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A COMPILATION OF LOCATION, SIZE, AND GEOMORPHOLOGICAL PARAMETERS OF VOLCANOES OF THE MICHOACAN-GUANAJUATO VOLCANIC FIELD, CENTRAL MEXICO

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RESUMEN

Se han catalogado más de mil centros volcánicos en el campo volcánico Michoacán-Guanajuato, el cual está situado en la parte media del Cinturón Volcánico Mexicano. Los volcanes catalogados incluyen: 901 conos cineríticos o cúpulas de lava, 43 domos, 22 maars o cercos anulares de tobas, 13 volcanes de tipo escudo con conos en las cimas y 61 flujos de lava no asociados a conos. Estos volcanes se distribuyen entre los 200 km y 430 km medidos desde la Fosa Americana Mediana. No se observa alineamiento preferencial, sin embargo, la concentración máxima estimada se encuentra a los 250 km.

Entre los indicadores morfológicos catalógicos catalogados para determinar la edad de los conos cineríticos, la densidad de las zanjas y la clasificación geomorfológica de los flujos de lava resultaron sensibles dentro del límite de determinación de edad mediante ^{14}C. Finalmente, se clasificaron 78 volcanes como morfológicamente jóvenes, de edad de 40,000 años o menos y un volumen de 31 km^3, cifras que indican una tasa estimada en el volumen de erupción de 0.8 km^3/1 000 años para todo el campo volcánico en su conjunto.

ABSTRACT

Over one-thousand small volcanic centers have been catalogued from the Michoacán-Guanajuato Volcanic Field, which is in the middle part of the Mexican Volcanic Belt. Catalogued volcanoes include: 901 cinder or lava cones, 43 domes, 22 maars or tuff rings, 13 shield volcanoes with cones at the summit, and 61 lava flows not associated with cones. These volcanoes distribute between 200 km and 430 km from the Middle America Trench without forming preferred alignment, and the highest concentration is at 250 km. Among catalogued morphological indicators of cinder cone age, gully density and geomorphological classification of lava flows are sensitive within the ^{14}C age determination limit. Seventy-eight volcanoes were classified to be morphologically younger than 40 000 years B.P. and their volume is 31 km^3; these figures yield an eruption volume rate of 0.8 km^3/1 000 years for the entire volcanic field.

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INTRODUCTION

The Michoacán-Guanajuato Volcanic Field (MGVF), in central Mexico contains over one-thousand small volcanic centers in an area of 40 000 km^2, and forms the middle part of the Mexican Volcanic Belt (MVB) (Fig. 1). Cinder or scoria cones are the most common volcanic form and large composite volcanoes are rare. This characteristic makes the MGVF a unique part of the MVB which is typically dominated by large composite volcanoes. Descriptions of part of the MGVF have been made by Williams (1950), Foshag and González (1956), Simkin *et al.* (1981), and Demant (1981). Both Williams (1950) and Demant (1981) presented maps of the volcanoes based on the interpretation from air- and satellite-photographs and topographic maps. Using Williams' (1950) reconnaissance map of the Paricutín region, Settle (1979) discussed the distribution and size frequency of cinder cones in comparison with other cinder cone fields in the world.

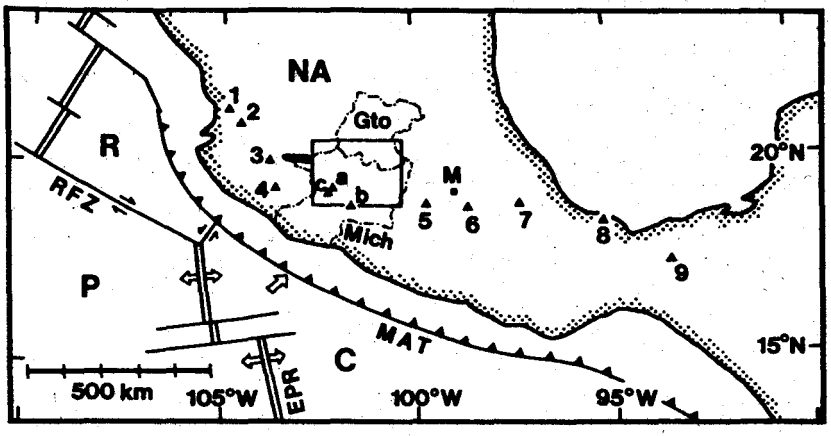

Fig. 1. Index map of the Michoacán-Guanajuato Volcanic Field (MGVF). The location of the MGVF is shown as a rectangle, which is enlarged in Figure 2. Plate boundaries are drawn after Drummond (1981).

Volcanoes – 1: Sanganguey, 2: Ceboruco, 3: Sierra La Primavera, 4: Colima, 5: Nevado de Toluca, 6: Popocatépetl, 7: Pico de Orizaba, 8: San Andrés Tuxtla, 9: El Chichón, A: Paricutín, b: El Jorullo, c: Tancítaro.

States – Mich: Michoacán, Gto: Guanajuato.

Plates – NA: North America, C: Cocos, R: Rivera, P: Pacific.

Plate boundaries – MAT: Middle America Trench, EPA: East Pacific Rise, RFZ: Rivera Fracture Zone.

For studies involving an estimation of eruption volume of lava and eruption age of volcanoes, a compilation of the volcanoes' size and morphological parameters of age is essential. Thus we have catalogued all the young volcanoes less than 3 Ma in the northern half of the state of Michoacán and southern part of Guanajuato state.

VOLCANOES OF THE MGVF

Volcanic landforms were identified from topographic maps, geologic maps, air photographs, and field observations. Maps and photographs are published by DETENAL (Mexico City) and their scale is 1:50 000. Geologic maps are useful for identifying volcanoes, but they are only available from limited areas. Air photographs were used in the southern half of the volcanic field where the volcanoes are relatively young and their concentration is high relative to the rest of the area. About 200 volcanoes and cones were visited in the field, particularly those cinder cones with quarries which expose their internal structure.

A total of 1 040 volcanic vents were identified in the volcanic field (Table 1 and Fig. 2). This total includes 901 cones (cinder cones and lava cones), 43 domes, 22 maars or tuff rings, 13 young shield volcanoes with cones at the summit, and 61 lava flows with hidden vents.

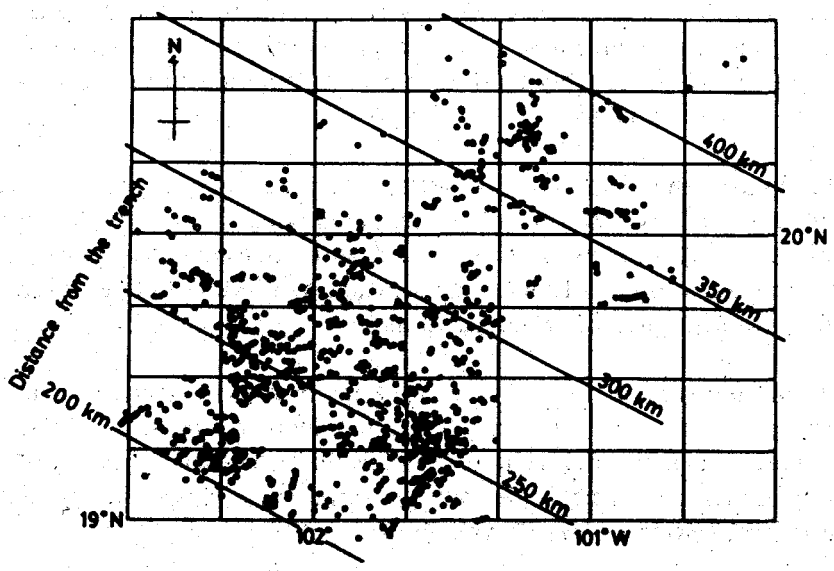

Fig. 2. Distribution of volcanoes in the MGVF. Each circle represents the vents of either of the following: cinder cone, lava cone, lava dome, maar, tuff cone, shield volcano with a cone on the summit, lava flows which are not associated with cones. Diagonal lines indicate the distance from the Middle America Trench.

Cinder cones show various morphology depending on their degradational stage. Young cinder cones like volcan Paricutín (1943-1952) have a truncated cone shape with a slope angle of 33° - 34°, and an unfilled crater. As a cone degrades, its slope becomes gentler, the crater becomes infilled, and rain-wash gullies form on the sides of the cone. Extremely eroded cones show two distinct forms due to different erosional processes; one is a dissected cone with a few deep gullies; the other is a rounded, flat cone without gullies; these very flat cones can only be identified where cut by quarries. A scoria sample from such a cinder cone west of Celaya has been dated to be 2.7 Ma (Mahood, personal communication). In an active volcanic area, older cones are occasionally buried or destroyed by later lava flows or nearby volcano eruptions and are therefore not counted. Where cones erupt on the slope of an older volcano, they sometimes form a crescent or horse-shoe shape as a result of breaching by lava flows, as has been observed on Mt. Etna in Italy (Hammill, 1979). Lava cones, defined by Bloomfield (1975) as made up largely of subangular lava blocks, are topographically identical to cinder cones, and are not distinguished in the compilation.

Approximately 120 shield volcanoes, 4-14 km in diameter, are found throughout the volcanic field. Because most of these volcanoes are dissected, they can be classified as older than the main phase of cinder cone activity (Williams, 1950). Only 13 shield volcanoes with relatively fresh lava flow morphology and with a summit cone are included in the compilation.

Lava flows are generally associated with cinder or lava cones whose morphology is not much modified by erosion or by later sediments. They usually issue from the base of the cone. Lava flows not associated with cones indicate that the vents were buried by the thick viscous flows. The location of a hidden vent is sometimes inferable from concentric pressure ridge patterns.

Table 1, a catalogue of the volcanoes contains: name of a volcano, symbol for volcanic forms, location (latitude, longitude, and map number), size (basal diameter, crater diameter, height, and volume), and geomorphological parameters of cones (H/D ratio, maximum slope angle, average slope angle, gully density, and geomorphological classification of lava flows).

DISTRIBUTION OF VOLCANOES

The latitude and longitude of volcanic vents were taken from the topographic maps

whose map number appears in Table 1. Multiple vents within a cone which were caused by the slight shift of the vent during eruption are counted only once. But neighboring lava flows coming out of different, hidden vents are treated as separate volcanoes.

The distribution of the 1 040 volcanic vents together with lines which indicate the distance from the Middle America Trench (MAT) are shown in Fig. 2. The volcanic front is observed to be approximately 200 km from the trench. The highest concentration of cones occur about 250 km from the trench, and include the youngest cinder cone, volcán Paricutín on the NW side. Beyond 250 km, the frequency of cones decreases except for a small cluster at 380 km. Approximately 75% of the cones are found between 200 km and 300 km from the MAT. High concentrations of cones are observed in several locations; for example, 19°15'N-102°20'W, 19°30'N-102°15'W, 19°15'N-101°35'W, and 20°20'N-101°10'W. The last locality, near Valle de Santiago, Guanajuato, represents the only area of explosive maars and cones. The overall density of vents, assuming a homogeneous distribution in the whole volcanic field, is 2.5 cones/100 km^2.

As Williams (1950) noted in the Paricutín region, Fig. 2 indicates no preferred orientation of cones, except in certain local areas. In the northeastern part, on both sides of 300 km line, are found two parallel E-W alignments of cinder cones. In the southwestern part, between 200 km and 250 km from the trench, recognizable local alignments of cones are NE-SW. On a large scale, clusters of cones also appear to form a crude NE-SW alignment stretching from 19°15'N-102°20'W to 20°20'N-101°10'W, which includes the above mentioned high cone density localities.

TABLE 1. CATALOGUE OF THE VOLCANOES IN THE MGVF.

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	VCO	VCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
1	C.SAN ANTONIO	S	B37	19°22.54'	102°40.77'	1.38	0.88	.170	.173	0.12	-	34	5	PLV4
2	C.EL GUACO	D	B37	19°20.24'	102°41.93'	0.88	0.53	.070	.028	0.08	-	22	-	
3	C.LA LAGUNITA	D	B37	19°20.64'	102°41.51'	0.75	0.43	.040	.011	0.05	-	14	-	
4		D	B37	19°21.08'	102°41.05'	0.65	0.48	.050	.013	0.08	-	30	-	
5	C.LAS CUEVAS	D	D88	20°13.22'	102°23.64'	1.03	0.35	.063	.025	0.06	-	10	-	
6	C.LA TROMPETA	D	D88	20°12.77'	102°22.32'	0.73	0.06	.053	.008	0.07	-	9	-	
7		D	D88	20°12.22'	102°21.09'	0.58	0.05	.080	.008	0.11	-	14	-	
8		D	D88	20° 8.09'	102°24.00'	1.20	0.28	.108	.052	0.09	-	13	-	
9		D	D88	20° 7.86'	102°22.52'	1.03	0.05	.058	.020	0.07	-	8	-	
10	CT.DE COTIJARAN	C	D88	20° 0.53'	102°26.42'	0.75	0.20	.075	.015	0.10	10	16	-	
11	(EL COMETA)	C	D88	20° 5.26'	102°31.66'	0.88	0.18	.065	.016	0.07	-	11	-	
12	ST.COLORADO	C	D88	20° 0.23'	102°31.36'	0.95	0.20	.043	.006	0.07	19	13	-	
13		D	D88	20° 3.91'	102°30.29'	1.18	0.08	.100	.039	0.08	-	10	-	
14		P	D88	20° 3.39'	102°27.74'	0.38	0.11	.032	.001	0.06	-	9	-	
15		P	D88	20° 3.32'	102°27.42'	0.35	0.07	.032	.001	0.09	-	13	-	
16		P	D88	20° 2.99'	102°26.28'	0.78	0.16	.025	.005	0.03	-	5	-	
17	C.LA CALERA	C	D88	20° 1.46'	102°25.33'	0.68	0.21	.063	.011	0.09	-	15	-	
18	C.EL COMALITO	C	B18	19°54.14'	102°32.77'	1.88	0.35	.235	.265	0.13	-	17	3	
19	C.LA COFRADIA	B	B18	19°53.97'	102°31.04'	0.58	0.13	.065	.007	0.11	-	16	-	
20	C.VALERIO	C	B18	19°53.26'	102°30.23'	0.80	0.25	.090	.023	0.09	-	14	-	
21		C	B18	19°50.27'	102°30.89'	0.70	0.25	.078	.014	0.11	-	18	-	
22		B	B18	19°52.03'	102°30.34'	1.23	0.40	.078	.044	0.06	-	11	-	
23		B	B18	19°48.98'	102°29.83'	0.58	0.10	.038	.004	0.07	-	9	-	
24	C.EL SOMBRERO	C	B18	19°47.13'	102°32.37'	1.25	0.43	.125	.075	0.10	-	17	-	
25	V.EL COMALITO	C	B18	19°46.62'	102°33.29'	0.65	0.35	.078	.016	0.12	-	27	-	
26	L.LA CAPILLA	C	B18	19°46.57'	102°34.49'	0.83	0.28	.050	.013	0.06	-	10	-	
27		B	B18	19°51.00'	102°28.47'	0.73	0.25	.048	.010	0.07	-	11	-	
28		B	B18	19°51.14'	102°28.16'	0.68	0.28	.040	.008	0.06	-	11	-	
29	(TARECUATO)	B	B18	19°50.76'	102°28.14'	0.93	0.38	.038	.014	0.04	18	8	-	
30	C.PARTIDO	C	B18	19°50.43'	102°26.86'	0.80	0.23	.078	.018	0.10	-	15	-	
31		B	B18	19°50.27'	102°26.56'	0.73	0.23	.078	.015	0.11	-	17	-	
32	C.IGRANIISH	B	B18	19°51.59'	102°26.43'	0.90	0.20	.075	.020	0.08	-	12	-	
33		B	B18	19°51.84'	102°26.00'	0.63	0.20	.060	.009	0.10	-	16	-	
34	C.CUPACUARO	C	B18	19°51.92'	102°25.51'	0.88	0.33	.043	.013	0.05	-	8	1	
35	C.HILARIO	B	B18	19°52.24'	102°25.40'	1.10	0.45	.095	.047	0.09	-	16	1	
36	C.LA CANTERA	D	B18	19°51.41'	102°24.80'	1.00	0.40	.205	.084	0.20	-	34	-	
37		C	B18	19°51.38'	102°24.17'	0.83	0.30	.075	.020	0.09	-	16	-	
38	C.PARASTACUA	D	B18	19°50.54'	102°23.97'	1.23	0.38	.170	.095	0.14	-	22	-	
39	C.LOS COYOTES	C	B18	19°50.89'	102°23.01'	0.50	0.30	.020	.003	0.04	-	11	-	
40		R	B18	19°50.03'	102°22.97'	0.63	0.40	.008	.002	0.01	-	4	-	
41	C.CURUNGUATO	D	B18	19°49.92'	102°22.41'	1.05	0.07	.185	.057	0.18	-	21	-	PLV1
42	(N.CHICA)	B	B18	19°49.27'	102°23.97'	0.60	0.38	.040	.008	0.07	-	20	-	PLV1
43		B	B18	19°48.85'	102°23.31'	0.43	0.20	.008	.001	0.02	-	4	-	
44	C.AGUILAR	C	B18	19°48.81'	102°23.00'	0.50	0.10	.048	.004	0.10	-	13	-	
45	N.GRANDE	F	B18	19°48.40'	102°23.30'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
46	C.ARANZA	D	B18	19°48.30'	102°20.93'	0.95	0.20	.128	.038	0.13	-	19	-	
47	(J.JESUS DIAS)	R	B18	19°48.28'	102°23.60'	0.65	0.23	.104	.017	0.16	-	26	4	
48	(C.TINGUINDIN)	R	B28	19°43.72'	102°30.20'	0.65	0.05	.060	.007	0.09	-	11	-	
49	C.TINGUINDIN	C	B28	19°43.31'	102°30.37'	1.05	0.40	.140	.062	0.13	29	23	7	
50	(LA ESTANCIA)	B	B28	19°41.54'	102°27.84'	0.75	0.45	.050	.014	0.07	-	18	-	
51	C.LAS VACAS	C	B28	19°44.30'	102°25.74'	1.65	0.68	.165	.186	0.10	-	19	-	
52	C.ENATAITZERO	E	B28	19°40.40'	102°20.86'	1.55	0.45	.250	.216	0.16	-	24	4	
53	C.ZIRPO	C	B28	19°40.62'	102°20.46'	0.88	0.43	.130	.046	0.15	-	30	3	
54		B	B28	19°40.86'	102°20.17'	0.48	0.25	.030	.003	0.06	-	15	-	
55	C.CHERATO	B	B28	19°37.97'	102°20.69'	0.80	0.38	.110	.032	0.14	-	28	-	
56	C.BLANCO	S	B38	19°23.22'	102°37.53'	1.05	0.22	.165	.060	0.16	-	22	3	PLV2

