TABLE 2. GRAIN-SIZE TRENDS IN THIN SECTIONS FROM UNIT II OF THE MIMBRAL K/T SANDSTONE COMPLEX

	General: Muddy Matrix				General: Sparry Calcite Cement		Limeclasts				Terrig. Detritus	
Samples	Crs sand/fine gravel	Crs-med sand	Med-fine sand	Fine sand	Terr. sand	Foram grainst.	Crs	Med	Med-fine	No lst grains	Med	Med-fine v fine
M29						X		X			X	
M28						X		X			X	
M27					X				X		X	
M26					X				X		X	
M25						X		X			X	
M24					X				X		X	
M23						X		X			X	
M22						X		X			X	
M21					X				X		X	
M20						X		X			X	
M19					X				X		X	
M18						X		X			X	
M17						X			X		X	
M16	X						X					
M15			X					X				X
M14				X						X		X
M13				X					X			X
M12				X						X		X
M11				X					X			X
M10			X						X			X
M9			X						X			X
M8			X						X			X
M7			X					X				X
M6			X					X			X	
M5		X						X				X
M4			X					X				X
M3			X					X				X
M2		X					X					X
M1	X						X				X	

m.mk. 16, supplemented at m.mk. 48 for the part of Unit II missing there. The most common composition is a foraminiferal grainstone with abundant lime-clasts and with minor amounts of terrigenous grains, alternating with layers rich in terrigenous detritus. A basic twofold subdivision could be made of Unit II sandstone (Table 3). The basal part has essentially a "dirty muddy matrix" (Fig. 12A); the upper part is a clean, better-sorted sandstone with a sparry calcite matrix (Fig. 12B). Petrographically, three different groups of sediment can be distinguished. The first group—the lower part of Unit II (M2 through 15)—has a "dirty" aspect due to smeared, lime-mud matrix. The sand is a polymict mixture of medium-fine to fine-grained terrigenous sand, with foraminifers. Lime-mud grains occur, roughly fining up from coarse grained at the bottom to medium and fine grained at the top. The second group—Samples M16 through 29 (=upper part of Unit II, starting with a small erosive channel with spherules)—have a cleaner and better-sorted aspect, with a sparry calcitic cement. Medium-grained calcareous sandstones with medium-grained terrigenous grains alternate with foraminiferal grainstones. The foraminifers have an infilling of greenish clay. The third group—samples M30 through 42 (Unit III)—shows a crude grading from laminated and cross-bedded silty and very fine sandstones to siltstones. The topmost samples contain burrows.

TABLE 3. Ir, Fe, AND Cs ABUNDANCES IN THE MIMBRAL SECTION

Position (m)	Ir (ppt)	Fe (%)	Cst (ppm)
−0.14	13 ± 4	2.90	3.55
+0.13	18 ± 5	4.96	0.30
+0.15	4 ± 9	12.95	0.73
+0.78	16 ± 4	1.09	0.98
+1.48	7 ± 4	1.41	0.36
+1.83	8 ± 9/7	1.19	0.54
+1.98	25 ± 32/20	1.01	1.06
+2.01	192 ± 12	1.72	2.04
+2.03	83 ± 15	1.22	1.58
+2.06	414 ± 44	2.34	3.26
+2.07	206 ± 36	1.72	2.04
+2.08	423 ± 50	2.28	3.05
+2.1	153 ± 24	1.29	1.57
+2.125	457 ± 44	2.14	3.52
+2.14	92 ± 18	0.79	1.07
+2.16	642 ± 24	2.16	4.05
+2.185	921 ± 23	1.61	2.80
+2.24	306 ± 21	1.34	1.64
+2.28	650 ± 63	2.22	4.67
+2.3	187 ± 9	1.86	2.40
+2.36	109 ± 22	1.34	2.26
+2.38	184 ± 7	0.67	3.68
+2.39	191 ± 8	1.17	2.36
+2.55	250 ± 12	1.58	2.40
+2.615	218 ± 20	2.62	3.46
+2.7	228 ± 23	2.80	4.17
+2.84	22 ± 4	0.82	1.16
+3.39	79 ± 8	2.82	4.17
+4.49	41 ± 6	2.57	3.98

La Lajilla, Mexico

At La Lajilla (Alvarez et al., 1992b) the K/T sandstone complex crops out at both sides of the overflow channel of the Lajilla reservoir dam. The upper Mendez shales are rich in Upper Maastrichtian foraminifers (Fig. 14A). The well-developed planktic fauna and high planktic/benthic foraminifer ratio suggest deposition at upper bathyal (±500 m) water depth. Bedding is not visible in the top 0.5 m of the Mendez Formation, possibly as a consequence of soft sediment deformation, similar to that in the Mimbral outcrop. The Lajilla K/T sandstone complex can also be subdivided into three units (Fig. 15). Unit I fills shallow (<50 cm) scours in the top Mendez. Unit I sands with K/T spherules are locally "injected" into the top Mendez beds. Unit I