

Map of Quaternary Faults and Folds of Colombia and Its Offshore Regions

A project of International Lithosphere Program Task Group II-2,
Major Active Faults of the World

A cooperative project between the U.S. Geological Survey (USGS)
and Gabriel Paris

Data compiled by Gabriel Paris.
Digital representation by Richard L. Dart (USGS).
Project coordination by Michael N. Machette (Co-chairman, ILP Task Group II-2).

2000
Scale 1:2,500,000
Mercator Projection
(longitude of central meridian, 73°W; latitude of true scale 0°; Clarke 1866 spheroid)

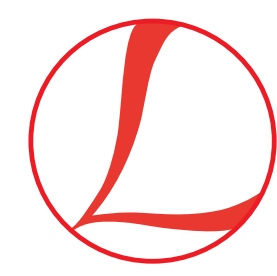
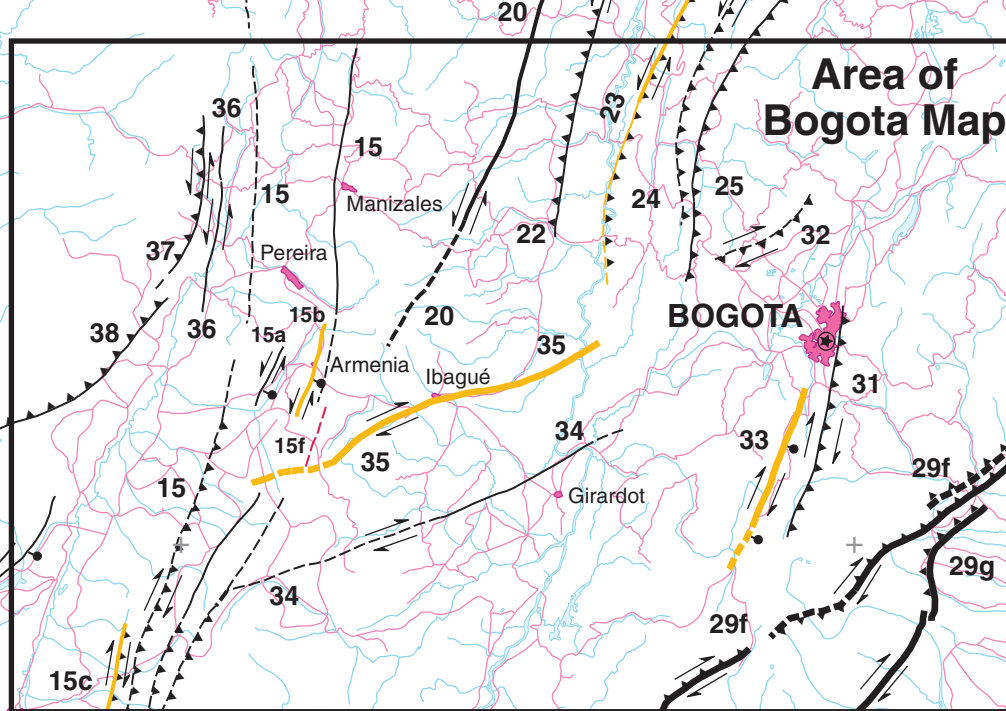
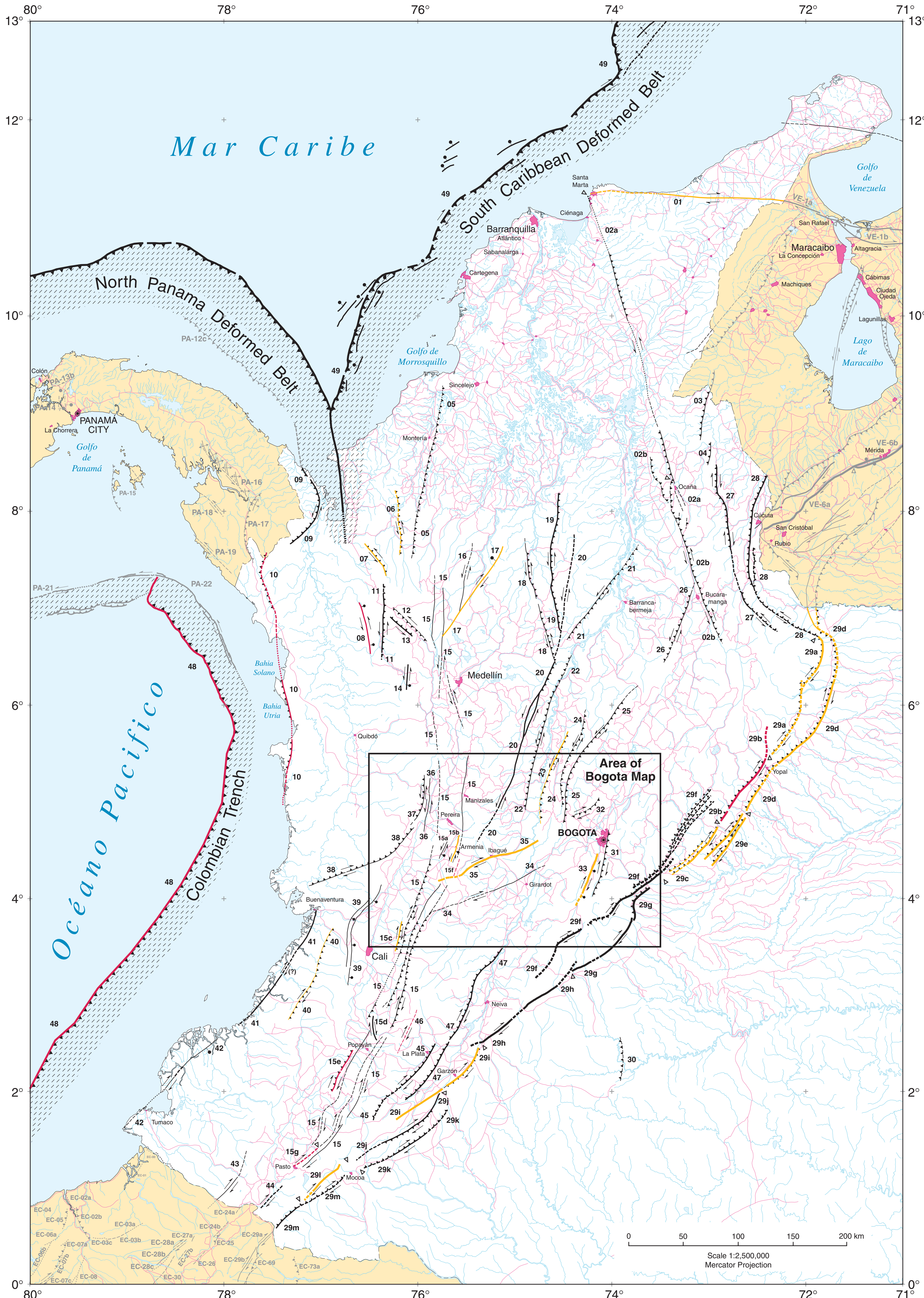
Mapa de Fallas y Pliegues Cuaternarias de Colombia y Regiones Oceanicas Adyacentes