TABLE 1. (CONTINUED --2)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
57	C.EL MELONCILLO	C	E38	19°23.54′	102°36.11′	0.48	0.15	.070	.006	0.15	-	23	10	
58	C.EL PLATANO	B	E38	19°24.33′	102°33.22′	0.70	0.25	.085	.010	0.08	-	14	17	
59	C.EL PILON	E	E38	19°23.15′	102°32.08′	1.15	0.05	.210	.076	0.18	-	21	4	
60	C.CARRIZALILLO	C	E38	19°24.17′	102°29.72′	1.15	0.05	.210	.076	0.18	-	21	7	
61	C.LA SIDRA	C	E38	19°24.25′	102°29.23′	0.80	0.15	.145	.030	0.18	-	24	-	
62	C.MEDINA	E	E38	19°23.88′	102°29.07′	0.85	0.08	.150	.031	0.18	-	21	2	
63		C	E38	19°28.87′	102°27.75′	0.57	0.13	.060	.007	0.11	-	15	-	
64		C	E38	19°29.54′	102°26.43′	0.50	0.15	.085	.005	0.11	-	17	-	
65	C.PARAMBEN	C	E38	19°29.54′	102°26.16′	0.68	0.23	.115	.031	0.13	29	19	-	
66	C.SAN MIGUEL	E	E38	19°26.43′	102°27.01′	0.55	0.05	.100	.009	0.18	-	22	-	
67	(LA ESCONDIDA)	R	E38	19°26.53′	102°24.78′	0.65	0.13	.085	.008	0.10	-	14	-	
68	C.LA CRUZ	E	E38	19°26.18′	102°24.15′	1.73	0.20	.200	.177	0.12	-	15	4	
69	C.HICAZUELA	C	E38	19°27.12′	102°24.07′	0.98	0.23	.080	.016	0.05	-	8	3	
70	C.TEPAMEL	C	E38	19°27.22′	102°23.50′	1.25	0.43	.120	.072	0.10	-	16	3	
71	C.PRIETO	C	E38	19°26.84′	102°23.07′	0.80	0.25	.125	.036	0.14	-	21	-	
72	C.EL CHICOL	E	E38	19°27.93′	102°23.40′	1.40	0.40	.160	.112	0.11	-	18	2	
73	LS.LA TINAJA	B	E38	19°24.53′	102°23.07′	0.70	0.40	.060	.015	0.09	-	22	-	
74	C.LA CANTERA	C	E38	19°22.57′	102°22.37′	1.23	0.30	.245	.126	0.20	-	28	-	
75	(B.LAS LAJAS)	D	E38	19°21.28′	102°39.87′	1.10	0.43	.065	.032	0.06	-	11	-	
76	(B.CIGUANZO)	C	E38	19°21.98′	102°39.01′	0.78	0.40	.058	.016	0.07	-	17	-	
77	C.EL PUERTO	C	E38	19°22.31′	102°38.57′	0.63	0.28	.068	.012	0.11	-	21	-	
78	C.COLORADO	E	E38	19°20.88′	102°33.57′	1.20	0.15	.210	.090	0.17	28	22	4	
79	C.EL PINZAN	S	E38	19°19.45′	102°33.13′	1.10	0.27	.135	.056	0.12	-	18	5	PLV2
80	C.EL GUAYABAL	B	E38	19°18.80′	102°32.29′	0.55	0.15	.085	.009	0.15	28	23	6	
81	C.LA PAJA	S	E38	19°22.30′	102°35.68′	0.90	0.33	.130	.041	0.14	-	25	9	PLV2
82		C	E38	19°16.20′	102°30.37′	0.42	0.28	.010	.001	0.02	-	6	-	
83	C.PELON	B	E38	19°16.96′	102°29.54′	0.78	0.18	.138	.028	0.18	-	25	16	
84	(LA HIGUERITA)	B	E38	19°17.74′	102°29.69′	0.38	0.12	.060	.003	0.16	-	25	-	
85	C.ESPINOZA	C	E38	19°17.54′	102°28.39′	1.05	0.30	.165	.065	0.16	-	24	5	
86		B	E38	19°16.92′	102°28.13′	0.48	0.13	.060	.008	0.13	-	19	-	
87	C.PAREO	C	E38	19°18.81′	102°27.44′	1.18	0.33	.195	.097	0.17	-	25	-	
88	C.URINGUITIRO	C	E38	19°16.83′	102°25.43′	1.13	0.33	.210	.097	0.19	-	28	4	
89		C	E38	19°16.57′	102°25.49′	0.70	0.30	.090	.019	0.13	-	24	-	PLV2
90		B	E38	19°17.14′	102°24.80′	0.88	0.13	.090	.021	0.10	-	13	-	
91	(ST.CATARINA)	R	E38	19°17.08′	102°24.17′	0.83	0.28	.080	.021	0.10	-	17	-	
92	C.LA HOYA	C	E38	19°15.68′	102°23.23′	0.85	0.30	.135	.045	0.14	-	23	7	
93	(LA CIENEGA)	R	E38	19°15.13′	102°22.63′	0.53	0.10	.055	.005	0.10	-	14	-	
94	C.EL TECOLOTE	B	E38	19°18.46′	102°23.89′	0.58	0.18	.055	.007	0.08	-	15	-	
95	C.EL ASTILLERO	C	E38	19°18.54′	102°22.94′	1.20	0.25	.185	.087	0.15	-	21	-	HV
96	C.PANQUITIRO	D	E38	19°18.46′	102°22.37′	0.75	0.20	.100	.020	0.13	-	20	-	
97	C.EL PEDREGAL	C	E38	19°19.08′	102°21.08′	0.35	0.13	.035	.002	0.10	-	18	-	HV
98	C.CHARANDAS	C	E38	19°19.60′	102°20.70′	0.70	0.28	.110	.022	0.16	-	28	-	
99	C.ARAPO	C	E38	19°19.17′	102°20.14′	0.70	0.20	.080	.014	0.11	-	18	-	
100	M.ZIRIMONDIRO	F	E38	19°21.73′	102°21.13′	0.00	0.00	.000	.000	0.00	-	-	-	
101	C.BUENAVISTA	S	E48	19° 9.33′	102°36.51′	1.20	0.40	.250	.136	0.21	-	32	4	PLV2
102	C.LOS AZOTES	S	E48	19°14.37′	102°31.87′	0.80	0.28	.110	.027	0.14	-	23	-	PLV2
103		C	E48	19°12.48′	102°29.60′	1.13	0.43	.135	.069	0.12	-	21	12	
104	C.EL PUERTO	C	E48	19°12.65′	102°29.18′	1.08	0.25	.115	.045	0.11	-	15	10	PLV2
105	C.LA CAZUELA	C	E48	19°13.65′	102°28.70′	1.25	0.23	.275	.137	0.22	-	28	6	
106	C.BLANCO	E	E48	19°13.97′	102°27.88′	0.90	0.25	.140	.040	0.16	-	23	4	
107	C.EL CIRIAN	C	E48	19°14.67′	102°27.32′	1.25	0.23	.195	.097	0.16	-	21	3	
108	C.SAN JUAN	C	E48	19° 8.57′	102°27.55′	1.70	0.45	.210	.212	0.12	-	19	9	PLV2-3
109	(EL NOPAL)	C	E48	19°10.28′	102°25.30′	0.83	0.25	.110	.033	0.12	-	18	-	PLV2
110	C.LAS JOYAS	C	E48	19°12.05′	102°25.26′	0.83	0.20	.135	.032	0.16	-	23	2	
111	C.LA ORTIGA	C	E48	19°12.16′	102°24.61′	0.65	0.25	.088	.016	0.14	-	24	-	
112		D	E48	19°11.92′	102°24.84′	0.75	0.40	.050	.013	0.07	-	16	-	

TABLE 1. (CONTINUED --3)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	QD	LAVA
113	(BELEN)	B	B48	19° 12.64'	102° 24.29'	0.55	0.15	.113	.012	0.21	-	29	9	PLV2
114	C.LOS HORCONES	E	B48	19° 13.17'	102° 23.62'	1.08	0.13	.170	.059	0.16	-	20	2	
115		R	B48	19° 13.40'	102° 24.28'	0.63	0.13	.070	.009	0.11	-	16	-	
116		B	B48	19° 13.63'	102° 23.72'	0.70	0.23	.085	.016	0.12	-	20	9	
117		E	B48	19° 13.51'	102° 23.34'	0.85	0.13	.088	.013	0.15	-	21	2	
118	(EL JACAL)	B	B48	19° 13.98'	102° 24.27'	0.60	0.10	.065	.007	0.11	-	15	-	
119	(EL PUERTO DE Z.)	B	B48	19° 13.98'	102° 23.35'	0.48	0.25	.030	.003	0.06	-	15	-	
120	C.VALENTIN	E	B48	19° 14.70'	102° 22.45'	1.03	0.28	.140	.052	0.14	-	20	1	
121	C.LA MAJADA	B	B48	19° 8.48'	102° 24.37'	1.05	0.08	.185	.056	0.18	-	20	2	PLV1
122		E	B48	19° 8.80'	102° 24.28'	0.96	0.15	.155	.046	0.16	-	20	2	PLV2
123	(B.CINCO HOJAS)	B	B48	19° 10.32'	102° 23.80'	0.45	0.16	.050	.004	0.11	-	20	-	PLV2
124	(C.ANICUATO)	B	B48	19° 10.88'	102° 21.98'	0.63	0.23	.110	.017	0.17	-	28	-	PLV2
125	(B.LOS COYOTES)	B	B48	19° 10.78'	102° 21.00'	0.58	0.25	.095	.014	0.16	-	30	5	
126		E	B48	19° 11.29'	102° 21.62'	0.65	0.15	.100	.014	0.15	-	22	3	
127		B	B48	19° 11.45'	102° 21.73'	0.35	0.18	.040	.002	0.11	-	25	6	
128		B	B48	19° 11.77'	102° 21.58'	0.30	0.15	.035	.001	0.12	-	25	-	
129	(LA CANADA)	B	B48	19° 12.25'	102° 21.48'	0.40	0.14	.065	.004	0.16	-	27	-	PLV3
130	(CHUPADERITO)	B	B48	19° 13.30'	102° 22.22'	0.73	0.08	.080	.014	0.12	-	15	-	PLV2
131	LOS CERRITOS	C	B48	19° 12.97'	102° 21.60'	0.45	0.23	.035	.003	0.08	-	18	-	PLV2
132	LOS CERRITOS	C	B48	19° 13.07'	102° 21.48'	0.65	0.35	.070	.014	0.11	-	25	8	PLV2
133	(CEMENTERIO)	B	B48	19° 13.42'	102° 21.20'	0.45	0.18	.045	.004	0.10	-	18	-	PLV2
134		B	B48	19° 13.57'	102° 21.04'	0.45	0.25	.045	.004	0.10	-	24	-	PLV2
135	C.CHATO	C	B48	19° 11.81'	102° 20.74'	1.15	0.40	.198	.101	0.17	-	28	11	PLV2
136	C.OVAL	E	B48	19° 12.73'	102° 20.52'	1.58	0.08	.175	.120	0.11	-	13	5	
137	C.EL CHIVO	E	B48	19° 13.05'	102° 20.32'	1.23	0.33	.160	.065	0.13	-	20	5	
138	(ACUMBARO)	B	B48	19° 13.67'	102° 20.37'	0.68	0.30	.060	.012	0.09	-	18	6	
139	C.EL HUNGARO	C	B48	19° 7.23'	102° 20.54'	1.38	0.23	.190	.113	0.14	-	18	7	
140		C	D89	20° 10.85'	102° 9.86'	1.38	0.13	.115	.063	0.08	-	10	-	
141	(LA PROVIDENCIA)	C	D89	20° 13.86'	102° 6.39'	0.63	0.07	.048	.006	0.08	-	10	-	
142	(SAN VICENTE)	C	D89	20° 11.66'	102° 6.83'	1.30	0.15	.093	.046	0.07	-	9	-	
143	(EL SALTO)	C	D89	20° 9.95'	102° 6.69'	0.88	0.13	.028	.007	0.03	-	4	-	
144		C	D89	20° 8.51'	102° 4.93'	0.60	0.05	.063	.005	0.09	-	11	-	
145	CTS.DE LOS ORTIZ	C	D89	20° 2.09'	102° 17.41'	1.28	0.13	.115	.055	0.09	22	11	-	
146	C.GACHO	C	D89	20° 1.51'	102° 5.53'	1.48	0.28	.108	.076	0.07	-	10	-	
147	C.PELON	C	D89	20° 0.69'	102° 4.63'	1.00	0.20	.103	.033	0.10	-	14	-	
148		R	B19	19° 56.16'	102° 19.91'	0.88	0.23	.085	.018	0.07	12	11	-	
149	C.LA AGUJA	B	B19	19° 50.41'	102° 17.26'	1.00	0.40	.103	.042	0.10	-	19	3	
150	(DAMASO CARDENAS)	B	B19	19° 50.70'	102° 16.40'	1.20	0.50	.060	.030	0.04	-	8	-	
151		B	B19	19° 50.39'	102° 15.76'	0.70	0.28	.060	.012	0.08	-	16	-	
152	C.EL MIRADOR	E	B19	19° 51.32'	102° 15.56'	0.88	0.25	.155	.051	0.16	-	23	2	
153	C.COLORADO	R	B19	19° 50.73'	102° 13.18'	1.03	0.10	.075	.023	0.07	17	9	-	
154	(NOROTO)	M	B19	19° 51.07'	102° 10.35'	0.00	2.00	.035	.000	0.00	-	-	-	
155	C.HUANATO	E	B19	19° 50.55'	102° 9.06'	0.78	0.08	.143	.025	0.18	26	22	3	
156	H.TIPONDIRO	M	B19	19° 50.40'	102° 9.67'	0.00	0.98	.020	.000	0.00	-	-	-	
157		C	B19	19° 45.30'	102° 14.89'	0.60	0.15	.080	.010	0.13	-	20	-	
158		C	B19	19° 45.41'	102° 14.68'	0.55	0.25	.060	.008	0.11	-	22	-	
159	(P.LA TRENZA)	C	B19	19° 48.47'	102° 2.72'	0.85	0.25	.065	.017	0.08	-	12	2	
160	M.ALTA	F	B19	19° 48.73'	102° 2.60'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
161	C.JAROQUI JUATA	B	B19	19° 45.32'	102° 4.96'	0.58	0.18	.085	.011	0.15	-	23	6	PLV3
162	C.ANTZITACUATO	C	B19	19° 45.49'	102° 4.27'	0.65	0.23	.093	.015	0.14	-	24	6	
163	C.HUAHUARUA	C	B19	19° 45.64'	102° 3.74'	0.53	0.17	.075	.006	0.14	-	23	11	PLV3
164	C.CATZICAPACUA...	C	B19	19° 45.65'	102° 3.45'	0.43	0.20	.060	.005	0.14	-	28	9	
165	C.EL ZOPILOTE	C	B19	19° 45.70'	102° 3.15'	0.45	0.20	.075	.007	0.17	-	31	6	PLV4
166	C.LAS YERBAS	C	B19	19° 46.11'	102° 1.82'	0.75	0.23	.105	.022	0.14	29	22	5	PLV2
167	C.LOS POZOS	C	B19	19° 46.16'	102° 1.35'	0.68	0.35	.060	.011	0.07	-	17	-	PLV2
168	C.EL DERRUMBADERO	C	B19	19° 46.24'	102° 0.54'	0.83	0.28	.150	.039	0.18	-	29	6	PLV2

TABLE 1. (CONTINUED --4)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
169		C	B19	19°45.27′	102° 0.53′	0.50	0.23	.040	.004	0.08	-	17	-	
170		C	B19	19°45.05′	102° 0.23′	0.65	0.25	.080	.014	0.12	-	22	-	
171	C.ORDAZ	C	B19	19°48.05′	102° 0.51′	0.90	0.18	.130	.034	0.14	-	20	3	PLV2
172		C	B19	19°47.89′	102° 0.80′	0.50	0.15	.060	.005	0.12	-	19	2	PLV2
173	(SAN ISIDRO)	P	B29	19°44.24′	102°18.26′	0.87	0.58	.035	.015	0.04	-	14	-	
174		P	B29	19°43.86′	102°18.08′	0.70	0.45	.018	.005	0.03	-	8	-	
175	C.TAPAN	C	B29	19°43.78′	102°17.06′	0.93	0.43	.100	.038	0.11	-	22	4	
176		B	B29	19°44.11′	102°15.63′	0.45	0.23	.030	.003	0.07	-	15	-	
177	C.EL LEON	B	B29	19°43.91′	102°15.26′	0.65	0.20	.105	.016	0.16	-	25	-	PLV2
178	C.ZENDENYAN	C	B29	19°42.72′	102°18.09′	1.08	0.30	.157	.065	0.15	-	22	8	
179	C.CUATZIAN	B	B29	19°41.89′	102°17.87′	0.88	0.38	.095	.031	0.11	-	21	2	
180	C.QUANIMBAN	C	B29	19°41.95′	102°17.31′	0.96	0.28	.175	.060	0.18	-	27	5	
181	C.EL BURRO	C	B29	19°42.70′	102°15.84′	1.10	0.35	.175	.079	0.16	-	25	4	
182	C.EL ZOPILOTE	C	B29	19°42.57′	102°12.57′	0.75	0.25	.100	.021	0.13	27	22	2	
183	C.COCUCHO	S	B29	19°43.07′	102°10.71′	1.13	0.28	.200	.088	0.18	-	25	11	PLV2
184	(SAN MARCOS)	E	B29	19°40.41′	102°18.51′	0.73	0.28	.060	.013	0.08	-	15	1	
185		R	B29	19°40.32′	102°18.04′	0.50	0.23	.055	.006	0.11	-	22	-	
186		E	B29	19°39.95′	102°17.80′	0.83	0.26	.090	.023	0.11	-	18	3	
187	C.ANTZISCUARO	C	B29	19°40.24′	102°16.86′	0.80	0.30	.100	.025	0.12	-	22	-	
188		C	B29	19°40.12′	102°16.29′	0.65	0.23	.032	.005	0.05	-	9	-	
189	C.CUMAN	C	B29	19°39.35′	102°17.20′	1.00	0.23	.148	.050	0.15	-	21	3	
190	C.TEPOJA	B	B29	19°38.51′	102°17.91′	0.78	0.25	.100	.023	0.13	-	21	3	
191	C.CHANAMBA	B	B29	19°38.00′	102°17.89′	0.78	0.18	.085	.017	0.11	-	16	2	
192	L.EL TECOLOTE	C	B29	19°38.72′	102°17.20′	1.25	0.50	.052	.033	0.04	-	8	-	
193	C.NIGUATIRO	E	B29	19°41.05′	102°15.66′	0.58	0.15	.070	.008	0.12	-	18	-	
194		R	B29	19°41.49′	102°15.13′	0.55	0.13	.080	.008	0.15	-	21	-	
195	C.JARATZNDAN	C	B29	19°38.54′	102°14.89′	0.65	0.35	.050	.010	0.08	25	18	-	
196	C.JUATQUERI	C	B29	19°38.62′	102°14.51′	0.75	0.25	.110	.023	0.15	-	24	-	
197		C	B29	19°39.70′	102°14.24′	0.78	0.30	.130	.032	0.17	-	28	5	
198	C.LA CULEBRA	C	B29	19°39.43′	102°13.26′	1.20	0.28	.150	.073	0.13	-	18	4	
199	C.APUNDARO	C	B29	19°39.70′	102°12.61′	1.00	0.33	.180	.068	0.18	32	28	7	
200		P	B29	19°37.84′	102°10.83′	0.50	0.40	.015	.002	0.03	-	17	-	
201	C.TAMAPAN	C	B29	19°37.57′	102°10.30′	0.65	0.06	.060	.007	0.09	22	11	-	
202	CS.PELONES	C	B29	19°39.19′	102° 9.26′	0.60	0.15	.090	.011	0.15	28	22	-	
203	CS.PELONES	C	B29	19°38.87′	102° 9.09′	0.80	0.20	.085	.019	0.11	27	16	-	
204	CS.PELONES	R	B29	19°39.01′	102° 8.66′	0.53	0.20	.030	.003	0.06	22	10	-	
205		R	B29	19°38.38′	102° 7.94′	0.56	0.30	.020	.003	0.04	9	9	-	
206		B	B29	19°38.84′	102° 7.29′	0.35	0.15	.020	.001	0.06	24	11	-	
207		B	B29	19°38.95′	102° 7.01′	0.58	0.23	.040	.005	0.07	20	19	-	
208	C.PARACHO VIEJO	C	B29	19°38.20′	102° 4.86′	0.80	0.33	.090	.024	0.11	-	21	11	PLV3
209	CS.CUMBUAN	C	B29	19°39.16′	102° 3.69′	0.73	0.25	.130	.026	0.18	-	28	11	PLV2
210	CS.CUMBUAN	C	B29	19°39.32′	102° 3.43′	0.45	0.28	.045	.005	0.10	-	28	9	PLV2
211	C.PELON	C	B29	19°39.70′	102° 2.84′	0.48	0.23	.050	.005	0.10	28	22	6	
212	C.JARAJTEN	C	B29	19°43.82′	102° 3.63′	0.58	0.23	.090	.012	0.16	-	27	5	
213		F	B29	19°43.65′	102° 3.10′	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
214	C.LA GUITARRA	C	B29	19°44.05′	102° 2.34′	0.45	0.23	.040	.004	0.09	-	20	4	
215	(CHERANATZICURIN)	F	B29	19°42.37′	102° 0.63′	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
216		B	B29	19°37.16′	102°17.72′	0.50	0.15	.035	.003	0.07	-	11	-	
217		C	B29	19°36.50′	102°17.51′	0.45	0.15	.050	.004	0.11	-	18	-	
218		B	B29	19°35.59′	102°16.55′	0.68	0.33	.065	.014	0.10	-	20	-	
219	C.ZIPACHAN	S	B29	19°36.77′	102°16.38′	0.85	0.23	.145	.037	0.17	-	25	4	
220	C.PICHAMBO	C	B29	19°35.95′	102°15.19′	0.60	0.35	.057	.010	0.09	-	25	-	
221	C.HUANIMBA	B	B29	19°35.76′	102°14.41′	0.40	0.15	.025	.002	0.06	-	11	-	
222	C.EL CALVARIO	B	B29	19°36.31′	102°14.36′	0.55	0.30	.040	.006	0.07	23	18	-	
223	C.TEN JUATA	B	B29	19°36.86′	102°13.50′	0.55	0.20	.050	.006	0.09	28	16	-	
224	C.PURU JUATA	C	B29	19°37.15′	102°12.85′	0.65	0.20	.060	.009	0.09	28	15	2	

