APPENDIX III. COMPOSITION AND SOURCE OF DETRITAL SAND LAYERS FROM THE GUAYMAS BASIN[1]

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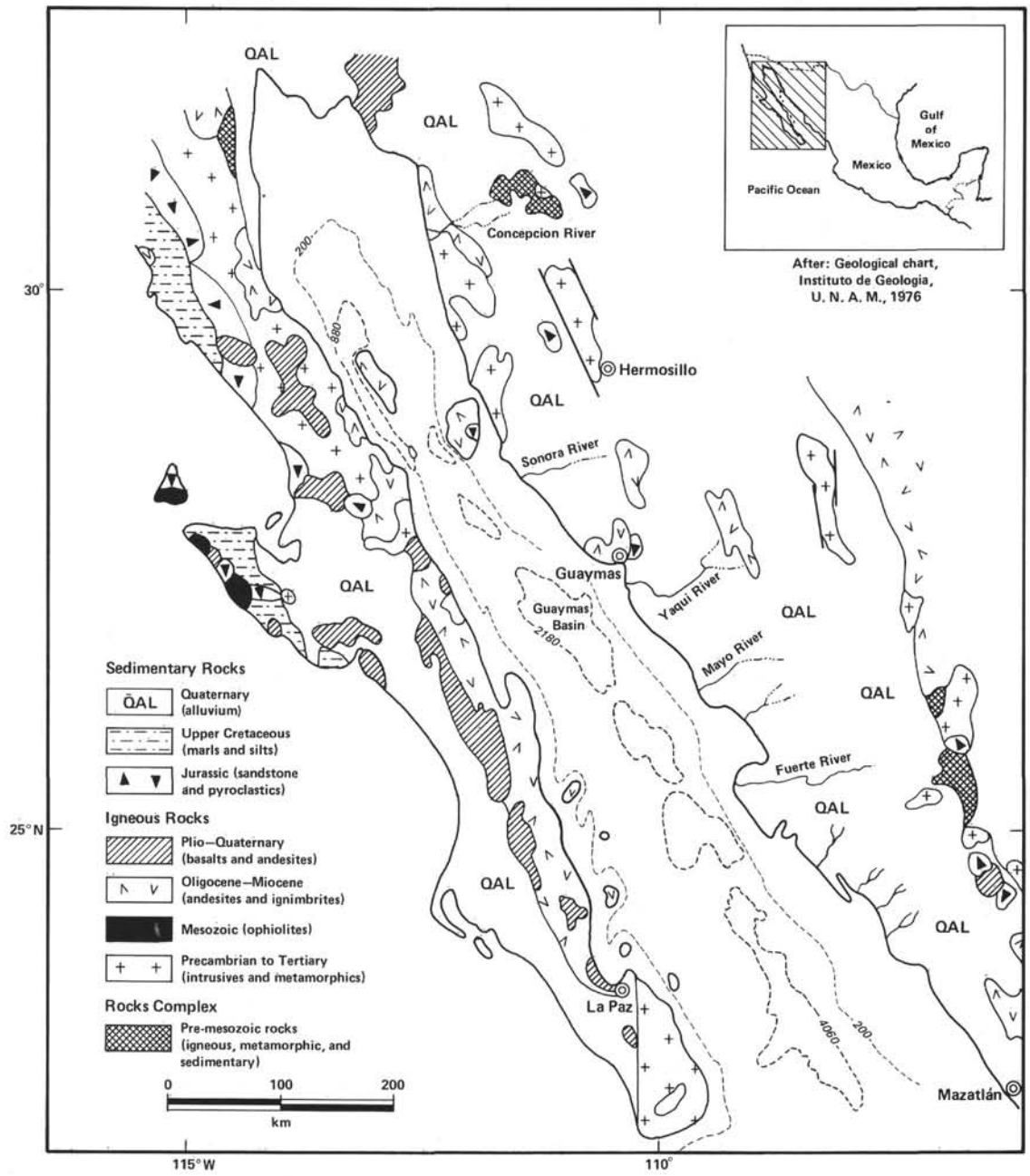
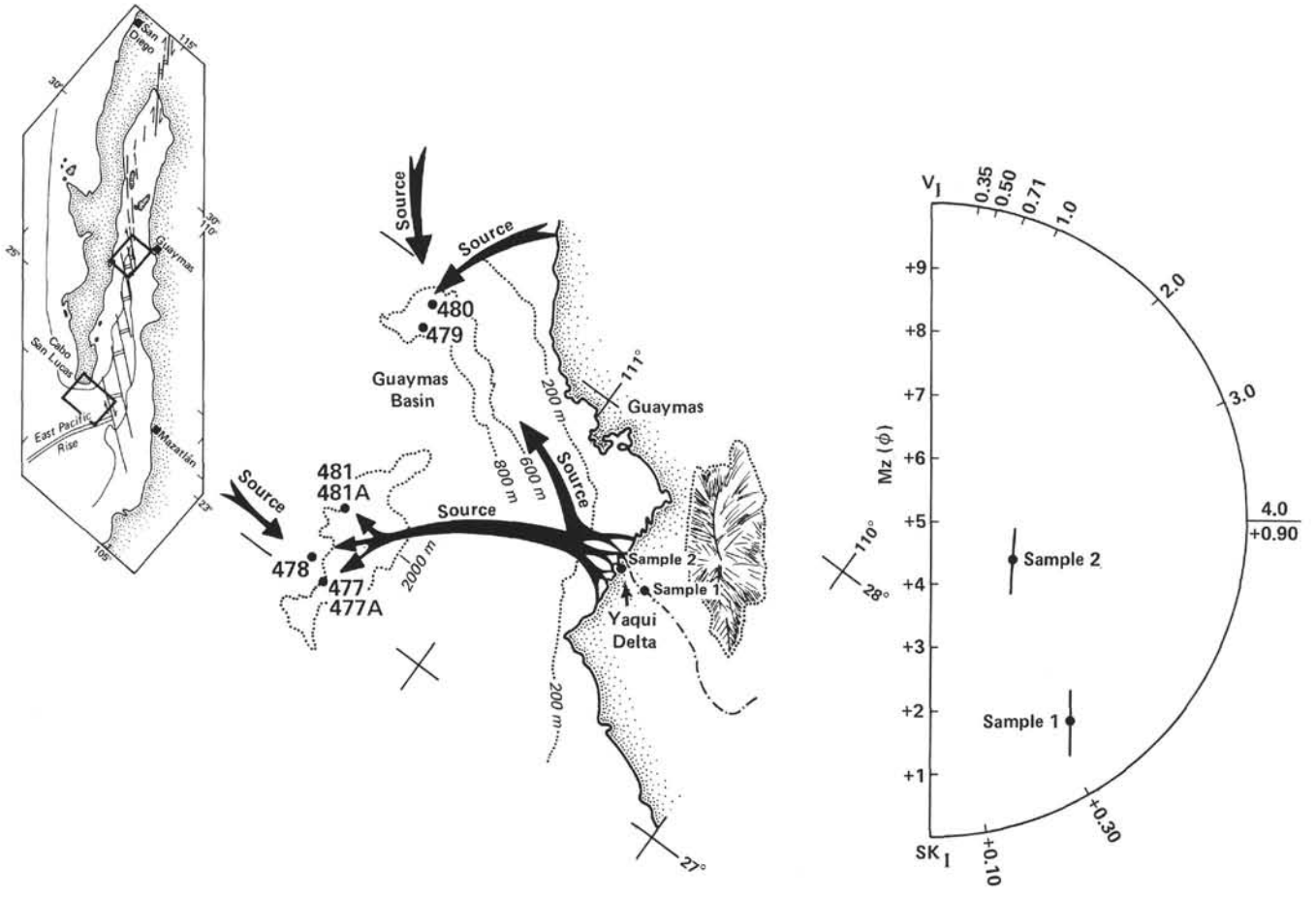


Figure 1. Generalized distribution of lithological facies in northwest Mexico.

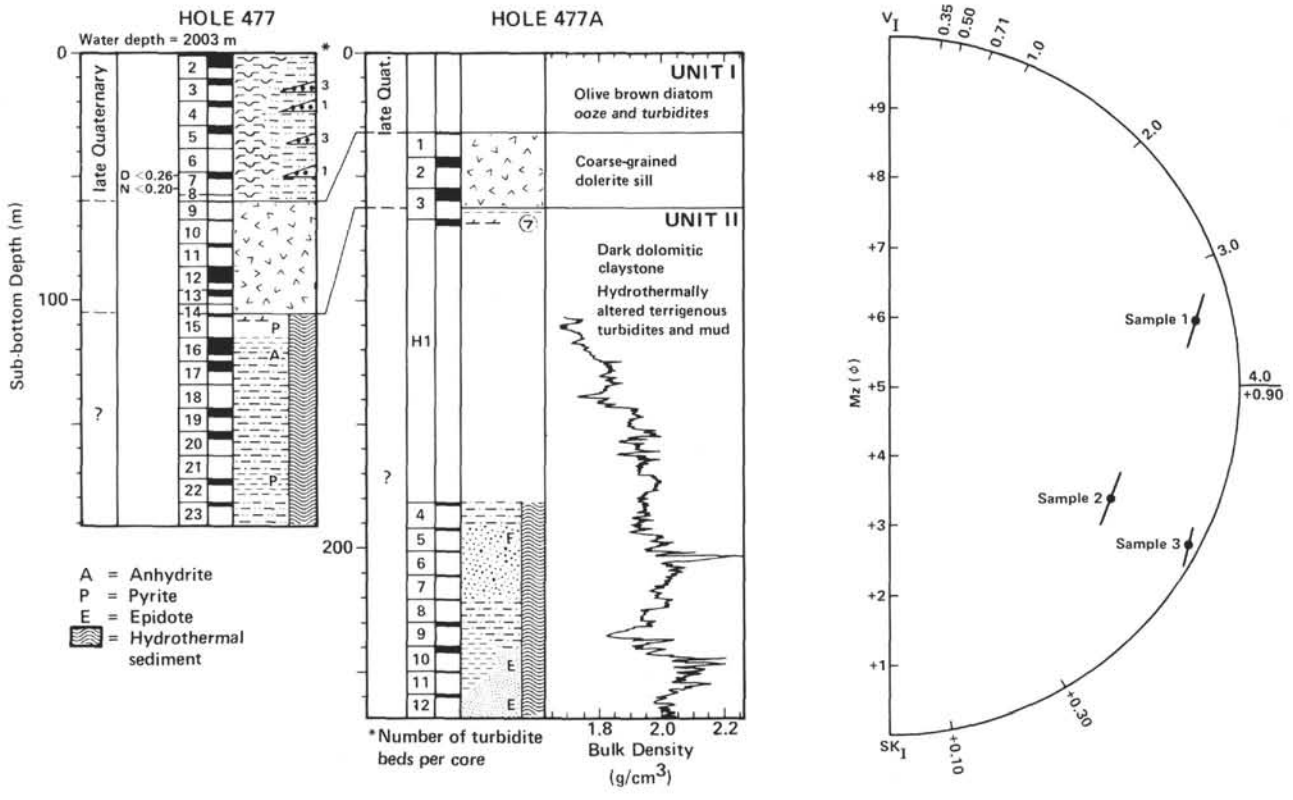
[1] Curray, J. R., Moore, D. G., et al., *Init. Repts. DSDP*, 64: Washington (U.S. Govt. Printing Office).



Sample	Description	Composition (%)															
		Mz (ϕ)	V_I	SK_I	Qz	IRF	Fs	Aug	Hor	Hyp	Mi	Oliv	Apat	Epid	Mag	Tit	Ilm
1	Dark greenish gray (5G 4/1) medium sand, poorly sorted, fine-skewed.	1.75	1.25	+0.28	25	20	15	5	5	3	10	3	3	5	3	3	
2	Medium gray (N5) coarse sandy silt, moderately sorted, fine-skewed.	4.30	0.81	+0.12	45		30		2		10		5	3	3		2

