NTU 1
RPM 1
Temp = 29°C

Core Description on Back

# Erosion log sheet

**Experiment Name:** S3943-5e  **Date:** 8-08-07

**Experiment Start Time (EST):** 10:52:40  **Operator:** Pat D.

$\tau_b$ (dynes)

| $\tau_b$ (dynes) | Bottle No. | Step start time (add) | Bottle switch time | Notes |
|---|---|---|---|---|
| ~~0.0~~ | ~~2.8~~ | ~~10:52:00~~ | | |
| 0.1 | 2.8 | 10:52:40 | 10:53:00 | Problems with motors. Pumped ~1 minute before motors would turn on. No resuspension |
| ~~0.5~~ | ~~303~~ | ~~10:00:00~~ | ~~11:21:00~~ | 11:21 – attempt to start next step |
| 0.5 | 303 | 12:33:30 | 12:33:30 | Slight Resuspension. See comments on back. Aggregates eroding – fecal pellets? |
| 1.0 | 202 | 12:53:30 | 12:53:45 | Resuspension of aggregates (pellets?). Tornado |
| 1.7 | | | 13:06:45 | pellets |
| 2.0 | 215 | 13:13:30 | 13:13:45 | Erosion. Tornado. Aggregates + fines. Material seems to erode + deplete quickly. – Initial spike – real |
| | 205 | | 13:23:45 | |
| 3.0 | 222 | 13:33:30 | 13:33:40 | Some erosion. No tornado. Fines + some aggregates |
| | 213 | | 13:43:40 | |
| 4.5 | 206 | 13:53:30 | 13:53:40 | Erosion. Aggregates + Fines. Aggs (pellets?) being ripped from bed |
| | 209 | | 14:04:00 | Chunk torn from bed. causing turb spike mid step |
| 6.0 | 200 | 14:13:30 | 14:13:40 | Resuspension. Small chunks torn from bed. |
| | 1.3 | | 14:24:40 | No pike in center |
| | 2.5 | | 14:30:00 | – Scour holes in bed – likely mass erosion + explanation of turb spikes |
| | | | 14:35:00 | Stop collecting effluent. Continue eroding |
| | | | 15:06:30 | End |
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Observation – seemed to erode mostly fecal pellets (I think) at $\tau_b$ = 0.05-0.2 Pa.
– I would guess $\tau_c$ of a fecal pellet not bound to the bed is 0.05-0.2 Pa.
– After 0.2 Pa most erosion came from tearing pellets from the bed.

## Core Desc.

- nearly level surface

- smooth surface

- some worm tubes

- worm burrows visible along edge of core

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## Comments

- issues associated with bad grounding in calibration lab, Franklin Hall.

- 1st step (0.1 dynes) seemed to run OK

- when second step began turbidity went crazy. Stopped motors + pumps (~11:21)

- after ~ 1 hour of trouble shooting seemed to have fixed problem by plugging everything into 1 outlet

- Started again with second step at 12:33

- to process - should be able to include frame from start of 1st step to restart of 2nd step in 1st step interval - select period of actual good data for fit

NTU 2
RPM 2
Temp = 29°C

Core Description on back

# Erosion log sheet

**Experiment Name:** S3743-6e    **Date:** 8-08-07

**Experiment Start Time (EST):** 10:52:40    **Operator:** Pat D.

$\tau_b$ (d/ynes)

| $\tau_b$ (d/ynes) | Bottle No. | Step start time | Bottle switch time | Notes |
|---|---|---|---|---|
| 0.1 | 2.10 | 10:52:40 | 10:53:00 | See note for 5e |
| 0.5 305 | | | | |
| 0.5 | 305 | 12:33:30 | 12:33:30 | ~~305~~ Resuspension. See comments back of 5e Aggregates eroding. |
| 1.0 | 302 | 12:53:30 | 12:53:45 | Resuspension of aggregates (pellets). Tornado. Small pile in center |
| | 2.2 | | 13:06:45 | |
| 2.0 | 220 | 13:13:30 | 13:13:45 | Erosion. Tornado. Aggregates (pellets?) + fines |
| | 219 | | 13:23:45 | |
| 3.0 | 301 | 13:33:30 | 13:33:40 | Some erosion. No tornado. Fines + Aggs. |
| | 214 | | 13:43:40 | |
| 4.5 | 314 | 13:53:30 | 13:53:40 | Erosion. Aggs + Fines. Pellets being ripped from bed. Erosional event ~14:00 - did not observe cause of |
| | 211 | | 14:04:00 | |
| 6.0 | 201 | 14:13:30 | 14:13:40 | Major erosion. Too turbid to see. |
| | 1.6 | | 14:24:40 | Pile in center (core clearing + can see now) |
| | 2.9 | | 14:30:00 | – Scour holes in bed. Likely mass erosion. Explanation for turb spikes |
| | | | 14:35:00 | Stop collecting effluent. Continue eroding |
| | | | 15:06:30 | End |
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## Core Desc.

- Slight surface slope ~2mm
- mostly smooth surface

- some worm tubes
- worm burrows along edge of core