

DR2004012**Data Repository Item****Figure DR1**

This map is a simplification of the electronic document “*Digital Cartography of the Trans-Mexican Volcanic Belt*” available at URL: http://satori.geociencias.unam.mx/Digital_Geosciences/

The map was compiled by the author based on geologic information from published sources and unpublished geologic maps provided by José Rosas, Gerardo Carrasco, Angel Nieto, Susana Alaniz and María Teresa Orozco, as well as his own mapping.

Source of data used in Figure 3

Figure 3 used data compiled to May 2003 for mafic volcanic rocks of late Miocene to early Pliocene that define an eastward migrating pulse of volcanism in central Mexico. These data are listed in Table 1. Data with experimental error >10% of the age were discarded. Published data were compiled from the following sources:

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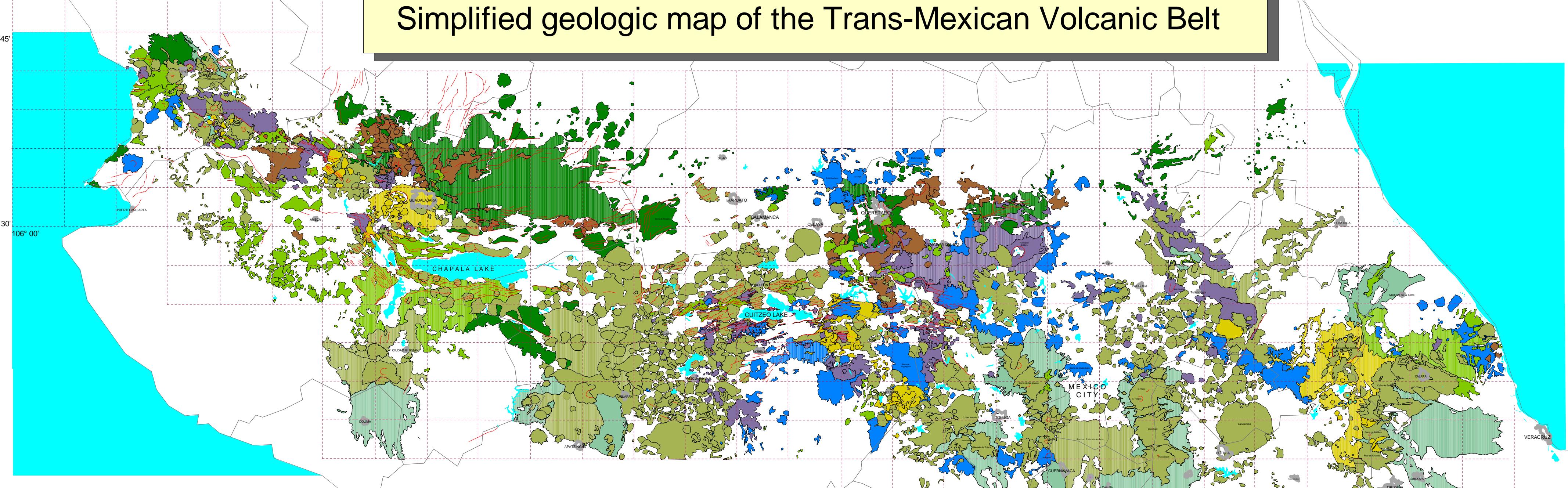
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Figure DR2

Plot of Miocene to Holocene ages (656 data points) for central Mexico against distance from present trench for three arc segments. Ages are part of the electronic document “*Digital Cartography of the Trans-Mexican Volcanic Belt*” available at URL: http://satori.geociencias.unam.mx/Digital_Geosciences/

Gray bars indicate ages of mafic pulse produced by detachment. Note increasing amount of trenchward migration of arc and, particularly, of volcanic front toward eastern part of Trans-Mexican volcanic belt (TMVB).

Simplified geologic map of the Trans-Mexican Volcanic Belt



Legend

— Faults

Geologic units



Silicic ignimbrites and domes (Quaternary)



Mafic to intermediate volcanism (Late Pliocene - Quaternary)



Debris avalanches, lahars and epiclastics (Quaternary)



Silicic domes, flows and ignimbrites (Pliocene)



Basaltic and andesitic lava flows and shield volcanoes (6 - 3 Ma)



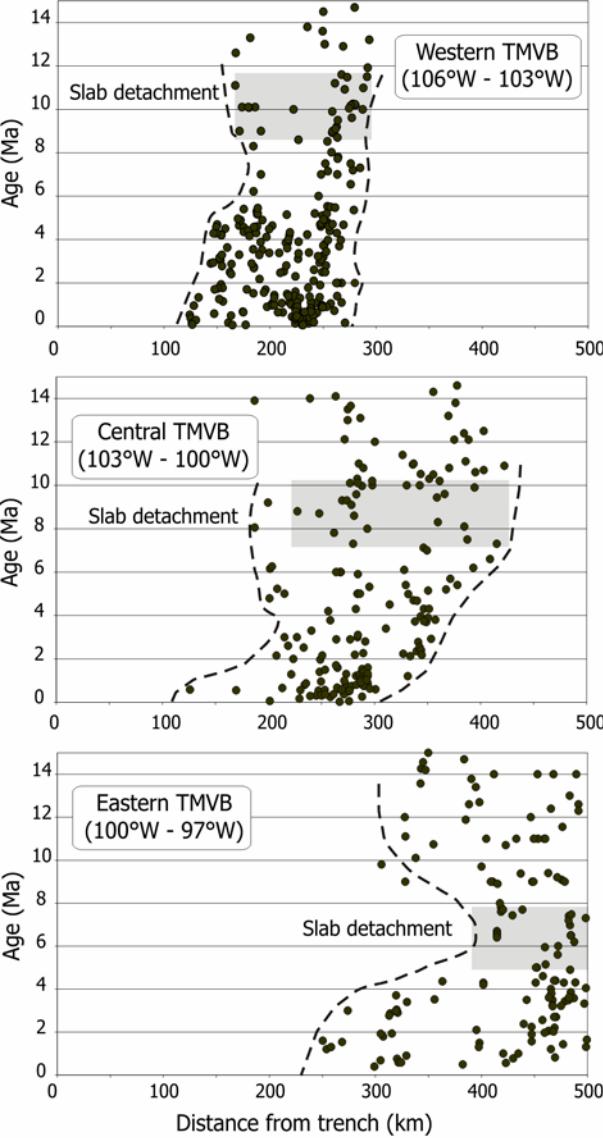
Silicic to intermediate domes (7.5 - 5 Ma)



Basaltic plateaux and shield volcanoes (11.5 - 7.5 Ma)



Andesitic to dacitic volcanic complexes (17 - 10 Ma)



Ferrari - Figure Dr2

TABLE 1 - Age data for mafic volcanic rocks Late Miocene to Early Pliocene in central Mexico

Sample	Site	Longitude	Latitude	Rock type	Method	Material	Age	Error	Reference
*I	Aguamilpa, Nay.	-104.77	21.86	Monzonitic dike	K/Ar	WR	11.5	0.5	Soto and Ortega, 1982
Ped Nay 3	La Yesca, Nay.	-104.03	21.3	Basaltic dike	K/Ar	WR	11.48	0.24	Damon et al., 1979
*J	Mirador el Aguila, Nay.	-105.01	21.67	Basalt	K/Ar	WR	11.2	0.8	Soto and Ortega, 1982
A 81	Garcia de la Cadena, Jal.	-103.48	21.18	Bas.-Andesite	K/Ar	gms	10.99	0.23	Moore et al., 1994
Ped Zac 1	Mesa Toyahua, Zac	-102.77	21.32	Bas.-Andesite	K/Ar	WR	10.96	0.57	Nieto-Obregón et al. 1981
Ped Nay 12	La Manga Larga, Nay.	-104.34	21.43	Basaltic dike	K/Ar	WR	10.92	0.33	Damon et al., 1979
DCH 2	E Atotonilco, Jal.	-102.22	20.57	Bas. Andesite	K/Ar	WR	10.8	0.9	Castillo-Hdz. and Romero-Ri
GTO 1	Soria, Gto.	-100.758	20.66	Andesite	Ar/Ar	WR	10.8	0.5	Cerca-Martinez et al., 2000
-	N of S. M. de Allende, Gto.	-100.76	21	Basalt	K/Ar	WR	10.7	0.7	Carranza-Castaneda et al., 1
Ped Zac 2	C. San Miguel, Ags.	-102.82	21.42	Bas.-Andesite	K/Ar	gms	10.52	0.22	Nieto-Obregón et al. 1981
1327	La Ordeña, Gto.	-101.13	20.7	Andesite	K/Ar	WR	10.5	0.1	Hasenaka et al., 1994
1330	La Ordeña, Gto.	-101.17	20.68	Bas.-Andesite	K/Ar	WR	10.3	0.1	Hasenaka et al., 1994
DCH 4	Ayotlán, Jal.	-102.3	20.55	Basalt	K/Ar	WR	10.3	0.5	Castillo-Hdz. and Romero-Ri
A 30	S. Cristobal Barranca, Jal.	-103.42	21.05	Basalt	K/Ar	gms	10.25	0.82	Moore et al., 1994
61-180	S. Cristobal Barranca, Jal.	-103.42	21.07	Basalt	K/Ar	gms	10.23	0.34	Moore et al., 1994
1131	Arandas, Jal.	-102.31	20.7	Basalt	K/Ar	WR	10.2	0.3	Nixon et al. 1987
1151	Punta Mita, Nay.	-105.5	20.78	Basalt	K/Ar	WR	10.2	0.8	Gastil et al. 1979
1331	La Ordeña, Gto.	-101.05	20.72	Andesite	K/Ar	WR	10.2	0.1	Hasenaka et al., 1994
PR 67	Mesa Chinacatiahua, Zac.	-103.61	21.17	Basalt	K/Ar	WR	10.2	0.4	Ferrari et al., 2002
1150	S. Vallejo, Nay.	-105.36	20.95	Basalt	K/Ar	WR	10.1	0.3	Gastil et al. 1979
DCH 9	S Atotonilco el alto, Jal.	-102.38	20.52	Rhyolite	K/Ar	WR	10.1	0.4	Castillo-Hdz. and Romero-Ri
M203a	E Sayula Lake, Jal.	-103.45	20.06	Andesite	K/Ar	WR	10.1	0.4	Allan, 1986
ZHG JRE-7	W Atemajac, Jal.	-103.68	20.24	Basalt	K/Ar	gms	10.1	0.5	Rosas et al., 1997
CHP 711	North of Atoyac, Jal.	-103.48	20.08	Bas.-Andesite	K/Ar		10.08	0.8	Delgado et al., 1995
Ped Jal 8	S. Cristobal Barranca, Jal.	-103.41	21.01	Bas.-Andesite	K/Ar	gms	10.05	0.32	Damon et al., 1979
C3	Mesa Barduces, Jal.	-103.17	21.02	Basalt (ol px)	K/Ar	WR	10	1	Castillo-Hdz. and Romero-Ri
GTO 2	Neutla (La Cantera), Gto.	-100.813	20.41	Andesite	Ar/Ar	gms	10	0.2	Cerca-Martinez et al., 2000
MON 10	Chapala, Jal.	-103.1	20.32	Andesite	K/Ar	WR	10	1	Murillo Muñeton & Rodriguez
MS 56	Jerecuaro, Guanajuato	-100.58	20.17	Andesite	K/Ar	PI	10	1	Murillo Muñeton & Rodriguez
Ped Jal 14	C. La Campana, Ags.	-102.85	20.87	Basalt	K/Ar	WR	9.97		Nieto-Obregón et al. 1981
193	N Mecatan, Tepic	-105.08	21.68	Basalt	K/Ar	WR	9.9	0.3	Gastil et al. 1979
A 28	S. Cristobal, Jal.	-103.4	21.03	Basalt	K/Ar	gms	9.61	0.28	Moore et al., 1994
Ped Jal 12	Lagunillas, Jal.	-102.9	20.84	Basalt	K/Ar	WR	9.58	0.35	Nieto-Obregón et al. 1981
1	Rio G. Santiago, Jal.	-103.31	20.85	Basalt	K/Ar	WR	9.5	0.1	Watkins et al. 1971
1337	La Ordeña, Gto.	-101.02	20.68	Andesite	K/Ar	WR	9.44	0.1	Hasenaka et al., 1994
EN 33	N Pathè, Hgo.	-99.42	20.68	Basalt	K/Ar	WR	9.38	0.5	Jacobo-Albarrán, 1986
DCH 5	E Atotonilco, Jal.	-102.34	20.47	Basalt	K/Ar	WR	9.3	0.9	Castillo-Hdz. and Romero-Ri
2	Rio G. Santiago, Jal.	-103.33	20.85	Basalt	K/Ar	WR	9.2	0.1	Watkins et al. 1971
JIQ 15	Cotija region, Mich.	-102.807	19.944	Basalt	Ar/Ar	WR	9.2	0.92	Rosas et al., in press
4	Rio G. Santiago, Jal.	-103.33	20.81	Basalt	K/Ar	WR	9	0.2	Watkins et al. 1971
*	S Atemajac, Jal.	-103.7	20.1	Bas.-Andesite	K/Ar	WR	9	0	CFE 1980
HF 7	Taxbatha, Hgo.	-99.6	20.5	Andesite	K/Ar		9	0.8	Venegas et al. 1985
MS 102	Atotonilco, Jal.	-103.75	20.33	Basalt	K/Ar	WR	9	1	CFE 1980
ZI 43	N Zimampan, Hgo.	-99.4	20.78	Andesite	K/Ar	WR	9	0.3	Cantagrel et al. 1979

KR 381	Cinco de Mayo, Nay.	-105.094	21.685	Alk.-Basalt	Ar/Ar	gms	8.93	0.11 Righter et al., 1995
KR 452	Jumantan, Nay.	-105.03	21.67	Alk.-Basalt	Ar/Ar	gsm	8.91	0.06 Righter et al., 1995
ROE 142	Villa Chavinda, Mich.	-102.39	20.02	Basalt	K/Ar	WR	8.8	0.8 Rosas et al., 1989
*K	C. S. Isidro, Nay.	-104.78	21.58	Basalt	K/Ar	WR	8.7	0.7 Soto and Ortega, 1982
Ocotlán toll house, Jal.	Ocotlán toll house, Jal.	-102.75	20.41	Basalt	Ar/Ar	gms	8.7	1 Rosas & Urrutia-Fucugauchi,
CB1 N2	Ceboruco Well, -2000 m., Nay.	-104.55	21.09	Basaltic-and.	Ar/Ar	PI	8.6	0.2 Ferrari et al., 2000
Ped Jal 17	Mistemeque, Jal.	-103.79	20.99	Basalt	K/Ar	WR	8.52	0.1 Nieto-Obregón et al. 1985
SB 8	Apaseo el Alto, Gto.	-100.58	20.47	Basalt	K/Ar	WR	8.3	1 Murillo Muñeton & Rodriguez
Mx 88-20	Queretaro airport, Qro.	-100.37	20.62	Basalt	K/Ar	WR	8.1	0.8 Pasquarè et al., 1991
RF 1	Cotija region, Mich.	-102.929	19.878	Andesite	Ar/Ar	WR	8.05	1.7 Rosas et al., in press
Ped Jal 11	C. Las Higueras, Jal.	-103.23	20.75	Basalt	K/Ar	WR	8.02	0.1 Nieto-Obregón et al. 1981
CU-2	Puerto las Cabras, Mich.	-100.98	19.99	Andesite	K/Ar	WR	8	Murillo Muñeton & Rodriguez
NT -29	Mexquital valley, Hgo.	-99.22	20.38	Basalt	Ar/Ar	gms	8	0.5 Suter, Lopez, unpublished
NT 22	Aljibes, Hgo.	-99.6	20.6	Basalt	Ar/Ar	WR	7.7	0.1 Suter et al., 1995
VE 118	NE Jalapa, Ver.	-97.58	19.78	Basaltic-and.	K/Ar	WR	7.7	0.3 Cantagrel et al. 1979
EAP 10	Cerro Sombrerete			Aphyric basalt	K/Ar	WR	7.58	0.15 Ferrari, Tagami et al., in prep
EAP 22	Cerro el Cañon			Aphyric basalt	K/Ar	WR	7.56	0.14 Ferrari, Tagami et al., in prep
QRO 13	Juriquilla, Qro.	-100.4396	20.683	Andesite	Ar/Ar	WR	7.5	0.5 Aguirre-Diaz and Lopez, 200
EAP 20	Cerro El Espinal			Aphyric basalt	K/Ar	WR	7.46	0.13 Ferrari, Tagami et al., in prep
EN 36	N Path , Pach.	-99.74	20.76	Andesite	K/Ar	WR	7.43	0.4 Jacobo-Albarrán, 1986
PH 113	N of Molango, Hgo.	-98.73	20.8	Alkaline Basalt	K/Ar	WR	7.4	0.6 Cantagrel & Robin, 1979
EAP 33	SW of Huejuelta			Aphyric basalt	K/Ar	WR	7.3	0.13 Ferrari, Tagami et al., in prep
EAP 24	Near La Laja			Aphyric basalt	K/Ar	WR	7.27	0.13 Ferrari, Tagami et al., in prep
EAP 36	S of Tlanchinol			Aphyric basalt	K/Ar	WR	7.27	0.13 Ferrari, Tagami et al., in prep
EAP 26	Flows from Sierra Tantima near San Juan Otontepec			Aphyric basalt	K/Ar	WR	7.26	0.16 Ferrari, Tagami et al., in prep
TH 24	N of Tlanchinol	-98.63	21.03	Basalt	K/Ar	WR	7.1	0.3 Cantagrel & Robin, 1979
EAP 23	Neck Cerro Moralillo			Aphyric basalt	K/Ar	WR	7.09	0.14 Ferrari, Tagami et al., in prep
EAP 21	Block from Cerro Tlacolula near Zapotal Espinal			Aphyric basalt	K/Ar	WR	7.08	0.16 Ferrari, Tagami et al., in prep
EAP 16	Cerro Cacalote			Microporphyrict	K/Ar	WR	7.01	0.16 Ferrari, Tagami et al., in prep
EAP 28	S of Tantima village, Sierra Tantima			Aphyric basalt	K/Ar	WR	6.97	0.13 Ferrari, Tagami et al., in prep
EAP 49	N of Plan de las Hayas			Basalt	K/Ar	gms	6.97	0.16 Ferrari, Tagami et al., in prep
EAP 19	Near Tierra Blanca			Aphyric basalt (I)	K/Ar	WR	6.71	0.14 Ferrari, Tagami et al., in prep
EAP 18	Near microwave station			Aphyric basalt	K/Ar	WR	6.68	0.41 Ferrari, Tagami et al., in prep
EAP 17	Neck W of EAP 16			Aphyric basalt	K/Ar	WR	6.64	0.12 Ferrari, Tagami et al., in prep
EAP 27	S of Tantima village, Sierra Tantima			Ol basalt	K/Ar	WR	6.54	0.12 Ferrari, Tagami et al., in prep
PH 171	E of Molango, Hgo.	-98.69	20.8	Basalt	K/Ar	WR	6.5	0.3 Cantagrel & Robin, 1979
LIRT 2	Chiconquiaco-Palma Sola, Ver.	-96.7	19.83	Gabbro	K/Ar	WR	6.2	0.6 Lopez-Infanzon, 1990
LIRT 202	Chiconquiaco-Palma Sola, Ver.	-96.86	19.78	Basalt alk.	K/Ar	WR	6	0.6 Lopez-Infanzon, 1990
LIRT 200	Chiconquiaco-Palma Sola, Ver.	-96.860	19.790	Basaltic-andesit	K/Ar	WR	5.60	0.90 Lopez-Infanzon, 1990
LIRT 3	Chiconquiaco-Palma Sola, Ver.	-96.620	19.760	Basalt alk.	K/Ar	WR	4.90	0.50 Lopez-Infanzon, 1990
LI 104	Chiconquiaco-Palma Sola, Ver.	-96.750	19.670	Trachy-basalt	K/Ar	WR	4.40	0.30 Lopez-Infanzon, 1990
*	La Lumbre, Palma Sola, Ver.	-96.500	19.750	Bas.-Andesite	K/Ar	WR	4.31	0.80 Negendank et al. 1985
LI 300	Chiconquiaco-Palma Sola, Ver.	-96.800	19.800	Basalt alk.	K/Ar	WR	4.30	0.30 Lopez-Infanzon, 1990