TABLE 1. (CONTINUED --5)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
225	C.IPANDAN	C	B29	19°36.59'	102°10.77'	0.78	0.20	.105	.022	0.13	31	20	2	
226	C.NANARI JUATA	E	B29	19°35.19'	102°10.99'	0.80	0.18	.135	.029	0.17	23	24	4	
227		C	B29	19°35.54'	102°10.67'	0.40	0.15	.055	.003	0.14	-	24	-	
228		C	B29	19°35.91'	102°10.11'	0.70	0.20	.100	.018	0.14	27	22	-	
229	C.SANTA CATARINA	C	B29	19°36.62'	102° 9.00'	0.85	0.30	.130	.036	0.15	29	25	5	
230	L. LARGA	D	B29	19°35.81'	102° 8.80'	1.13	0.60	.080	.048	0.07	-	17	-	
231	C.PARAMBO	B	B29	19°34.74'	102°10.35'	1.03	0.40	.120	.051	0.12	-	21	3	
232		B	B29	19°33.69'	102°10.05'	0.53	0.27	.040	.005	0.08	-	17	-	
233		B	B29	19°33.35'	102°10.94'	0.90	0.33	.033	.005	0.07	-	21	-	
234	(ZACAN)	C	B29	19°33.92'	102°17.56'	0.53	0.25	.050	.006	0.09	28	20	-	
235		C	B29	19°32.73'	102°16.92'	0.43	0.25	.032	.003	0.07	-	20	-	
236		B	B29	19°33.15'	102°16.21'	0.53	0.30	.025	.003	0.05	-	12	-	
237		C	B29	19°33.42'	102°16.10'	0.58	0.23	.105	.014	0.18	-	31	6	PLV2
238	(B.GUERRERO)	C	B29	19°33.57'	102°15.73'	0.80	0.29	.100	.026	0.12	-	21	4	
239		C	B29	19°34.89'	102°15.42'	0.80	0.40	.110	.032	0.14	-	29	-	
240		C	B29	19°34.73'	102°15.19'	0.65	0.33	.080	.016	0.12	-	27	-	
241	C.ZITZAN	C	B29	19°34.57'	102°14.76'	0.83	0.45	.108	.036	0.13	-	30	-	
242	C.PAQUICHIHUATA	C	B29	19°34.32'	102°13.94'	0.75	0.33	.040	.010	0.05	13	11	-	
243	C.CONBUNDICATA	C	B29	19°34.14'	102°12.88'	0.95	0.48	.095	.040	0.10	-	22	-	
244	C.HUAHUACHO	C	B29	19°33.69'	102°13.14'	0.40	0.18	.060	.004	0.15	-	29	-	
245		C	B29	19°33.16'	102°13.38'	0.73	0.08	.113	.018	0.15	-	19	5	
246	C.ZINZUCU	C	B29	19°32.34'	102°13.34'	0.80	0.25	.130	.031	0.16	-	25	8	PLV2-3
247	C.NURETO	E	B29	19°32.11'	102°12.45'	0.55	0.08	.090	.007	0.15	-	19	3	
248		C	B29	19°32.16'	102°10.59'	0.53	0.23	.050	.006	0.09	-	18	8	
249	C.ZCHINDIO	C	B29	19°32.57'	102°10.42'	0.80	0.22	.145	.033	0.18	-	27	7	
250	C.JANAMO	S	B29	19°33.42'	102° 9.68'	0.83	0.25	.145	.036	0.17	-	27	9	PLV4
251		C	B29	19°30.05'	102°17.84'	0.73	0.30	.083	.018	0.11	-	21	6	
252		E	B29	19°30.45'	102°16.59'	0.73	0.18	.140	.026	0.19	-	27	4	
253		B	B29	19°30.92'	102°14.36'	0.53	0.25	.040	.005	0.08	-	16	6	
254		E	B29	19°30.16'	102°12.91'	0.60	0.20	.060	.008	0.10	-	17	2	
255	C.CUSATO	C	B29	19°30.08'	102°11.35'	1.38	0.40	.265	.182	0.19	-	28	12	PLV2
256	C.LOS ANOLES	B	B29	19°35.32'	102° 7.74'	0.80	0.30	.100	.025	0.12	-	22	8	PLV3
257	C.YONDIMA	C	B29	19°36.15'	102° 6.78'	1.03	0.38	.185	.077	0.18	31	30	10	
258	C.GACHO	E	B29	19°36.61'	102° 7.22'	0.68	0.08	.125	.017	0.18	-	23	2	
259	C.GARACUTIRO	B	B29	19°36.38'	102° 6.40'	0.93	0.18	.073	.008	0.14	32	23	-	PLV2
260	C.SAN MIGUEL	C	B29	19°36.73'	102° 5.72'	1.25	0.30	.225	.119	0.18	32	25	12	
261	C.CICAPIEN	C	B29	19°35.43'	102° 5.53'	0.70	0.30	.080	.017	0.11	32	22	13	PLV2-3
262	C.CAPATACUIRO	B	B29	19°35.46'	102° 4.36'	0.75	0.23	.130	.027	0.17	30	27	-	PLV4
263		B	B29	19°36.18'	102° 3.25'	0.45	0.23	.045	.004	0.10	-	22	-	
264	C.SINAR JUATA	C	B29	19°36.32'	102° 1.98'	0.63	0.25	.088	.014	0.14	-	25	5	
265	C.CAIN	C	B29	19°36.96'	102° 0.66'	0.95	0.27	.150	.048	0.16	-	24	7	
266		C	B29	19°36.62'	102° 0.58'	0.68	0.33	.040	.008	0.06	-	13	-	
267	C.SHANAN JUATA	C	B29	19°36.84'	102° 0.16'	0.38	0.20	.040	.003	0.11	-	24	-	
268		C	B29	19°33.45'	102° 6.30'	0.80	0.13	.140	.028	0.17	-	23	3	
269		C	B29	19°33.38'	102° 6.10'	0.58	0.15	.115	.013	0.20	-	28	3	
270		C	B29	19°33.35'	102° 5.50'	0.33	0.18	.030	.002	0.09	-	22	3	
271		C	B29	19°33.30'	102° 5.33'	0.40	0.10	.075	.004	0.19	-	27	4	
272	C.ARICHAN	B	B29	19°33.34'	102° 4.57'	0.73	0.23	.085	.017	0.12	-	19	6	PLV2
273	C.TZINTZUNZAGUA	C	B29	19°32.58'	102° 4.93'	0.65	0.28	.095	.017	0.15	-	27	7	PLV2
274	C.TAPAN JUATA	C	B29	19°30.70'	102° 7.45'	0.75	0.15	.140	.026	0.19	33	25	5	
275	C.PIRUANI	B	B29	19°30.93'	102° 6.55'	0.83	0.33	.120	.034	0.14	-	26	8	PLV2
276	C.EQUACUARO	C	B29	19°30.03'	102° 5.96'	0.90	0.25	.140	.040	0.16	-	23	5	
277	C.CUATZION	C	B29	19°30.47'	102° 5.56'	0.88	0.13	.135	.032	0.15	-	20	7	
278	C.CARAPAN	C	B29	19°31.04'	102° 5.62'	0.83	0.13	.140	.030	0.17	-	22	4	
279	C.SANTA CRUZ	C	B29	19°31.41'	102° 5.80'	1.10	0.30	.180	.077	0.16	-	24	11	
280	C.TARENGO	C	B29	19°31.62'	102° 5.23'	0.68	0.20	.080	.013	0.12	-	18	4	

TABLE 1. (CONTINUED --6)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
281	C.EL AIRE'	C	B29	19°31.22'	102° 3.87'	1.40	0.60	.205	.170	0.15	-	27	8	
282	C.EL VARAL	C	B29	19°31.51'	102° 3.07'	1.08	0.40	.160	.074	0.15	33	25	11	PLV3
283	EL CERRITO	C	B29	19°31.62'	102° 2.18'	0.53	0.30	.055	.008	0.10	-	26	5	
284	C.ISINGO	C	B39	19°29.40'	102°17.79'	0.75	0.28	.105	.023	0.14	-	24	4	
285		E	B39	19°29.95'	102°17.13'	0.58	0.08	.090	.009	0.16	-	20	2	
286		B	B39	19°29.81'	102°16.72'	0.85	0.25	.095	.025	0.11	-	18	4	
287		C	B39	19°29.57'	102°16.26'	0.60	0.28	.060	.010	0.10	-	21	12	
288		B	B39	19°29.77'	102°15.87'	0.90	0.28	.155	.046	0.17	-	27	7	
289	V.PARICUTIN	C	B39	19°29.55'	102°15.07'	0.95	0.25	.220	.069	0.23	33	32	37	HV
290		B	B39	19°29.03'	102°16.78'	0.65	0.25	.050	.008	0.08	-	14	-	
291		B	B39	19°28.59'	102°16.98'	0.55	0.30	.060	.009	0.11	-	26	5	
292	(C.SAN PEDRO)	C	B39	19°27.19'	102°16.55'	1.00	0.25	.195	.067	0.19	-	27	-	PLV3
293	(C.SAN PEDRO)	C	B39	19°27.35'	102°16.47'	1.00	0.10	.170	.049	0.17	-	21	-	PLV3
294	C.EL CEBO	C	B39	19°27.46'	102°15.98'	0.68	0.05	.155	.020	0.23	-	26	8	
295	(LA ESCONDIDA)	F	B39	19°27.64'	102°15.40'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
296	(C.EL TIZNE)	C	B39	19°27.65'	102°15.09'	0.50	0.20	.060	.006	0.12	-	22	13	PLV2
297	C.CIRAHAPAN	B	B39	19°28.43'	102°14.00'	0.88	0.40	.120	.040	0.14	-	27	11	
298		C	B39	19°28.38'	102°13.71'	0.65	0.20	.065	.010	0.10	-	16	-	
299	C.PANCINGO	B	B39	19°29.76'	102°11.81'	0.63	0.25	.060	.010	0.10	-	18	-	
300		B	B39	19°26.53'	102°14.96'	1.03	0.35	.150	.061	0.15	-	24	-	
301	C.PRIETO	C	B39	19°26.23'	102°13.17'	0.50	0.08	.110	.009	0.22	-	28	-	PLV3
302		C	B39	19°27.10'	102°12.69'	0.65	0.20	.090	.014	0.14	-	22	-	PLV2
303	C.LA PERITA	C	B39	19°27.21'	102°12.32'	0.90	0.33	.155	.049	0.17	-	29	3	
304	(LL.JURITZICUARO)	C	B39	19°27.57'	102°12.30'	0.45	0.10	.055	.004	0.12	-	17	-	PLV2
305	C.ESTILADERO	C	B39	19°26.58'	102°11.78'	0.89	0.28	.130	.038	0.15	-	23	3	
306	(LL.TACADERO)	B	B39	19°27.95'	102°11.85'	0.50	0.30	.015	.002	0.03	-	9	-	PLV2
307	C.PARIO	C	B39	19°28.14'	102°11.06'	0.90	0.10	.180	.043	0.20	-	24	-	PLV2
308	C.TUMBISCATILLO	C	B39	19°27.79'	102°10.34'	0.93	0.23	.170	.050	0.18	-	26	3	
309		B	B39	19°28.70'	102°10.69'	0.45	0.08	.100	.006	0.22	-	28	3	
310	(B.LAS PAREDES)	B	B39	19°28.95'	102° 9.90'	0.48	0.20	.055	.005	0.11	-	21	-	PLV2
311	(C.SAN PEDRO)	C	B39	19°26.35'	102°16.90'	0.65	0.18	.100	.015	0.15	-	23	-	PLV2
312	C.EL TEPETATE	C	B39	19°24.90'	102°15.99'	0.45	0.15	.065	.005	0.14	-	23	-	
313	C.LA CHIMENEA	C	B39	19°24.40'	102°15.56'	1.20	0.33	.215	.109	0.18	-	26	6	PLV1
314	(EL TEJAMANIL)	D	B39	19°24.43'	102°15.03'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
315	C.EL LLACUARO	C	B39	19°25.48'	102°14.33'	0.60	0.13	.120	.014	0.20	-	27	-	PLV2
316	C.CIRICUTI	C	B39	19°25.93'	102°10.59'	0.75	0.35	.065	.016	0.09	-	18	3	
317	C.EL COLORADO	C	B39	19°25.33'	102°10.11'	0.83	0.25	.145	.036	0.17	-	27	4	
318	C.EL ROSARIO	C	B39	19°26.20'	102° 9.31'	0.73	0.08	.110	.017	0.15	-	19	3	
319	C.LA TRINIDADO	R	B39	19°28.56'	102° 8.15'	0.58	0.10	.070	.007	0.12	-	16	4	
320	C.LAS VARAS	C	B39	19°27.75'	102° 7.74'	0.78	0.15	.140	.027	0.18	-	24	13	PLV3
321	C.EL JABALI	C	B39	19°26.93'	102° 6.76'	0.93	0.38	.160	.057	0.17	-	30	27	HV
322	(C.EL JABALI)	C	B39	19°26.62'	102° 7.23'	0.70	0.50	.045	.013	0.06	-	24	-	HV
323		C	B39	19°26.26'	102° 6.91'	0.65	0.23	.075	.012	0.12	-	20	3	
324	C.SAPIEN	C	B39	19°26.92'	102° 6.10'	0.73	0.28	.130	.028	0.18	-	30	15	
325	C.CHERANGUARAN	C	B39	19°28.02'	102° 4.93'	1.25	0.35	.200	.111	0.16	33	24	9	
326	(COSTO)	M	B39	19°26.61'	102° 4.13'	0.00	1.15	.030	.000	0.17	17	-	-	
327	C.COPITIRO	C	B39	19°29.13'	102° 3.04'	0.95	0.25	.160	.050	0.17	-	25	6	PLV2
328	C.EL CAJETE	C	B39	19°28.26'	102° 2.52'	0.85	0.28	.100	.027	0.12	-	19	9	
329	C.EL PUERTO	C	B39	19°28.45'	102° 2.11'	0.93	0.33	.145	.049	0.16	-	26	5	
330	C.LA ALBERCA	C	B39	19°29.05'	102° 0.66'	1.28	0.30	.220	.122	0.17	-	24	7	PLV2
331	C.CHINO	C	B39	19°24.66'	102° 6.36'	1.38	0.48	.210	.154	0.15	32	25	6	
332	C.JICALMI	B	B39	19°23.33'	102° 4.68'	1.40	0.50	.170	.130	0.12	33	21	7	
333		B	B39	19°21.61'	102°19.34'	1.15	0.35	.135	.065	0.12	-	19	-	
334	C.LA ALBERCA	C	B39	19°21.73'	102°17.74'	1.03	0.35	.170	.069	0.17	-	27	-	
335	EL CERRITO	C	B39	19°21.51'	102°17.31'	0.95	0.20	.180	.053	0.19	-	26	-	
336	(LA SOLEDAD)	B	B39	19°21.05'	102°17.06'	0.93	0.23	.135	.040	0.15	-	21	-	

TABLE 1. (CONTINUED --7)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
337	C.LOS VALIENTES	C	B39	19° 17.37'	102° 19.63'	0.65	0.15	.110	.016	0.17	-	24	-	PLV2
338	(ZIRIMBO)	B	B39	19° 17.64'	102° 19.45'	0.55	0.20	.070	.008	0.13	-	22	-	PLV2
339	C.CONDEMBARO	C	B39	19° 18.13'	102° 18.05'	0.90	0.15	.155	.039	0.17	-	22	7	
340		C	B39	19° 18.59'	102° 17.39'	0.80	0.28	.120	.030	0.15	-	25	7	
341	C.EL COHETERO	C	B39	19° 16.19'	102° 19.83'	1.13	0.40	.145	.072	0.13	-	22	7	
342	C.TAMACUIRO	C	B39	19° 16.68'	102° 18.07'	0.88	0.22	.095	.025	0.11	-	16	6	PLV2
343	C.DE AFUERA	B	B39	19° 17.14'	102° 16.91'	0.75	0.20	.090	.018	0.12	-	18	-	PLV2
344	C.LOS REINA	B	B39	19° 17.78'	102° 16.84'	0.48	0.08	.080	.006	0.17	-	22	8	
345	C.LA AGUILILLA	C	B49	19° 14.59'	102° 19.40'	1.25	0.05	.285	.121	0.23	-	25	3	PLV2
346	C.EL UVAL	B	B49	19° 13.73'	102° 19.88'	1.02	0.23	.160	.056	0.16	-	22	10	PLV2
347	C.EL PELILLO	C	B49	19° 14.88'	102° 16.68'	0.73	0.23	.080	.016	0.11	-	18	-	PLV2
348	C.EL MOLCAJETE	P	B49	19° 14.57'	102° 16.87'	0.75	0.33	.035	.008	0.05	-	9	-	PLV2
349	C.LA CORUQUERA	D	B49	19° 14.68'	102° 15.98'	1.00	0.28	.145	.052	0.14	-	22	-	
350		E	B49	19° 13.67'	102° 16.30'	0.70	0.18	.100	.017	0.14	-	21	3	
351	C.CHINO	C	B49	19° 13.41'	102° 15.40'	0.75	0.18	.145	.028	0.19	-	27	7	PLV2
352	(C.CHINO)	F	B49	19° 13.86'	102° 15.03'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
353	C.CHATO	B	B49	19° 12.65'	102° 16.23'	1.05	0.35	.155	.065	0.15	-	24	-	
354	C.AGUA ZARCA	C	B49	19° 13.05'	102° 17.06'	1.10	0.28	.130	.054	0.12	-	18	-	PLV2
355	C.LA ESTACADA	C	B49	19° 14.84'	102° 13.11'	0.70	0.35	.080	.018	0.11	-	25	-	PLV2
356	C.LAS VUELTAS	E	B49	19° 14.90'	102° 11.17'	1.65	0.23	.295	.244	0.18	-	23	8	
357	(M.LA PRIMAVERA)	B	B49	19° 10.67'	102° 19.07'	0.85	0.25	.130	.034	0.15	-	23	4	
358	C.LA PRESA	E	B49	19° 10.11'	102° 19.03'	1.25	0.35	.230	.128	0.18	-	27	7	
359		C	B49	19° 10.28'	102° 18.77'	0.70	0.25	.120	.023	0.17	-	28	5	
360	C.EL LEON	B	B49	19° 10.75'	102° 17.88'	0.83	0.28	.110	.029	0.13	-	22	7	
361	C.EL MALACATERO	C	B49	19° 11.20'	102° 17.27'	1.08	0.20	.185	.068	0.17	-	23	6	PLV2
362	(B.EL TIGRE)	D	B49	19° 10.68'	102° 16.55'	0.90	0.25	.165	.047	0.18	-	27	10	
363		B	B49	19° 11.32'	102° 14.77'	0.85	0.30	.110	.031	0.13	-	22	5	PLV2
364	C.BLANCO	C	B49	19° 11.49'	102° 14.37'	0.78	0.30	.140	.034	0.18	-	30	7	
365	(EL TABACAL)	C	B49	19° 12.49'	102° 13.66'	0.48	0.15	.070	.006	0.15	-	23	5	
366	CS.CUATES	B	B49	19° 12.20'	102° 13.32'	1.10	0.63	.110	.066	0.10	-	25	7	PLV2
367	C.BLANCO	E	B49	19° 8.10'	102° 17.65'	0.90	0.25	.140	.040	0.16	-	23	4	
368		C	B49	19° 8.43'	102° 17.70'	0.48	0.05	.070	.005	0.15	-	18	7	
369	C.LA GUERA	C	B49	19° 9.28'	102° 16.73'	1.58	0.35	.220	.183	0.14	-	20	9	PLV2
370	M.LA BOLA	F	B49	19° 8.82'	102° 9.66'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
371	C.LA BATEA	C	B49	19° 7.73'	102° 9.14'	1.60	0.30	.300	.246	0.19	-	25	10	PLV2
372		C	B49	19° 8.28'	102° 8.80'	1.88	0.60	.195	.256	0.10	-	17	36	
373	C.ANDANGIO	C	B49	19° 7.30'	102° 4.66'	0.68	0.05	.120	.016	0.18	27	21	11	PLV2
374	C.RANCHO VIEJO	B	B49	19° 7.70'	102° 4.53'	1.05	0.25	.150	.056	0.14	28	21	15	PLV2
375	C.LA CAULOTERA	B	B49	19° 8.63'	102° 4.21'	0.83	0.25	.085	.021	0.10	25	16	12	PLV2
376	C.LA CRUZ	M	B49	19° 9.68'	102° 3.77'	1.00	0.60	.055	.000	0.05	24	15	-	
377	C.BLANCO	C	B49	19° 10.48'	102° 4.00'	0.85	0.13	.140	.031	0.16	26	21	15	
378	C.EL CIRCO	T	B49	19° 5.18'	102° 19.78'	2.88	2.03	.000	.000	0.00	-	-	33	PLV4
378	C.BLANCO	D	B49	19° 3.72'	102° 10.18'	1.43	0.55	.150	.123	0.10	-	19	-	
380	C.CUEVA DEL PADRE	D	B49	19° 4.77'	102° 9.90'	0.73	0.05	.090	.013	0.12	-	15	-	
381	L.LA TINAJA	D	B49	19° 5.32'	102° 8.36'	0.75	0.30	.120	.028	0.16	-	28	-	PLV2
382	H.VERDE MADURO	C	B49	19° 4.75'	102° 8.62'	0.95	0.05	.130	.032	0.14	-	16	-	PLV2
383	(EL JABALI)	D	B49	19° 4.33'	102° 8.60'	0.75	0.10	.110	.019	0.15	-	18	-	PLV2
384	L.LA CRUZ	D	B49	19° 3.97'	102° 8.28'	1.15	0.70	.080	.055	0.07	-	20	-	PLV2
385	M.DE ENMEDIO	F	B49	19° 3.03'	102° 8.42'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
386	M.DE ABAJO	C	B49	19° 2.50'	102° 9.57'	0.65	0.35	.080	.016	0.12	-	28	-	PLV2
387	C.COLORADO	C	B49	19° 4.75'	102° 5.54'	0.55	0.15	.060	.006	0.11	24	17	15	
388	C.EL MARQUES	C	B49	19° 5.70'	102° 5.43'	0.50	0.13	.065	.006	0.13	25	19	3	PLV1
389	C.EL CAPIRI	C	B49	19° 7.08'	102° 0.40'	1.08	0.18	.160	.058	0.15	29	20	16	PLV2
390	C.LA CRUZ	C	B49	19° 1.11'	102° 4.73'	1.70	0.48	.215	.222	0.13	30	19	20	
391		R	B49	19° 1.56'	102° 4.33'	1.03	0.13	.090	.008	0.09	18	11	14	
392	(LA SERNA)	C	C71	20° 23.72'	101° 58.11'	0.63	0.05	.050	.006	0.08	7	10	-	

