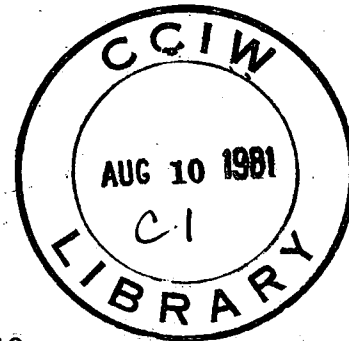


HYDRAULICS DIVISION
Technical Note



DATE: July 1981 **REPORT NO:** 81-19

TITLE: Particle Size Data Report 81-10

AUTHOR: G. A. Duncan

REASON FOR REPORT: This report responds to a request for particle size data from Walter Glooschenko, AED.

CORRESPONDENCE FILE NO:
5690(Study No. 2302)

1.0 INTRODUCTION

W. Glooschenko submitted two samples to the Sedimentology Laboratory for grain-size analysis. The samples were analysed by Keith Salisbury and the results checked by G. Duncan.

2.0 PROCEDURE

The Sieve and Short Pipette Method, which provides gravel, sand, silt and clay percentages was used to analyse the samples.

Briefly, the procedure consists of:

- 1) splitting the sample to 20 g.
- 2) sieving the split at -1 PHI (2.00 mm).
- 3) dispersing the sample in 50 ml of Calgon solution (50 g/l) and mixing it for 15 minutes.
- 4) recovering two pipette aliquots of 25 ml for sand, silt and clay percentages.
- 5) processing the results with SIZDIST: a FORTRAN IV computer program (Sandilands and Duncan, 1980).

3.0 RESULTS

For the Sieve and Short Pipette Method, the output consists of:

- a) percent gravel, sand, silt and clay.
- b) ratios used to plot Folk's Ternary Clasification.
- c) Shepard (1954) and Folk (1974) Ternary Classification.

4.0 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, vol. 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, vol. 24, pp. 151-158.

APPENDIX 1
SIZDIST Output

10-11-12 (3) 030681 SIEVE AND PIPETTE (2) SAMPLE WT.= 23.0146
PCT. GRAVEL 0.00 SAND 13.99 SILT (PIPETTE) 72.40 CLAY (PIPETTE) 13.61
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 13.99 SILT/(SILT+CLAY) 84.17PCT.GRAV+SAND/SILT+CLAY .16

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

23700

456 (2) 030681 SIEVE AND PIPETTE (2) SAMPLE WT. = 25.9489
 PCT. GRAVEL 0.00 SAND 4.37 SILT (PIPETTE) 63.14 CLAY (PIPETTE) 32.49
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 4.37 SILT/(SILT+CLAY) 66.03PCT.GRAV+SAND/SILT+CLAY .05
 LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD