

TABLE DR1. INPUT PARAMETERS FOR BACKSTRIPPING AND GEOHISTORY ANALYSIS OF THE MESOZOIC TO CENOZOIC SEDIMENTARY SECTION OF THE NORTHERN MIDDLE MAGDALENA VALLEY BASIN*

Stratigraphic unit	Lithology†	Depth interval (m)	Age (Ma)	Grain density (kg/m ³)	C (1/km)	Initial porosity	Water depth (m)	Absolute sea level (m)
Real	ss, ms, cg	0-2000	5.4-12.7	2679	0.37	0.55	-250±250	140
Colorado	ss, ms	2000-3150	12.7-23.8	2678	0.37	0.55	-250±250	135
Mugrosa	ss, ms	3150-4150	23.8-31.1	2685	0.39	0.56	-250±250	180
Esmeraldas	ss, ms	4150-4750	31.1-35.3	2685	0.39	0.56	-250±250	200
La Paz	ss, ms	4750-5719	35.3-43	2669	0.34	0.53	-250±250	205
LKCU		5719-5719	43-56				-1500±1500	200
Lisama	ms, ss	5719-6944	56-65	2692	0.41	0.57	0±5	210
Umir	ms, ss	6944-8019	65-83.5	2709	0.47	0.61	5±5	230
La Luna	ls, ms	8019-8319	83.5-93.5	2713	0.65	0.68	30±15	250
Salto	ls	8319-8444	93.5-98.9	2710	0.71	0.70	10±5	230
Simití	ms	8444-9211	98.9-110	2720	0.51	0.63	30±10	160
Tablazo	ls	9211-9461	110-112.2	2710	0.71	0.70	15±10	170
Paja	ms	9461-10086	112.2-127	2720	0.51	0.63	15±15	100
Rosa Blanca	ls	10086-10514	127-137	2710	0.71	0.70	5±5	165
Los Santos	ss	10514-10819	137-142	2650	0.27	0.49	-5±5	150
Girón-Jordán	cg, ss, ms	10819-16126	142-176.5	2671	0.34	0.53	-5±5	35
Bocas	ms, ls	16126-16709	176.5-193	2715	0.61	0.67	5±5	40

* Data sources: Etayo-Serna (pers.comm., 2000), Etayo-Serna et al (1983), Gómez (2001), Morales et al (1958), Ramírez (1988)

† ss (sandstone), ms (mudstone), cg (conglomerate)

TABLE DR2. INPUT PARAMETERS FOR BACKSTRIPPING AND GEOHISTORY ANALYSIS OF THE MESOZOIC TO CENOZOIC SEDIMENTARY SECTION OF THE VILLETA ANTICLINORIUM-GUADUAS SYNCLINE AREA, SOUTHERN MMVB*

Stratigraphic unit	Lithology†	Depth interval (m)	Age (Ma)	Grain density (kg/m ³)	C (1/km)	Initial porosity	Water depth (m)	Absolute sea level (m)
Santa Teresa	ms, ss	0-430	12.7-17	2692	0.41	0.57	-250±250	140
La Cruz Mb	ss, ms	430-923	17-26	2654	0.28	0.50	-250±250	150
Almácigos Mb	ms, ss	923-2095	26-35.5	2692	0.41	0.57	-250±250	200
Armadillos Mb	ss, ms	2095-2973	35.5-43	2654	0.28	0.50	-250±250	205
LKCU		2973-2973	43-56				-1500±1500	195
Hoyón	cg, ss, ms	2973-4400	56-63	2671	0.34	0.53	-250±250	200
La Seca	ms, ss	4400-4800	63-67.5	2699	0.44	0.59	-150±150	210
Ms/Ss+Cimarrona	cg, ms, ss	4800-5150	67.5-80.5	2706	0.46	0.60	10±10	245
Olini	ms, st	5150-5665	80.5-87	2719	0.51	0.63	20±10	230
Villeta	ms, ls	5665-7775	87-98	2719	0.53	0.64	25±10	235
Unnamed Siltstones	ms, st	7775-8175	98-100	2710	0.47	0.61	20±10	205
Hiló	ms, ls	8175-8805	100-103	2720	0.51	0.63	30±10	185
Socotá	ms, ls, ss	8805-10226	103-121	2716	0.51	0.63	25±10	115
Trincheras	ms, ls	10226-11226	121-132	2720	0.52	0.63	15±10	130
Pinzaima	ss, ms	11226-12146	132-140	2657	0.29	0.50	35±15	170

* Data sources: Etayo-Serna (pers. comm., 2000), Gómez (2001), Sarmiento (1989)

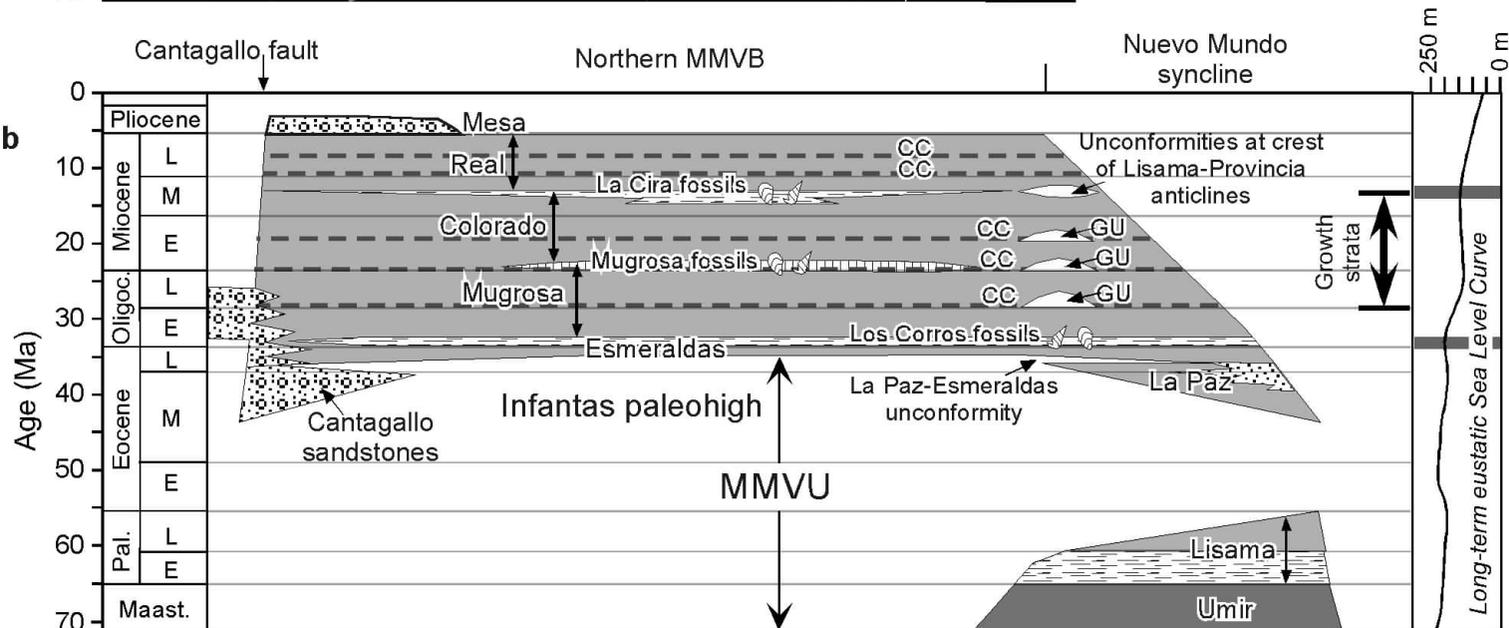
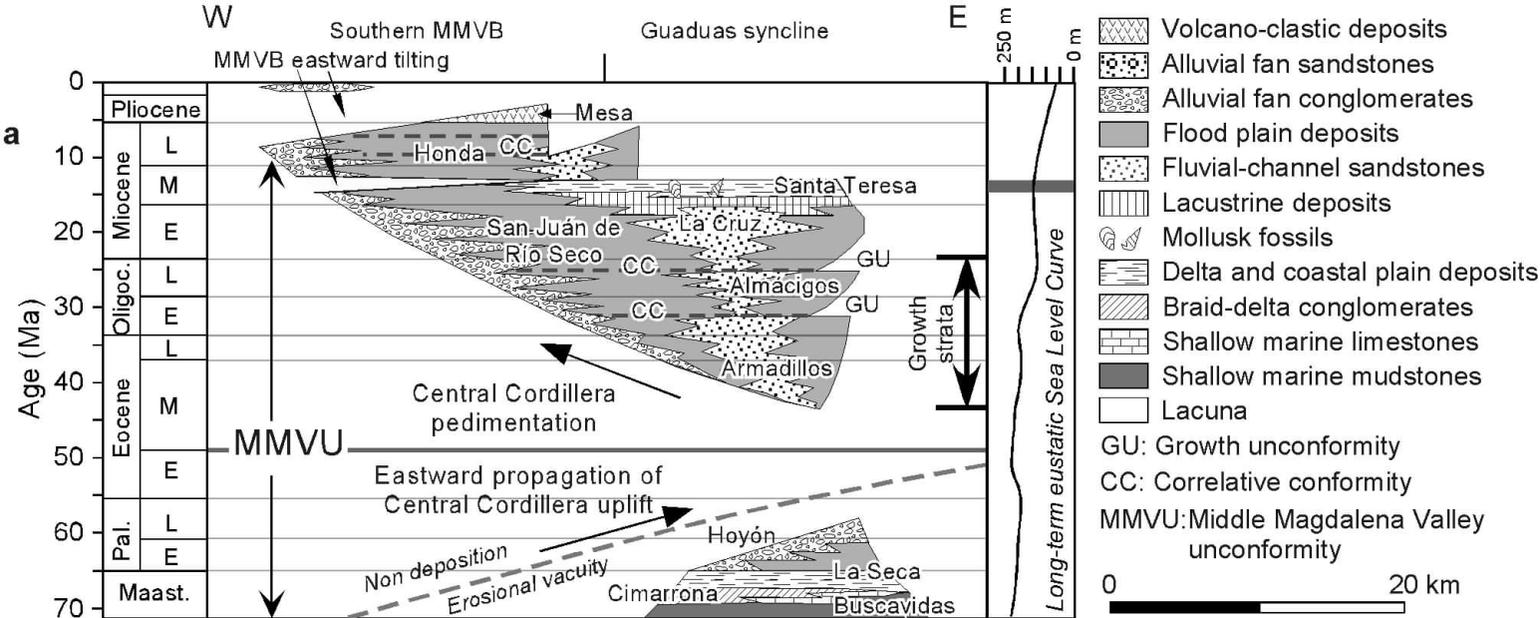
† ss (sandstone), ms (mudstone), cg (conglomerate)

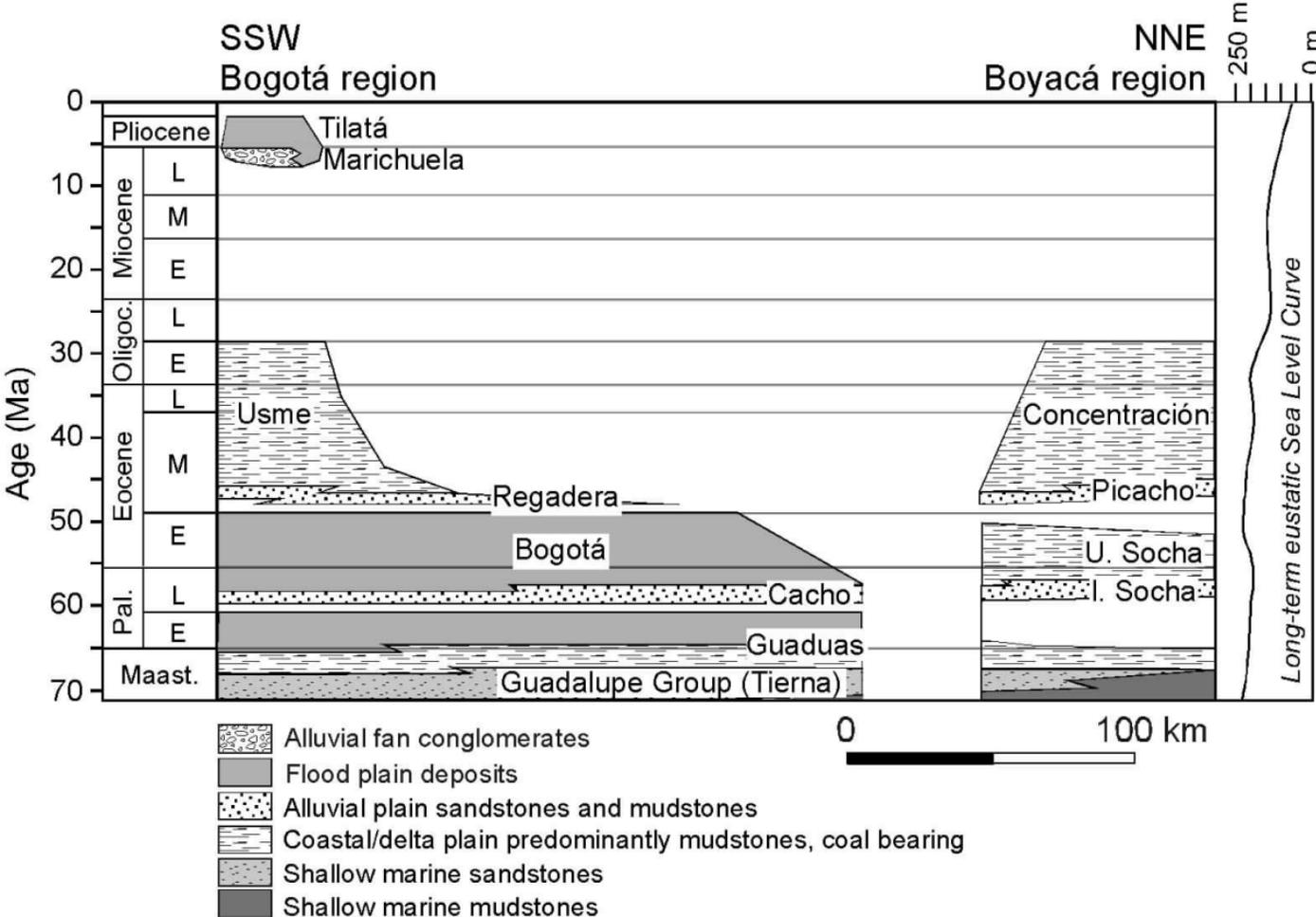
TABLE DR3. INPUT PARAMETERS FOR BACKSTRIPPING AND GEOHISTORY ANALYSIS OF THE MESOZOIC TO CENOZOIC
SEDIMENTARY SECTION OF THE COCUY AREA (EASTERN CORDILLERA)*