TABLE 1. (CONTINUED --8)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	SLOPE GD	LAVA
393		R	C71	20°23.00′	101°59.05′	0.00	0.00	.000	.000	0.00	5	-	-	
394	COL.DE HERRERA	C	C71	20°19.04′	101°50.66′	0.63	0.25	.017	.003	0.03	4	5	-	
395	COL.DE SAAVEDRA	R	C71	20°21.37′	101°45.07′	0.70	0.45	.006	.001	0.01	4	2	-	
396	(EL GUAYABO)	C	C81	20°11.20′	101°44.51′	0.95	0.10	.065	.017	0.07	-	9	-	
397	(TORRECILLAS)	C	C81	20° 5.04′	101°59.34′	0.55	0.15	.030	.003	0.05	-	9	-	
398	C.CORTES	C	C81	20° 4.90′	101°58.62′	0.70	0.05	.058	.008	0.08	-	10	-	
399	C.DE ENMEDIO	C	C81	20° 4.48′	101°59.08′	0.78	0.13	.100	.019	0.13	-	17	-	
400	C.ACUMBAS	C	C81	20° 4.04′	101°58.62′	0.58	0.08	.065	.007	0.11	-	15	-	
401		C	C81	20° 4.12′	101°58.70′	0.78	0.10	.115	.021	0.15	-	19	-	
402	(ZIQUITARO)	C	C81	20° 4.48′	101°53.54′	0.90	0.35	.040	.013	0.04	-	8	-	
403	(EL MIRADOR)	C	C81	20° 2.47′	101°54.88′	0.85	0.15	.055	.013	0.06	-	9	-	
404		C	C81	20° 0.08′	101°52.31′	0.33	0.08	.045	.002	0.14	-	20	-	
405		C	C81	20° 1.27′	101°50.20′	0.35	0.05	.055	.002	0.16	-	20	-	
406	C.EL HERRERO	C	C81	20° 2.70′	101°50.20′	0.60	0.10	.077	.009	0.13	-	17	-	
407		C	C81	20° 3.69′	101°46.08′	0.75	0.10	.052	.009	0.07	-	9	-	
408	C.EL PUERTITO	C	A11	19°59.48′	101°56.95′	0.88	0.20	.078	.020	0.09	-	13	-	
409	C.SAN MIGUEL	C	A11	19°59.08′	101°52.36′	1.05	0.35	.113	.047	0.11	-	18	-	
410	C.LA CEBADILLA	C	A11	19°59.46′	101°51.18′	1.03	0.28	.090	.034	0.09	-	13	-	
411	C.EL PATACUTIRO	R	A11	19°54.87′	101°57.53′	0.63	0.18	.050	.007	0.08	-	13	-	
412	C.DE ENMEDIO	B	A11	19°56.47′	101°55.19′	0.88	0.15	.085	.021	0.10	-	13	1	
413		C	A11	19°53.71′	101°54.18′	0.38	0.15	.040	.002	0.11	-	19	-	
414		B	A11	19°52.87′	101°51.72′	0.48	0.20	.013	.001	0.03	-	5	-	PLV2
415	C.LOS CUARTERONES	C	A11	19°53.69′	101°51.09′	0.55	0.15	.050	.005	0.09	-	14	-	
416	C.LOS COYOTILLOS	E	A11	19°53.82′	101°50.40′	0.68	0.15	.060	.008	0.09	-	13	1	PLV1
417		B	A11	19°54.03′	101°49.54′	0.83	0.28	.060	.016	0.07	-	12	-	
418	C.EL COPALILLO	B	A11	19°54.53′	101°48.85′	0.75	0.28	.060	.013	0.08	-	14	-	PLV1
419	(LOS LLANOS)	F	A11	19°56.40′	101°51.40′	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
420		F	A11	19°56.50′	101°49.80′	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
421		C	A11	19°59.90′	101°48.18′	0.70	0.18	.045	.008	0.06	-	10	-	
422		C	A11	19°59.86′	101°48.00′	0.70	0.20	.085	.015	0.12	-	19	-	
423	H.LA ALBERCA	M	A11	19°54.36′	101°46.12′	1.25	0.30	.098	.000	0.08	19	12	24	
424		C	A11	19°56.15′	101°42.17′	0.63	0.25	.040	.006	0.06	-	12	-	
425		R	A11	19°55.69′	101°41.25′	0.00	0.00	.000	.000	0.00	-	-	-	
426	C.EL CARACOL	C	A11	19°57.15′	101°41.30′	0.23	0.05	.040	.001	0.17	-	24	-	
427	PRIETO	F	A11	19°53.32′	101°48.75′	0.00	0.00	.000	.000	0.00	-	-	-	HV
428		F	A11	19°53.05′	101°49.37′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
429		F	A11	19°53.25′	101°47.85′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
430	C.EL PLAN DE LOS	R	A11	19°50.90′	101°59.22′	0.70	0.23	.095	.018	0.14	-	22	-	
431	C.DE ENMEDIO	C	A11	19°51.08′	101°56.19′	1.08	0.23	.138	.053	0.13	-	18	5	
432	(EL PUEBLITO)	B	A11	19°49.48′	101°55.40′	1.00	0.38	.185	.075	0.18	33	31	10	PLV3
433	C.LAS CABRAS	B	A11	19°49.56′	101°53.62′	1.18	0.55	.195	.120	0.17	34	32	13	PLV2
434		B	A11	19°50.48′	101°53.19′	0.90	0.30	.058	.018	0.06	-	11	-	PLV2
435		B	A11	19°51.96′	101°52.40′	0.43	0.20	.033	.003	0.08	-	16	-	PLV2
436		F	A11	19°50.90′	101°51.43′	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
437	(LAS VIGAS)	C	A11	19°51.24′	101°50.83′	0.55	0.30	.078	.011	0.14	-	32	-	HV
438	LOS TRES CERRITOS	C	A11	19°51.42′	101°50.23′	0.55	0.23	.090	.011	0.16	-	29	6	
439	LOS TRES CERRITOS	C	A11	19°51.55′	101°49.94′	0.40	0.18	.045	.003	0.11	-	22	3	
440	C.CAPAXTIRO	C	A11	19°50.70′	101°49.78′	0.70	0.30	.100	.021	0.14	31	27	14	HV
441	C.SAN MIGUEL	C	A11	19°48.15′	101°58.61′	1.20	0.28	.220	.107	0.18	33	26	9	PLV4
442	CS.CUATES	C	A11	19°46.78′	101°58.36′	0.70	0.25	.120	.023	0.17	-	28	12	PLV3
443	CS.CUATES	C	A11	19°46.89′	101°57.97′	0.53	0.15	.105	.011	0.20	-	29	9	PLV3
444	(COZUMO)	C	A11	19°45.42′	101°57.13′	0.50	0.15	.090	.008	0.18	-	27	-	PLV4
445	C.LAS POMAS	C	A11	19°47.39′	101°55.96′	1.40	0.20	.180	.107	0.13	-	17	-	PLV2
446	C.LA ARENA	C	A11	19°46.60′	101°54.53′	0.90	0.25	.168	.048	0.19	-	27	12	
447		P	A11	19°46.49′	101°54.17′	0.00	0.00	.000	.000	0.00	-	-	-	
448	CT.DE LEON	B	A11	19°45.80′	101°53.68′	0.83	0.30	.140	.038	0.17	-	28	11	PLV3

TABLE 1. (CONTINUED --9)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	SLOPE GD	LAVA
449		C	A11	19°47.45'	101°54.18'	0.28	0.10	.033	.001	0.12	-	20	-	PLV3
450	(LA VIBORA)	F	A11	19°47.73'	101°54.22'	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
451	C.EL PAJARITO	C	A11	19°45.05'	101°52.34'	1.38	0.43	.195	.137	0.14	-	22	1	
452	C.CUINATO	F	A11	19°47.90'	101°47.33'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
453	(TAREJERO)	B	A11	19°49.18'	101°42.73'	0.45	0.10	.055	.004	0.12	-	17	-	
454	C.HUARACHA	B	A11	19°45.75'	101°41.82'	0.85	0.35	.080	.024	0.09	-	18	-	PLV1
455		B	A21	19°44.40'	101°58.25'	0.45	0.13	.065	.005	0.14	-	22	-	PLV4
456	C.EL CHATIN	C	A21	19°44.24'	101°56.84'	0.80	0.28	.100	.025	0.12	-	21	-	
457	(P.TZITZINDARO)	B	A21	19°44.31'	101°56.41'	1.18	0.50	.140	.082	0.12	-	22	-	
458	(P.ZIPIATIRO)	F	A21	19°44.59'	101°53.29'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2-3
459	H.EL HUANILLO	C	A21	19°41.01'	101°59.07'	0.95	0.35	.190	.068	0.20	34	32	24	
460	C.EL BORREGO	E	A21	19°41.53'	101°56.80'	0.88	0.18	.130	.033	0.15	-	20	1	
461	C.TARUCUN	C	A21	19°41.66'	101°56.41'	0.88	0.30	.125	.037	0.14	-	23	-	
462	C.ANDUJUATA	C	A21	19°41.83'	101°55.72'	0.68	0.15	.100	.015	0.15	30	21	-	
463	C.ZIAPO	C	A21	19°42.00'	101°55.35'	0.70	0.30	.090	.019	0.13	28	24	-	
464	C.CUCUNDICATA	C	A21	19°40.47'	101°56.67'	0.98	0.30	.175	.062	0.18	34	27	5	
465	C.EL AIRE	R	A21	19°40.88'	101°55.24'	0.40	0.08	.050	.003	0.13	-	17	-	
466		C	A21	19°40.93'	101°54.71'	0.45	0.20	.040	.003	0.09	-	18	-	
467	C.GUARIO	C	A21	19°40.96'	101°54.35'	0.65	0.15	.130	.018	0.20	30	27	-	
468	C.EL TIPICATO	C	A21	19°41.20'	101°53.66'	1.10	0.38	.150	.070	0.14	27	21	4	
469	C.PELON	R	A21	19°42.41'	101°49.93'	0.70	0.13	.105	.016	0.15	30	20	-	
470	C.ANGARUEN	C	A21	19°41.46'	101°49.56'	1.00	0.25	.140	.048	0.14	-	20	4	
471	C.EL GUAXAN	D	A21	19°38.06'	101°55.12'	1.60	0.50	.135	.128	0.08	25	14	-	
472	C.LA ARENA	C	A21	19°44.48'	101°47.55'	0.88	0.30	.140	.041	0.16	30	26	7	
473	C.SAN MIGUEL	B	A21	19°44.76'	101°41.98'	0.78	0.15	.100	.020	0.13	25	18	-	
474	C.LA CALABAZA	C	A21	19°44.95'	101°40.83'	0.80	0.15	.150	.031	0.19	33	25	8	PLV4
475	C.LA ALBERCA	C	A21	19°41.50'	101°48.67'	0.83	0.30	.105	.028	0.13	-	22	-	
476		C	A21	19°41.20'	101°47.63'	0.45	0.15	.030	.002	0.07	-	11	-	
477	C.LA CURINDITA	C	A21	19°41.20'	101°46.31'	1.13	0.35	.155	.073	0.14	-	22	2	
478	C.LA POMA	C	A21	19°41.68'	101°45.88'	0.60	0.23	.058	.008	0.10	-	17	-	
479	C.LA PUERCA	C	A21	19°41.60'	101°45.88'	0.70	0.05	.095	.013	0.14	-	16	-	
480	C.CUPAMBA	C	A21	19°42.53'	101°42.68'	0.00	0.00	.000	.000	0.00	-	-	4	
481	C.AXASJUATA	C	A21	19°41.96'	101°41.42'	0.95	0.28	.140	.046	0.15	-	23	4	
482	C.EL MESTENO	C	A21	19°39.60'	101°48.58'	0.85	0.18	.135	.032	0.16	-	22	-	
483		C	A21	19°39.25'	101°46.59'	0.58	0.20	.075	.010	0.13	-	22	-	
484	C.OJO DE AGUA	R	A21	19°38.25'	101°46.47'	0.53	0.15	.060	.006	0.11	-	18	-	
485	C.LA BRONCA	C	A21	19°37.95'	101°46.01'	0.50	0.18	.070	.007	0.14	-	24	-	
486	C.LAS CASILLAS	B	A21	19°37.93'	101°45.72'	0.38	0.08	.045	.002	0.12	-	17	-	
487	C.HUIZATARO	C	A21	19°37.59'	101°45.45'	0.70	0.28	.095	.019	0.14	-	24	-	
488	C.LOS QUEROS	C	A21	19°37.51'	101°44.86'	0.75	0.23	.130	.027	0.17	-	27	-	
489	C.CAUCA	C	A21	19°37.54'	101°44.35'	0.75	0.25	.130	.028	0.17	-	27	4	
490		B	A21	19°34.15'	101°58.51'	0.53	0.18	.060	.006	0.11	-	19	-	
491	C.HUATEQUERI	R	A21	19°35.25'	101°58.19'	0.65	0.23	.060	.010	0.09	-	16	4	
492	L.HUATZUPICHU	R	A21	19°35.47'	101°57.75'	0.28	0.15	.010	.000	0.04	-	9	-	
493	H.URUTZEN	C	A21	19°33.54'	101°57.11'	1.35	0.70	.125	.107	0.09	-	21	16	PLV2
494	C.PACHANGUAJUATA	B	A21	19°35.44'	101°56.44'	0.45	0.15	.070	.005	0.16	-	25	-	
495	C.LA CANTERA	D	A21	19°34.81'	101°55.70'	1.00	0.28	.220	.078	0.22	-	31	-	
496	C.TEJOCOTE ANCHO	C	A21	19°35.61'	101°54.55'	0.85	0.30	.090	.025	0.11	-	18	4	
497	C.HARATZIO	C	A21	19°36.24'	101°54.29'	0.70	0.28	.100	.020	0.14	-	25	4	
498		B	A21	19°35.48'	101°52.32'	0.60	0.12	.075	.009	0.12	-	17	-	
499	C.EL METATE	S	A21	19°32.33'	101°59.55'	0.88	0.20	.150	.039	0.17	-	24	-	HV
500		R	A21	19°30.08'	101°58.39'	0.78	0.30	.080	.020	0.10	-	18	2	
501		C	A21	19°31.03'	101°56.48'	0.93	0.23	.130	.039	0.14	-	20	2	
502	H.LOS DURAZNOS	C	A21	19°30.42'	101°56.41'	0.83	0.38	.120	.036	0.14	-	28	6	
503	CS.CUATES	R	A21	19°30.70'	101°55.39'	0.75	0.13	.145	.026	0.19	-	25	-	
504	CS.CUATES	C	A21	19°30.64'	101°55.14'	0.85	0.28	.140	.038	0.16	-	26	-	