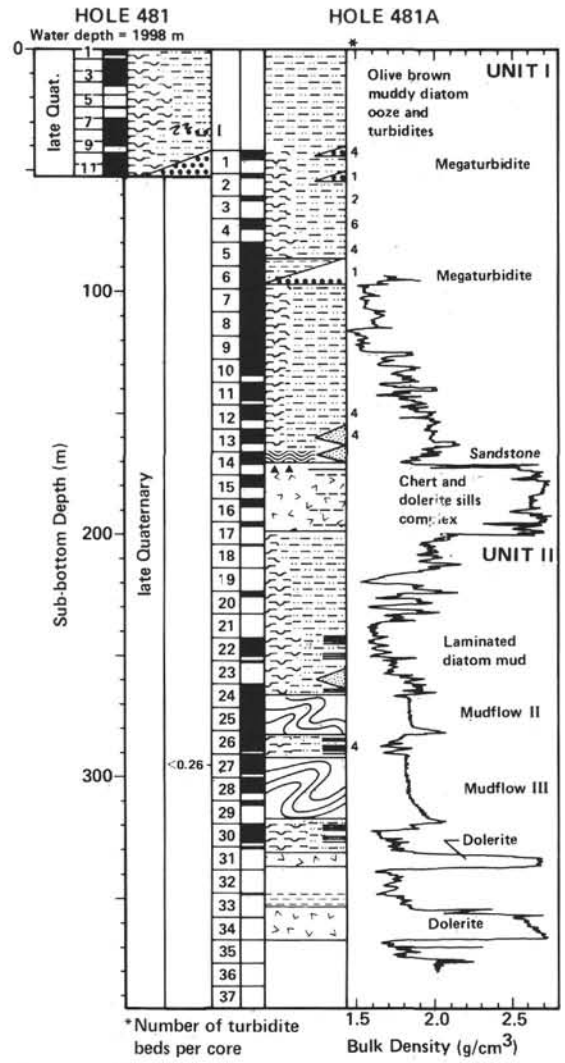
Note: Mz (ϕ) = mean size; V_I = sorting; SK_I = skewness; Apat = apatite; Aug = augite; Dol = dolomite; Epid = epidote; Fs = feldspar; Hem = hematite; Hor = hornblende; Hyp = hypersthene; Ilm = ilmenite; IRF = igneous rock fragments; Mag = magnetite; Mi = mica; Oliv = olivine; Py = pyrite; Qz = quartz; VG = volcanic glass; Zeol = zeolite; Diat = diatoms; Rads = radiolarians; Fors = foraminifers; Sp Spic = sponge spicules.

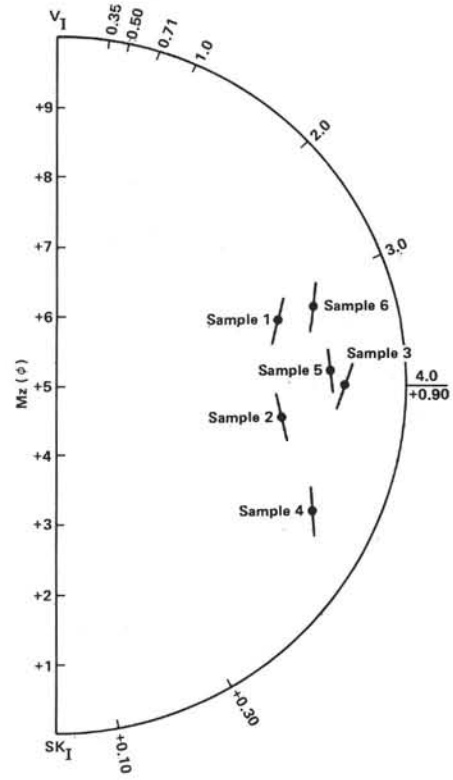
Figure 2. Source areas of sediments deposited in the Guaymas Basin and textural attributes of Yaqui River sediments.



Sample	Core/Section (interval in cm)	Description	Composition (%)																
			Mz (φ)	V_I	SK_I	Qz	Fs	Mi	Aug	Py	Epid	VG	Horn	Zeol	Hem	Diat	Rads	Fors	Sp Spic
	477																		
1	4-1, 100–102	Grayish olive (10Y 4/2) sandy diatomaceous silt, very poorly sorted, strongly fine-skewed.	6.0	3.10	+0.32	5	2	2	1	5						45	15	10	15
	477A																		
2	5-4, 106–108	Medium light gray (N6–5) very fine silty sand, poorly sorted, fine-skewed.	3.43	2.41	+0.23	30	35			2	15	10						8	
3	9-1, 53–55	Medium gray (N5) fine silty sand, very poorly sorted, strongly fine-skewed.	2.70	3.55	+0.57	40	20			2	10		10	15	3				