Proyecto Internacional de la Litósfera, Grupo de Trabajo II-2,
Principales Fallas Activas del Mundo

Un proyecto de cooperación entre el U.S. Geological Survey (USGS)
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2000
Escala 1:2.500.000
Proyección de Mercator
(longitud de meridiano central, 73°W; latitud de escala verdadera 0°; con base en el esferoide de Clarke 1866)



International
Lithosphere
Program
(ILP)
Programa
Internacional
de la Litósfera
(ILP)

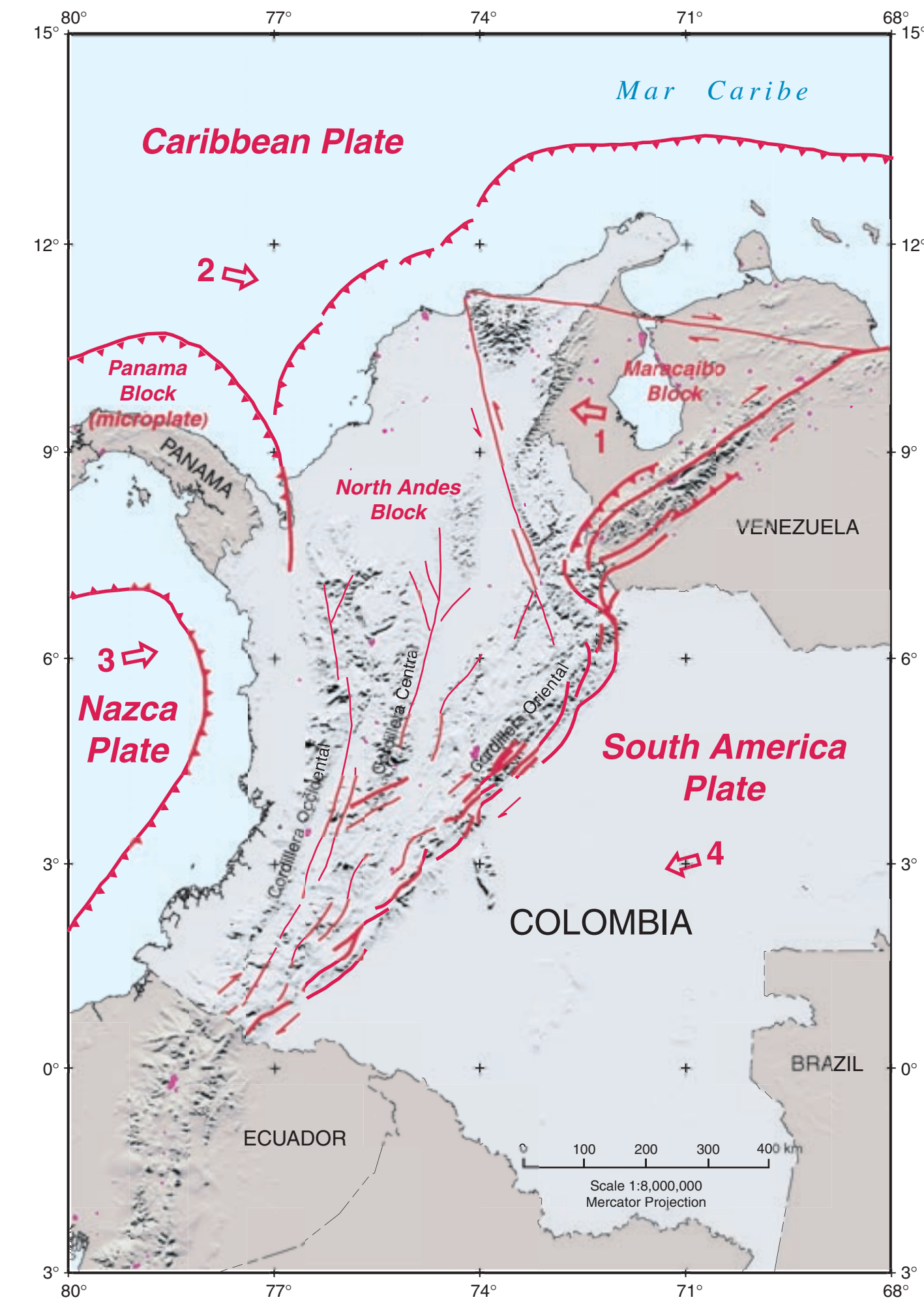


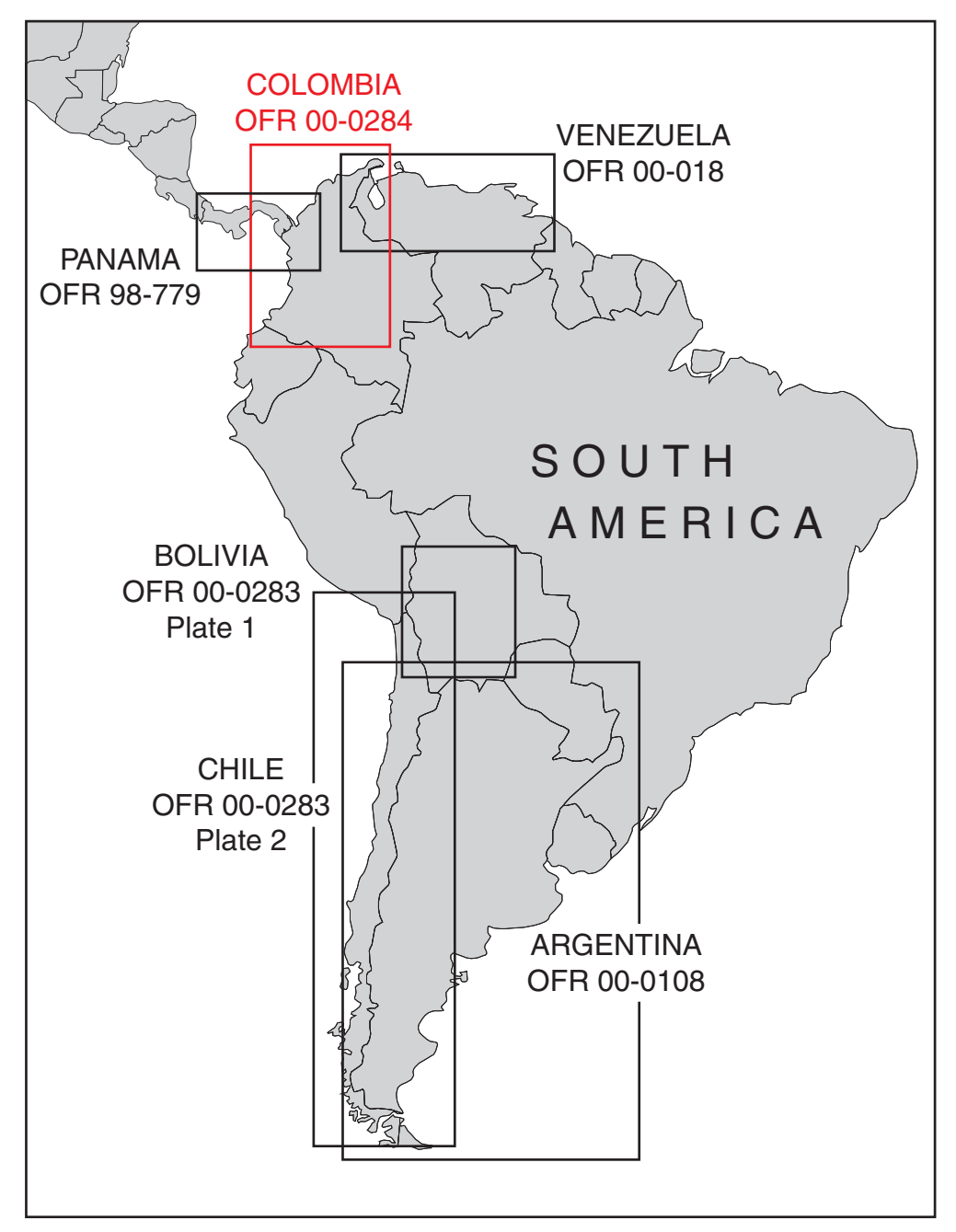
Diagram of major plate boundaries for Colombia
Esquema de límites de placas para Colombia

RELATIVE PLATE MOTION				
No.	Location	Fixed Plate	Moving Plate	Velocity Direction
1	72.5°W/9.5°N	Caribbean	South America	1.3 cm/yr 277°
2	77.5°W/11.5°N	South America	Caribbean	1.3 cm/yr 102°
3	79.0°W/6.0°N	South America	Nazca	6.3 cm/yr 78°
4	71.0°W/3.0°N	Nazca	South America	6.6 cm/yr 255°

