91	25TH 5.25
		75TH 7.83	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 2.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 75.00	(SEDIGRAPH) 23.00

GRAVEL+SAND 2.00 SILT/(SILT+CLAY) 76.53PCT.GRAV+SAND/SILT+CLAY .02

LABELS SHEPARD -SILT FOLK(GMS)-MLD (SCS)-SILT

C7A 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50	18.00	18.00	*****
4.00	10.00	28.00	*****
4.50	9.00	37.00	*****
5.00	5.50	42.50	*****
5.50	6.50	49.00	*****
6.00	7.00	56.00	*****
6.50	5.00	61.00	*****
7.00	7.00	68.00	*****
7.50	5.00	73.00	***
8.00	3.00	76.00	***
8.50	3.00	79.00	*****
9.00	21.00	100.00	*****

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN 6.07	5TH*****	16TH*****	25TH 4.35
		75TH 8.33	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 18.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 55.00	(SEDIGRAPH) 27.00

GRAVEL+SAND 18.00 SILT/(SILT+CLAY) 67.07 PCT.GRAV+SAND/SILT+CLAY .22

LABELS SHEPARD -CLAYEY SILT FOLKWAYS)-SANDY MUD (SCS)-SANDY SILT

C12A 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMPCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	1.01	1.01	*
5.50	3.03	4.04	***
6.00	7.07	11.11	*****
6.50	9.09	20.20	*****
7.00	9.09	29.29	*****
7.50	13.13	42.42	*****
8.00	10.10	52.53	*****
8.50	7.07	59.60	*****
9.00	6.08	67.68	*****
*****	32.32	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.12 1.03 -.07 -.61

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.86	5TH 5.57	16TH 6.27	25TH 6.76
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 52.53	(SEDIGRAPH) 47.47
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	52.53PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-CLAYEY SILT	FOLK(GMS)-MUD		(SCS)-MUD

DH 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI FCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	5.00	5.00	*****
4.50	4.00	9.00	****
5.00	3.00	12.00	***
5.50	3.00	15.00	***
6.00	3.00	18.00	***
6.50	6.00	24.00	*****
7.00	7.00	31.00	*****
7.50	9.00	40.00	*****
8.00	10.00	50.00	*****
8.50	6.00	56.00	*****
9.00	8.00	64.00	*****
****	36.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.72 1.54 -.27 -.81

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 8.00	5TH 4.00	16TH 5.67	25TH 6.57
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 5.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 45.00	(SEDIGRAPH) 50.00
GRAVEL+SAND	5.00	SILT/(SILT+CLAY)	47.37PCT.GRAV+SAND/SILT+CLAY	.05
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-MUD		(SCS)-MUD

D-32 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMPCT.

3.50 ASSUMED UPPER LIMIT

4.00	1.00	1.00	***
4.50	3.00	4.00	*****
5.00	6.00	10.00	*****
5.50	12.00	22.00	*****
6.00	12.00	34.00	*****
6.50	11.00	45.00	*****
7.00	7.00	52.00	*****
7.50	7.00	59.00	*****
8.00	6.00	65.00	***
8.50	3.00	68.00	***
9.00	4.00	72.00	*****
*****	28.00	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

6.25 1.21 .16 -.61 KROMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 6.86	5TH 4.58	16TH 5.25	25TH 5.63
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 1.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 64.00	(SEDIGRAPH) 35.00
GRAVEL+SAND	1.00	SILT/(SILT+CLAY)	64.65PCT.GRAV+SAND/SILT+CLAY	.01
LABELS SHEPARD -CLAYEY SILT FOLK(SMS)-MUD				(SCS)-MUD

F-168-LH-80 091181

SEDIGRAPH ANALYSIS

01/14/82

PHI PCT. CUMFCT.

3.50

4.00 0.00 0.00

4.50 .53 .53

5.00 3.21 3.74

5.50 6.42 10.16

6.00 0.00 10.16

6.50 4.28 14.44

7.00 5.35 19.79

7.50 10.70 30.48

8.00 12.83 43.32

8.50 8.56 51.87

9.00 7.49 59.36

***** 40.64 100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

7.20 1.19 -.36 -.46

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 8.39 5TH 5.10 16TH 6.65 25TH 7.2+

75TH***** 84TH***** 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 43.32 (SEDIGRAPH) 56.63

GRAVEL+SAND .00 SILT/(SILT+CLAY) 43.32 PCT.GRAV+SAND/SILT+CLAY .00

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

COMMENTS - NO SAND FRACTION

F-30

SEDIGRAPH ANALYSIS

01/13/82

PHI	PCT. CUMFCT.	
3.50		
4.00	0.00	
4.50	4.76	4.76 *****
5.00	9.52	14.29 *****
5.50	14.81	29.10 *****
6.00	12.70	41.80 *****
6.50	8.47	50.26 *****
7.00	6.35	56.61 *****
7.50	8.47	65.08 *****
8.00	4.23	69.31 *****
8.50	4.23	73.54 *****
9.00	4.23	77.78 *****
*****	22.22	100.00 *****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.15 1.25 .25 -.72 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 6.48	5TH 4.51	16TH 5.06	25TH 5.36
		75TH 8.67	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 69.31	(SEDIGRAPH) 30.69
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	69.31	PCT.GRAV+SAND/SILT+CLAY .00
LABELS SHEPARD	-CLAYEY SILT	FOLK(GMS)-MLD		(SCS)-SILT

GH-B-LH-80 091281

SEDIGRAPH ANALYSIS

01/14/82

PHI PCT. CUMFCT.

3.50

4.00 0.00 0.00

4.50 1.03 1.03

5.00 0.00 1.03

5.50 0.00 1.03

6.00 2.06 3.09

6.50 1.03 4.12

7.00 3.09 7.22

7.50 6.19 13.40

8.00 9.28 22.68

8.50 7.22 29.90

9.00 11.34 41.24

**** 58.76 100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

7.74

1.00

-.66

2.05

KRUMBEIN + PETTICORN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN***** 5TH 6.64 16TH 7.64 25TH 8.16

75TH*****

84TH*****

95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 22.68 (SEDIGRAPH) 77.32

GRAVEL+SAND .00 SILT/(SILT+CLAY) 22.68 PCT.GRAV+SAND/SILT+CLAY .00 (SCS)-CLAY

LABELS SHEPARD -CLAY FOLK(GMS)-MUD

COMMENTS - NO SAND FRACTION

G-12A-LH-80 091281

SEDIGRAPH ANALYSIS

01/14/82

PHI FCT. CUMFCT.

3.50

0.00

0.00

4.00

0.00

0.00

4.50

2.17

2.17

5.00

0.00

2.17

5.50

8.70

10.87

6.00

7.61

13.48

6.50

8.70

27.17

7.00

13.04

40.22

7.50

8.70

48.91

8.00

8.70

57.61

8.50

6.52

64.13

9.00

35.27

100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

7.15

1.03

-.12

-.67

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 8.06 5TH 5.66 16TH 6.34 25TH 6.88 75TH***** 84TH***** 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 48.91 (SEDIGRAPH) 51.09

GRAVEL+SAND .00 SILT/(SILT+CLAY) 48.91 PCT.GRAV+SAND/SILT+CLAY .00 (SCST)-MUD

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD

COMMENTS - NO SAND FRACTION

J-3A-LH-80 091281

SEDIGRAPH ANALYSIS

01/14/82

PHI FCT. CUMFCT.

3.50			
4.00	0.00	0.00	*
4.50	1.19	1.19	*
5.00	.60	1.79	
5.50	0.00	1.79	
6.00	0.00	1.79	*
6.50	.60	2.38	**
7.00	2.38	4.76	**
7.50	5.95	10.71	*****
8.00	8.33	19.05	*****
8.50	9.52	28.57	*****
9.00	10.71	39.29	*****
****	60.71	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.83 .98 -.94 -2.24

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN*****	5TH 7.02	16TH 7.82	25TH 8.31
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 19.05	(SEDIGRAPH) 80.95

GRAVEL+SAND .00 SILT/(SILT+CLAY) 19.05 PCT.GRAV+SAND/SILT+CLAY .00

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

COMMENTS - NO SAND FRACTION

J6A 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50

4.00 0.00 0.00

4.50 0.00 0.00

5.00 0.00 0.00

5.50 3.00 3.00 ***

6.00 4.00 7.00 ****

6.50 6.00 13.00 *****

7.00 5.00 19.00 *****

7.50 12.00 31.00 *****

8.00 11.00 42.00 *****

8.50 10.00 52.00 *****

9.00 10.00 62.00 *****

**** 38.00 100.00 *****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.40 1.00 -.22 -.69

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 8.40 5TH 5.75 16TH 6.75 25TH 7.25

75TH***** 84TH***** 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 42.00 (SEDIGRAPH) 58.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 42.00 PCT.GRAV+SAND/(SILT+CLAY) .00

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

L3A 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT **

4.00 2.00 2.00

4.50 0.00 2.00

5.00 1.00 3.00

5.50 3.00 6.00

6.00 3.00 9.00

6.50 4.00 13.00

7.00 3.00 16.00

7.50 7.00 23.00

8.00 7.00 30.00

8.50 7.00 37.00

9.00 10.00 47.00

***** 53.00 100.00

MEAN ST.DEV. SKEWNESS KUPTOSIS

7.25 1.35 -.43 -.01

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN***** 5TH 5.33 16TH 7.00 25TH 7.64
75TH***** 94TH***** 95TH*****

PCT. GRAVEL .00 SAND 2.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 26.00 (SEDIGRAPH) 70.00

GRAVEL+SAND 2.00 SILT/(SILT+CLAY) 28.57PCT.GFAV+SAND/SILT+CLAY .02
LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD (SCS)-CLAY

K-29-LH-80 091281

SEDIGRAPH ANALYSIS

01/14/62

PHI PCT. CUMFCT.