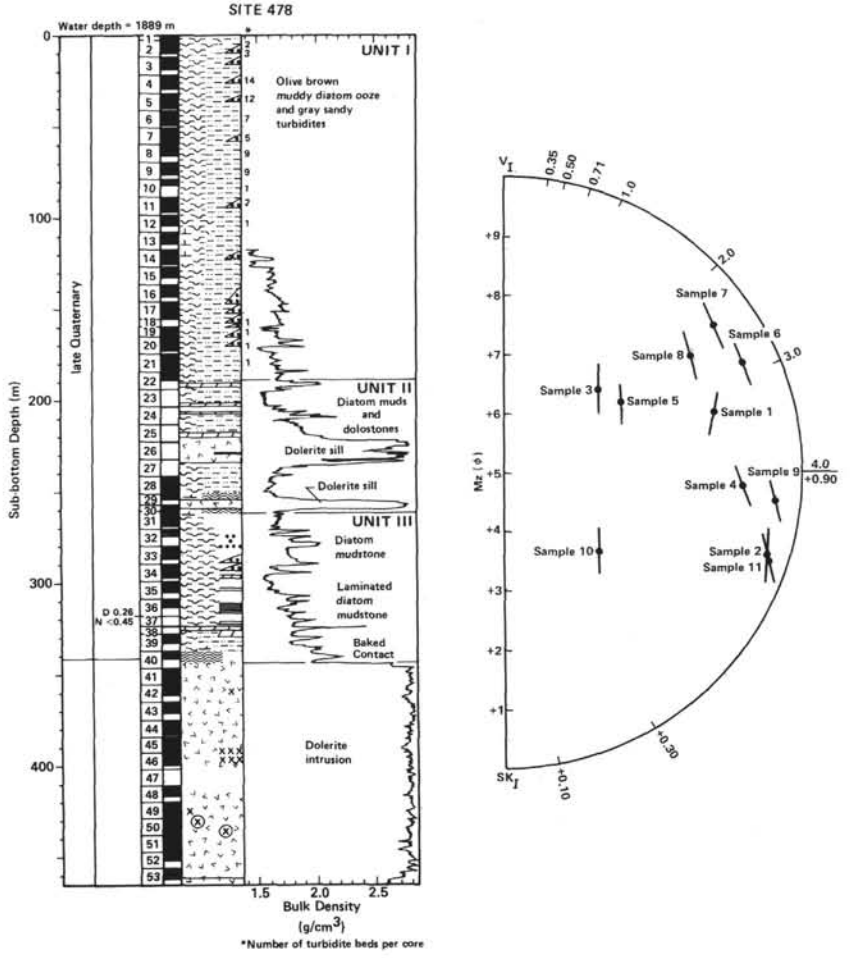
Figure 3. Mineralogical and textural attributes of terrigenous sediments from Holes 477 and 477A. Locations given on stratigraphic column. Note Samples 2 and 3 are from hydrothermally altered sands. (See Fig. 2 for explanation of symbols and abbreviations.)





Sample	Core/Section (interval in cm)	Description	Composition (%)																
			Mz (ϕ)	V_I	SK_I	Qz	Fs	Py	Hor	Aug	Clay	IRF	Mi	VG	Others	Diat	Rads	Fors	Sp Spic
1	1-1, 60–62	Grayish olive (10Y 4/1) medium diatomaceous clayey silt, very poorly sorted, fine-skewed.	6.0	2.10	+0.25	3	5	2	1	1	40					30	10	3	5
2	1-2, 96–98	Grayish olive (10Y 4/2) coarse diatomaceous clayey silt, strongly fine-skewed.	4.5	1.25	+0.50	10	20	3			40	5			1	20		1	
3	2-1, 113–115	Grayish olive (10Y 4/2) sandy diatomaceous clayey silt, very poorly sorted, fine-skewed.	5.0	3.2	+0.30	10	15	2	1		45	2	2		3	15	1	1	3
4	6-4, 63–65	Grayish olive (10Y 4/2) very fine silty sand, poorly sorted, strongly fine-skewed.	3.2	1.8	+0.50	30	35	1		2		2	3		5	15	2	5	
5	6-5, 78–80	Grayish olive (10Y 4/2) medium sandy silt, very poorly sorted, strongly fine-skewed.	5.26	2.11	+0.57	30	35	3	2			1	2		5	20	1	1	
6	12-3, 19–21	Brown gray (5YR 3/1) medium sandy clayey silt, very poorly sorted, strongly fine-skewed.	6.2	2.30	+0.40	20	25		5	5	20	7	3	3	15	3	2	5	

