U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

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Text accompanies map

Map of Quaternary Faults and Folds of Argentina

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
the National University of San Luis (UNSL).

Data compiled by Carlos H. Costa (UNSL).
Digital representation by Richard L. Dart (USGS), Guillermo E. Ojeda and Ricardo Morán (UNSL).
Project coordination by Michael N. Machette (Co-chairman, ILP Task Group II-2).

2000

Scale 1:4,000,000 Equirectangular Projection
(Longitude of central meridian, 63 30'W; latitude of true scale, 0)

Mapa de Fallas y Pliegues Cuaternarias de Argentina

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) y
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2000

Escala 1:4.000.000 Proyección Equirectangular
(longitud de meridiano central, 63 30'W; latitud de escala verdadera 0)

QUATERNARY FAULTS AND FOLDS OF ARGENTINA
FALLAS Y PLIEGUES CUATERNARIAS DE ARGENTINA

Number Numeró	Name of structure Nombre de structuro	Sense of movement (major/minor) Sentido de movimiento (mayor/menor)	Time of most recent movement Edad del último movimiento	Slip rate (mm/yr) Tasa de movimiento (mm/año)
AR-01	**Aguilar Este-Sierra de Cajas fault zone (Zona fallas de Aguilar Este-Sierra de Cajas)**	Reverse	<1.6 Ma	Unknown
AR-02	**Aconquija fault (Falla Aconquija)**	Reverse	<1.6 Ma	Unknown
AR-03	**Calalaste-La Colorada faults (Grupo de fallas Calalaste-La Colorada)**	Normal, reverse with strike slip	<1.6 Ma	Unknown
AR-04	**Pipanaco fault (Falla Pipanaco)**	Unknown	<1.6 Ma	Unknown
AR-05	**Chumbicha fault (Falla Chumbicha)**	Unknown	<1.6 Ma	Unknown
AR-06	**Jaguel fault (Falla Jagüel)**	Unknown	<1.6 Ma	Unknown
AR-07	**La Brava fault (Falla La Brava)**	Unknown	<1.6 Ma	Unknown
AR-08	**El Leoncito fault (Falla El Leoncito)**	Unknown	<1.6 Ma	Unknown
AR-09	**Infiernillo fault (Falla Infiernillo)**	Reverse	<1.6 Ma	Unknown
AR-10	**La Troya fault (Falla Troya)**	Unknown, strike slip?	<1.6 Ma	Unknown
AR-11	**Cachiyuyal fault (Falla Cachiyuyal)**	Strike slip/normal?	<1.6 Ma	Unknown
AR-12	**Las Majaditas fault (Falla Las Majaditas)**	Dextral?	<1.6 Ma, historic?	Unknown
AR-13	**La Bolsa fault (Falla La Bolsa)**	Dextral	<15 ka, historic?	Unknown
AR-14	**Punilla fault (Falla Punilla)**	Strike slip/normal?	<1.6 Ma	Unknown
AR-15	**Pismanta-Las Flores fault (Falla Pismanta-Las Flores)**	Dextral/normal?	<15 ka	Unknown
AR-16	**El Tigre fault (Falla El Tigre)**	Dextral/normal?	<15 ka	1-5
AR-17	**La Cantera fault (Falla La Cantera)**	Reverse?	<1.6 Ma	Unknown
AR-18	**La Dehesa fault (Falla La Dehesa)**	Reverse?	<15 ka	Unknown
AR-19	**Maradona-Acequion fault (Falla Maradona-Acequion)**	Reverse (mainly)	<15 ka	0.2-1
AR-20	**Las Tapias-Villicum fault (Falla Las Tapias-Villicum)**	Reverse	<1.6 Ma	Unknown
AR-21	**La Laja fault (Falla La Laja)**	Reverse	Historic (1944)	1-5