3.50

4.00 0.00 0.00

4.50 2.06 2.06

5.00 1.03 3.09

5.50 1.03 4.12

6.00 2.06 6.19

6.50 3.09 9.28

7.00 6.19 15.46

7.50 8.25 23.71

8.00 8.25 31.96

8.50 8.25 40.21

9.00 10.31 50.52

**** 49.48 100.00

**

*

*

**

MEAN ST.DEV. SKEWNESS KURTOSIS

7.40 1.18 -.47 .41

KROMBEIN + FETTLJOHN (1958) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 8.98 5TH 5.71 16TH 7.03 25TH 7.53

75TH***** 84TH***** 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 31.96 (SEDIGRAPH) 68.0

GRAVEL+SAND .00 SILT/(SILT+CLAY) 31.96 PCT.GRAV+SAND/SILT+CLAY .00 (SCS)-CLAY

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD

COMMENTS - NO SAND FRACTION

K-31-LH-80 091281

SEDIGRAPH ANALYSIS

01/14/82

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	1.04	1.04	*
5.50	2.08	3.13	**
6.00	1.04	4.17	*
6.50	4.17	8.33	****
7.00	5.21	13.54	*****
7.50	6.25	19.79	*****
8.00	7.29	27.08	*****
8.50	9.37	36.46	*****
9.00	5.21	41.67	*****
****	58.33	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.39 1.04 -.34 -.25 KROMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN*****	5TH 6.10	16TH 7.20	25TH 7.86
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 27.08	(SEDIGRAPH) 72.9
GRAVEL+SAND	.00	SILT/(SILT+CLAY) 27.08	PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-MLD		(SCS)-CLAY

COMMENTS -
NO SAND FRACTION.

P3A

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 18.4110

01/07/82

PHI PCT. CUMPCT.

3.50			*****
4.00	35.92	35.92	*
4.50	.55	36.47	**
5.00	1.93	38.39	****
5.50	4.40	42.80	***
6.00	3.30	46.10	**
6.50	2.20	48.30	***
7.00	2.75	51.05	****
7.50	3.85	54.90	****
8.00	3.85	58.75	****
8.50	4.40	63.15	****
9.00	4.40	67.55	*****
9.50	4.95	72.50	****
10.00	4.40	76.90	***
10.50	2.75	79.65	***
11.00	2.75	82.40	**
11.50	2.20	84.60	**
12.00	1.65	86.25	*****
*****	13.75	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

6.30 2.63 .24 -1.24

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

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

PERCENTILES	MEDIAN	6.81	5TH	3.57	16TH	3.72	25TH	3.85
			75TH	9.78	84TH	11.35	95TH	*****

PCT. GRAVEL	0.00	SAND	35.92	SILT (PIPETTE)	35.69	CLAY (PIPETTE)	28.1
				(SEDIGRAPH)	22.83	(SEDIGRAPH)	41.2

GRAVEL+SAND 35.92 SILT/(SILT+CLAY) 35.62 PCT.GRAV+SAND/SILT+CLAY .56

LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

P-16 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI FCT. CUMFCT.

3.50			
4.00	0.00	0.00	****
4.50	4.00	4.00	*****
5.00	16.00	20.00	*****
5.50	16.00	36.00	*****
6.00	11.00	47.00	*****
6.50	8.00	55.00	*****
7.00	5.00	60.00	*****
7.50	6.00	66.00	*****
8.00	5.00	71.00	**
8.50	2.00	73.00	*****
9.00	5.00	78.00	*****
****	22.00	100.00	

MEAN ST.DEV. SKEWNESS KUFTOSIS

5.98 1.25 .37 -.46

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 5.19	5TH 4.53	16TH 4.63	25TH 5.16
		75TH 8.70	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 71.00	(SEDIGRAPH) 29.00
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	71.00	PCT.GRAV+SAND/SILT+CLAY .00
LABELS SHEFARD	-CLAYEY SILT	FOLK(GMS)-MUD		(SCS)-SILT

Q-19 110182

SEDIGRAPH ANALYSIS

01/13/92

PHI PCT. CUM PCT.

3.50 ASSUMED UPPER LIMIT

4.00	5.05	5.05	*****
4.50	9.09	14.14	*****
5.00	14.14	28.28	*****
5.50	8.08	36.36	****
6.00	4.04	40.40	****
6.50	5.05	45.45	****
7.00	4.04	49.49	****
7.50	7.07	56.57	****
8.00	4.04	60.61	***
8.50	3.03	63.64	***
9.00	3.03	66.67	*****
****	33.33	100.00	

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN 7.04	5TH*****	16TH 4.57	25TH 4.88
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 5.05	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 58.56	(SEDIGRAPH) 39.39
GRAVEL+SAND	5.05	SILT/(SILT+CLAY)	58.51	PCT. GRAV+SAND/SILT+CLAY .05
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MLD				(SCS)-MUD

Q-23-LH-80 181261

SEDIGRAPH ANALYSIS

12/18/81

PHI PCT. CUMFCT.