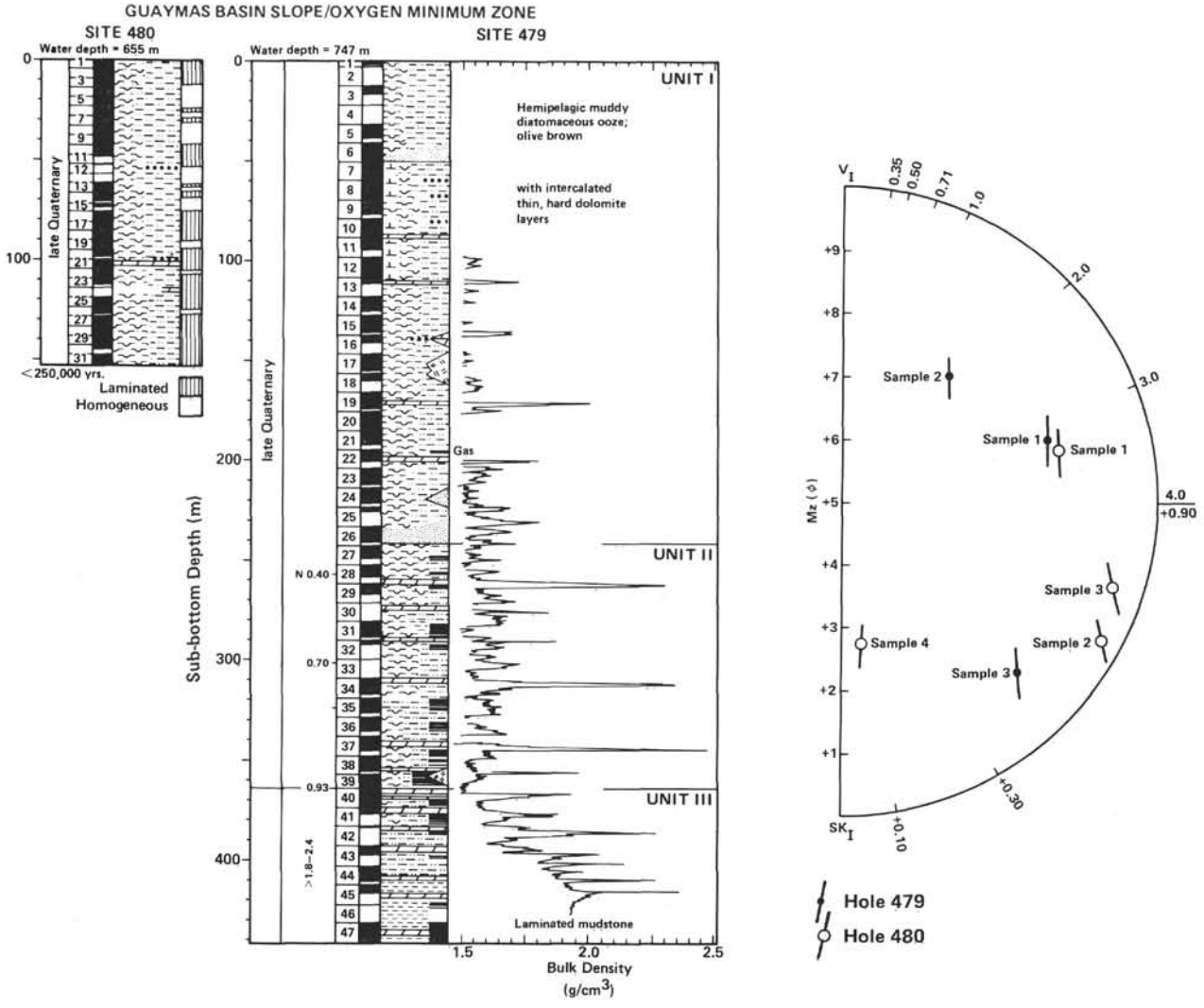
Figure 4. Mineralogical and textural attributes of terrigenous sediments from Hole 481A. Note uniform source and abundance of feldspar. (See Fig. 2 for explanation of symbols and abbreviations.)



