

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

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

A cooperative project between the U.S. Geological Survey (USGS), Research Institute for Development (IRD), and University of Chile (UC).

Un proyecto de cooperación entre el U.S. Geological Survey (USGS), Institut de Recherche pour le Développement (IRD) y Universidad de Chile (UC).

Data compiled by Alain Lavenu (IRD) and Ricardo Thiele (UC). Digital representation by Richard L. Dart (USGS).

Datos compilados por Alain Lavenu (IRD) y Ricardo Thiele (UC). Representación digital por Richard L. Dart (USGS).

Project coordination by Michael N. Machette (Co-chairman, ILP Task Group II-2).

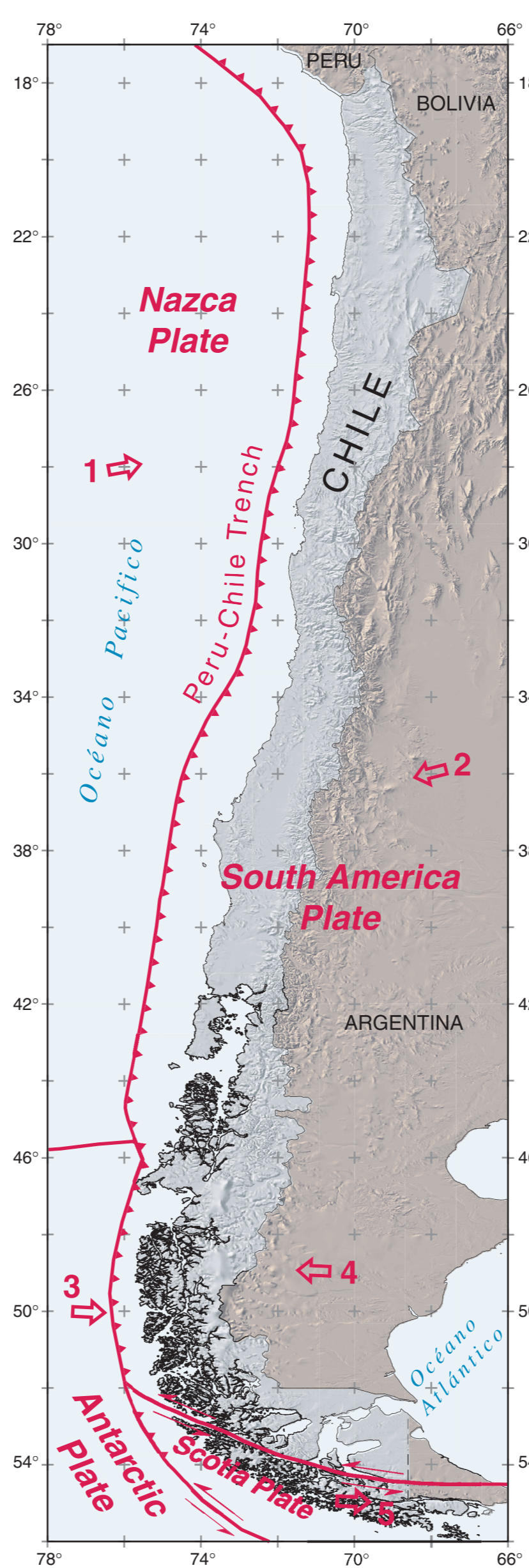
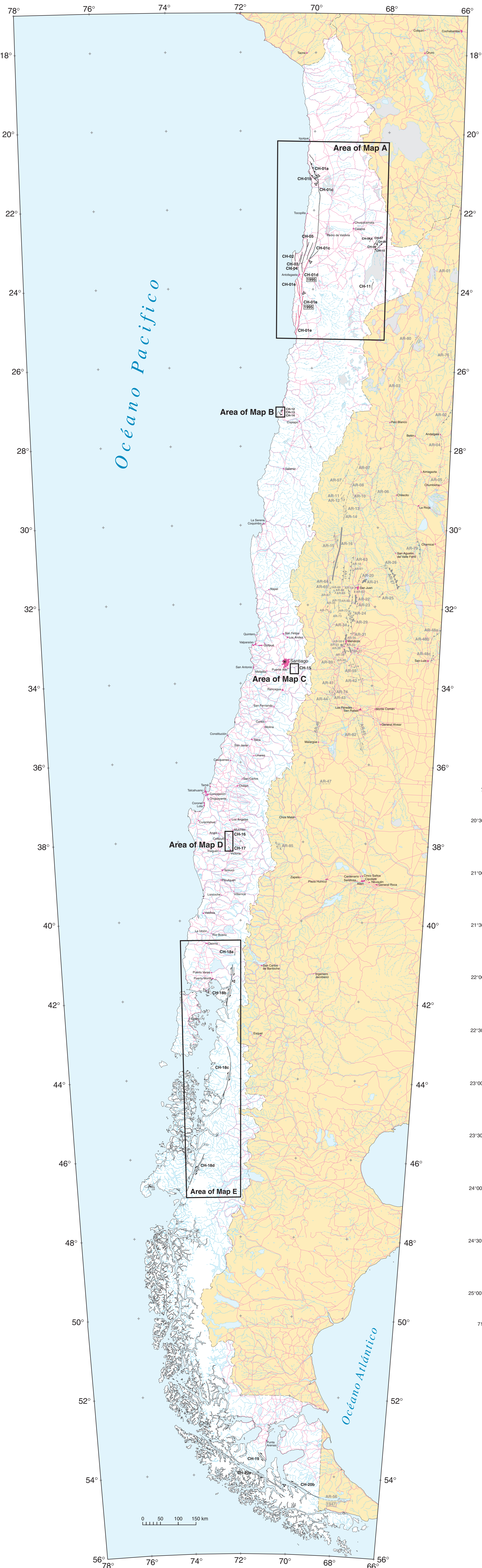
Proyecto coordinado por Michael N. Machette (Co-chairman, ILP Grupo de Trabajo II-2).