Stratigraphic unit	Lithology†	Depth interval (m)	Age (Ma)	Grain density (kg/m ³)	C (1/km)	Initial porosity	Water depth (m)	Absolute sea level (m)
Carbonera	ms, ss	0-1200	28.5-43	2699	0.44	0.59	-20±20	210
Mirador	ss, ms	1200-1584	43-51.5	2657	0.29	0.50	-20±20	225
Los Cuervos	ms, ss	1584-2079	51.5-59	2699	0.44	0.59	-20±20	195
Barco	ss, ms	2079-2373	59-62	2657	0.29	0.50	-20±20	205
Guaduas	ms, ss	2373-2582	62-67.5	2699	0.44	0.59	-20±20	215
Tierna Ss	ss, ms	2582-2693	67.5-71.3	2685	0.39	0.56	5±5	225
Los Pinos	ms, ss, ls	2693-3136	71.3-80.5	2708	0.50	0.62	20±10	240
La Luna	ms, ls	3136-3394	80.5-85.8	2716	0.51	0.63	45±20	230
Chipaque	ms, ls	3394-4014	85.8-95	2716	0.51	0.63	10±5	250
Une	ss, ms	4014-5225	95-112.2	2664	0.32	0.52	0±5	170
Apón	ms, ls, ss	5225-5367	112.2-117	2700	0.50	0.61	5±5	180
Las Juntas Ss	ss, ms	5367-7489	117-132	2671	0.34	0.53	0±5	130
Macanal Ms	ss, ms	7489-8489	132-144	2685	0.39	0.56	0±5	140

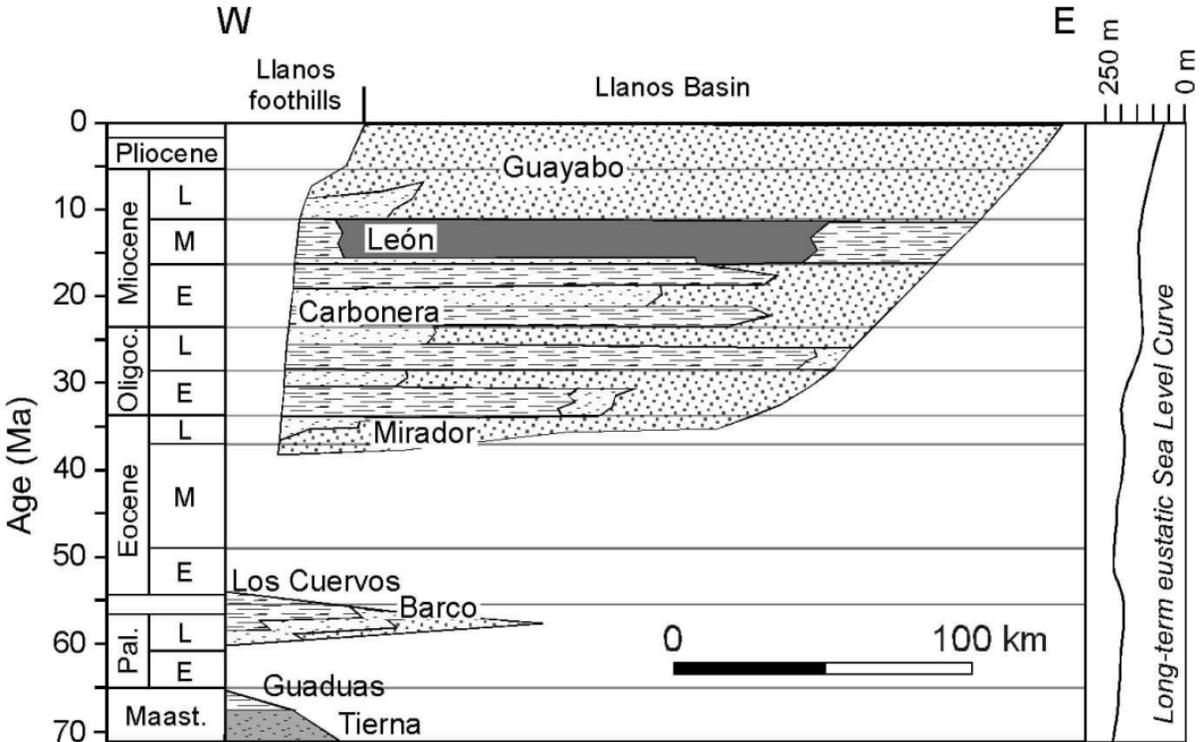
* Sources of data: Fabre (1983b), Fabre (1985)

† ss (sandstone), ms (mudstone), cg (conglomerate)