TABLE 1. (CONTINUED --10)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
505		B	A21	19°32.13′	101°50.39′	0.50	0.23	.040	.004	0.08	-	17	-	
506	C.ZIQUITZ	C	A21	19°31.87′	101°49.38′	0.83	0.28	.120	.039	0.13	-	20	-	
507		C	A21	19°31.51′	101°49.21′	0.75	0.43	.070	.020	0.09	-	24	-	PLV2
508		F	A21	19°32.93′	101°49.60′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
509	CHIMILPA	F	A21	19°33.15′	101°48.97′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
510	C.CUIXO	R	A21	19°35.67′	101°48.55′	0.40	0.13	.080	.005	0.20	-	31	-	
511		C	A21	19°37.19′	101°47.03′	0.50	0.13	.080	.007	0.16	-	23	-	
512		C	A21	19°36.65′	101°46.05′	0.45	0.15	.065	.005	0.14	-	23	-	
513		C	A21	19°36.97′	101°45.80′	0.53	0.05	.090	.007	0.17	-	21	-	
514		B	A21	19°36.71′	101°43.39′	0.50	0.18	.050	.005	0.10	-	17	-	
515		B	A21	19°36.84′	101°42.61′	0.50	0.25	.040	.005	0.08	-	18	-	
516	C.ZIRA	B	A21	19°37.09′	101°40.98′	0.83	0.35	.115	.033	0.14	29	26	-	
517	C.LA TACUANA	R	A21	19°36.21′	101°40.88′	0.65	0.28	.038	.007	0.06	-	12	2	
518		C	A21	19°32.36′	101°48.22′	0.80	0.38	.028	.008	0.03	-	8	-	
519		C	A21	19°31.29′	101°46.64′	0.73	0.10	.065	.010	0.09	-	12	-	
520	(SAN JUAN TUMBIO)	F	A21	19°30.84′	101°47.57′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
521	(SAN JUAN TUMBIO)	F	A21	19°30.19′	101°47.02′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
522		C	A21	19°31.06′	101°44.76′	0.45	0.10	.055	.004	0.12	-	17	-	
523	C.CHENDANAS	C	A21	19°31.56′	101°43.89′	0.58	0.15	.120	.014	0.21	-	29	12	PLV4
524	C.LA TAZA	C	A21	19°31.55′	101°43.47′	0.70	0.18	.170	.029	0.24	34	33	20	HV
525		R	A21	19°31.07′	101°43.44′	0.53	0.10	.050	.005	0.09	-	13	-	
526	(CHARAHUEN)	E	A21	19°31.75′	101°42.50′	0.78	0.10	.105	.019	0.13	-	17	2	
527		E	A21	19°32.01′	101°42.35′	0.65	0.15	.095	.013	0.15	27	21	1	
528		B	A21	19°30.76′	101°42.40′	0.43	0.15	.045	.003	0.10	25	18	-	
529	C.EL AGUA	B	A31	19°29.92′	101°59.00′	1.05	0.48	.150	.072	0.14	-	28	6	
530	C.CHARACATAN	C	A31	19°29.02′	101°51.55′	0.95	0.28	.080	.026	0.08	30	13	-	
531	C.ZIAPO	B	A31	19°28.97′	101°51.13′	0.85	0.55	.045	.018	0.05	-	17	-	
532	C.PARANGUITIRO	C	A31	19°27.55′	101°52.09′	0.60	0.18	.110	.014	0.18	33	28	7	
533	H.EL TICUICHI	C	A31	19°29.85′	101°48.80′	0.90	0.38	.140	.048	0.16	30	28	5	
534	C.JORNAJARRICUARO	C	A31	19°26.15′	101°53.70′	0.90	0.30	.100	.031	0.11	-	18	-	
535	C.ZIRCUATA	C	A31	19°26.02′	101°53.01′	1.05	0.20	.170	.060	0.16	-	22	-	
536	C.EL SIRASPEN	B	A31	19°24.44′	101°56.10′	1.20	0.35	.120	.062	0.10	21	16	4	
537	C.LA ARENA	B	A31	19°22.44′	101°55.82′	0.90	0.35	.100	.033	0.11	22	20	3	
538		B	A31	19°22.38′	101°52.03′	1.13	0.45	.100	.052	0.09	-	16	-	
539	C.LAS CORTINAS	S	A31	19°24.97′	101°49.81′	1.35	0.63	.180	.145	0.13	-	27	-	PLV2
540		B	A31	19°28.69′	101°45.42′	0.45	0.25	.035	.003	0.08	-	19	-	
541		B	A31	19°29.91′	101°44.81′	0.75	0.40	.050	.013	0.07	-	16	-	
542	C.EL BORREGO	B	A31	19°28.66′	101°42.18′	0.73	0.30	.120	.026	0.16	-	29	-	PLV2
543	C.LA MAGUEYERA	C	A31	19°24.39′	101°46.06′	1.15	0.50	.165	.093	0.14	-	27	-	PLV3
544	(JUJUCATO)	P	A31	19°25.05′	101°47.47′	0.70	0.30	.100	.021	0.14	-	27	-	
545		P	A31	19°24.78′	101°47.64′	0.55	0.25	.080	.011	0.15	-	28	-	PLV2
546	C.EL PUERTO	B	A31	19°24.15′	101°45.44′	1.03	0.45	.135	.061	0.13	-	25	-	
547	C.SAN LORENZO	R	A31	19°24.72′	101°43.98′	0.90	0.30	.075	.023	0.08	-	14	1	
548		E	A31	19°25.35′	101°41.69′	0.83	0.23	.110	.027	0.13	-	20	2	
549	C.LAS PALAS	R	A31	19°25.08′	101°41.28′	0.58	0.13	.045	.005	0.08	-	11	-	
550	C.JUAN CABEZA	C	A31	19°24.55′	101°40.19′	0.88	0.28	.100	.029	0.11	25	18	-	
551	C.TIQUICHE	R	A31	19°22.49′	101°46.02′	1.05	0.25	.095	.036	0.09	-	13	2	
552	C.LA MAGUEYERA	B	A31	19°22.95′	101°44.73′	0.75	0.30	.100	.023	0.13	-	24	-	PLV1
553	C.LA GUERA	R	A31	19°23.52′	101°41.92′	0.48	0.15	.025	.002	0.05	-	9	-	
554	EL CAJETE CHICO	C	A31	19°22.66′	101°41.78′	0.70	0.28	.060	.012	0.09	-	16	-	
555		C	A31	19°22.55′	101°41.58′	0.63	0.30	.020	.004	0.03	-	7	-	
556	EL CAJETE GRANDE	C	A31	19°22.41′	101°41.29′	0.65	0.28	.080	.014	0.12	-	23	-	
557	C.PALMILLAS	C	A31	19°19.12′	101°59.08′	0.98	0.05	.135	.036	0.14	-	16	-	
558	(TAJUEJO)	C	A31	19°19.38′	101°57.97′	0.55	0.15	.085	.010	0.17	-	25	-	PLV2
559		R	A31	19°19.66′	101°56.49′	0.70	0.25	.040	.008	0.06	-	10	-	
560	CS.POTRERILLOS	R	A31	19°19.63′	101°55.82′	0.85	0.20	.105	.026	0.12	-	18	-	

TABLE 1. (CONTINUED --11)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
561	C.LA CRUZ	B	A31	19° 19.86'	101° 54.34'	1.30	0.13	.135	.066	0.10	-	13	-	
562		B	A31	19° 19.50'	101° 51.63'	0.80	0.28	.100	.025	0.12	-	21	9	
563	M.CHINA	F	A31	19° 16.58'	101° 57.96'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
564	C.PELON	B	A31	19° 17.87'	101° 54.79'	0.68	0.18	.085	.014	0.12	28	19	11	PLV2
565	C.LA PURISIMA	F	A31	19° 18.02'	101° 54.29'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
566	C.LOS PUERCOS	F	A31	19° 15.87'	101° 54.34'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
567	C.PELON	B	A31	19° 18.06'	101° 52.71'	0.48	0.18	.035	.003	0.07	21	13	6	PLV1
568	M.CHUPADEROS	F	A31	19° 17.15'	101° 53.06'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
569	C.LA CANTERA	F	A31	19° 16.41'	101° 53.49'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
570	C.TOMENDAN	F	A31	19° 18.48'	101° 51.17'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
571	C.EL SIMPACHE	F	A31	19° 16.17'	101° 51.94'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
572		C	A31	19° 15.33'	101° 49.77'	0.45	0.15	.050	.004	0.11	-	18	-	
573		C	A31	19° 20.81'	101° 47.38'	0.90	0.30	.125	.038	0.14	-	23	-	
574	C.PELON	B	A31	19° 21.58'	101° 45.39'	1.15	0.20	.130	.054	0.11	-	15	-	
575	C.LA CRUZ	B	A31	19° 21.26'	101° 41.95'	0.40	0.18	.040	.003	0.10	-	20	-	
576	C.CASIO	B	A31	19° 20.85'	101° 40.26'	0.88	0.35	.060	.019	0.07	-	13	-	
577	C.TIO JUAN	C	A31	19° 20.26'	101° 40.29'	0.68	0.28	.060	.011	0.09	-	17	-	
578	C.LA CHARANDA	C	A31	19° 19.72'	101° 44.29'	0.45	0.13	.040	.003	0.09	-	14	-	
579	C.MIRAFLORES	C	A31	19° 19.15'	101° 44.81'	0.75	0.25	.095	.020	0.13	-	21	2	
580	(C.TIPITARILLO)	F	A31	19° 16.41'	101° 47.20'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2-3
581		F	A31	19° 16.06'	101° 47.09'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
582	(B.SECA)	F	A31	19° 15.63'	101° 47.34'	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
583		C	A31	19° 16.90'	101° 46.89'	0.73	0.30	.120	.026	0.16	-	29	-	
584		C	A31	19° 17.03'	101° 46.22'	0.33	0.15	.045	.002	0.14	-	27	-	
585		R	A31	19° 17.28'	101° 45.90'	0.40	0.18	.040	.003	0.10	-	20	-	
586	C.TINGUINDIN	C	A31	19° 16.31'	101° 46.33'	0.78	0.30	.105	.026	0.13	-	24	1	PLV1
587	C.COLORADO	C	A31	19° 16.25'	101° 45.96'	0.60	0.18	.080	.010	0.13	-	21	1	
588		C	A31	19° 17.02'	101° 45.24'	0.20	0.10	.020	.000	0.10	-	22	-	
589		C	A31	19° 17.11'	101° 45.04'	0.35	0.15	.032	.002	0.09	-	18	-	
590	C.PELON	B	A31	19° 17.20'	101° 44.74'	0.45	0.20	.035	.003	0.08	-	16	-	PLV2-3
591	C.MANDAJAN	B	A31	19° 17.67'	101° 44.67'	0.80	0.40	.080	.023	0.10	-	22	-	PLV1
592	C.TOLLONGIO	C	A31	19° 18.09'	101° 44.27'	0.78	0.35	.085	.022	0.11	-	22	-	
593	C.LA LAJA	C	A31	19° 15.81'	101° 44.60'	0.55	0.30	.060	.009	0.11	-	26	-	PLV1
594	C.LAS GALLINAS	C	A31	19° 15.83'	101° 43.87'	1.10	0.25	.155	.063	0.14	-	20	-	
595	C.LA BALSA	B	A31	19° 17.30'	101° 41.58'	1.05	0.45	.070	.033	0.07	-	13	-	
596	C.EL CAJETE	C	A31	19° 17.22'	101° 40.95'	0.65	0.23	.065	.011	0.10	-	17	-	
597	C.EL MEMBRILLO	C	A31	19° 18.33'	101° 40.20'	1.45	0.45	.175	.136	0.12	-	19	2	
598		B	A31	19° 16.41'	101° 40.14'	1.13	0.50	.070	.038	0.06	-	13	-	
599	C.EL VARILLO	F	A41	19° 14.16'	101° 57.29'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
600	C.LOS HORNOS	C	A41	19° 14.08'	101° 54.18'	1.80	0.13	.280	.256	0.16	-	19	4	
601	C.LAS CUEVAS	E	A41	19° 14.05'	101° 53.35'	1.88	0.45	.270	.324	0.14	34	21	4	
602		C	A41	19° 8.89'	101° 48.99'	0.70	0.38	.065	.013	0.08	-	19	-	
603	M.LOS ARADOS	C	A41	19° 7.70'	101° 55.07'	0.83	0.15	.090	.020	0.11	-	15	5	
604	C.PELON	B	A41	19° 11.34'	101° 48.66'	0.85	0.23	.130	.033	0.15	-	23	4	PLV2
605	C.LA ESTANCIA	C	A41	19° 11.86'	101° 48.46'	0.83	0.38	.145	.044	0.17	-	33	2	PLV2
606	C.LA LAGUNILLA	E	A41	19° 12.60'	101° 47.05'	0.90	0.30	.120	.037	0.13	-	22	4	PLV2
607	C.CUIRIO	C	A41	19° 11.69'	101° 45.67'	1.10	0.25	.170	.069	0.15	-	22	5	
608	C.CANTERA	C	A41	19° 10.85'	101° 45.67'	0.83	0.18	.100	.023	0.12	-	17	12	
609	(LOS NEGROS)	F	A41	19° 10.30'	101° 46.37'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
610	C.EL COLORADO	C	A41	19° 13.48'	101° 43.30'	1.03	0.28	.095	.036	0.09	-	14	2	PLV1
611	C.EL BOSQUE	R	A41	19° 14.01'	101° 42.55'	1.30	0.18	.115	.059	0.09	-	12	-	
612	C.EL CASTILLO	C	A41	19° 13.13'	101° 41.00'	0.70	0.28	.045	.008	0.06	-	12	-	PLV1
613	C.LA LEONA	B	A41	19° 8.95'	101° 44.38'	1.00	0.25	.110	.038	0.11	23	16	-	PLV2
614	(M.EL ALTO)	D	A41	19° 8.58'	101° 44.83'	1.05	0.20	.090	.032	0.09	-	12	-	PLV1
615	C.LOS DIAZ	C	A41	19° 7.69'	101° 45.54'	1.10	0.24	.160	.072	0.16	-	23	3	PLV1
616	C.TOCORIO	C	A41	19° 8.48'	101° 41.21'	0.83	0.10	.140	.029	0.17	-	21	2	PLV2

TABLE 1. (CONTINUED --12)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	SLOPE GD	LAVA
617	C.LUCAS	F	A41	19° 8.67′	101°40.69′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
618	C.LA COCINA	C	A41	19° 5.70′	101°58.65′	1.08	0.25	.140	.055	0.13	-	19	15	
619	C.LA ZARDA	C	A41	19° 4.22′	101°56.73′	0.68	0.05	.160	.021	0.24	-	27	11	PLV2
620	M.LA PALMA	F	A41	19° 2.96′	101°57.57′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2-3
621	C.BLANCO	C	A41	19° 2.01′	101°59.69′	0.98	0.30	.105	.037	0.11	27	17	18	PLV2
622	C.CAMPANA	R	A41	19° 1.02′	101°54.73′	0.68	0.25	.085	.012	0.10	-	17	-	
623	C.BLANCO	C	A41	19° 2.44′	101°53.28′	1.50	0.23	.235	.163	0.16	-	20	3	PLV2
624	C.EL VARAL	C	A41	19° 6.56′	101°46.13′	1.05	0.20	.185	.066	0.18	-	24	6	
625	(M.RANCHO NUEVO)	F	A41	19° 4.17′	101°44.48′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
626	C.EL TOMATILLO	D	A41	19° 4.48′	101°43.77′	0.55	0.13	.140	.014	0.25	-	34	-	PLV2-3
627	C.LA FUNCION	B	A41	19° 5.08′	101°43.46′	0.55	0.20	.070	.008	0.13	-	22	-	
628	C.LA CHACHALACA	C	A41	19° 5.08′	101°42.83′	0.73	0.05	.100	.015	0.14	-	16	-	
629	C.EL COMAL	C	A41	19° 5.56′	101°42.69′	0.78	0.20	.125	.026	0.16	-	23	-	
630	C.EL PINALITO F.	R	A41	19° 2.77′	101°47.82′	0.75	0.13	.100	.018	0.13	31	18	8	
631	C.PELON	B	A41	19° 0.71′	101°47.11′	1.10	0.20	.190	.073	0.17	29	23	-	PLV2-3
632	C.SAN ISIDRO	B	A41	19° 2.82′	101°40.17′	0.95	0.33	.095	.033	0.10	-	17	-	PLV2
633	C.LA CHARANDA	B	A41	19° 4.22′	101°40.32′	0.45	0.20	.045	.004	0.10	-	20	-	PLV1
634	V.EL JORULLO	C	A51	18°58.31′	101°43.05′	1.45	0.42	.290	.219	0.20	34	29	24	HV
635	VC.DEL NORTE	C	A51	18°59.05′	101°42.66′	0.60	0.15	.140	.017	0.23	-	32	12	
636	(BEJUQUILLO)	B	A51	18°59.97′	101°42.18′	0.45	0.15	.080	.006	0.18	-	28	-	PLV2-3
637	VC.DE ENMEDIO	C	A51	18°57.89′	101°43.51′	0.40	0.12	.055	.003	0.14	-	21	-	
638	VC.DEL SUR	C	A51	18°57.76′	101°43.66′	0.43	0.18	.080	.006	0.19	33	33	20	
639		B	A51	18°58.70′	101°45.09′	0.33	0.13	.050	.002	0.15	30	27	-	
640		R	A51	18°58.38′	101°45.00′	0.20	0.02	.040	.000	0.20	30	24	5	
641	C.LA PILITA	C	A51	18°56.81′	101°43.57′	1.03	0.15	.170	.055	0.17	28	21	7	PLV2-3
642	M.AGUA CALIENTE	C	A51	18°56.22′	101°50.26′	0.65	0.13	.085	.012	0.13	34	18	-	
643		C	C62	20°43.40′	101°35.43′	0.85	0.25	.040	.010	0.05	24	8	-	
644	(S.F.DE HORTA)	R	C62	20°36.94′	101°31.14′	1.10	0.30	.015	.006	0.01	3	2	-	
645	C.EL JANAMO	C	C62	20°34.17′	101°27.27′	1.03	0.15	.065	.021	0.06	15	8	-	
646		D	C72	20°29.19′	101°34.40′	1.10	0.13	.045	.016	0.04	-	5	-	
647	C.HUIZATARO	D	C72	20°28.89′	101°33.95′	1.20	0.10	.055	.023	0.05	-	6	-	
648	(SAN JORGO)	R	C72	20°27.91′	101°31.96′	0.68	0.20	.020	.003	0.03	7	5	-	
649	CS.PRIETOS	D	C72	20°26.47′	101°28.44′	0.93	0.15	.027	.007	0.03	-	4	-	
650	CS.PRIETOS	D	C72	20°26.08′	101°28.24′	1.10	0.08	.055	.019	0.05	-	6	-	
651	(OTATES)	C	C72	20°24.22′	101°28.39′	0.80	0.18	.030	.006	0.04	-	6	-	
652	CS.LA LOBERITA	B	C72	20°22.85′	101°27.03′	1.50	0.85	.060	.067	0.04	-	10	-	
653	(JARRILLAS)	M	C72	20°22.82′	101°29.37′	0.00	1.83	.000	.000	0.00	-	-	-	
654	C.TIOLINO	C	C72	20°19.48′	101°26.97′	1.23	0.05	.085	.035	0.07	-	8	-	
655		B	C72	20°19.59′	101°25.91′	0.50	0.13	.050	.004	0.10	-	15	-	
656	(LA BARQUILLA)	D	C72	20°19.40′	101°25.73′	0.65	0.15	.053	.008	0.08	-	12	-	
657	C.LAS PENAS	C	C72	20°20.80′	101°23.01′	1.05	0.48	.080	.038	0.08	-	16	-	
658		C	C72	20°20.29′	101°23.21′	0.43	0.13	.050	.003	0.12	-	18	-	
659	C.LAS TORRES	C	C72	20°18.53′	101°23.63′	0.90	0.18	.145	.038	0.16	-	22	-	
660	C.COLORADO	C	C72	20°17.69′	101°23.92′	0.63	0.08	.055	.007	0.09	-	11	-	
661	C.BLANCO	C	C72	20°15.67′	101°23.90′	0.38	0.08	.037	.002	0.10	-	14	-	
662		C	C72	20°16.90′	101°20.68′	1.10	0.30	.080	.034	0.07	-	11	-	
663		C	C82	20°13.02′	101°29.28′	1.05	0.33	.055	.022	0.05	-	9	-	
664	C.EL LOBO	C	C82	20°10.05′	101°29.68′	1.13	0.30	.055	.025	0.05	-	8	-	
665		C	C82	20° 7.50′	101°33.80′	0.65	0.15	.025	.004	0.04	-	6	-	
666		C	C82	20° 7.70′	101°33.49′	0.65	0.18	.025	.004	0.04	-	6	-	
667		C	C82	20° 7.83′	101°29.31′	0.58	0.10	.040	.004	0.07	-	9	-	
668		C	C82	20°12.55′	101°27.65′	0.98	0.28	.080	.028	0.08	-	13	-	
669	C.LAS MANCUERNAS	C	C82	20°13.37′	101°26.83′	1.15	0.23	.110	.047	0.10	-	13	-	
670	C.VIEJO	E	C82	20°13.48′	101°26.08′	1.58	0.63	.180	.183	0.11	-	21	-	
671	C.POTERO VIEJO	C	C82	20°12.92′	101°26.20′	0.75	0.08	.075	.012	0.10	-	13	-	
672	C.OLOTES	C	C82	20°14.05′	101°24.32′	1.70	0.45	.220	.222	0.13	-	19	-	