3.50			
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	0.00	0.00	***
6.50	2.55	2.55	*****
7.00	4.59	7.14	*****
7.50	11.22	18.37	*****
8.00	10.20	28.57	*****
8.50	9.18	37.76	*****
9.00	9.18	46.94	*****
*****	53.06	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.74 .72 -.11 -.84

KRUMBEIN + PETTIJHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN*****	5TH 6.77	16TH 7.39	25TH 7.83
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 28.57	(SEDIGRAPH) 71.43
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	28.57PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-MUD		(SCS)-CLAY

Q-25 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	1.00	1.00	*
4.50	0.00	1.00	
5.00	2.00	3.00	**
5.50	2.00	5.00	**
6.00	3.00	8.00	***
6.50	5.00	13.00	*****
7.00	8.00	21.00	*****
7.50	10.00	31.00	*****
8.00	12.00	43.00	*****
8.50	9.00	52.00	*****
9.00	10.00	62.00	*****
****	38.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.31 1.14 -.42 .42

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	8.39	5TH	5.50	15TH	6.69	25TH	7.20
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL	.00	SAND	1.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	42.00	(SEDIGRAPH)	57.00

GRAVEL+SAND 1.00 SILT/(SILT+CLAY) 42.42 PCT. GRAV+SAND/SILT+CLAY .01

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

Q-27 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUM PCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	1.01	1.01	*
5.50	0.00	1.01	
6.00	3.03	4.04	***
6.50	4.04	8.08	****
7.00	6.06	14.14	*****
7.50	11.11	25.25	*****
8.00	11.11	36.36	*****
8.50	9.09	45.45	*****
9.00	9.09	54.55	*****
****	45.45	100.00	*****

MEAN ST. DEV. SKEWNESS KURTOSIS

7.51 .93 -.31 .02

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 8.75	5TH 6.12	16TH 7.08	25TH 7.49
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 36.36	(SEDIGRAPH) 63.64
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	36.36	PCT. GRAV+SAND/SILT+CLAY .00
LABELS SHEPARD	-SILTY CLAY	FOLK (GMS)-MUD		(SCS)-MUD

Q-29 110162

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUM.PCT.

3.50 ASSUMED UPPER LIMIT

4.00	2.00	2.00	**
4.50	0.00	2.00	
5.00	0.00	2.00	*
5.50	1.00	3.00	
6.00	2.00	5.00	**
6.50	5.00	10.00	*****
7.00	5.00	15.00	*****
7.50	11.00	26.00	*****
8.00	11.00	37.00	*****
8.50	8.00	45.00	*****
9.00	10.00	55.00	*****
****	45.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.41 1.14 -.61 1.84 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 8.75	5TH 6.00	16TH 7.05	25TH 7.45
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 2.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 35.00	(SEDIGRAPH) 63.00
GRAVEL+SAND	2.00	SILT/(SILT+CLAY)	35.71PCT.GRAV+SAND/SILT+CLAY	.02
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-MUD		(SCS)-MUD

N-14 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50	15.31	15.31	*****
4.00	12.24	27.55	*****
4.50	14.29	41.84	*****
5.00	8.16	50.00	*****
5.50	9.18	59.18	*****
6.00	7.14	66.33	*****
6.50	5.10	71.43	*****
7.00	5.10	76.53	***
7.50	3.06	79.59	***
8.00	3.06	82.65	**
8.50	2.04	84.69	*****
9.00	15.31	100.00	*****

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN	5.50	5TH*****	16TH	4.03	25TH	4.40
			75TH	7.35	84TH	8.83	95TH*****

PCT. GRAVEL	.00	SAND	15.31	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	64.29	(SEDIGRAPH)	20.41
GRAVEL+SAND	15.31	SILT/(SILT+CLAY)	75.90	PCT.GRAV+SAND/SILT+CLAY	.18		
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD						(SCS)-SANDY SILT	

N-26-LH-80 1712e1

SEDIGRAPH ANALYSIS

01/14/82

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	0.00	0.00	
6.00	1.56	1.56	**
6.50	4.69	6.25	*****
7.00	3.13	9.38	***
7.50	10.94	20.31	*****
8.00	6.25	26.56	*****
8.50	9.38	35.94	*****
9.00	64.06	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.86 .74 -.23 -.73