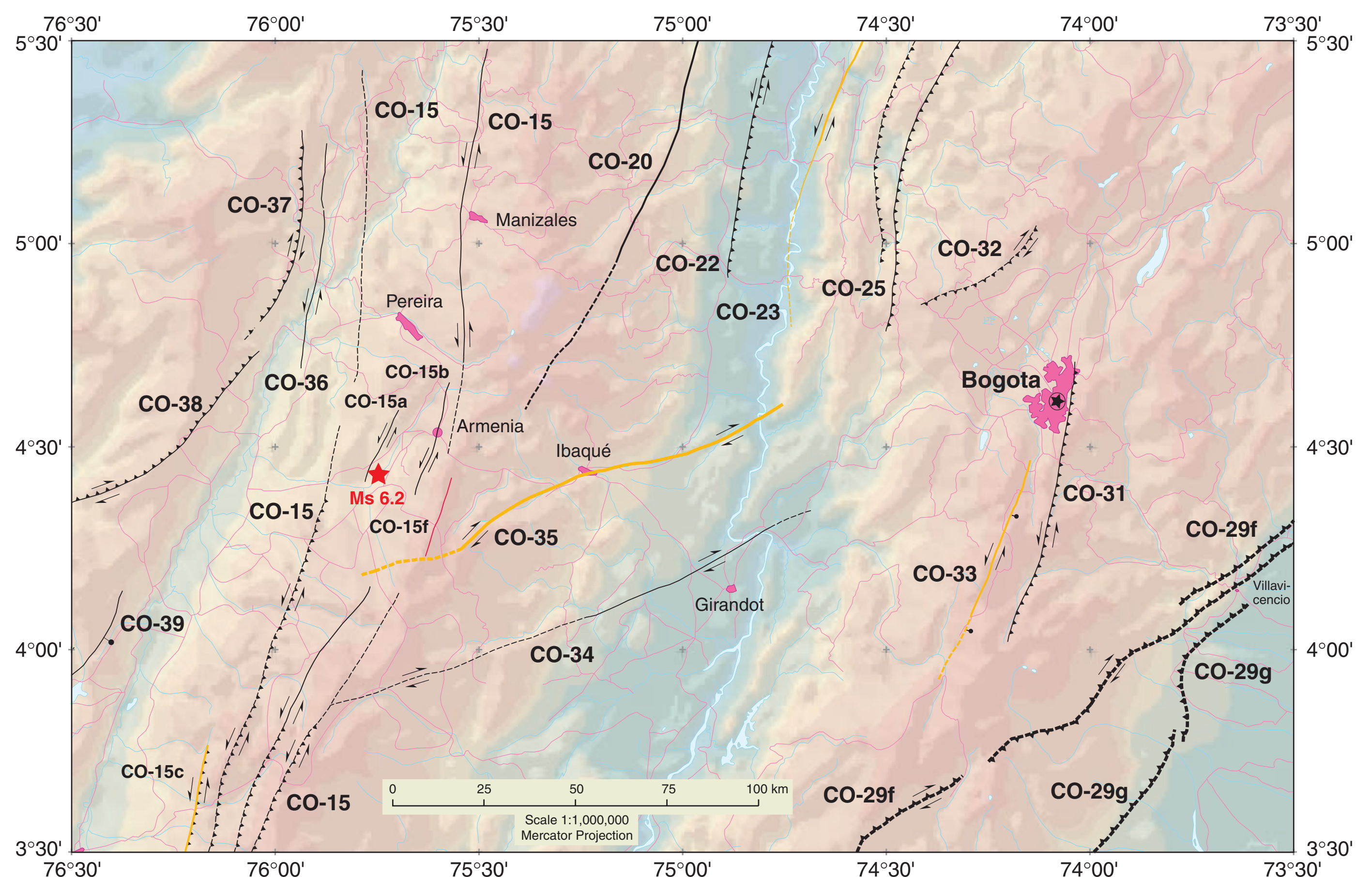
Source: Relative Plate Motion Calculator; Novali IA Model; Kenzaki Tamaki, Ocean Research Institute, University of Tokyo, 1-15-1 Minamidai, Nakano-ku, Tokyo, 164, Japan (tamaki@ori.u-tokyo.ac.jp)