AR-22	**Rinconada fault (Falla Rinconada)**	Reverse	Historic (1952)	1-5
AR-23	**Los Berros fault (Falla Los Berros)**	Reverse	<15 ka	0.2-1
AR-24	**Cerro Salinas fault (Falla Cerro Salinas)**	Reverse (mainly)	<1.6 Ma	Unknown
AR-25	**Ampacama-Niquizanga fault (Falla Ampacama-Niquizanga)**	Reverse?	Historic (1977)	Unknown
AR-26	**Pajaritos fault (Falla Pajaritos)**	Reverse/sinistral?	<1.6 Ma	Unknown
AR-27	**Las Chacras fault (Falla Las Chacras)**	Reverse/sinistral?	<15 ka	1-5
AR-28	**Las Peyas (Jocoli) fault (Falla Las Peyas o Jocoli)**	Reverse	<15 ka	Unknown
AR-29	**Las Vacas fold (Pliegue Las Vacas)**	Anticline	<15 ka	1-5
AR-30	**Cerro La Cal fault (Falla Cerro La Cal)**	Reverse?	<15 ka, historic? (1861)	0.2-1
AR-31	**Capdeville-Borbollon fold (Pliegue Capdeville-Borbollon)**	Anticlines	<1.6 Ma, <15 ka?	1-5
AR-32	**Cerro de la Gloria fault (Falla Cerro de la Gloria)**	Reverse	<15 ka	Unknown
AR-33	**Melocoton fault (Falla Melocoton)**	Reverse	<15 ka	0.2-1
AR-34	**Las Higueras fault (Falla Las Higueras)**	Reverse	<1.6 Ma	Unknown
AR-35	**Lomas Bayas fold (Pliegue Lomas Bayas)**	Anticline	<15 ka	Unknown
AR-36	**Punta del Agua fault (Falla Punta del Agua)**	Unknown, reverse/ strike slip	<1.6 Ma	Unknown
AR-37	**East Barrancas fault and folds (Falla y pliegues Barrancas Este)**	Reverse and anticlines	Historic (1985)	Unknown
AR-38	**West Barrancas fault and folds (Falla y pliegues Barrancas Oeste)**	Reverse and anticlines	Historic (1985)	1-5
AR-39	**Chupasangral fault (Falla Chupasangral)**	Unknown	<1.6 Ma	Unknown
AR-40	**Huayquerias fault (Falla Huayquerias)**	Strike slip?	<1.6 Ma	Unknown
AR-41	**Chalet fault (Falla Chalet)**	Unknown	<1.6 Ma	Unknown
AR-42	**Manantiales fault (Falla Manantiales)**	Strike slip?	<15 ka	Unknown
AR-43	**Papagayos fault (Falla Papagayos)**	Dextral?	<1.6 Ma	Unknown
AR-44	**Diamante fault (Falla Diamante)**	Strike slip?	<1.6 Ma	Unknown
AR-45	**Las Malvinas fault (Falla Las Malvinas)**	Strike slip?	<15 ka	Unknown
AR-46	**Malargue fault (Falla Malargüe)**	Unknown	<1.6 Ma	Unknown
AR-47	**Payun fault (Falla Payun)**	Unknown	<1.6 Ma	Unknown
AR-48	**San Luis fault zone (Zona falla San Luis)**			
AR-48a	La Higuera fault (Falla La Higuera)	Reverse	<15 ka	Unknown
AR-48b	Lorenzillo fault (Falla Lorenzillo)	Reverse	<1.6 Ma	0.2-1.0
AR-48c	Las Cuevas fault (Falla Las Cuevas)	Reverse	<1.6 Ma	Unknown
AR-49	**Potrero Sur fault (Falla Potrero Sur)**	Normal/strike slip?	<1.6 Ma	<0.2
AR-50	**El Molino branch of Comechingones fault (Ramo Los Molinos de falla Comechingones)**	Reverse	<15 ka	0.2-1.0
AR-51	**Nono fault (Falla Nono)**	Reverse	<15 ka	0.2-1.0
AR-52	**Sierra Baja de San Marcos fault (Falla Sierra Baja de San Marcos)**	Reverse	<1.6 Ma	Unknown
AR-53	**Sierra Chica fault zone (Zona falla Sierra Chica)**			
AR-53a	Cosquin fault (Falla Cosquin)	Reverse	<1.6 Ma	Unknown