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN*****	5TH 6.87	16TH 7.80	25TH 8.39
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 20.31	(SEDIGRAPH) 79.69
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	20.31	PCT.GFAV+SAND/SILT+CLAY .00
LABELS SHEPARD -CLAY		FOLK (GMS) -MOD		(SCS) -CLAY

COMMENTS - NO SAND FRACTION

N-27 080182

SEDIGRAPH ANALYSIS

01/13/62

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	7.22	7.22	*****
4.50	10.31	17.53	*****
5.00	17.53	35.05	*****
5.50	15.46	50.52	*****
6.00	11.34	61.86	*****
6.50	8.25	70.10	*****
7.00	5.15	75.25	****
7.50	4.12	79.38	***
8.00	3.09	82.47	**
8.50	2.06	84.54	***
9.00	3.09	87.63	*****
*****	12.37	100.00	

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN	5.48	5TH*****	16TH	4.43	25TH	4.71
			75TH	6.98	84TH	8.37	95TH*****

PCT. GRAVEL	.00	SAND	7.22	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	75.26	(SEDIGRAPH)	17.53
GRAVEL+SAND	7.22	SILT/(SILT+CLAY)	81.11	PCT.GRAV+SAND/SILT+CLAY			.08
LABELS SHEPARD -SILT		FGLK(GMS)-MUD		(SCS)-SILT			

M29

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 18.0296

01/07/82

PHI PCT. CUMFCT.

3.50			*****
4.00	67.48	67.48	
4.50	.09	67.56	
5.00	.09	67.65	
5.50	.09	67.73	
6.00	.77	68.50	*
6.50	.85	69.35	*
7.00	1.70	71.05	**
7.50	2.13	73.18	**
8.00	2.13	75.31	**
8.50	2.55	77.86	***
9.00	2.98	80.84	***
9.50	2.98	83.82	***
10.00	1.70	85.53	**
10.50	1.70	87.23	**
11.00	1.28	88.51	*
11.50	2.13	90.63	**
12.00	.43	91.06	
*****	8.94	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.04 2.32 .74 .62

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	3.87	5TH	3.54	16TH	3.62	25TH	3.69
			75TH	7.93	84TH	9.55	95TH	*****

PCT. GRAVEL	0.00	SAND	67.48	SILT (PIPETTE)	14.45	CLAY (PIPETTE)	18.07
				(SEDIGRAPH)	7.93	(SEDIGRAPH)	24.69

GRAVEL+SAND 67.48 SILT/(SILT+CLAY) 24.08 PCT.GRAV+SAND/SILT+CLAY 2.07

LABELS SHEPARD -CLAYEY SAND FOLK(GMS)-MUDDY SAND (SCS)-CLAYEY SAND

RB 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	*
4.50	1.00	1.00	
5.00	6.00	7.00	*****
5.50	13.00	20.00	*****
6.00	14.00	34.00	*****
6.50	9.00	43.00	*****
7.00	8.00	51.00	*****
7.50	10.00	61.00	*****
8.00	5.00	67.00	*****
8.50	4.00	71.00	****
9.00	4.00	75.00	****
*****	25.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.38 1.15 .19 -.60

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 5.94	5TH 4.83	16TH 5.35	25TH 5.68
		75TH 9.00	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 67.00	(SEDIGRAPH) 33.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 67.00 PCT.GRAV+SAND/SILT+CLAY .00

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

SB 080182

SEDIGRAPH ANALYSIS

01/13/62

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	*
4.50	1.18	1.18	****
5.00	3.53	4.71	*****
5.50	7.06	11.76	*****
6.00	10.59	22.35	*****
6.50	12.94	35.29	*****
7.00	10.59	45.88	*****
7.50	11.76	57.65	*****
8.00	8.24	65.89	*****
8.50	4.71	70.59	*****
9.00	4.71	75.29	*****
****	24.71	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.66 1.10 .03 -.68

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURE FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.15	5TH 5.02	15TH 5.70	25TH 6.10
		75TH 8.97	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.0
			(SEDIGRAPH) 65.88	(SEDIGRAPH) 34.1

GRAVEL+SAND	.00	SILT/(SILT+CLAY)	65.88	PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD				(SCS)-MUD	

S-7 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	3.06	3.06	***
4.50	5.10	8.16	*****
5.00	21.43	29.59	*****
5.50	17.35	46.94	*****
6.00	10.20	57.14	*****
6.50	5.10	62.24	*****
7.00	5.10	67.35	*****
7.50	4.08	71.43	****
8.00	2.04	73.47	**
8.50	2.04	75.51	**
9.00	2.04	77.55	**
****	22.45	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.56 1.14 .50 .52

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	5.65	5TH	4.19	16TH	4.69	25TH	4.69
			75TH	8.38	84TH	*****	95TH	*****

PCT. GRAVEL	.00	SAND	3.06	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	70.41	(SEDIGRAPH)	26.53

GRAVEL+SAND 3.06 SILT/(SILT+CLAY) 72.63 PCT. GRAV+SAND/SILT+CLAY .03

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

S-9 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMPCT.