Sample	Core/Section (interval in cm)	Description	Composition (%)																
			Mz (φ)	V_I	SK_I	Qz	Fs	Mi	Aug	Py	Clay	IRF	VG	Hor	Others	Diat	Fors	Rads
1	3-1, 8–10	Moderate olive brown (5Y 4/4) sandy diatomaceous mud, very poorly sorted, fine-skewed.	6.0	3.25	+0.28	3	2	1	1	1	40	10			5	35	2	
2	4-1, 122–124	Medium gray (N5) very fine clayey sand, poorly sorted, strongly fine-skewed.	3.58	1.83	+0.64	40	20	5	1	1	15	10	5				3	
3	5-4, 69–71	Medium dark gray (N4) sandy silt, moderately sorted, fine-skewed.	6.5	0.82	+0.18	25	15	5				10	15	2	5	10	8	5
4	11-4, 21–23	Medium dark gray (N5) coarse clayey diatomaceous silt, poorly sorted, strongly fine-skewed.	4.8	1.4	+0.65	10	5	3	2	3	20		20			25	7	5
5	14-3, 15–17	Olive gray (5Y 3/2) diatomaceous mud, medium clayey silt, moderately sorted, fine-skewed.	6.2	0.90	+0.28	5	3				40	5	4	1		25	7	10
6	14-5, 25–27	Olive gray (5Y 3/2) diatomaceous mud, poorly sorted, strongly fine-skewed.	6.9	1.77	+0.50	5	3		1		45		3	1		30	7	5
7	19-5, 83–85	Grayish olive (10Y 4/2) diatomaceous clayey silt, poorly sorted, strongly fine-skewed.	7.5	1.5	+0.78	7	2		3		40	5	5			30	3	5
8	20-3, 58–60	Grayish olive (10Y 4/2) diatomaceous clayey silt, poorly sorted, strongly fine-skewed.	7.0	1.3	+0.60	5	10		1	2	45	2				30	3	2
9	32-1, 117–119	Grayish olive (10Y 4/2) coarse diatomaceous clayey silt, poorly sorted, strongly fine-skewed.	4.5	1.93	+0.72	5	8	2	1	3	45			1		30		5
10	32-1, 132–134	Light gray very fine silty sand, moderately sorted, fine-skewed.	3.7	0.72	+0.30	25	30	10	3	4				3	5	15		5
11[a]	34-1, 94–96	Medium dark gray (N4) very fine silty sand, poorly sorted, strongly fine-skewed.	3.5	2.8	+0.6	35	30	2	1	3		5			5		4	

[a] Also includes 15% dolomite.

Figure 5. Mineralogical and textural attributes of terrigenous sediments from Hole 478. (See Fig. 2 for explanation of symbols and abbreviations.)



Sample	Core/Section (interval in cm)	Description	Composition (%)																		
			Mz (ϕ)	V_I	SK_I	Qz	Fs	Mi	Aug	IRF	Py	VG	Hor	Epid	Apat	Hyp	Clay	Others	Diat	Fors	Rads	Sp Spic
	479																					
1	6-6, 32–35	Moderate olive brown (5Y 4/4) and grayish (N5) muddy diatomaceous ooze, poorly sorted, strongly fine-skewed.	6.0	1.80	+0.40	15	30	5	5	10	5						10		20			
2	26-1, 137–139	Olive gray (5Y 3/2) and grayish (N5) clayey silt, moderately sorted, fine-skewed.	7.0	0.85	+0.22	20	15		2	5	1	2					40		10	5		
3	26-3, 107–109	Dark greenish gray (5G 4/1) muddy fine sand, poorly sorted, strongly fine-skewed.	2.23	1.16	+0.33	15	20			15	1	2					40		3	2	1	1
	480																					
1[a]	12, CC	Olive gray (5Y 3/2) clayey silt, poorly sorted, strongly fine-skewed.	5.75	1.80	+0.48	20	30	3	5	10	5	3	2				15		5			
2	20-1, 10	Medium gray (N5) fine sand, poorly sorted, strongly fine-skewed.	2.75	1.40	+0.55	20	50	5	3	10		5	1	1	3	2						
3	20-1, 103–104	Greenish gray (5G 4/1) very fine sand, poorly sorted, strongly fine-skewed.	3.56	1.68	+0.61	25	40	5	5	5	2	3	3		2	3		7				
4	31-1, 89–99	Greenish gray (5G 4/1) fine sand, well-sorted, near symmetrical.	2.69	0.49	+0.01	25	45	10	3	5		5	1		1			5				

[a] Also includes 2% hematite.

Figure 6. Mineralogical and textural attributes of terrigenous sediments from Holes 479 and 480. Note predominance of feldspar. (See Fig. 2 for explanation of symbols and abbreviations.)

