Abst	tract	248821											ſ
Sess	ion	T238											L
Post	er	343											
													_
	- 2	Flow Direc	etion									and another is and the	100
							and makes the months	- CALLER CONTRACTOR					いろう人と考
nlet	1	· · · · · · · · · · · · · · · · · · ·								She in the second s			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
													···
	(7 0	0 10 1	1 12 1	3 14	15 16	17 1	8 19	202	21 22	23	24 23)

INTRODUCTION

- ★ Banding in muddy sanstones is common in deepwater settings (Figure 3)
- * Banding is defined by repetitive, millimeter to decimeters thick couplets of alternating clean sands and muddy sands (Lowe & Guy, 2000)
- ★ Some suggest banding results from sorting of sediment in laminar near-bed layers dominated by cohesive forces (Lowe et al., 2003) while others interpret banding to be the result of intermittent turbulence suppression because of dispersed clay near bed (Haughton et al., 2009)
- **★** Depositional processes generating banded divisions have not been observed experimentally before this research

GEOLOGIC CONTEXT



EXPERIMENTAL METHODS

- ★ Simulate a weak transitional flow
- ★ Use fine black sand to better observe depositional of static bed
- ★ Use bimodal sediments in original mixture to clearly distinguish between pore-filling muds (<100 micrometers) and sands (>100 micrometers) (Figure 7)
- \star Experiment designed to represent the moment a flow becomes strongly depositional, consistent with a loss of confinement in a submarine lobe setting
- ★ Add mixed slurry to 2D flume head tank (Figure 6)
- ★ Induce three surges by controlling the pressure head that drives flow rate
- ★ Record high-resolution side-view video and acoustic data for the duration of the flow
- ★ Collect post-depositional photographs (Figure 1) and freeze core samples for grain size analysis









2D Flume Tank (10.97m x 0.61m x 1.22 m) Tail Tank Inner Channel (9.15 m x 0.2 m x 0.6 n)linage System 915 m

Figure 6: Schematic diagram of experimental flume tank set-up.

Effects of Surging During Deposition of a Subaqueous Transitional Flow Ustipak, K.R., Minton, B., Mohrig, D., Buttles, J., and Perillo, M.M.