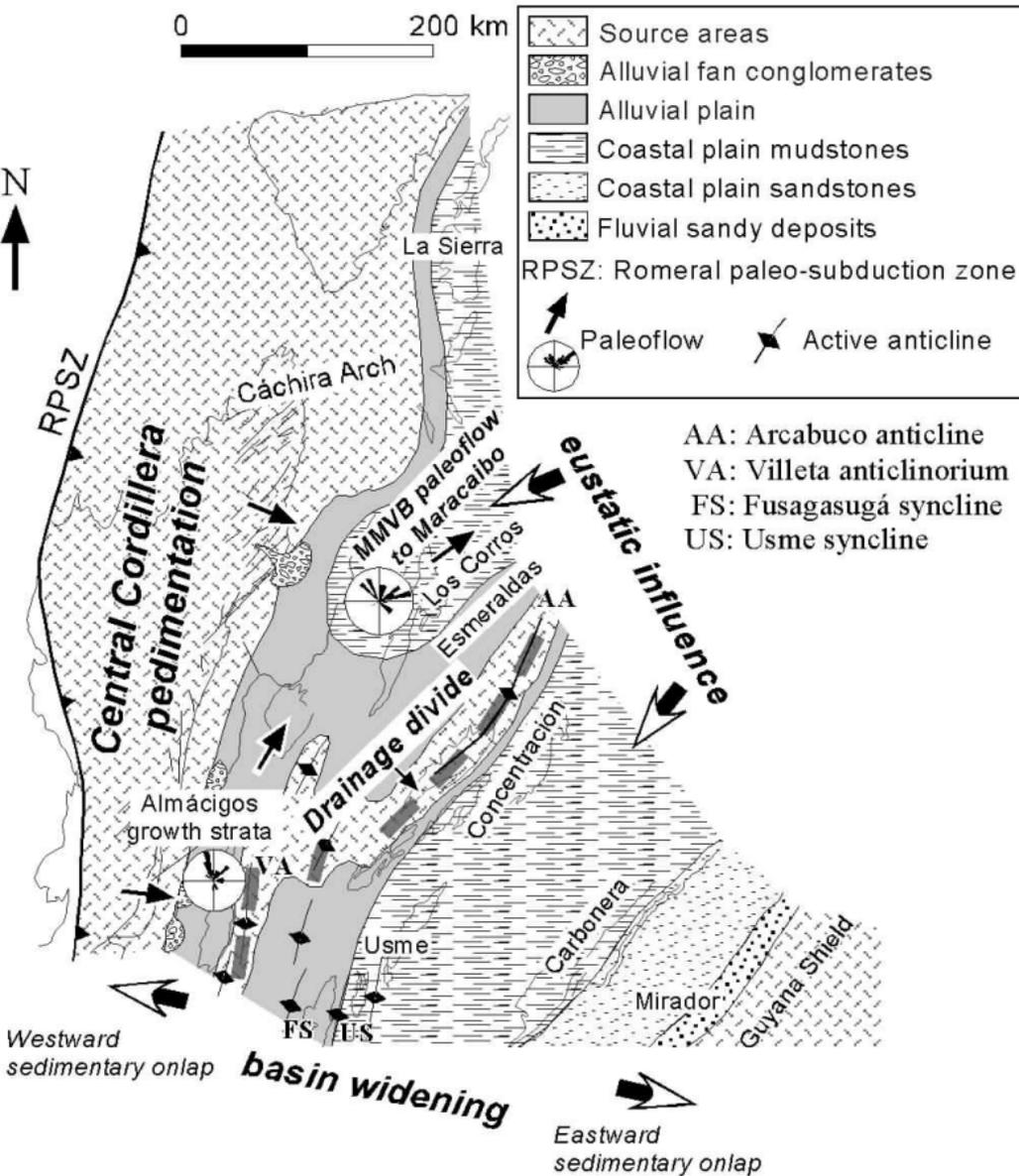


Gómez, Figure DR2



- Alluvial plain sandstones and mudstones
- Coastal plain predominantly mudstones
- Coastal plain predominantly sandstones
- Shallow marine sandstones
- Shallow marine mudstones

Late Eocene-Early Oligocene



Gómez, Figure DR4

Late Miocene

0 200 km



Gómez, Figure DR5

CAPTIONS FOR FIGURES IN DATA REPOSITORY

Figure DR1. Chronostratigraphic diagrams of the **(a)** southern MMVB and **(b)** northern MMVB after Gómez et al (2003, 2005). The geologic ages in left side of charts are deduced from compilation of paleontological ages of Upper Cretaceous-Cenozoic units and radiometric ages from Miocene-aged volcanic interbeds. Stratigraphic attributes vary along the MMVB reflecting diachronous exhumation of the Central and Eastern Cordilleras. The gray bars superimposed on the long-term eustatic sea level curves (right side of charts, Haq et al, 1988) highlight the correlation between sea level highstands and MMVB fossil horizons. Geologic time scale after Berggren et al (1995). See Figure 1b for location and text for discussion.

Figure DR2. Composite chronostratigraphic diagram of the Upper Cretaceous to Cenozoic units of the Eastern Cordillera in the Bogotá and Boyacá areas. Modified after Fabre (1987) and Díaz (1994). Geologic time scale after Berggren et al (1995). See Figure 1b for location and text for sources of facies data and discussion.

Figure DR3. Chronostratigraphic chart of the Upper Cretaceous to Cenozoic sedimentary record of the Llanos Foothills and Llanos Basin regions. Slightly modified after Cooper et al, 1995. See Figure 1b for location.

Figure DR4. Synthesis of Late Eocene-Early Oligocene depositional environments and paleogeography.

Figure DR5. Synthesis of Late Miocene-Early Oligocene depositional environments and paleogeography. Sedimentation was contemporaneous with volcanism in the Cauca Valley (west of the Central Cordillera) during the Late Miocene. Main sources of data: Duque-Caro (1980), Etayo-Serna et al (1983), Helmens (1990), Cooper et al (1995), Hoorn et al (1995), Gómez et al (2003, 2005).