3.50 ASSUMED UPPER LIMIT

4.00	1.00	1.00	
4.50	0.00	1.00	****
5.00	4.00	5.00	*****
5.50	8.00	13.00	*****
6.00	10.00	23.00	*****
6.50	11.00	34.00	*****
7.00	9.00	43.00	*****
7.50	8.00	51.00	*****
8.00	7.00	58.00	*****
8.50	5.00	63.00	*****
9.00	6.00	69.00	*****
****	31.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.63 1.20 .04 -.74

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.44	5TH 5.00	16TH 5.65	25TH 6.09
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 1.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 57.00	(SEDIGRAPH) 42.00

GRAVEL+SAND 1.00 SILT/(SILT+CLAY) 57.58 PCT.GRAV+SAND/SILT+CLAY .01

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

S-11 110182

SEDIGRAPH ANALYSIS

01/13/62

PHI PCT. CUMFCT.

3.50

0.00 0.00

4.00

0.00 0.00

4.50

0.00 0.00

5.00

4.00 0.00

5.50

4.00 4.00

6.00

8.00 8.00

6.50

8.00 16.00

7.00

9.00 25.00

7.50

12.00 37.00

8.00

9.00 46.00

8.50

8.00 54.00

9.00

9.00 63.00

37.00 100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

7.24 1.02 -.10 -.87

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 8.25 5TH 5.63 16TH 6.50 25TH 7.00 75TH***** 84TH***** 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 46.00 (SEDIGRAPH) 54.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 46.00 PCT.GRAV+SAND/SILT+CLAY .00 (SCS)-MUD

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-MUD

S-15 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	**
5.50	2.00	2.00	****
6.00	4.00	6.00	*****
6.50	9.00	15.00	*****
7.00	8.00	23.00	*****
7.50	13.00	36.00	*****
8.00	10.00	46.00	*****
8.50	9.00	55.00	*****
9.00	9.00	64.00	*****
****	35.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.32 .96 -.10 -.86

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	8.22	5TH	5.88	15TH	6.55	25TH	7.08
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL	.00	SAND	0.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	46.00	(SEDIGRAPH)	54.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 46.00 PCT.GRAV+SAND/SILT+CLAY .00

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

S-17 090182

SEDIGRAPH ANALYSIS

01/13/62

PHI FCT. CUMFCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	3.00	3.00	***
5.50	4.00	7.00	****
6.00	7.00	14.00	*****
6.50	9.00	23.00	*****
7.00	10.00	33.00	*****
7.50	10.00	43.00	*****
8.00	12.00	55.00	*****
8.50	0.00	64.00	*****
9.00	7.00	71.00	*****
*****	29.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.05 1.11 -.13 -.84

KEUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.79	5TH 5.25	16TH 6.11	25TH 6.60
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 55.00	(SEDIGRAPH) 45.00
GRAVEL+SAND	.00	SILT/(SILT+CLAY) 55.00	PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-CLAYEY SILT	FOLK (GMS)-MUD		(SCS)-MUD

T-6 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	3.00	3.00	***
4.50	4.00	7.00	****
5.00	18.00	25.00	*****
5.50	8.00	33.00	*****
6.00	22.00	55.00	*****
6.50	7.00	62.00	*****
7.00	6.00	68.00	****
7.50	4.00	72.00	***
8.00	3.00	75.00	****
8.50	4.00	79.00	**
9.00	2.00	81.00	*****
****	19.00	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

5.79 1.18 .34 -.04

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	5.89	5TH	4.25	16TH	4.75	25TH	5.00
			75TH	8.00	84TH	*****	95TH	*****
PCT. GRAVEL	.00	SAND	3.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	72.00	(SEDIGRAPH)		25.00
GRAVEL+SAND	3.00	SILT/(SILT+CLAY)		74.23PCT.GRAV+SAND/(SILT+CLAY)				.03
LABELS SHEPARD	-CLAYEY SILT	FOLK (GMS)-MUD				(SCS)-SILT		

T-12-LH-80 181281

SEDIGRAPH ANALYSIS

12/19/81

PHI PCT. CUMFCT.