QUATERNARY FAULTS OF COLOMBIA
FALLAS CUATERNARIAS DE COLOMBIA

Number (CO-)	Name of structure	Sense of movement (major/minor)	Time of most recent movement	Slip rate (mm/yr)
Número (CO-)	Nombre de estructura	Sentido de movimiento (mayor/menor)	Edad del último movimiento	Tasa de movimiento (mm/año)
01	Oca fault	Right-lateral	<15 ka, possibly historic (1833 or 1834)	0.2-1
02	Santa Marta-Bucaramanga fault system	Left-lateral/reverse	<1.6 Ma?	Unknown, probably <0.2
02a	Santa Marta section	Left-lateral/reverse	<1.6 Ma	Unknown, probably <0.2
02b	Bucaramanga section	Reverse	<1.6 Ma?	Unknown, probably <0.2
03	Caño Tomas fault	Reverse	<1.6 Ma?	Unknown, probably <0.2
04	Tarra fault	Reverse	<1.6 Ma	Unknown, probably <0.2
05	Montería fault	Reverse	<1.6 Ma	0.2-1
06	Tucura fault	Reverse/left lateral(?)	<15 ka(?)	0.2-1
07	Mutató fault	Left-lateral/reverse	<15 ka	0.2-1
08	Murindó fault	Left-lateral	Historic (1902)	0.2-1
09	Unguía fault	Reverse/right lateral	<1.6 Ma?	Unknown, probably 0.2-1
10	Bahía Solano fault	Reverse	Historic (1970)	0.2-1
11	Muri fault	Reverse/left-lateral	<1.6 Ma	0.2-1
12	Cañasgordas fault	Reverse/left-lateral	<1.6 Ma (probably <130 ka)	<0.2
13	Abraqui fault	Reverse/left-lateral	<1.6 Ma	0.2-1
14	Urrao fault	Left-lateral	<1.6 Ma	0.2-1
15	Romeral fault system	-----	-----	-----
15a	Montenegro (fault) section	Normal/left-lateral	<1.6 Ma	<0.2
15b	Armenia (fault) section	Normal/left-lateral	<15 ka	<0.2
15c	Paraiso section	Thrust/right-lateral	<15 ka	0.2-1
15d	Piedraza (fault) section	Reverse/right-lateral	<1.6 Ma?	0.2-1
15e	Pisasa-Juamito (fault) section	Historic (1903)	Historic (1903)	0.2-1
15f	Cordoba-Navarro (fault) section	Left-lateral	Historic (1999)	<0.2
15g	Buesaco-Aranda (fault) section	Right lateral	Historic (1995)	1-5
16	Santa Rita (fault) section	Left-lateral	<1.6 Ma	<0.2
17	Espirito Santo fault	Normal and right-lateral	<15 ka	0.2-1
18	Otu Norte fault	Left lateral/reverse	<1.6 Ma	<0.2
19	Baño Norte fault	Left lateral and reverse	<1.6 Ma	0.2-1
20	Palestina fault	Reverse/left-lateral	<1.6 Ma	0.2-1
21	Cimitarra fault	Reverse/left-lateral(?)	<1.6 Ma	<0.2
22	Mulato-Getulio fault	Reverse/left-lateral	<1.6 Ma	<0.2
23	Honda fault	Reverse/left-lateral?	<15 ka	<0.2, <0.2
24	Alto del Trigo (part of Salinas fault system)	Reverse/left-lateral?	<1.6 Ma	<0.2
25	Bituma fault (part of Salinas fault system)	Reverse/left-lateral	<1.6 Ma	<0.2
26	Suarez fault	Reverse/left-lateral	<1.6 Ma	<0.2
27	Moronero-Las Mercedes fault system	Reverse/strike-slip	<1.6 Ma	0.2-1