TABLE 1. (CONTINUED --13)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	SLOPE GD	LAVA
673	C.LAS CANDELAS	B	C82	20° 14.92'	101° 23.83'	1.25	0.55	.065	.043	0.05	-	11	-	
674	C.REYECITO	C	C82	20° 12.09'	101° 25.19'	1.33	0.13	.130	.067	0.10	-	12	-	
675	C.REY GRANDE	C	C82	20° 12.20'	101° 24.31'	1.55	0.23	.185	.136	0.12	-	16	-	
676	C.REY MELCOR	C	C82	20° 12.69'	101° 23.83'	1.18	0.15	.125	.052	0.11	-	14	-	
677	(EL ARMADILLO)	C	C82	20° 8.13'	101° 28.13'	0.85	0.18	.013	.003	0.02	-	2	-	
678	C.PRIETO	C	C82	20° 9.73'	101° 25.33'	0.73	0.23	.040	.008	0.05	-	9	-	
679		C	C82	20° 6.71'	101° 36.08'	0.85	0.18	.090	.021	0.11	-	15	-	
680		C	C82	20° 6.36'	101° 35.65'	0.58	0.13	.040	.004	0.07	-	10	-	
681	C.LA CRUZ	C	C82	20° 6.20'	101° 34.54'	0.90	0.23	.060	.017	0.07	19	10	-	
682		C	C82	20° 6.49'	101° 34.35'	0.65	0.15	.050	.007	0.08	-	11	-	
683		C	C82	20° 4.38'	101° 39.50'	0.65	0.28	.055	.010	0.08	-	17	-	
684	C.BORREGAS	C	C82	20° 3.13'	101° 37.69'	0.28	0.20	.010	.000	0.04	-	14	-	
685		C	C82	20° 2.58'	101° 37.98'	0.48	0.05	.035	.002	0.07	-	8	-	
686	C.LOS PUERCOS	C	C82	20° 4.54'	101° 27.32'	0.65	0.05	.055	.007	0.08	-	10	-	
687	C.GUARACO	C	C82	20° 5.72'	101° 22.36'	0.85	0.13	.135	.030	0.16	-	21	-	
688		C	C82	20° 5.49'	101° 21.10'	0.50	0.08	.065	.005	0.13	-	17	-	
689	C.COPETIRO	C	A12	19° 55.85'	101° 34.51'	0.80	0.05	.038	.007	0.05	-	6	-	
690	C.EL MUERTO	B	A12	19° 53.27'	101° 27.61'	0.50	0.20	.030	.003	0.06	18	11	-	
691	(HACIENDA VIEJA)	F	A12	19° 52.30'	101° 27.41'	0.00	0.00	.000	.000	0.00	-	-	-	
692	(TENDEPARACUA)	F	A12	19° 53.65'	101° 26.30'	0.00	0.00	.000	.000	0.00	-	-	-	
693	C.LA BATEA	B	A12	19° 52.78'	101° 22.17'	0.50	0.20	.045	.005	0.09	27	17	-	
694	C.ZUNIGA	C	A12	19° 46.34'	101° 35.46'	0.55	0.15	.050	.005	0.09	-	14	-	
695	C.EL MOLCAJETE	C	A12	19° 46.49'	101° 31.75'	0.88	0.35	.135	.043	0.15	-	27	4	
696	C.PELON	C	A12	19° 51.54'	101° 25.75'	0.88	0.18	.125	.032	0.14	-	20	-	
697	C.PRIETO	C	A12	19° 51.28'	101° 25.55'	0.28	0.05	.020	.000	0.07	-	10	-	
698	C.BLANCO	C	A12	19° 51.84'	101° 24.71'	0.38	0.05	.030	.001	0.08	18	10	-	
699	C.GUAJATE	B	A12	19° 50.70'	101° 26.22'	0.43	0.13	.055	.004	0.13	-	20	-	
700	C.PELON	C	A12	19° 47.66'	101° 27.20'	0.48	0.15	.040	.003	0.08	16	14	-	PLV1
701	H.LA ALBERCA	M	A12	19° 48.39'	101° 27.24'	0.00	0.95	.080	.000	0.00	14	-	-	
702	C.EL REPARO	B	A12	19° 48.31'	101° 23.10'	0.68	0.15	.100	.015	0.15	28	21	1	PLV2
703		B	A12	19° 45.92'	101° 26.95'	1.00	0.43	.100	.042	0.10	-	19	-	PLV2-3
704	C.GRANDE	B	A12	19° 45.68'	101° 24.68'	0.98	0.40	.130	.051	0.13	29	24	5	
705	V.MAZCUTA	C	A22	19° 44.89'	101° 39.76'	0.78	0.33	.110	.028	0.14	33	26	9	PLV4
706		F	A22	19° 43.21'	101° 35.88'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
707		B	A22	19° 43.43'	101° 35.22'	1.10	0.55	.080	.044	0.07	-	16	-	
708		F	A22	19° 43.28'	101° 34.91'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
709	V.GACHO	C	A22	19° 43.53'	101° 34.34'	0.73	0.23	.090	.018	0.12	-	20	2	
710		C	A22	19° 43.91'	101° 33.61'	0.70	0.33	.055	.012	0.08	-	17	-	PLV2
711		F	A22	19° 43.99'	101° 33.34'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
712	C.LA ACUMARA	C	A22	19° 42.69'	101° 34.51'	0.58	0.20	.065	.008	0.11	-	19	1	
713	C.PEMBA	C	A22	19° 42.64'	101° 33.97'	0.63	0.10	.100	.012	0.16	-	21	2	
714	V.LA ALBERQUILLA	C	A22	19° 44.78'	101° 30.46'	0.80	0.28	.100	.028	0.12	-	21	2	PLV2-3
715	V.HUECO	C	A22	19° 43.18'	101° 29.54'	0.93	0.35	.145	.050	0.16	31	27	12	PLV4
716	C.CHINO	D	A22	19° 42.21'	101° 29.71'	1.20	0.10	.330	.136	0.27	-	31	-	PLV1
717	C.SANDIO	C	A22	19° 40.98'	101° 36.93'	0.50	0.10	.060	.006	0.14	-	19	-	
718	C.HUAYAMO	B	A22	19° 41.12'	101° 33.97'	0.60	0.23	.090	.013	0.15	-	26	-	PLV1
719	C.LAS ROSAS	B	A22	19° 41.47'	101° 31.41'	0.60	0.20	.075	.010	0.12	-	21	-	
720		B	A22	19° 38.73'	101° 30.55'	0.55	0.15	.030	.003	0.05	-	9	-	
721	C.EL ORVIDO	E	A22	19° 37.94'	101° 29.25'	1.00	0.15	.150	.046	0.15	-	19	3	
722		B	A22	19° 43.75'	101° 27.70'	0.68	0.25	.050	.009	0.07	-	13	-	
723	V.SAJO	B	A22	19° 44.95'	101° 26.24'	1.23	0.50	.115	.072	0.09	29	17	-	PLV2
724		C	A22	19° 44.78'	101° 25.91'	0.40	0.20	.050	.004	0.13	-	27	-	
725	V.LA MINA	B	A22	19° 42.75'	101° 26.03'	1.15	0.35	.190	.092	0.17	34	25	17	PLV4
726	(HOYITAS)	C	A22	19° 43.15'	101° 23.45'	1.00	0.40	.120	.049	0.12	28	22	4	
727	V.EL MALACATE	B	A22	19° 44.05'	101° 22.04'	0.65	0.35	.068	.014	0.10	33	24	5	PLV2-3
728	V.EL MOLCAJETE	C	A22	19° 44.76'	101° 21.70'	0.73	0.40	.050	.013	0.07	33	17	-	PLV3

TABLE 1. (CONTINUED --14)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
729	V.EL MELON	B	A22	19°40.31'	101°25.93'	0.88	0.38	.135	.044	0.15	33	28	16	PLV4
730	(CAPULA)	F	A22	19°41.26'	101°23.21'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
731		F	A22	19°41.58'	101°22.67'	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
732	(TRICUARAN)	F	A22	19°42.33'	101°22.32'	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
733		C	A22	19°41.01'	101°21.08'	1.20	0.33	.130	.066	0.11	23	17	2	
734		B	A22	19°41.42'	101°20.52'	0.85	0.15	.100	.023	0.12	27	16	-	
735		B	A22	19°37.92'	101°24.20'	0.65	0.25	.060	.010	0.09	-	17	-	
736	C.LA ARENA	B	A22	19°38.76'	101°21.57'	0.60	0.20	.083	.011	0.14	-	23	-	
737	C.CATIO	B	A22	19°35.33'	101°34.84'	0.68	0.20	.090	.015	0.13	-	21	2	
738	C.COLORADO	B	A22	19°36.02'	101°34.57'	0.60	0.20	.060	.008	0.10	23	17	-	
739	(SANTA CRUZ)	C	A22	19°36.87'	101°31.65'	0.63	0.28	.060	.010	0.10	-	19	-	
740		B	A22	19°37.33'	101°28.92'	0.38	0.15	.030	.002	0.08	-	15	-	
741	V.EL ESTRIBO	C	A22	19°30.64'	101°38.48'	1.20	0.50	.105	.063	0.09	27	17	6	
742	C.BLANCO	B	A22	19°31.67'	101°35.98'	1.23	0.50	.095	.059	0.08	28	15	4	
743	C.LOS LOBOS	B	A22	19°30.08'	101°32.73'	1.25	0.40	.180	.105	0.14	-	23	-	PLV3
744	C.COLORADO	B	A22	19°33.88'	101°29.36'	0.70	0.13	.055	.009	0.08	14	11	-	
745		B	A22	19°37.33'	101°28.48'	0.50	0.25	.025	.003	0.05	-	11	2	
746	V.RANCHO SECO	C	A22	19°37.06'	101°28.32'	0.83	0.23	.135	.033	0.16	36	24	7	PLV4
747	(LAS PILAS)	R	A22	19°35.53'	101°26.26'	0.68	0.25	.040	.007	0.06	18	11	-	
748	L.EL MOLCAJETE	R	A22	19°33.26'	101°27.89'	1.43	0.50	.110	.087	0.08	-	13	1	
749	CT.PRIETO	R	A22	19°33.28'	101°28.30'	0.90	0.33	.060	.019	0.07	-	12	-	
750		B	A22	19°32.88'	101°28.85'	1.48	0.35	.125	.093	0.08	-	12	1	
751		B	A22	19°33.99'	101°27.47'	1.63	0.25	.088	.072	0.05	-	7	3	
752	(LAGUNILLAS)	C	A22	19°32.94'	101°24.89'	0.83	0.38	.050	.015	0.06	-	13	-	
753	L.LA ROSA DE S.J.	C	A22	19°31.52'	101°26.12'	1.58	0.68	.095	.100	0.06	-	12	-	
754	V.SAN ISIDRO	B	A22	19°31.09'	101°25.83'	0.70	0.20	.105	.018	0.15	31	23	-	PLV2
755	C.LA YERBABUENA	D	A22	19°30.92'	101°24.34'	0.93	0.18	.120	.033	0.13	-	18	-	
756		F	A32	19°29.98'	101°38.49'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
757		P	A32	19°29.95'	101°38.69'	0.50	0.25	.040	.005	0.08	-	18	-	
758	C.LA CANTERA	B	A32	19°26.55'	101°39.94'	1.10	0.20	.225	.087	0.20	33	27	-	
759	M.LOS LLANITOS	F	A32	19°26.66'	101°38.54'	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
760	C.COLORADO	C	A32	19°27.75'	101°39.08'	0.73	0.25	.100	.020	0.14	-	23	-	PLV4
761		C	A32	19°27.65'	101°38.48'	0.70	0.33	.080	.017	0.11	-	23	-	PLV4
762	M.LA ARENA	F	A32	19°26.78'	101°38.25'	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
763		F	A32	19°28.15'	101°37.31'	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
764	C.EL TECOLOTE	C	A32	19°27.75'	101°35.79'	1.20	0.43	.095	.053	0.08	27	14	-	
765	C.LA CANTERA	B	A32	19°28.75'	101°34.93'	0.68	0.35	.060	.013	0.09	-	20	-	PLV1
766	C.LA PANHUATA	B	A32	19°28.51'	101°29.62'	0.70	0.18	.100	.017	0.14	-	21	-	
767	(LA MESA)	C	A32	19°27.17'	101°29.18'	0.85	0.40	.090	.029	0.11	-	22	-	PLV2
768	(CASAS BLANCAS)	R	A32	19°25.22'	101°36.04'	0.88	0.33	.060	.018	0.07	18	12	-	
769	C.EL JAZMIN	B	A32	19°25.36'	101°35.41'	1.08	0.35	.095	.041	0.09	25	15	2	
770	C.SANTA JUATA	C	A32	19°25.44'	101°33.89'	0.95	0.23	.140	.043	0.15	-	21	-	
771	C.LUCAS	B	A32	19°22.54'	101°39.13'	1.13	0.15	.140	.054	0.12	-	16	-	
772		B	A32	19°22.36'	101°38.60'	0.73	0.30	.020	.004	0.03	-	5	-	
773	C.URAPIO	R	A32	19°22.70'	101°33.95'	0.55	0.20	.060	.007	0.11	-	19	2	PLV1
774	C.EL TECOLOTE	B	A32	19°23.81'	101°29.59'	0.73	0.30	.035	.008	0.05	26	9	-	
775	C.LAS ERAS	B	A32	19°23.19'	101°28.98'	0.93	0.28	.085	.027	0.09	-	15	-	
776		R	A32	19°22.70'	101°29.08'	0.48	0.13	.040	.003	0.08	-	13	-	
777	C.EL JANAMO	B	A32	19°25.17'	101°25.45'	1.15	0.43	.110	.058	0.10	-	17	-	
778	C.LA ALBERCA	B	A32	19°25.41'	101°23.73'	0.90	0.25	.140	.040	0.16	-	23	-	
779	C.TACUACHE	B	A32	19°24.78'	101°23.15'	1.23	0.43	.175	.102	0.14	-	24	-	
780	(LA PENITA)	B	A32	19°25.60'	101°21.00'	0.60	0.30	.040	.007	0.07	-	15	-	
781	C.EL CAJETE	C	A32	19°22.34'	101°36.56'	0.65	0.28	.090	.016	0.14	-	26	-	PLV3
782	C.EL PUERTO	C	A32	19°22.30'	101°36.13'	0.53	0.15	.100	.010	0.19	-	28	-	PLV3
783	C.LA DORA	C	A32	19°22.22'	101°35.53'	0.68	0.30	.085	.017	0.12	-	24	-	PLV2
784	C.CUITZITAN	R	A32	19°21.46'	101°38.28'	1.85	0.68	.190	.256	0.10	-	18	-	

TABLE 1. (CONTINUED --15)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
785	(EL QUERENDAL)	B	A32	19°20.97'	101°36.90'	0.65	0.33	.050	.010	0.08	-	17	-	
786	(TURIRA)	B	A32	19°21.50'	101°36.27'	0.85	0.35	.015	.004	0.02	-	3	-	
787	M.LOS CABALLOS	F	A32	19°20.48'	101°36.70'	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
788	C.EL CANTON	C	A32	19°21.65'	101°33.48'	0.93	0.20	.120	.034	0.13	-	18	-	PLV2
789	C.EL MORILLO	C	A32	19°21.78'	101°32.88'	0.85	0.20	.100	.024	0.12	-	17	-	PLV2
790	M.EL CANTARO	C	A32	19°20.62'	101°33.86'	0.93	0.35	.095	.033	0.10	-	18	2	
791	C.EL OYAMEL	C	A32	19°21.12'	101°32.80'	1.23	0.43	.220	.128	0.18	-	29	-	PLV3
792	C.LAS CRUCES	C	A32	19°21.11'	101°31.11'	0.93	0.35	.090	.031	0.10	-	17	-	
793	C.EL CAJETE	R	A32	19°19.88'	101°38.24'	1.40	0.55	.085	.067	0.06	-	11	-	
794	C.EL MORRO	B	A32	19°19.64'	101°36.13'	0.83	0.25	.105	.026	0.13	-	20	-	
795		D	A32	19°20.58'	101°35.75'	0.58	0.20	.060	.008	0.10	-	18	-	
796		C	A32	19°20.46'	101°35.14'	0.55	0.23	.060	.008	0.11	-	21	-	
797	C.LAS CABRAS	C	A32	19°19.86'	101°34.76'	0.60	0.25	.070	.010	0.12	-	22	-	PLV2
798	C.PUNZUMARAN	B	A32	19°19.21'	101°37.81'	0.73	0.15	.075	.013	0.10	-	15	-	
799	C.LA CEBADA	C	A32	19°18.74'	101°37.48'	0.65	0.33	.045	.009	0.07	-	16	2	
800	C.EL PINABETE	C	A32	19°17.89'	101°37.65'	0.65	0.15	.070	.010	0.11	25	16	2	
801	C.EL TAMBOR	R	A32	19°17.67'	101°38.45'	0.55	0.15	.050	.005	0.09	-	14	-	PLV1
802	C.EL ARENAL	E	A32	19°17.31'	101°37.08'	0.95	0.20	.125	.037	0.13	23	18	2	
803	C.EL CAJETE	C	A32	19°16.37'	101°38.31'	0.60	0.18	.080	.010	0.13	29	21	-	PLV2
804	C.LA IMAGEN	B	A32	19°15.65'	101°37.94'	1.00	0.40	.085	.035	0.08	27	16	-	
805		B	A32	19°15.49'	101°36.76'	0.50	0.18	.023	.002	0.05	-	8	-	
806	C.TRIGUENO	B	A32	19°15.78'	101°35.96'	0.70	0.35	.065	.015	0.09	30	20	-	PLV1
807	C.EL PUENTE	B	A32	19°16.55'	101°35.90'	0.58	0.08	.060	.006	0.10	18	13	-	PLV1
808	C.LA PALMA	B	A32	19°16.93'	101°35.41'	0.80	0.25	.085	.020	0.11	26	17	-	
809		B	A32	19°18.42'	101°35.44'	0.60	0.23	.035	.005	0.06	-	11	-	
810	C.EL DOMINGUEJO	B	A32	19°16.91'	101°34.51'	0.90	0.30	.130	.040	0.14	-	23	3	
811	C.LAS LATAS	C	A32	19°17.59'	101°34.04'	1.10	0.28	.135	.056	0.12	-	18	3	
812	C.PRIETO	C	A32	19°18.01'	101°32.92'	1.58	0.48	.240	.219	0.15	-	24	4	
813		C	A32	19°17.20'	101°32.84'	0.75	0.28	.055	.012	0.07	-	13	-	
814	C.JANAMARO	B	A32	19°16.38'	101°33.41'	0.93	0.35	.140	.048	0.15	-	26	6	PLV1
815	C.POZO DEL AIRE	E	A32	19°15.68'	101°33.28'	0.53	0.25	.040	.005	0.08	-	16	-	
816	C.EL CUIJE	B	A32	19°15.19'	101°33.32'	1.45	0.50	.135	.109	0.09	-	16	3	
817		C	A32	19°16.80'	101°31.23'	0.83	0.40	.070	.022	0.08	-	18	-	
818	C.LAS PAREDES	C	A32	19°17.47'	101°31.03'	1.35	0.28	.168	.100	0.12	-	17	3	
819	C.EL MOLINO	B	A32	19°16.41'	101°30.77'	0.53	0.15	.065	.007	0.12	-	19	-	
820	C.LA PENA	B	A32	19°15.95'	101°30.78'	0.63	0.30	.065	.012	0.10	-	22	-	
821	C.GRANDE	E	A32	19°15.87'	101°30.18'	1.75	0.20	.290	.262	0.17	-	21	4	
822	C.EL CAJETE	B	A32	19°17.31'	101°29.87'	0.80	0.38	.105	.030	0.13	-	27	3	
823	(LOS JACALES)	C	A32	19°16.73'	101°29.40'	0.75	0.28	.050	.011	0.07	-	12	-	
824	(EL ATASCOS)	C	A32	19°17.21'	101°29.19'	0.80	0.48	.030	.010	0.04	-	11	-	
825	C.EL LEON	B	A32	19°18.53'	101°28.82'	1.35	0.43	.170	.115	0.13	-	20	3	
826	C.LOS JUAREZ	C	A32	19°19.19'	101°28.85'	0.65	0.25	.065	.011	0.10	-	18	-	
827	C.EL JUDIO	B	A32	19°21.24'	101°27.33'	0.75	0.08	.085	.014	0.11	-	14	-	
828		B	A32	19°20.97'	101°25.45'	0.58	0.15	.075	.009	0.13	-	19	-	
829		B	A32	19°21.32'	101°24.96'	0.53	0.25	.025	.003	0.05	-	10	-	
830	C.MARIA	B	A32	19°21.24'	101°24.46'	1.10	0.23	.140	.056	0.13	25	18	-	
831	C.EL TIZATE	C	A32	19°18.96'	101°27.31'	0.83	0.35	.095	.027	0.11	-	22	-	
832	(SANTIAGO VINA)	B	A32	19°16.60'	101°28.30'	0.75	0.08	.105	.017	0.14	-	17	-	
833	(LA ESCONDIDA)	B	A32	19°16.76'	101°27.96'	0.85	0.13	.095	.021	0.11	-	15	-	
834	C.TANQUE AZUL	B	A32	19°16.85'	101°27.43'	0.88	0.23	.115	.031	0.13	-	19	3	
835	C.EL PUERTO	E	A32	19°16.22'	101°27.14'	1.48	0.28	.275	.193	0.19	-	25	4	
836	C.MACHUPARO	C	A32	19°16.93'	101°20.59'	0.95	0.30	.160	.054	0.17	-	26	6	
837		B	A32	19°15.33'	101°25.30'	0.68	0.20	.090	.015	0.13	-	21	-	
838		R	A42	19°13.60'	101°39.26'	0.38	0.20	.028	.002	0.07	-	17	-	
839		R	A42	19°13.64'	101°39.31'	0.38	0.10	.030	.002	0.08	-	12	-	
840		C	A42	19°14.00'	101°38.48'	1.25	0.55	.070	.047	0.06	-	11	-	