AR-53b	Carlos Paz fault (Falla Carlos Paz)	Reverse	<1.6 Ma, <15 ka?	Unknown
AR-53c	Potrero de Garay-San Pedro fault (Falla Potrero de Garay-San Pedro)	Reverse	<15 ka	Unknown
AR-53d	Santa Rosa fault (Falla Santa Rosa)	Reverse	<15 ka	Unknown
AR-54	**Sampacho fault zone (Zona falla Sampacho)**	Reverse?	<15 ka	Unknown
AR-55	**Sauce Chico fold (Pliegue Sauce Chico)**	Syncline	<15 ka	Unknown
AR-56	**Lago Fagnano fault (Falla Lago Fagnano)**	Sinistral	Historic (1947)	Unknown
AR-57	**Infiernillos fault (Falla Los Infiernillos)**	Unknown	<1.6 Ma	Unknown
AR-58	**Divisadero Largo fault (Falla Divisadero Largo)**	Reverse	<1.6 Ma	Unknown
AR-59	**Carrizal-La Ventana-Punta de las Bardas-Vacas Muertas folds (Pliegues Carrizal-La Ventana-Punta de las Bardas-Vacas Muertas)**	Anticline	<15 ka	<0.2
AR-60	**Zonda fault (Falla Zonda)**	Reverse	<15 ka	Unknown
AR-61	**Blanquitos fault system (Systema de falla Blanquitos)**	Reverse	<15 ka	Unknown
AR-62	**Marquesado fault (Falla Marquesado)**	Reverse	<1.6 Ma	Unknown
AR-63	**La Chilca fault (Falla La Chilca)**	Reverse	<1.6 Ma	Unknown
AR-64	**El Carrizal fault (Falla El Carrizal)**	Reverse	<1.6 Ma	Unknown
AR-65	**El Alcazar fault (Falla El Alcazar)**	Reverse	<1.6 Ma	Unknown
AR-66	**Mosquitos fault (Falla Mosquitos)**	Reverse	<1.6 Ma	Unknown
AR-67	**Cepeda fault (Falla Cepeda)**	Reverse	<1.6 Ma	Unknown
AR-68	**Tontal fault (Falla Tontal)**	Reverse	<1.6 Ma	Unknown
AR-69	**La Horqueta (Falla La Horqueta)**	Reverse	<1.6 Ma	Unknown
AR-70	**Ansilta-Jarillal faults (Fallas Ansilta-Jarillal)**	Reverse	<1.6 Ma	Unknown
AR-71	**Yalguaraz fault group (Grupo de fallas Yalguaraz)**	Reverse	<1.6 Ma	Unknown
AR-72	**Agua del Jaguel-Penasco faults (Fallas Agua del Jaguel-Peñasco)**	Reverse and normal	<1.6 Ma	Unknown
AR-73	**Sierra de Uspallata fault group (Grupo de fallas Sierra de Uspallata)**	Reverse	<1.6 Ma	Unknown
AR-74	**Casa de Piedra fault (Falla Casa de Piedra)**	Reverse	<1.6 Ma	Unknown
AR-75	**Cachipampa fault (Falla Cachipampa)**	Unknown	<1.6 Ma	Unknown
AR-76	**Amblayo fault (Falla Amblayo)**	Unknown	<1.6 Ma	Unknown
AR-77	**Guachipas fault group (Grupo de fallas Guachipas)**	Unknown	<1.6 Ma	Unknown
AR-78	**San Carlos fault group (Grupo de fallas San Carlos)**	Unknown	<1.6 Ma	Unknown
AR-79	**Patquia Viejo fault (Falla Patquia Viejo)**	Reverse	<1.6 Ma	Unknown
AR-80	**Salar de Hombre Muerto fault group (Grupo de fallas Salar de Hombre Muerto)**	Strike slip	<1.6 Ma	Unknown
AR-81	**Rio Paclin fault group (Grupo de fallas Rio Paclín)**	Reverse and normal	<1.6 Ma	Unknown
AR-82	**Aisol fault (Falla Aisol)**	Sinistral	<1.6 Ma	Unknown
AR-83	**La Angostura fault group (Grupo de fallas La Angostura)**	Reverse/strike slip	<1.6 Ma	Unknown
AR-84	**Ambato fault group (Grupo de fallas Ambato)**	Reverse/normal	<1.6 Ma	Unknown
AR-85	**Caldera del Agrio fault group (Grupo de fallas Caldera del Agrio)**	Sinistral/reverse	<1.6 Ma	Unknown