28	Chitaga-Pampóna faults	Reverse and left-lateral	<1.6 Ma (probably >750 ka)	Unknown, probably 0.2-1
29	Eastern Frontal fault system	-----	-----	-----
29a	Northern Guacaramo section	Reverse/right-lateral	<15 ka	1-5
29b	Central Guacaramo section	Reverse/right-lateral	Historic (1995)	1-5
29c	Southern Guacaramo section	Reverse/right-lateral	<15 ka	1-5
29d	Yopal (fault) section	Reverse/right-lateral	<15 ka	1-5
29e	San Pedro-Cumari section	Reverse/right lateral	<15 ka	1-5
29f	Servia-Santa Maria (fault group) section	Reverse/left-lateral?	<1.6 Ma (possibly <15 ka)	1-5
29g	Guayurba (fault) section	Reverse/left-lateral	<1.6 Ma (probably <50 ka)	1-5
29h	Algeciras (fault) section	Right-lateral	<1.6 Ma (probably <130 ka)	1-5
29i	Carzon-Puerto (fault) section	Right-lateral(?) & reverse	<15 ka	1-5(?)
29j	Suaza (fault) section	Right-lateral & reverse	<1.6 Ma	0.2-1
29k	Mocóa (fault) section	Reverse/right-lateral	<1.6 Ma (probably <130 ka)	Unknown, probably 0.2-1
29l	Sibundoy (fault) section	Right-lateral	<15 ka (possibly historic 1834)	1-5
29m	Alisadores (fault) section	Reverse/right-lateral	<1.6 Ma	Unknown, probably 0.2-1
30	La Macarena fault	Reverse	<1.6 Ma	Unknown, probably 0.2-1
31	Bogotá fault	Reverse/right-lateral	<1.6 Ma	<0.2
32	Viani fault	Reverse/right-lateral	<1.6 Ma	<0.2
33	Usme fault	Normal/right-lateral	<15 ka	1-5
34	Cucunza fault	Right-lateral	<1.6 Ma	<0.2
35	Ibaqué fault	Right-lateral, slight oblique	<15 ka	1-5
36	Toro fault	Left-lateral	<1.6 Ma	<0.2
37	Argelia fault	Reverse/right lateral?	<1.6 Ma	Unknown, probably <0.2
38	Garrapatas fault	Reverse/right lateral?	<1.6 Ma	Unknown, probably <0.2
39	Dagua-Calima fault system	Normal	<1.6 Ma	<0.2
40	El Tambor fault	Reverse/right lateral?	<1.6 Ma	Unknown, probably <0.2
41	Naya-Micay fault	Right-lateral/oblique	<1.6 Ma	0.2-1
42	Remolino-El Charco fault	Probably right-lateral/oblique	<1.6 Ma	Unknown, probably <0.2
43	Piedraza fault	Probably right-lateral/oblique	<1.6 Ma	Unknown, probably <0.2
44	Guatara fault	Right-lateral	<1.6 Ma	Unknown, probably 0.2-1
45	La Plata (Chusma) fault	Right-lateral/reverse	<1.6 Ma (known <130 ka)	Unknown, probably 0.2-1
46	Hlanda fault	Right-lateral	Historic? (1994)	Unknown, probably <0.2
47	La Dina fault	Reverse/right-lateral	<1.6 Ma	Unknown, probably 0.2-1
48	Nazca subduction zone	Thrust	Historic (1906, 1942, 1958, 1979)	Ca. 70 across zone
49	South Caribbean deformed belt (Colombia fault)	Thrust/oblique	<1.6 Ma (probably <15 ka)	Ca. 10 across belt