TABLE 1. (CONTINUED --16)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
841	C.LA MAGDALENA	C	A42	19°14.58′	101°37.85′	1.73	0.45	.135	.140	0.08	18	12	2	
842	C.LA CRUZ	B	A42	19°14.70′	101°36.62′	1.05	0.30	.060	.024	0.06	-	9	-	
843	C.ABELINO	E	A42	19°14.48′	101°35.93′	1.15	0.53	.100	.058	0.09	-	16	2	
844		C	A42	19°14.82′	101°36.59′	1.38	0.38	.195	.131	0.14	-	21	4	
845	C.EL MALACATE	B	A42	19°14.95′	101°35.24′	1.00	0.33	.095	.036	0.09	-	16	4	
846	C.EL CALABOZO	C	A42	19°14.95′	101°34.70′	1.90	0.60	.200	.268	0.11	-	17	5	
847	C.MT.DEL CORRAL	B	A42	19°12.91′	101°36.56′	0.68	0.38	.060	.020	0.07	-	13	-	
848	(TZATZIO)	R	A42	19°12.90′	101°35.90′	0.60	0.30	.055	.009	0.09	-	20	-	
849	C.LAS FLORES	C	A42	19°12.80′	101°35.27′	0.85	0.33	.130	.038	0.15	-	27	6	
850	C.CHEPELOPEZ	C	A42	19°13.29′	101°34.86′	0.53	0.23	.055	.007	0.10	-	20	-	
851	(CANADA VERDE)	R	A42	19°13.96′	101°35.47′	0.60	0.30	.060	.010	0.10	-	22	-	
852	C.SAN JOSE	C	A42	19°13.08′	101°34.96′	1.43	0.15	.185	.111	0.13	25	16	4	
853	C.LAS ANIMAS	C	A42	19°13.86′	101°34.98′	0.80	0.25	.120	.028	0.15	-	24	5	
854	C.SOPOMIO	C	A42	19°14.04′	101°34.13′	0.98	0.28	.120	.041	0.12	25	19	6	
855	C.TECARIO	C	A42	19°14.10′	101°32.54′	0.55	0.18	.050	.006	0.09	25	15	-	
856	C.COLORADO	B	A42	19°14.38′	101°31.75′	0.55	0.18	.048	.005	0.09	23	15	-	
857	C.COLORADO	B	A42	19°14.78′	101°29.66′	0.60	0.25	.055	.008	0.09	-	17	2	
858	C.MARGADO	C	A42	19°11.93′	101°36.56′	0.75	0.25	.100	.021	0.13	-	22	-	
859	C.LAS TABLAS	C	A42	19°11.47′	101°36.76′	1.60	0.48	.145	.135	0.09	-	15	3	PLV2
860	C.PELON	C	A42	19° 8.46′	101°36.70′	0.83	0.15	.105	.023	0.13	-	17	-	
861	C.EL CAPULIN	C	A42	19° 8.24′	101°38.80′	1.55	0.30	.210	.163	0.14	-	19	3	PLV2
862	C.CIPRES	C	A42	19° 8.54′	101°38.44′	0.85	0.40	.083	.027	0.10	-	20	5	
863	C.LA VENTANA	C	A42	19° 8.98′	101°38.17′	0.93	0.15	.105	.028	0.11	-	15	2	PLV2
864	C.LAS CANALEJAS	B	A42	19° 8.98′	101°37.82′	0.95	0.38	.095	.035	0.10	-	18	-	
865		B	A42	19° 8.35′	101°37.28′	0.58	0.18	.070	.009	0.12	-	19	-	PLV2
866	C.EL ZOYATE	C	A42	19° 8.65′	101°37.05′	1.40	0.45	.180	.132	0.13	-	21	4	PLV4
867		B	A42	19° 8.95′	101°36.73′	0.55	0.33	.040	.006	0.07	-	20	-	
868		E	A42	19° 9.22′	101°36.85′	0.85	0.33	.080	.023	0.09	-	17	1	
869	C.GRANDE	B	A42	19° 9.25′	101°36.56′	0.75	0.25	.105	.022	0.14	-	23	5	
870	C.LAS CARRETAS	B	A42	19° 9.46′	101°36.39′	0.65	0.30	.070	.013	0.11	-	22	7	PLV2
871	C.ZIHUATZIO	C	A42	19° 9.78′	101°35.82′	1.23	0.30	.200	.103	0.16	-	23	5	
872	(ZIHUATZIO)	F	A42	19°10.16′	101°35.23′	0.00	0.00	.000	.000	0.00	-	-	-	PLV1
873	C.EL ELÓN	C	A42	19°10.82′	101°34.46′	0.50	0.15	.060	.008	0.12	-	18	-	
874	C.EL JABALI	C	A42	19°10.08′	101°34.23′	0.45	0.18	.080	.007	0.18	-	31	-	
875		F	A42	19° 9.45′	101°34.80′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2-3
876	(HACHEROS)	F	A42	19° 9.13′	101°34.91′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
877	C.COLORADO	R	A42	19° 7.48′	101°35.44′	0.58	0.10	.100	.011	0.17	-	23	-	
878	C.ZIHUATANEJO	D	A42	19° 7.74′	101°32.69′	0.60	0.28	.060	.010	0.10	-	21	-	PLV2
879	C.COLORADO	E	A42	19° 8.57′	101°33.21′	1.00	0.20	.160	.052	0.16	-	22	3	
880	P.LOS ATES	B	A42	19° 8.62′	101°32.38′	0.85	0.33	.100	.029	0.12	-	21	-	PLV4
881	C.LA PALMA	B	A42	19° 8.83′	101°31.83′	0.88	0.40	.150	.051	0.17	-	32	-	PLV4
882	C.EL COCO	S	A42	19°10.63′	101°32.40′	1.00	0.35	.170	.066	0.17	-	28	4	
883	C.EL MIRADOR	B	A42	19°11.17′	101°30.97′	0.85	0.35	.100	.030	0.12	-	22	2	
884	C.V.LA TINAJA	C	A42	19°10.03′	101°31.06′	1.73	0.45	.320	.333	0.18	26	27	10	PLV2-3
885		F	A42	19°10.05′	101°30.23′	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
886	C.CARITZIO	R	A42	19°13.94′	101°28.22′	0.80	0.15	.100	.020	0.12	25	17	2	
887	C.PARTIDO	C	A42	19°14.65′	101°27.11′	0.83	0.33	.080	.022	0.10	30	18	1	
888	M.EL MALPAIS	F	A42	19°11.93′	101°28.77′	0.00	0.00	.000	.000	0.00	-	-	-	HV
889	C.LA LAGUNA	C	A42	19°12.07′	101°28.34′	0.93	0.23	.180	.053	0.19	30	27	4	
890		F	A42	19° 7.61′	101°36.88′	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
891		C	A42	19° 7.31′	101°36.71′	0.55	0.30	.070	.010	0.13	-	29	5	
892	C.EL TIGRE	D	A42	19° 7.34′	101°36.57′	0.58	0.05	.175	.017	0.30	-	33	-	PLV3
893	C.LAS CARRETAS	C	A42	19° 6.90′	101°37.23′	0.88	0.48	.100	.037	0.11	-	27	-	PLV3
894		F	A42	19° 7.04′	101°36.80′	0.00	0.00	.100	.000	0.00	-	-	-	PLV3
895	M.EL CURATO	C	A42	19° 6.47′	101°36.74′	0.85	0.48	.080	.028	0.09	-	23	4	
896	C.DON NATO	F	A42	19° 5.74′	101°37.06′	0.00	0.00	.000	.000	0.00	-	-	-	PLV2-3

TABLE 1. (CONTINUED --17)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	SLOPE GD	LAVA
897	C.ALTO	F	A42	19° 6.17'	101° 37.77'	0.00	0.00	.000	.000	0.00	-	-	-	PLV3
898	C.LAS CRUCES	B	A42	19° 5.86'	101° 38.06'	0.90	0.33	.145	.046	0.16	-	27	-	PLV2-3
899	M.EL MALPAIS	F	A42	19° 4.89'	101° 38.40'	0.00	0.00	.000	.000	0.00	-	-	-	PLV4
900	C.LOS LOBOS	B	A42	19° 4.48'	101° 38.85'	0.65	0.35	.090	.018	0.14	-	31	7	PLV2
901	M.EL CARACOL	F	A42	19° 3.85'	101° 38.78'	0.00	0.00	.000	.000	0.00	-	-	-	PLV2
902		R	A42	19° 4.15'	101° 38.31'	0.58	0.18	.030	.004	0.05	-	9	-	
903	P.EL MORAL	B	A42	19° 3.93'	101° 39.66'	0.55	0.20	.025	.003	0.05	-	8	-	
904	C.LA PALMA	C	A42	19° 3.23'	101° 37.34'	1.00	0.25	.110	.038	0.11	-	16	4	
905	C.EL SOSAL	C	A42	19° 2.14'	101° 34.27'	1.88	0.20	.370	.383	0.20	-	24	2	
906	C.EL CARACOL	B	A42	19° 3.18'	101° 31.93'	1.13	0.35	.125	.059	0.11	-	18	5	PLV2
907	(NOMBRE DE DIOS)	C	A42	19° 5.84'	101° 33.46'	1.25	0.26	.240	.123	0.19	31	26	2	
908	C.EL PINO	B	A42	19° 4.60'	101° 30.69'	0.78	0.30	.080	.018	0.11	25	20	3	
909	C.EL TECOLOTE	C	A42	19° 3.16'	101° 29.74'	0.50	0.05	.085	.006	0.17	-	21	6	
910	C.VERDE	C	A42	19° 3.50'	101° 29.38'	0.60	0.15	.060	.007	0.10	-	15	10	
911		B	A42	19° 3.85'	101° 28.68'	0.40	0.13	.035	.002	0.09	-	15	-	
912	C.COLORADO	C	A42	19° 4.18'	101° 28.97'	0.58	0.13	.070	.007	0.13	-	18	-	
913	C.LAS AGUILLAS	C	A42	19° 0.32'	101° 23.32'	0.50	0.25	.030	.003	0.06	-	13	-	
914	C.EL NARANJO	C	A42	19° 0.49'	101° 22.52'	0.93	0.15	.110	.030	0.12	-	16	-	
915		C	A52	18° 59.84'	101° 24.65'	0.78	0.18	.105	.021	0.13	-	19	-	
916	(VISTA HERMOSA)	M	C63	20° 37.90'	101° 19.05'	0.00	1.58	.038	.000	0.00	-	-	-	
917	(LA SANABRIA)	M	C63	20° 36.06'	101° 19.19'	0.00	1.65	.028	.000	0.00	-	-	-	
918	LA CAL	C	C63	20° 32.30'	101° 12.93'	1.00	0.25	.075	.026	0.07	15	11	-	
919	C.LA CRUZ	C	C63	20° 32.22'	101° 11.48'	1.25	0.15	.070	.032	0.06	15	7	-	
920	(SAN ANTONIO)	C	C73	20° 28.65'	101° 12.87'	0.65	0.08	.065	.008	0.10	20	13	-	
921	(LOS LOBOS)	C	C73	20° 28.75'	101° 11.98'	0.80	0.30	.030	.008	0.04	-	7	-	
922	C.GUANTECILLOS	B	C73	20° 27.68'	101° 12.42'	0.68	0.18	.032	.005	0.05	13	7	-	
923	H.RINCOL DE P	M	C73	20° 25.83'	101° 14.89'	0.00	1.90	.220	.000	0.00	-	-	-	
924	C.LA MINA	D	C73	20° 26.42'	101° 15.27'	0.78	0.08	.110	.020	0.14	-	17	-	
925		M	C73	20° 26.74'	101° 15.06'	0.00	1.58	.085	.000	0.00	-	-	-	
926		M	C73	20° 27.33'	101° 15.50'	0.00	1.18	.000	.000	0.00	-	-	-	
927	C.SAN ANDRES	C	C73	20° 22.97'	101° 17.34'	1.23	0.25	.110	.054	0.09	-	13	-	
928	H.SAN NICOLAS	M	C73	20° 23.28'	101° 15.41'	0.00	1.80	.073	.000	0.00	-	-	-	
929	(HOYUELA)	M	C73	20° 23.76'	101° 14.05'	0.00	0.70	.023	.000	0.00	-	-	-	
930	H.ESTRADA	M	C73	20° 23.22'	101° 13.62'	0.00	1.23	.063	.000	0.00	-	-	-	
931		R	C73	20° 24.48'	101° 11.41'	0.38	0.10	.024	.001	0.06	-	10	-	
932	H.LA ALBERCA	M	C73	20° 23.30'	101° 12.05'	0.00	0.70	.100	.000	0.00	-	-	-	
933	H.BLANCA	M	C73	20° 22.59'	101° 13.07'	0.00	1.18	.090	.000	0.00	-	-	-	
934	(BENITO JUAREZ)	B	C73	20° 21.68'	101° 15.64'	1.25	0.55	.050	.033	0.04	-	8	-	
935		E	C73	20° 22.42'	101° 14.20'	1.23	0.30	.118	.061	0.10	-	14	2	
936		C	C73	20° 22.00'	101° 14.05'	0.65	0.05	.070	.008	0.11	-	13	-	
937		M	C73	20° 21.99'	101° 13.56'	0.00	0.65	.065	.000	0.00	-	-	-	
938	H.LA CINTURA	M	C73	20° 21.34'	101° 12.84'	0.00	2.03	.180	.000	0.00	-	-	-	
939		B	C73	20° 21.46'	101° 11.49'	0.70	0.23	.070	.013	0.10	-	17	-	
940	C.LA BATEA	C	C72	20° 20.59'	101° 11.73'	1.80	0.35	.225	.235	0.13	30	17	6	
941		B	C73	20° 20.40'	101° 12.35'	0.73	0.30	.045	.010	0.06	-	12	-	
942	C.EL OLIVO	B	C73	20° 20.16'	101° 10.75'	1.05	0.18	.085	.029	0.08	17	11	-	
943	C.QUEMADO	R	C73	20° 19.80'	101° 10.24'	0.75	0.13	.060	.011	0.08	-	11	-	
944	C.LAS SILLETAS	B	C73	20° 19.37'	101° 17.66'	0.60	0.33	.040	.007	0.07	-	17	-	
945	C.EL SOMBRERO	R	C73	20° 20.07'	101° 16.85'	0.55	0.05	.070	.006	0.13	-	16	-	
946	CERRITOS	C	C73	20° 20.70'	101° 16.42'	0.65	0.18	.040	.006	0.06	-	10	-	
947	CERRITOS	R	C73	20° 20.56'	101° 16.10'	0.78	0.13	.070	.013	0.09	-	12	-	
948	CERRITOS	C	C73	20° 20.64'	101° 15.70'	0.75	0.15	.045	.008	0.06	-	9	-	
949		R	C73	20° 20.18'	101° 14.34'	0.68	0.23	.025	.004	0.04	-	6	-	
950	C.CHAPIN	B	C73	20° 20.40'	101° 13.71'	1.23	0.28	.070	.035	0.06	-	8	2	
951		B	C73	20° 19.15'	101° 14.29'	0.70	0.38	.060	.014	0.09	-	21	-	
952	H.DE ALVAREZ	M	C73	20° 19.50'	101° 12.38'	0.00	1.88	.208	.000	0.00	-	-	-	

TABLE 1. (CONTINUED --18)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
953	C.EL TULE	C	C73	20° 18.18′	101° 13.77′	1.65	0.50	.225	.224	0.14	-	21	-	
954		B	C73	20° 18.55′	101° 9.43′	0.50	0.08	.065	.005	0.13	-	17	-	
955		E	C73	20° 18.36′	101° 9.38′	0.90	0.45	.040	.015	0.04	-	10	-	
956		E	C73	20° 17.88′	101° 8.92′	0.80	0.13	.065	.013	0.08	-	11	-	
957		B	C73	20° 16.11′	101° 10.42′	0.98	0.53	.045	.021	0.05	-	11	-	
958	C.LA TETILLA	B	C73	20° 21.11′	101° 5.77′	1.35	0.20	.055	.031	0.04	-	5	-	
959		B	C73	20° 18.64′	101° 8.39′	0.43	0.20	.020	.002	0.05	-	10	-	
960		C	C73	20° 17.90′	101° 8.15′	0.40	0.05	.085	.004	0.21	-	26	-	
961	C.COLORADO	C	C83	20° 14.13′	101° 15.02′	0.60	0.13	.050	.006	0.08	18	12	-	
962		C	C83	20° 14.92′	101° 13.61′	0.65	0.35	.045	.009	0.07	-	17	-	
963		C	C83	20° 14.57′	101° 13.57′	1.15	0.70	.035	.024	0.03	-	9	-	
964	C.COLORADO	D	C83	20° 14.19′	101° 12.06′	1.13	0.53	.075	.042	0.07	-	14	-	
965		C	C83	20° 11.96′	101° 11.87′	0.55	0.08	.020	.002	0.04	-	5	-	
966	(SAN MIGUEL)	C	C83	20° 12.37′	101° 10.71′	1.60	0.05	.063	.044	0.04	-	5	-	
967		C	C83	20° 11.67′	101° 9.60′	0.50	0.05	.045	.003	0.09	-	11	-	
968		C	C83	20° 10.58′	101° 10.50′	0.35	0.05	.010	.000	0.03	-	4	-	
969		C	C83	20° 10.43′	101° 10.04′	0.58	0.05	.058	.006	0.10	-	12	-	
970	(YURIRIA)	M	C83	20° 12.26′	101° 7.67′	0.00	0.78	.035	.000	0.00	-	-	-	
971	C.PORULLO	C	C83	20° 9.55′	101° 4.81′	1.00	0.15	.160	.049	0.16	29	21	-	
972	(HUARO)	C	C83	20° 6.29′	101° 17.67′	0.80	0.20	.055	.012	0.07	-	10	-	
973		C	C83	20° 6.56′	101° 16.72′	1.05	0.10	.063	.020	0.06	-	8	-	
974		C	C83	20° 6.50′	101° 15.78′	0.73	0.05	.050	.007	0.07	-	8	-	
975		C	C83	20° 6.78′	101° 15.57′	0.68	0.13	.045	.007	0.07	-	9	-	
976	(CARICHEO)	C	C83	20° 6.87′	101° 14.96′	0.73	0.10	.065	.010	0.09	-	12	-	
977	(LA LOMA)	C	C83	20° 4.85′	101° 14.86′	0.98	0.28	.080	.028	0.08	-	13	-	
978	(LA SOLDAD)	C	C83	20° 5.60′	101° 12.75′	0.90	0.05	.070	.016	0.08	-	9	-	
979	C.BLANCO	C	C83	20° 1.90′	101° 14.36′	0.88	0.10	.110	.025	0.12	-	16	-	
980		C	C83	20° 3.40′	101° 11.83′	0.68	0.15	.055	.008	0.08	-	12	-	
981	C.EL MELON	C	C83	20° 3.58′	101° 10.94′	1.28	0.18	.153	.076	0.12	21	16	-	
982	C.EL CONEJO	C	C83	20° 5.15′	101° 1.01′	0.80	0.08	.080	.015	0.10	-	13	-	
983	C.EL TRUJILLO	C	A13	19° 49.53′	101° 13.20′	0.76	0.18	.065	.013	0.09	-	13	-	
984	C.COLORADO	C	A13	19° 49.63′	101° 11.90′	0.73	0.28	.080	.017	0.11	-	20	-	
985	C.EL TLACUACHE	C	A13	19° 50.50′	101° 11.35′	0.95	0.23	.120	.037	0.13	-	18	-	
986	(GUADALUPE)	R	A13	19° 47.06′	101° 12.95′	0.45	0.20	.020	.002	0.04	-	9	-	
987	C.PELON	C	A23	19° 42.13′	101° 19.37′	1.25	0.65	.135	.099	0.11	27	24	2	
988	(SANTA TERESA)	E	C74	20° 29.84′	100° 59.88′	0.63	0.15	.030	.004	0.05	-	7	-	
989	CT.COLORADO	C	C74	20° 28.21′	100° 56.54′	1.50	0.05	.065	.040	0.04	17	5	-	
990	C.MAN DINGA	C	C74	20° 26.67′	100° 54.78′	1.33	0.48	.120	.083	0.09	-	16	-	
991	(MAN DINGA)	C	C74	20° 25.98′	100° 54.18′	0.93	0.20	.058	.017	0.06	-	9	-	
992	(MINILLA)	C	C74	20° 25.20′	100° 53.69′	0.75	0.05	.045	.007	0.06	-	7	-	
993	C.GRANDE	S	C74	20° 24.46′	100° 52.73′	1.95	0.33	.150	.179	0.08	-	10	-	
994	(VALENCIA DE F.)	R	C74	20° 26.63′	100° 57.78′	0.60	0.00	.000	.000	0.00	-	-	-	
995	C.TETILLAS	C	C84	20° 12.20′	100° 55.70′	1.43	0.40	.180	.131	0.13	-	19	-	
996	C.TETILLAS	D	C84	20° 11.48′	100° 55.08′	1.53	0.35	.125	.098	0.08	-	12	-	
997	(EL POCHO)	C	C84	20° 10.83′	100° 53.69′	0.80	0.05	.040	.007	0.05	10	6	-	
998		C	C84	20° 10.50′	100° 51.08′	1.08	0.05	.095	.030	0.09	-	10	-	
999	C.LAS CANAS	C	C84	20° 5.04′	100° 59.31′	0.56	0.10	.055	.005	0.10	-	13	-	
1000	C.LAS CRUCES	C	C84	20° 5.45′	100° 58.76′	0.85	0.20	.083	.020	0.10	-	14	-	
1001		C	C84	20° 5.18′	100° 57.70′	0.63	0.10	.060	.007	0.10	-	13	-	
1002		C	C84	20° 5.03′	100° 57.27′	0.45	0.20	.023	.002	0.05	-	10	-	
1003		C	C84	20° 4.82′	100° 56.66′	0.68	0.18	.042	.007	0.06	-	10	-	
1004		C	C84	20° 4.82′	100° 56.32′	0.85	0.20	.110	.027	0.13	-	19	-	
1005		C	C84	20° 4.62′	100° 56.12′	0.55	0.10	.060	.006	0.11	-	15	-	
1006	(ARROYO COLORADO)	C	C84	20° 4.31′	100° 55.83′	1.10	0.30	.120	.051	0.11	-	17	-	
1007		C	C84	20° 5.28′	100° 54.23′	0.60	0.10	.030	.003	0.05	-	7	-	
1008		C	C84	20° 5.12′	100° 53.32′	0.65	0.33	.025	.005	0.04	-	9	-	

