

Supplemental File S7 A. Core Top Observations for cores offshore of northern Sumatra, in region of 2005 SASZ earthquake.

Core	Possible Recent Turbidite	OSU Core Logs				Wynn Core Logs			Core Data	Radiometric Age		Munsell Color	Oxidation Present
		Munsell Color	Descriptive Color	Foraminifera Presence	Notes	Descriptive Color	Foraminifera Presence	Notes		14C	210Pb		
2004													
RR0705-109MC	yes	--	--	--		##	##	--	no	--	--	--	no
RR0705-108TC	yes	--	--	--	graded upward fining turbidite unit, rich in quartz, mica, and forams	##	##	--	no	--	--	--	no
RR0705-108PC	yes	GLEY 1 5/N	--	--	v.f. sand mica rich	##	##	--	no	--	--	--	no
RR0705-01GC	yes	5Y 4/3	--	maybe	forams?	dark gray	--	qtz mica sand flow in at core top?	no	--	--	--	no
RR0705-03TC	no	--	olive gray	--	mud	##	##	--	yes	--	--	--	yes
RR0705-03PC	no	5Y 4/2	olive brown	--	silty mud	--	--	qtz mica sand	yes	--	--	--	yes
RR0705-05TC	no	5Y 4/2	olive gray	--	silty mud	##	##	--	yes	--	--	--	yes
RR0705-05PC	yes	5Y 4/2	olive; dark	--	silty mud	greenish gray	--	--	no	--	--	--	yes
RR0705-107TC	no	2.5Y 4/1	greenish brown	--	m. silt	##	##	--	yes	--	--	--	no
RR0705-107PC	yes	GLEY 1 3/10Y	dark gray	--	c. silt	##	##	--	no	--	--	--	no
RR0705-105TC	no	--	olive gray	--	fine sand lent with a lot of black micas; upward decrease grainsize sequence from fine sand (very bioturbated black and white micas) to silt calcareous clay foram bearing	##	##	--	yes	--	maybe	--	maybe not
RR0705-106TC	no	10YR 5/2	--	yes	nanno foram ooze	##	##	--	yes	--	--	--	yes
RR0705-106PC	no	10YR 5/2	--	--	upward fining sand to c. silt; inclined qtz rich sharp base	##	##	--	yes	--	--	--	no
RR0705-104TC	yes	5Y 3/2	--	--	v. f. sand	--	--	disrupted fine qtz-mica sand w/irreg. mud clasts from below. Note some sand present at top of TC	no	--	--	--	no
RR0705-104PC	yes	5Y 3/2	--	--		--	--	sn probably not flow in	yes	--	--	--	no
RR0705-10GC	no	5Y 4/3	--	--	muddy v. f. sand	greenish gray	--	--	yes	--	--	--	no
RR0705-12GC	no	5Y 4/2	olive gray	--	upward grainsize decrease sequence from medium sand (High amount of forams/black micas and white micas) to silt also with frams	##	##	--	yes	--	--	--	no
RR0705-102MC	yes	5Y 4/2	olive gray	--	medium sand, lots of micas and forams	##	##	--	no	yes	yes	--	no
RR0705-103TC	no	--	olive gray	yes	medium sand, lots of micas and forams	##	##	--	yes	--	--	--	no
RR0705-103PC	no	2.5Y 4/1	--	--	silt	##	##	--	yes	--	--	--	no
RR0705-15GC	no	5Y 5/3	--	yes	forams	brownish gray	yes	muddy fine sand with abundant forams and quartz / mica	yes	--	--	--	yes
RR0705-16GC	no	5Y 5/3	olive	yes	forams in all section	varying color	yes	--	yes	no	--	--	yes
RR0705-18GC	no	--	dark olive brown	yes	v.f. sandy foram mud with mica and glass, few mica, biogenic laminated foraminiferal ooze? Hemipelagic sediment?	--	--	--	yes	no	--	--	yes
RR0705-101GC	no	10YR 5/1	--	yes	foram ooze with v.f.-f.s. sized sand grains and mica	pale brown	yes	muddy fine sand rich in forams and mica	yes	--	--	--	yes
RR0705-100MC	no	--	--	--	--	##	##	--	yes	--	--	--	maybe yes
RR0705-97MC	yes	--	dark gray	--	silt without laminations, structures	##	##	--	no	--	--	--	no
RR0705-96TC	yes	2.5Y 4/1	--	--	clayey silt	##	##	soupy structureless fine qtz-mica sand; V. recent double turbidite (2004-2005 event)	no	yes	yes	--	no
RR0705-96PC	yes	5Y 4/2	--	--	soupy clayey silt	greenish gray	--	~60 cm of very soupy turbidite mud; No oxidation; v. young event?	no	yes	yes	--	no
RR0705-95PC	yes	5Y 3/1	--	--	Clean mica rich v. f. sand	##	##	--	no	--	--	--	no
RR0705-98TC	no	--	olive brown	--	mud, silt w/bioturbation	##	##	--	yes	--	--	--	yes, no top
RR0705-98PC	no	5Y 4/1	--	--	silt	brownish gray	--	--	no	--	--	--	yes, no top
RR0705-99MC	yes	5Y 4/2	olive brown	--	silt	##	##	--	no	--	--	--	maybe not
RR0705-19GC	no	--	olive gray brown	--	silty mud	##	##	--	--	--	--	--	yes
RR0705-20GC	no	5Y 4/3	olive	--	--	##	##	--	yes	--	--	--	maybe yes
RR0705-21GC	no	5Y 4/3	olive	--	--	##	##	--	--	--	--	--	maybe yes
RR0705-94PC	yes	2.5Y 4/2	dark grayish brown	--	mud – silt	greenish gray	--	soupy silty mud	no	--	yes	--	maybe yes, core disturbance

-- no observation
no log

Supplemental File S7 B. Core Top Observations for cores offshore of northern Sumatra, in region of 2004 SASZ earthquake.