3.50			
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	2.02	2.02	**
6.50	5.05	7.07	*****
7.00	8.59	15.66	*****
7.50	12.63	23.28	*****
8.00	14.14	42.42	*****
8.50	12.12	54.55	*****
9.00	11.11	65.66	*****
****	34.34	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.61 .82 -.16 -.73

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	8.31	5TH	6.30	15TH	7.01	25TH	7.37
			75TH	*****	84TH	*****	95TH	*****
PCT. GRAVEL	.00	SAND	0.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	42.42	(SEDIGRAPH)		57.56
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	42.42	PCT.GRAV+SAND/SILT+CLAY				.00
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-MLD				(SCS)-4UD		

T-20 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	*
4.50	1.00	1.00	*
5.00	1.00	2.00	**
5.50	2.00	4.00	****
6.00	4.00	8.00	*****
6.50	9.00	17.00	*****
7.00	8.00	25.00	*****
7.50	13.00	38.00	*****
8.00	12.00	50.00	*****
8.50	10.00	60.00	*****
9.00	8.00	68.00	*****
****	32.00	100.00	*****

MEAN ST.DEV. SKEWNESS KUPTOSIS

7.24 1.04 -.27 -.14

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 8.00	5TH 5.63	16TH 6.44	25TH 7.00
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 50.00	(SEDIGRAPH) 50.00
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	50.00PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-CLAYEY SILT	FOLK (GMS)-MLD		(SCS)-MUD

U-27 080162

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50 ASSUMED UPPER LIMIT

4.00	4.04	4.04	****
4.50	2.02	6.06	**
5.00	1.01	7.07	*
5.50	2.02	9.09	**
6.00	4.04	13.13	****
6.50	4.04	17.17	****
7.00	4.04	21.21	****
7.50	10.10	31.31	*****
8.00	9.09	40.40	*****
8.50	9.09	49.49	*****
9.00	12.12	61.62	*****
****	38.38	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.14 1.47 -.46 -.11

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	8.52	5TH	4.24	15TH	6.35	25TH	7.19
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL	.00	SAND	4.04	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.0
				(SEDIGRAPH)	36.36	(SEDIGRAPH)	59.6

GRAVEL+SAND 4.04 SILT/(SILT+CLAY) 37.89 PCT. GRAV+SAND/SILT+CLAY .04

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

V4

SIEVE, SH. PIP., SEDIGRAPH SAMPLE WT.= 19.7393

01/07/82

PHI PCT. CUMFCT.

3.50			*****
4.00	49.38	49.38	*
4.50	1.23	50.61	
5.00	6.17	56.79	*****
5.50	4.94	61.73	*****
6.00	4.01	65.74	****
6.50	3.40	69.13	***
7.00	2.47	71.60	**
7.50	1.23	72.84	*
8.00	1.85	74.69	**
8.50	1.85	76.54	**
9.00	1.85	78.39	**
9.50	1.85	80.25	**
10.00	1.23	81.48	*
10.50	1.23	82.72	*
11.00	.93	83.64	*
11.50	.93	84.57	*
12.00	1.23	85.80	*
****	14.20	100.00	*****

MEAN ST.DEV. SKEWNESS KUFTOSIS

5.11 2.10 .79 1.51

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 4.25	5TH 3.55	16TH 3.66	25TH 3.75
		75TH 8.08	84TH 11.19	95TH*****
PCT. GRAVEL	0.00	SAND 49.38	SILT (PIPETTE) 42.66	CLAY (PIPETTE) 7.96
			(SEDIGRAPH) 25.31	(SEDIGRAPH) 25.31
GRAVEL+SAND	49.38	SILT/(SILT+CLAY)	50.00PCT.GRAV+SAND/SILT+CLAY	.98
LABELS SHEPARD	-SAN	SIL	CLY	FOLK(GMS)-SANDY MUD
				(SCS)-SANDY MUD

V-6 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMPCT.

3.50 ASSUMED UPPER LIMIT

4.00	11.00	11.00	*****
4.50	24.00	35.00	*****
5.00	30.00	65.00	*****
5.50	12.00	77.00	***
6.00	3.00	80.00	***
6.50	3.00	83.00	**
7.00	2.00	85.00	*
7.50	1.00	86.00	*
8.00	1.00	87.00	*
8.50	1.00	88.00	*
9.00	1.00	89.00	*
****	11.00	89.00	*****
		100.00	

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN	4.75	5TH*****	16TH	4.10	25TH	4.29
			75TH	5.42	84TH	6.75	95TH*****

PCT. GRAVEL	.00	SAND	11.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	76.00	(SEDIGRAPH)	13.00

GRAVEL+SAND 11.00 SILT/(SILT+CLAY) 85.39 PCT. GRAV+SAND/SILT+CLAY .12

LABELS SHEPARD -SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

V-8 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50

4.00 0.00 0.00

4.50 3.06 3.06 ***

5.00 11.22 14.29 *****

5.50 19.39 33.67 *****

6.00 17.35 51.02 *****

6.50 13.27 64.29 *****

7.00 8.16 72.45 *****

7.50 6.12 78.57 *****

8.00 4.08 82.65 *****

8.50 2.04 84.69 *****

9.00 2.04 86.73 *****

***** 13.27 100.00 *****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.96 1.03 .36 .06

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES MEDIAN 5.97 5TH 4.59 16TH 5.04 25TH 5.28

75TH 7.21 84TH 8.33 95TH*****

PCT. GRAVEL .00 SAND 0.00 SILT (PIPETTE) 0.00 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 82.65 (SEDIGRAPH) 17.35