MAP EXPLANATION	SIMBOLOGIA DEL MAPA
TIME OF MOST RECENT SURFACE RUPTURE	EDAD DE ÚLTIMA RUPTURA SUPERFICIAL
Historic (year)	Historic (año)
Holocene (<10,000 yrs) or post glacial (<15,000 yrs)	Holoceno (<10,000 años) o post glacial (<15,000 años)
Quaternary, undifferentiated (<1,600,000 yrs)	Cuaternario, sin diferenciar (<1,600,000 años)
SLIP RATE	TASA DE MOVIMIENTO
1.5 mm/yr	1.5 mm/año
0.2-1 mm/yr	0.2-1 mm/año
<0.2 mm/yr (or unknown)	<0.2 mm/año (o desconocida)
QUALITY	CALIDAD
Continuous at map scale	Continua a la escala del mapa
Poor or discontinuous at map scale	Pobre o discontinua a la escala del mapa
Inferred or concealed	Inferida u oculta
STRUCTURE TYPE	TIPO DE ESTRUCTURA
FAULTS	FALLAS
Thrust or reverse fault (beeh on upper block)	Falla inversa o corrimiento (triángulos en bloque superior)
Right-lateral (dextral) strike-slip fault	Falla de rumbo dextral
Left-lateral (sinistral) strike-slip fault	Falla de rumbo sinistral
Normal fault (bar and ball on downthrown block)	Falla normal (círculo en bloque hundido)
FOLDS	PLIEGUES
Anticline	Anticlinal
Syncline	Sinclinal
OTHER SYMBOLS	OTROS SIMBOLICOS
Location of fault section	Extremidad de sección de falla
Fault number (CO-)	Número de falla (CO-)
★ Earthquake epicenter (07/25/99)	★ Terremoto (07/25/99)



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This map is available as a PDF file at <http://geology.cr.usgs.gov>
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