Core	Possible Recent Turbidite	OSU Core Logs				Wynn Core Logs			Core Data	Radiometric Age		Munsell Color	Oxidation Present
		Munsell Color	Descriptive Color	Foraminifera Presence	Notes	Descriptive Color	Foraminifera Presence	Notes		14C	210Pb		
2005													
RR0705-91MC	yes	5Y 4/2	olive gray	yes	decreasing gain size upward sequence from fine sand to silt; presence of forams and larger micas	##	##	--	yes			--	yes
RR0705-92TC	no	5Y 4/2	olive gray	--	grain size decreasing upward sequence f. sand to silt, oxidized	##	##	--	no			--	no
RR0705-92PC	no	2.5Y 4/1	--	--	--	##	##	--	no			--	yes
RR0705-93TC	yes	--	--	--	--	##	##	--	no			--	no
RR0705-93PC	no	2.5Y 4/1	--	--	silt	brown	--	disturbed mud with v. fine sand	no			--	yes
RR0705-22GC	no	5Y 4/2	olive gray	--	--	##	##	--	yes			--	yes
RR0705-23GC	no	5Y 4/2	olive gray	--	--	##	##	--	yes			--	no
RR0705-24GC	no	--	olive brown	--	--	##	##	--	yes			--	yes
RR0705-89TC	no	2.5Y 4/2	dark grayish brown	--	silt hemipelagic	##	##	--	yes			--	yes
RR0705-89PC	no	2.5Y 5/3	light olive brown	--	silty v.c. sand	##	##	--	yes			--	yes
RR0705-90MC	yes	5Y 4/3	olive	yes	silt-clay, forams, burrows, black micas	##	##	--	no			--	yes
RR0705-88TC	yes	5Y 4/2	brown	--	hemipelagic (?) sediment	##	##	--	no			--	no
RR0705-88PC	no	GLEY 4/N	--	--	silt	grayish mud	--	mud	no			--	no
RR0705-26GC	no	5Y 5/1	--	--	--	greenish gray	--	silty mud	yes			--	no
RR0705-27GC	yes	--	dark gray	--	bioturbated v. f. sand	greenish gray	##	silty mud	yes	yes		--	no
RR0705-87TC	yes	5Y 4/2	--	--	--	##	##	--	no			--	no
RR0705-87PC	yes	--	dark grayish brown	--	muddy silt	--	--	soupy mud	no			--	no
RR0705-85TC	no	2.5Y 5/2	grayish brown	--	upward grain size decreasing sequence from v.f. sand in the bottom to silt on top	##	##	--	yes			--	yes
RR0705-85PC	no	2.5Y 5/2	--	--	silt	##	##	--	yes			--	yes
RR0705-86MC	no	2.5Y 4/3	olive brown	--	silt, forams	##	##	--	yes			--	yes
RR0705-82MC	no	--	light olive brown	--	silts	##	##	--	yes			--	yes
RR0705-83TC	no	##	##	##	--	##	##	--	yes			--	yes
RR0705-83PC	no	10YR 4/2	--	--	silt	brown	--	oxidized soupy silty mud	yes			--	yes
RR0705-29GC	no	5Y 4/1	--	--	--	greenish gray	--	silty mud	yes			--	yes
RR0705-30GC	no	5Y 5/2	--	--	--	greenish gray	--	silty mud with sub-horizontal Roophydos – type burrows	yes			--	yes
RR0705-84TC	no	5Y 4/2	olive gray	--	--	##	##	--	yes			--	no
RR0705-84PC	no	5Y 4/2	dark grayish brown	--	muddy silt	grey brown	--	soupy silty mud	yes			--	yes

-- no observation
no log

Supplemental File S7. Core Top Observations. Core top observations for cores offshore of northern Sumatra are presented. (A) Cores in the 2004 Sumatra-Andaman subduction zone (SASZ) earthquake region. (B) Cores in the 2005 SASZ earthquake region. Please visit <http://dx.doi.org/10.1130/GES01066.S7> or the full-text article on www.gsapubs.org to view Supplemental File S7

Citation: Patton, J.R., Goldfinger, C., Morey, A.E., Ikehara, K., Romsos, C., Stoner, J., Djadjahardja, Y., Udrekth, Ardhayastuti, S., Gaffar, E.Z., and Viscaino, A., 2015, A 6500 year earthquake history in the region of the 2004 Sumatra-Andaman subduction zone earthquake: Geosphere, v. 11, doi:10.1130/GES01066.1.