TABLE 1. (CONTINUED --19)

#	NAME	TYPE	MAP	LATITUDE	LONGITUDE	WCO	WCR	HCO	VOL	H/D	SLOPE MAX	SLOPE AVE	GD	LAVA
1009		C	C84	20° 5.01'	100° 52.82'	0.60	0.10	.045	.005	0.07	-	10	-	
1010		C	C84	20° 5.07'	100° 52.40'	0.63	0.05	.063	.007	0.10	-	12	-	
1011		D	C84	20° 4.50'	100° 53.32'	1.10	0.18	.065	.025	0.06	-	8	-	
1012	(INCHAMACUARO)	C	C84	20° 5.15'	100° 50.50'	1.15	0.05	.050	.018	0.04	19	5	-	
1013	(CHAMACUARO)	C	C84	20° 6.61'	100° 48.63'	0.90	0.10	.100	.024	0.11	19	14	-	
1014	(RUIZ CORTINES)	C	C84	20° 3.44'	100° 52.23'	1.06	0.18	.055	.019	0.05	-	7	-	
1015	(LAS PARTIDAS)	C	C84	20° 2.01'	100° 50.62'	1.10	0.10	.080	.031	0.08	-	10	-	
1016		C	C84	20° 2.03'	100° 50.13'	1.15	0.10	.125	.047	0.11	-	13	-	
1017	(LA MINA)	P	A14	19° 53.82'	100° 58.99'	0.28	0.00	.000	.000	0.00	-	-	-	
1018	(TEPECUA)	P	A14	19° 53.27'	100° 58.98'	0.50	0.28	.020	.002	0.04	-	10	-	
1019	C.LOS GARCIA	C	A14	19° 53.01'	100° 47.33'	0.90	0.20	.075	.020	0.08	-	12	-	
1020	(LA LOMA)	C	A14	19° 52.76'	100° 42.63'	0.85	0.20	.085	.021	0.10	20	15	-	
1021	(BENITO JUAREZ)	P	A14	19° 51.96'	100° 58.76'	0.60	0.15	.010	.001	0.02	-	3	-	
1022		P	A14	19° 51.45'	100° 51.61'	0.35	0.15	.005	.000	0.03	2	3	-	
1023	C.LAS PACHOMAS	B	A14	19° 45.16'	100° 57.95'	0.83	0.28	.055	.014	0.07	26	11	-	
1024		B	A14	19° 45.41'	100° 57.07'	0.93	0.23	.070	.021	0.08	-	11	-	
1025	C.LAS CRUZ	B	A14	19° 46.68'	100° 54.68'	1.43	0.33	.095	.065	0.07	-	10	-	
1026	CS.LOS CUATES	B	A14	19° 46.71'	100° 53.48'	1.15	0.35	.135	.065	0.12	-	19	-	
1027	CS.LOS CUATES	B	A14	19° 46.63'	100° 53.13'	0.85	0.28	.085	.023	0.10	-	17	-	
1028		B	A14	19° 46.54'	100° 52.21'	0.95	0.43	.030	.012	0.03	-	7	-	
1029		C	A14	19° 46.63'	100° 51.35'	0.88	0.30	.030	.009	0.03	-	6	-	
1030	C.EL GALLO	B	A14	19° 46.76'	100° 50.66'	0.88	0.33	.060	.015	0.06	-	10	-	
1031	C.GUAJOLOTERA	B	A14	19° 46.98'	100° 49.91'	1.20	0.35	.115	.060	0.10	-	15	-	
1032		C	A14	19° 47.03'	100° 49.63'	0.63	0.05	.040	.005	0.06	-	8	-	
1033	C.CHATO	C	A14	19° 47.17'	100° 49.20'	0.60	0.18	.030	.004	0.05	-	8	-	
1034	C.EL BARCO	B	A14	19° 47.25'	100° 48.69'	1.23	0.50	.060	.037	0.05	-	9	-	
1035	C.LAS CUEVAS	B	A14	19° 46.22'	100° 48.25'	1.25	0.38	.130	.074	0.10	-	17	-	
1036	C.EL ROSARIO	E	A14	19° 50.88'	100° 42.18'	1.23	0.43	.170	.099	0.14	-	23	-	
1037		E	A14	19° 50.47'	100° 42.30'	1.13	0.30	.105	.047	0.09	-	14	-	
1038	CT.COLORADO	R	C65	20° 37.28'	100° 27.06'	0.70	0.05	.030	.004	0.04	-	5	-	
1039	(OBRAJUELO)	R	C65	20° 36.10'	100° 30.81'	0.95	0.38	.010	.004	0.01	4	2	-	
1040	C.LAS BRUJAS	R	C65	20° 31.22'	100° 39.10'	3.20	0.68	.035	.118	0.01	-	2	-	

Explanation of Table 1

NAME: Name of a volcano or name of either a town or a topography (in parenthesis) in the vicinity of a volcano. Abbreviations are: B. = Barranca, C. = Cerro, CS. = Cerros, CT. = Cerrito, CTS. = Cerritos, H. = Hoya, HT. = Hoyita, L. = Loma, LS. = Lomas, LL. = LLano, M. = Mesa, P. = Puerto, ST. = Santa, V. = Volcan, VC. = volcancito.

TYPE: Symbol for volcanic forms. B = breached cone, C = cinder or lava cone, D = dome, E = eroded, or highly dissected cone, F = lava flow not associated with cone, M = maar, R = rounded, flat cone, P = partly buried cone, S = shield volcano with a cone on the summit, T = tuff ring or tuff cone.

MAP: The number of 1:50 000 topographic map (published by DETENAL) which indicates the location of a volcano.

LATITUDE: In degrees and minutes (including two decimal places) n.

LONGITUDE: In degrees and minutes (including two decimal places) west.

WCO: Basal diameter of a volcano (in km).

WCR: Crater diameter of a volcano (in km).

HCO: Volcano height. For maars (TYPE: M), the crater depth is presented instead.

VOL: Volume of a volcano.
Calculated as $H(Wcr^2 + Wcr \bullet Wco + Wco^2)/12$

H/D: Ratio of the height to the basal diameter.

MAX SLOPE: Maximum slope angle (in degrees) measured in the field.

AVE SLOPE: Slope angle (in degrees) calculated from the tangent of the slope as
$\tan^{-1}\ 2 \bullet Hco/(Wco - Wcr)$

GD: Gully density normalized to 90^{o} of a basal arc.

LAVA: Morphological classification of lava flows after Bloomfield (1975).

SIZE OF CONES

Morphometric parameters of cinder cones such as height (Hco), basal diameter (Wco), and crater diameter (Wcr) were obtained from the 1:50 000 topographic maps following Settle's (1979) definitions (p. 1 092). Contour interval for these maps is usually 20 m (10 m in some areas). Values for each parameter represents the arithmetic mean of the maximum and minimum values. Volume of a cone is calculated from these parameters assuming a truncated cone shape and neglecting errors caused by assymmetry. The same procedure was followed for the size measurement of lava cones and domes.

Frequency histograms for these morphometric parameters of cinder cones, excluding dissected, flat, or partly buried cones, show their skewed distribution, in which the most frequent values (mode) is found at lower values (Fig. 3). The mean values

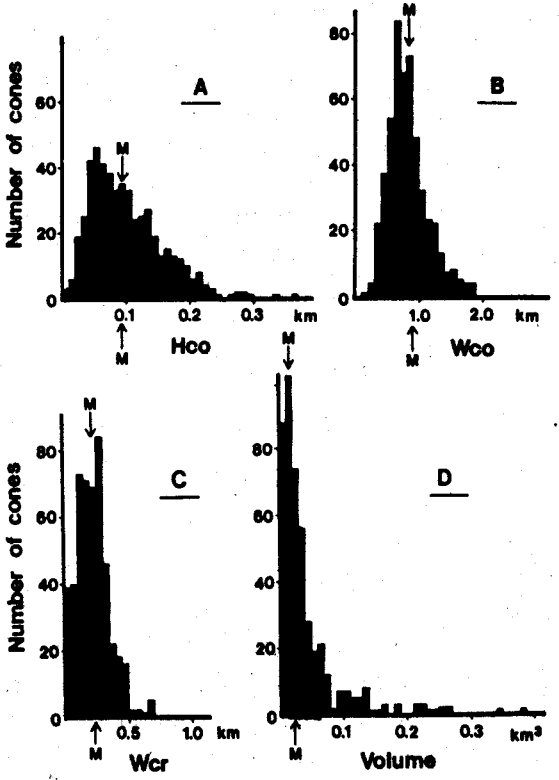

Fig. 3. Frequency distribution of cinder cone size in the MGVF. (A) cone height (Hco), (B) cone basal diameter (Wcr), (C) Cone crater diameter (Wcr), (D) cone volume calculated as a symmetrical truncated cone shape. "M" indicates the position of median value.

for Hco, Wco, Wcr, and volumes are 100 m, 830 m, 240 m, and 0.038 km^3, respectively. These values are similar to those which Settle (1979) reported in the Paricutín region alone.

Within the MGVF, a difference in cinder cones size is found between cones erupted close to or far from the MAT. Cones on and near the volcanic front at a relatively low basal elevation (500 m - 1 500 m) have greater dimensions than the cones on the high plateau (1 500 m - 2 200 m).

LAVA FLOW SIZE

Area and thickness of lava flows were measured where flow margins were clearly observable in the topographic maps and air photographs. Area was measured using a planimeter, and thickness measurements were made at approximately equal intervals along the flow margins and then averaged. When the lava thickness was less than the contour interval, it was assumed to be half the contour interval. As was observed at volcán Paricutín (Foshag and González, 1956), most of the lava flows are composite, i.e. many different flow units overlap. Thus, measured thickness can indicate an accumulated value unless each individual flow unit is recognized as in the case of young lava flows. In Table 2, the mean, median, minimum, and maximum values are presented for the thickness, length, and volume of the 279 lava flows. The largest lava flow volume of 4.8 km^3 and the longest lava flow length of 15 km was observed at cerro El Metate, a Holocene volcano, 25 km east of volcán Paricutín. Aspect ratio, defined by Walker (1973) as the ratio of the diameter of a circle of equal area for the lava flow to its average thickness, varies from 20 to 1 000. In general, lava flows whose vents are hidden have a greater thickness and hence a smaller aspect ratio than those which are associated with cones.

Table 2

Dimensions and volume of lava flows

	average	median	minimum	maximum
Thickness (m)	40	30	2 – 3	120
Length[1] (km)	3.5	3.0	0.7	15
Volume[2] (km^3)	0.23	0.20	0.01	4.8

[1] Calculated for 279 lava flows
[2] Total lava volume erupted for a single cone

The volumes of lava flows and associated cones show positive correlation, and plot closely to the least-squares fit obtained by Wood (1980a) from several cinder cone fields of the world (Fig. 4). In the MGVF, the volume of a cinder cone is roughly 1/10 that of its associated lava flow.

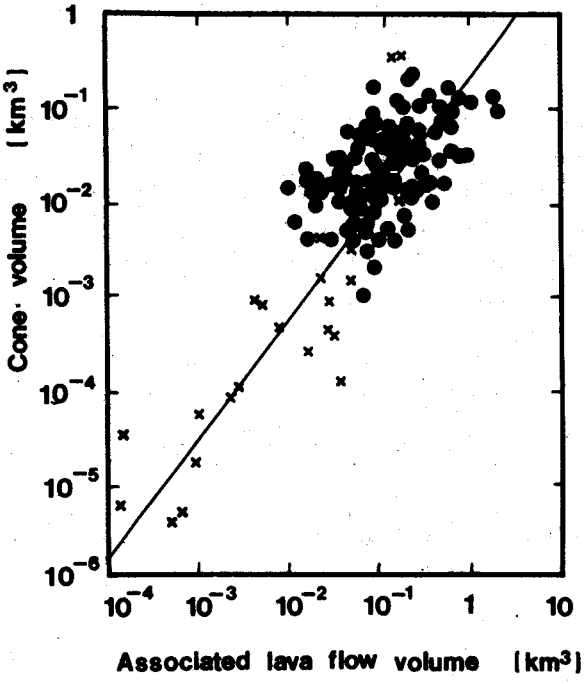

Fig. 4. The relationship between volumes of cinder cones and associated lava flows in the MGVF (dots), combined with Wood (1980a) The error for the least-square fitted lava-cone volume relation in the MGVF is approximately one order of magnitude.

GEOMORPHOLOGICAL PARAMETERS OF CINDER CONE AGE

Geomorphological parameters reflecting the cinder cone degradation are useful in estimating the eruption age when they are calibrated by absolute ages. Scott and Trask (1971), in their study of Lunar Volcanic Field in Nevada, proposed a maximum cone slope, and a rate of cone radius to cone height as semi-quantitative indicators of cinder cone age. Bloomfield (1975) reported several ^{14}C ages relating to the cinder cone eruptions in the volcanic field SW of Mexico City. He demonstrated that his morphological classification of lava flows and the tangent of the cone slope (expressed as r/H) both show a correlation with ^{14}C ages. Wood (1980b) showed

that the ratio of cone height to cone basal diameter (H/D) decreases with time in the San Francisco Volcanic Field in Arizona. Porter (1972) presented a value of 0.22 for the H/D ratio of recently erupted cinder cones on the slope of Mauna Kea Volcano in Hawaii. Hasenaka and Carmichael (1985) also reported radiocarbon dates from cinder cone eruptions in the MGVF. Within the ^{14}C age determination limit, the number of gullies on the cone slope (GD) and surface features of lava flows were observed to change with age.

Among these indices of cinder cone age, H/D ratio, maximum slope angle, average slope angle, gully density, and geomorphological classification of lava flows are listed in the compilation (Table 1). The H/D ratio, calculated as a ratio of measured cone height to cone basal diameter, varies from 0.24 to nearly zero. For cones younger than 40 000 years B.P., the values are between 0.24 and 0.17 showing slight tendency to decrease with age (Fig. 5).

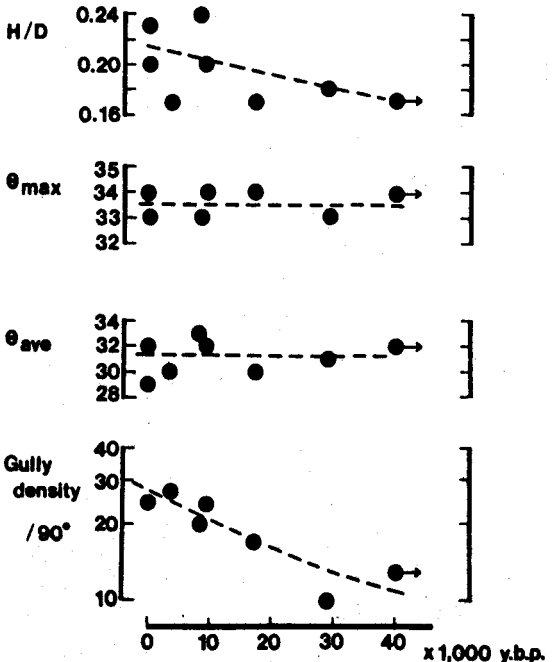

Fig. 5. Geomorphological parameters of cinder cone age plotted against ^{14}C age (after Hasenaka and Carmichael, (1985).

Maximum slope angle represents an average of maximum slope angles which were measured in the field from several different directions. The total variation range is between 34° and 2° for all cones measured and 33°-34° for cones younger than 40 000 years B.P. Average slope angle (θave) was calculated from the tangent of the slope and thus has the same significance as Bloomfield's (1975) r/H ratio.

$$\theta\text{ave} = \tan^{-1}\left\{2 \cdot \text{Hco}/(\text{Wco}-\text{Wcr})\right\}$$

As the original straight cone slope profile becomes modified by the rounding of the crater rim and deposition of colluvium at the foot, average slope angle is expected to decrease prior to maximum slope angle. This angle varies from 34° to nearly 0° for all cones and 34° - 29° for cones younger than 40 000 years B.P. Large errors can occur when the equation is applied to an irregularly shaped cone.

Gully density is defined as the number of gullies (or radial lineaments) observed on cone slopes in air photographs, normalized to 90° of basal arc. Gully density decreases from the 36/90° to 10/90° in 40 000 years. Some lineaments on the cone slope can be misidentified as gullies on air photographs. For very young cinder cones like Paricutín (1943-1952) that have not developed soils on the surface, the lineaments on the slope are made of alternating bands of scoriae and lapilli.

For geomorphological classification of lava flows, we followed Bloomfield's (1975) nomenclature. He classified volcanoes into Holocene volcanoes (Hv) and Pleistocene volcanoes (Plv4, Plv3, Plv2, and Plv1), depending on how much of the original surface features of lava flows are still preserved. We subdivided Plv3 into Plv3 and Plv2-3 according to the amount of soil development, so that in the MGVF, lava flows that are classified as Hv, Plv4, and Plv3 are younger than 40 000 years. Eruption ages of Hv volcanoes vary from 1943 A.D. (Paricutín) to 9 000 years B.P. Those of dated Plv4 and Plv3 volcanoes are 17 000 years B.P. and 30 000 years B.P., respectively (Hasenaka and Carmichael, 1985).

MAGMA ERUPTION RATE

From the calibrated classifications of lava flow morphology, the relative ages of cinder cones and lava flows were estimated. The number of Holocene and late Pleistocene volcanoes (Hv, Plv4, and Plv3) are 16, 27, 35 respectively; thus, there are 78 volcanoes erupted within the last 40 000 years. The volume of Hv, Plv4, and Plv3

volcanoes are 9.3 km^3, 11.3 km^3, and 9.9 km^3 respectively, thus yielding 31 km^3 (dense rock equivalent; Hasenaka and Carmichael, 1985). The magma eruption rate of the entire volcanic field is 0.8 km^3/1 000 years. By contrast, the magma eruption rate at large composite volcanoes in other portions of the MVB is, for example, 2.7 km^3/1 000 years at volcán Colima (Luhr and Carmichael, 1980), and 10 km^3 for the last 1 000 years at volcán Ceboruco (Nelson, 1980).

CONCLUSIONS

(1) The Michoacán-Guanajuato Volcanic Field (MGVF) contains 1 040 volcanoes within an area of 40 000 km^2, most of which are cinder or lava cones, with other, less numerous volcanic forms such as lava domes, maars, tuff rings, shield volcanoes, and coneless lava flows. The concentration of cones is highest at 250 km from the MAT, and no clear alignments of cinder cones are observable.

(2) A median-sized cinder cone in the MGVF is 90 m high, with a 800 m basal diameter, 230 m crater diameter, and 0.021 km^3 volume. For lava flows, the median thickness is 30 m and median length is 3 km with aspect ratios varying from 20 to 1 000. On the average, the volume of a lava flow is roughly 10 times larger than that of the associated cinder cone.

(3) Gully density and morphological classification of lava flows are two sensitive indicators of cinder cone age during the last 40 000 years. Other morphological indices do not show much variation during this period, and are expected to change at a higher degradational stage of cinder cone.

(4) The volume of magmas erupted in the last 40 000 years is 31 km^3 for 78 volcanoes. The magma eruption rate in the last 40 000 years for the entire volcanic field is much smaller than that of a single composite volcano such as volcán Colima.

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