GRAVEL+SAND .00 SILT/(SILT+CLAY) 82.65 PCT. GRAV+SAND/SILT+CLAY .00

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

V-9 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUM PCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	1.16	1.16	*
5.50	2.33	3.49	**
6.00	10.47	13.95	*****
6.50	15.12	29.07	*****
7.00	10.47	39.53	*****
7.50	11.63	51.16	*****
8.00	6.98	58.14	*****
8.50	6.98	65.12	***
9.00	3.49	68.60	*****
*****	31.40	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.84 .96 .10 -.71

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.45	5TH 5.57	15TH 6.07	25TH 6.37
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 58.14	(SEDIGRAPH) 41.86

GRAVEL+SAND	.00	SILT/(SILT+CLAY) 58.14	PCT. GRAV+SAND/SILT+CLAY	.00
-------------	-----	------------------------	--------------------------	-----

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MLD (SCS)-MUD

V-11 110182

SEDIGRAPH ANALYSIS

01/13/52

PHI PCT. CUMFCT.

3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	3.00	3.00	***
5.50	5.00	8.00	*****
6.00	10.00	18.00	*****
6.50	12.00	30.00	*****
7.00	11.00	41.00	*****
7.50	12.00	53.00	*****
8.00	7.00	60.00	*****
8.50	6.00	66.00	*****
9.00	6.00	72.00	*****
*****	28.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.81 1.08 .05 -.79

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.33	5TH 5.20	16TH 5.90	25TH 6.29
		75TH*****	84TH*****	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 60.00	(SEDIGRAPH) 40.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 60.00 PCT. GRAV+SAND/SILT+CLAY .00

LABELS SHEFARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

V-24 110182

SEDIGRAPH ANALYSIS

01/13/82

PHI PCT. CUMFCT.

3.50			
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	4.00	4.00	****
6.50	6.00	10.00	*****
7.00	10.00	20.00	*****
7.50	13.00	33.00	*****
8.00	12.00	45.00	*****
8.50	10.00	55.00	*****
9.00	10.00	65.00	*****
****	35.00	100.00	*****

MEAN ST.DEV. SKEWNESS KUFTOSIS

7.47 .88 -.10 -.88

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN	8.25	5TH	6.08	16TH	6.80	25TH	7.19
			75TH	*****	84TH	*****	95TH	*****

PCT. GRAVEL	.00	SAND	0.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	45.00	(SEDIGRAPH)	55.00

GRAVEL+SAND .00 SILT/(SILT+CLAY) 45.00 PCT.GFAV+SAND/SILT+CLAY .00

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

W-17 080182

SEDIGRAPH ANALYSIS

01/13/82

PHI	PCT.	CUMFCT.	
3.50			
4.00	0.00	0.00	
4.50	0.00	0.00	
5.00	0.00	0.00	
5.50	6.00	6.00	*****
6.00	4.00	10.00	****
6.50	11.00	21.00	*****
7.00	9.00	30.00	*****
7.50	13.00	43.00	*****
8.00	12.00	55.00	*****
8.50	9.00	64.00	*****
9.00	8.00	72.00	*****
****	28.00	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

7.16 1.03 -.10 -.86

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 7.79	5TH 5.42	16TH 6.27	25TH 6.72
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 55.00	(SEDIGRAPH) 45.00
GRAVEL+SAND	.00	SILT/(SILT+CLAY)	55.00PCT.GRAV+SAND/SILT+CLAY	.00
LABELS SHEPARD	-CLAYEY SILT	FOLK(GMS)-MUD		(SCS)-MUD

23711

Z-20-LH-80 181281

SEDIGRAPH ANALYSIS

12/18/81

PHI PCT. CUMPCT.

3.50			
4.00	0.00	0.00	*****
4.50	6.06	6.06	*****
5.00	22.22	28.28	*****
5.50	25.25	53.54	*****
6.00	15.66	69.19	*****
6.50	10.61	79.80	*****
7.00	5.05	84.85	****
7.50	4.04	88.89	**
8.00	2.02	90.91	**
8.50	2.02	92.93	**
9.00	1.52	94.44	**
*****	5.56	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.60 .98 .58 1.12

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 9.0 PHI

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

PERCENTILES	MEDIAN 5.43	5TH 4.41	16TH 4.72	25TH 4.93
		75TH 6.27	84TH 6.92	95TH*****

PCT. GRAVEL	.00	SAND 0.00	SILT (PIPETTE) 0.00	CLAY (PIPETTE) 0.00
			(SEDIGRAPH) 90.91	(SEDIGRAPH) 9.09

GRAVEL+SAND .00 SILT/(SILT+CLAY) 90.91 PCT.GRAV+SAND/SILT+CLAY .00

LABELS SHEPARD -SILT FOLK(GMS)-MLD (SCS)-SILT