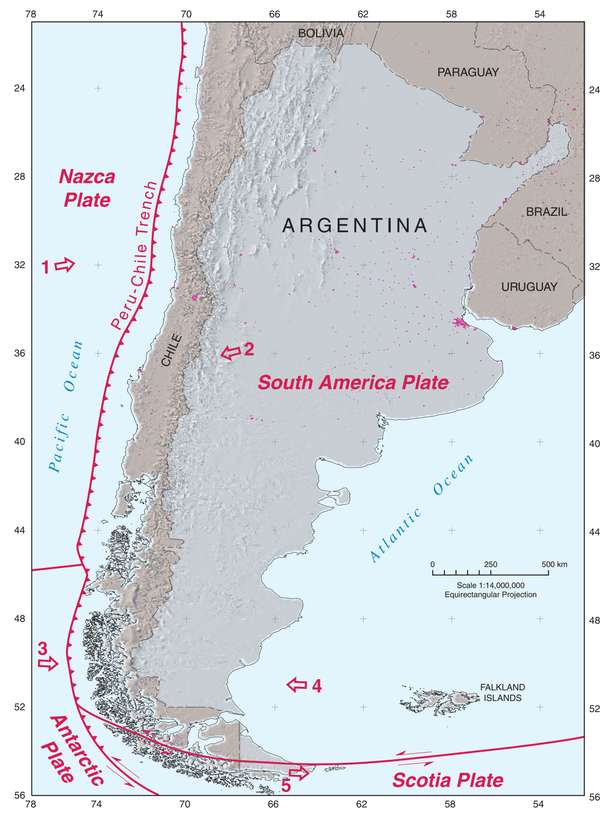

Diagram of major plate boundaries for Argentina
Esquema de límites de placas para Argentina

RELATIVE PLATE MOTION

No.	Location	Fixed Plate	Moving Plate	Velocity	Direction
1	76 W/32 S	South America	Nazca	8.00 cm	80.05
2	68 W/36 S	Nazca	South America	7.98 cm	255.76
3	77 W/50 S	South America	Antarctica	1.97 cm	93.13
4	65 W/51 S	Scotia	South America	1.94 cm	272.20
5	65 W/55 S	South America	Scotia	1.79 cm	92.39

Source: Kensaku Tamaki, Ocean Research Institute, University of Tokyo
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MAP EXPLANATION

TIME OF MOST RECENT SURFACE RUPTURE
- Historic (year)
- Holocene (<10,000 yrs) or post glacial (<15,000 yrs)
- Quaternary, undifferentiated (<1,600,000 yrs)

SLIP RATE
- > 5 mm/yr
- 1-5 mm/yr
- < 1 mm/yr (or unknown)

QUALITY
- Continuous at map scale
- Poor or discontinuous at map scale
- Inferred or concealed

STRUCTURE TYPE

FAULTS
- Thrust or reverse fault (teeth on upper block)
- Right-lateral (dextral) strike-slip fault
- Left-lateral (sinistral) strike-slip fault
- Normal fault

FOLDS
- Anticline
- Syncline

OTHER SYMBOLS
- Location of fault section boundary

SIMBOLOGIA DEL MAPA

EDAD DE ULTIMA RUPTURA SUPERFICIAL
- Histórica (año)
- Holocena (<10,000 años) o post glacial (<15,000 años)
- Cuaternaria, sin diferenciar (<1,600,000 años)

TASA DE MOVIMIENTO
- > 5 mm/año
- 1-5 mm/año
- < 1 mm/año (o desconocida)

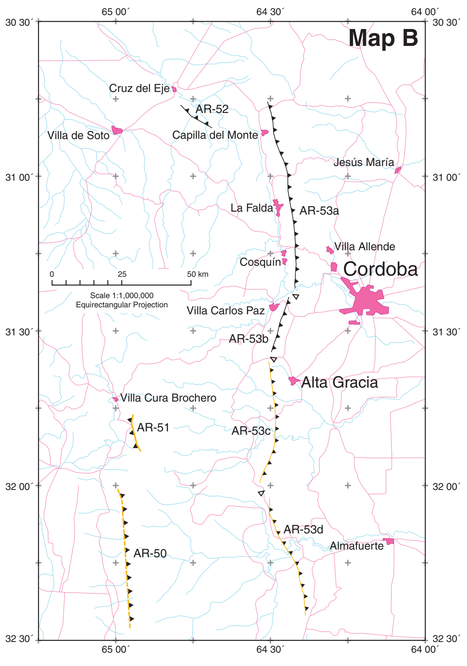
CALIDAD
- Continua a la escala del mapa
- Pobre o discontinua a la escala del mapa
- Inferida u oculta

TIPO DE ESTRUCTURA

FALLAS
- Falla inversa o corrimiento (triángulos en bloque superior)
- Falla de rumbo dextral
- Falla de rumbo sinestral
- Falla normal (círculo en bloque hundido)

PLIEGUES
- Anticlinal
- Sinclinal

OTROS SIMBOLICOS
- Extremidad de sección de falla



International Lithosphere Program (ILP)

Programa Internacional de la Litósfera (ILP)

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