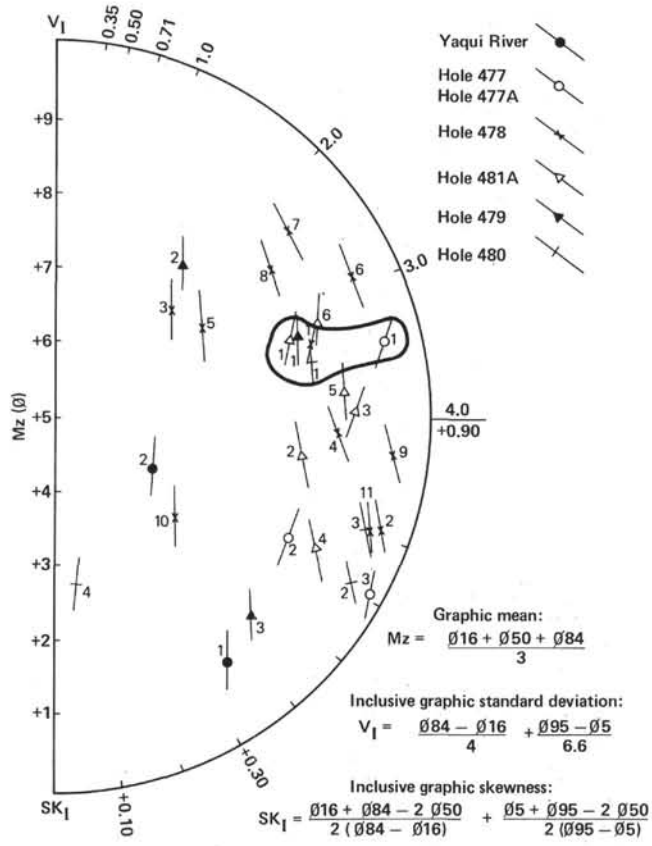


Figure 7. Textural attributes of terrigenous sediments for all samples from the Guaymas Basin and from the Yaqui River. (Numbers refer to sample locations on lithology for Figures 2–6.)

Table 1. Mineral composition (total percent) for Leg 64 sites in the Guaymas Basin.

Sample	Location	Qz	Fs	IRF	VG	Mi	Aug	Hor	Epid	Hyp	Apat	Oliv	Zeol	Mag	Tit	Ilm	Py	Hem	Dol	Diat	Rads	Fors	Sp Spic	Clay	Others
1	Yaqui River	25	15	20		10	5	5	5	3	3	3		3	3										
2	Yaqui River	45	30			10		4	3		5			3		2									
1	477-4-1, 100–102 cm	5	2			2	1										5			45	15	10	15		
2	477A-5-4, 106–108 cm	30	35		10				15								2					8			
3	477A-9-1, 53–55 cm	40	20					10	10				15				2	3							
1	478-3-1, 8–10 cm	3	2	10		1	1								1					35		2		40	6
2	478-4-1, 122–124 cm	40	20	10	5	5	1										1					3		15	
3	478-5-4, 69–71 cm	25	15	10	15	5		2												10	5	8			5
4	478-11-4, 21–23 cm	10	5		20	3	2										3			25	5	7		20	
5	478-14-3, 15–17 cm	5	3	5	4			1												25	10	7		40	
6	478-14-5, 25–27 cm	5	3		3		1	1												30	5	7		45	
7	478-19-5, 83–85 cm	7	2	5	5		3													30	5	3		40	
8	478-20-3, 58–60 cm	5	10	2			1										2			30	2	3		45	
9	478-32-1, 117–119 cm	5	8			2	1	1									3			30	5			45	
10	478-32-1, 132–134 cm	25	30			10	3	3									4			15	5				5
11	478-34-1, 94–96 cm	35	30	5		2	1										3		15	4					6
1	481A-1-1, 60–62 cm	3	5				1	1									2			30	10	3	5	40	
2	481A-1-2, 96–99 cm	10	20	5													3			20		1		40	1
3	481A-2-1, 113–115 cm	10	15	2		2		1									2			16	1	1	3	45	3
4	481A-6-4, 63–65 cm	30	35	2		3	2										1			15	2	5			5
5	481A-6-5, 78–80 cm	30	35	1		2		2									3			20	1	1			5
6	481A-12-3, 19–21 cm	20	25	7	3	3	5	5												3	2	5		20	2
1	479-6-6, 33–35 cm	15	30	10		5	5										5			20				10	
2	479-26-1, 137–139 cm	20	15	5	2		2										1			10		5		40	
3	479-26-3, 107–109 cm	15	20	15	2												1			3	1	2	1	40	
1	480-12,CC	20	30	10	3	3	5	2									5	2		5				15	
2	480-20-1, 10 cm	20	50	10	5	5	3	1	1	2	3														
3	480-20-1, 103–114 cm	25	40	5	3	5	5	3		3	2						2								7
4	480-31-1, 89–99 cm	25	45	5	5	10	3	1		1															5

Note: See Figure 2 for explanations of abbreviations.