2000

2000

Scale 1:4,000,000
Polyconic Projection
(Longitude of central meridian, 72°W; latitude of true scale, 0°;
Clarke 1866 spheroid)

Escala 1:4,000,000
Proyección de Polyconic
(Longitud de meridiano central, 72°W; latitud de escala verdadera 0°;
con base en el esferoide de Clarke 1866)



RELATIVE PLATE MOTION

No.	Location	Fixed Plate	Moving Plate	Velocity	Direction
1	76°W/32°S	South America	Nazca	8.45 cm	80.05°
2	68°W/36°S	Nazca	South America	8.42 cm	255.76°
3	72°W/52°S	South America	Antarctica	1.97 cm	93.13°
4	71°W/49°S	South America	South America	2.01 cm	272.61°
5	70°W/55°S	South America	Scotland	1.79 cm	92.95°

Source: Relative Plate Motion: Geological, No. 14. A Model, Nishida, Teraki, Ogasawara Institute, University of Tokyo, 1974. Modified: Nishida, Teraki, Ogasawara Institute, University of Tokyo, 1974.

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

QUATERNARY FAULTS OF CHILE
FALLAS CUATERNARIAS DE CHILE

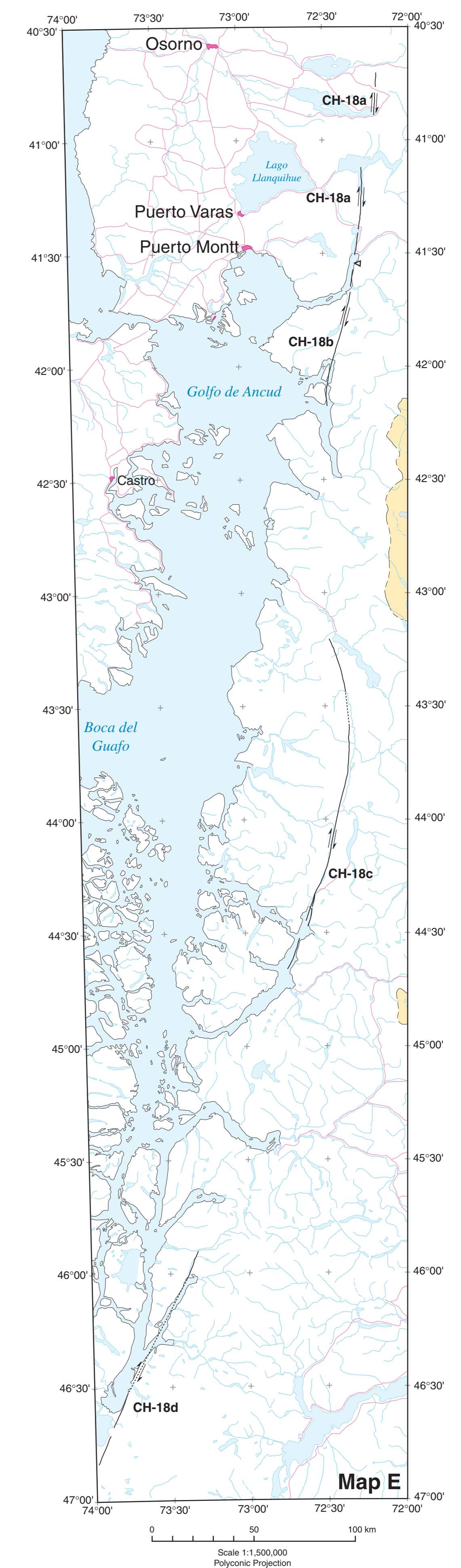
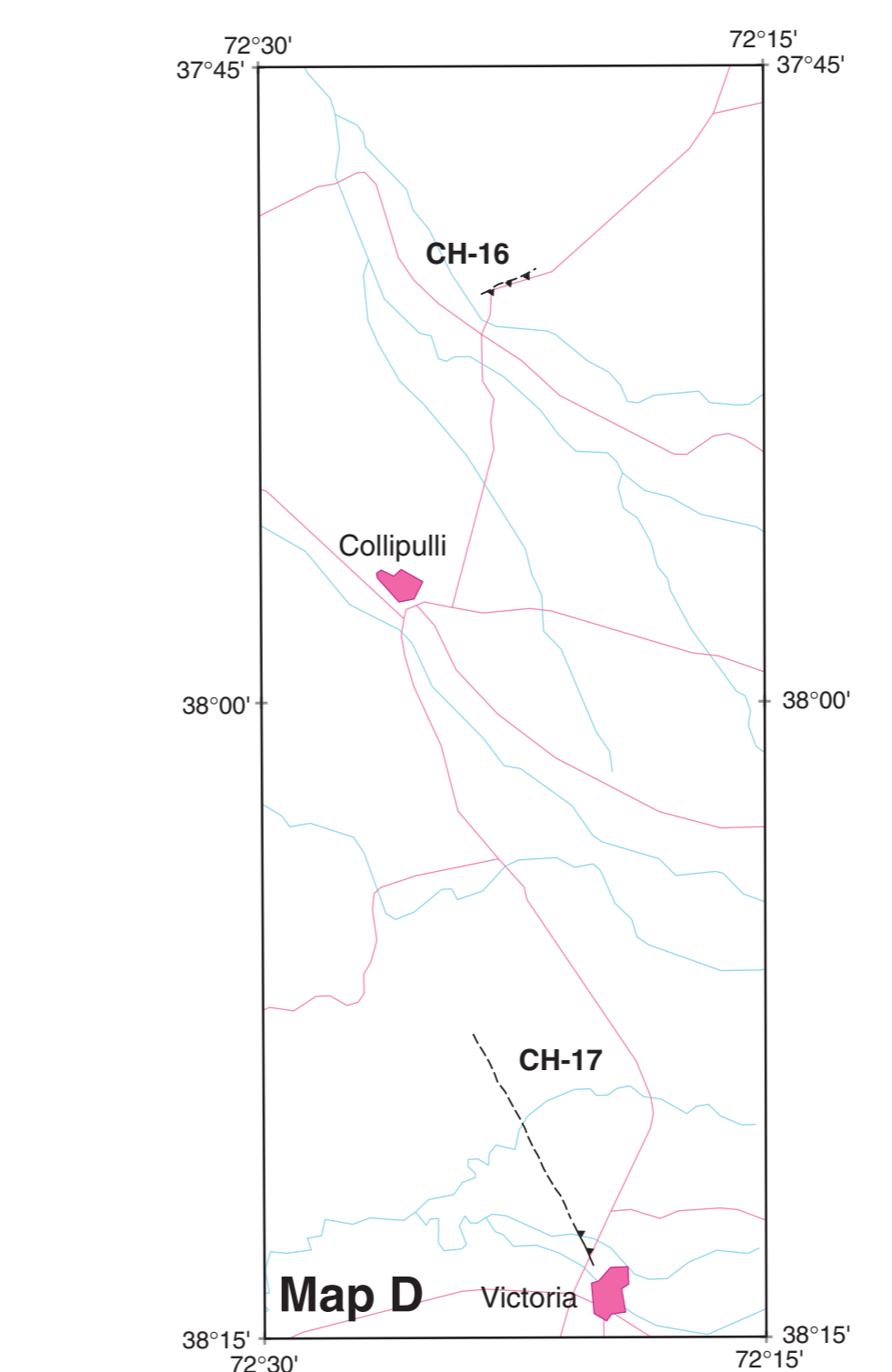
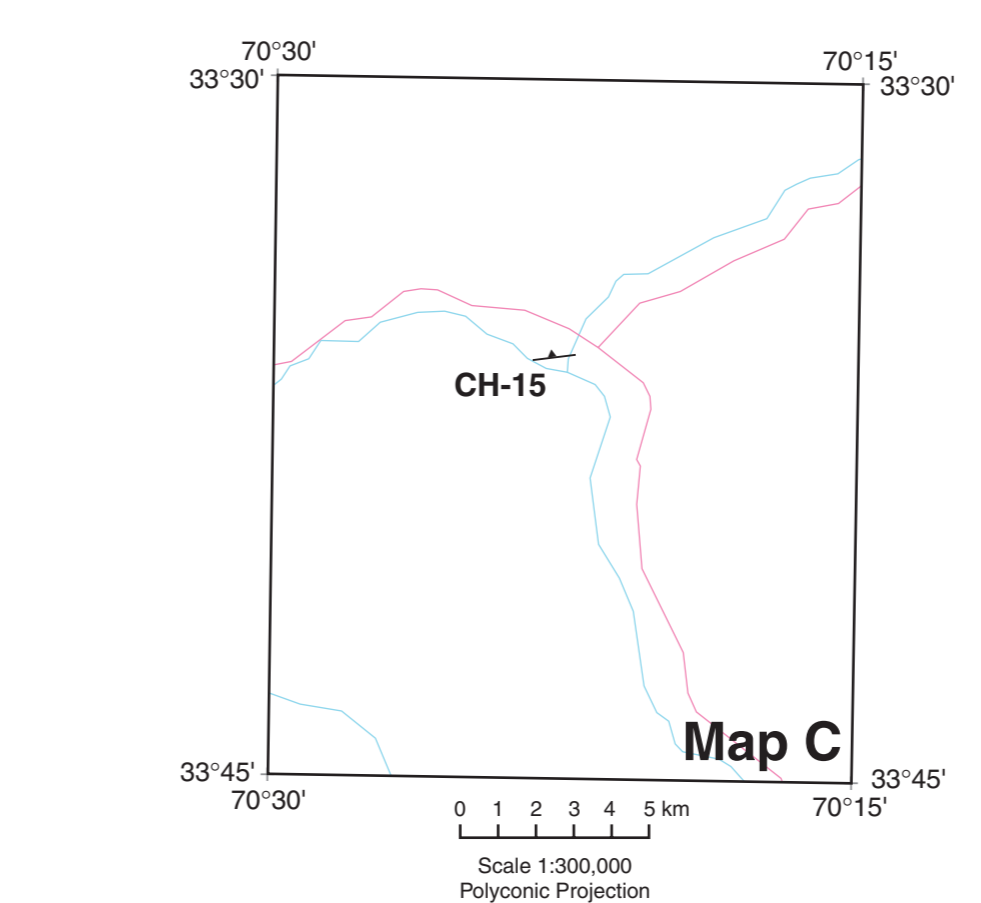
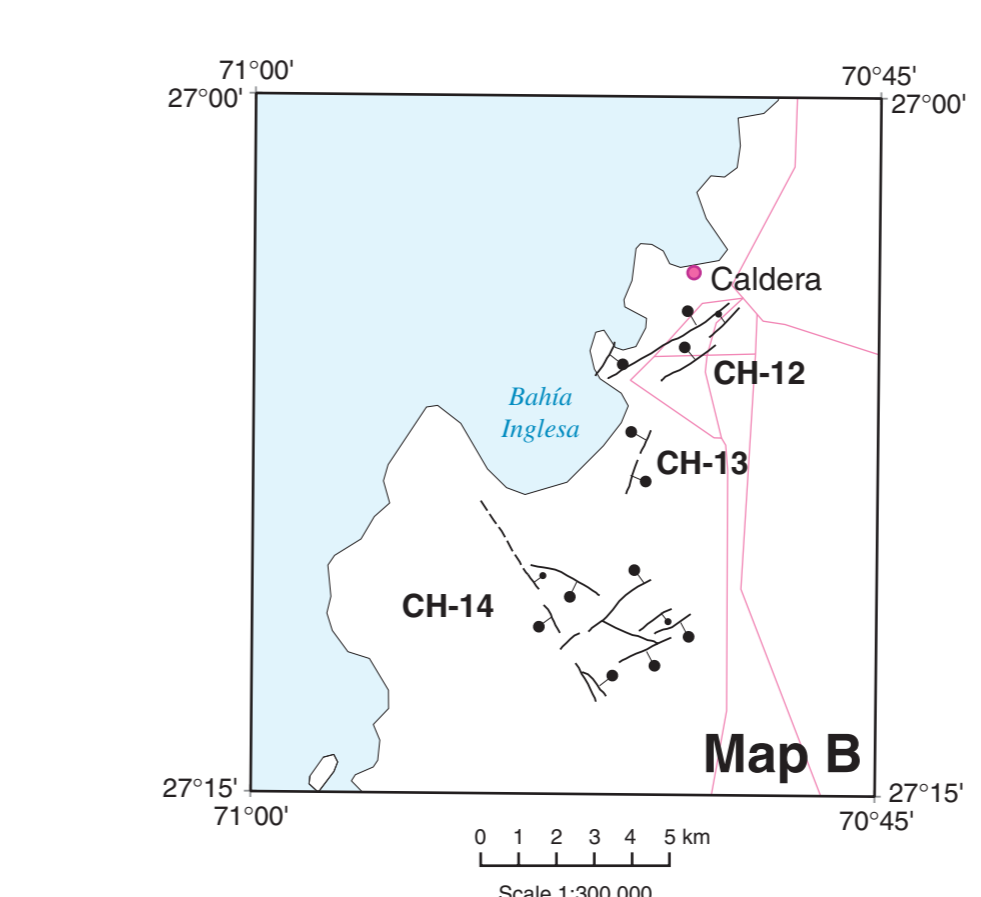
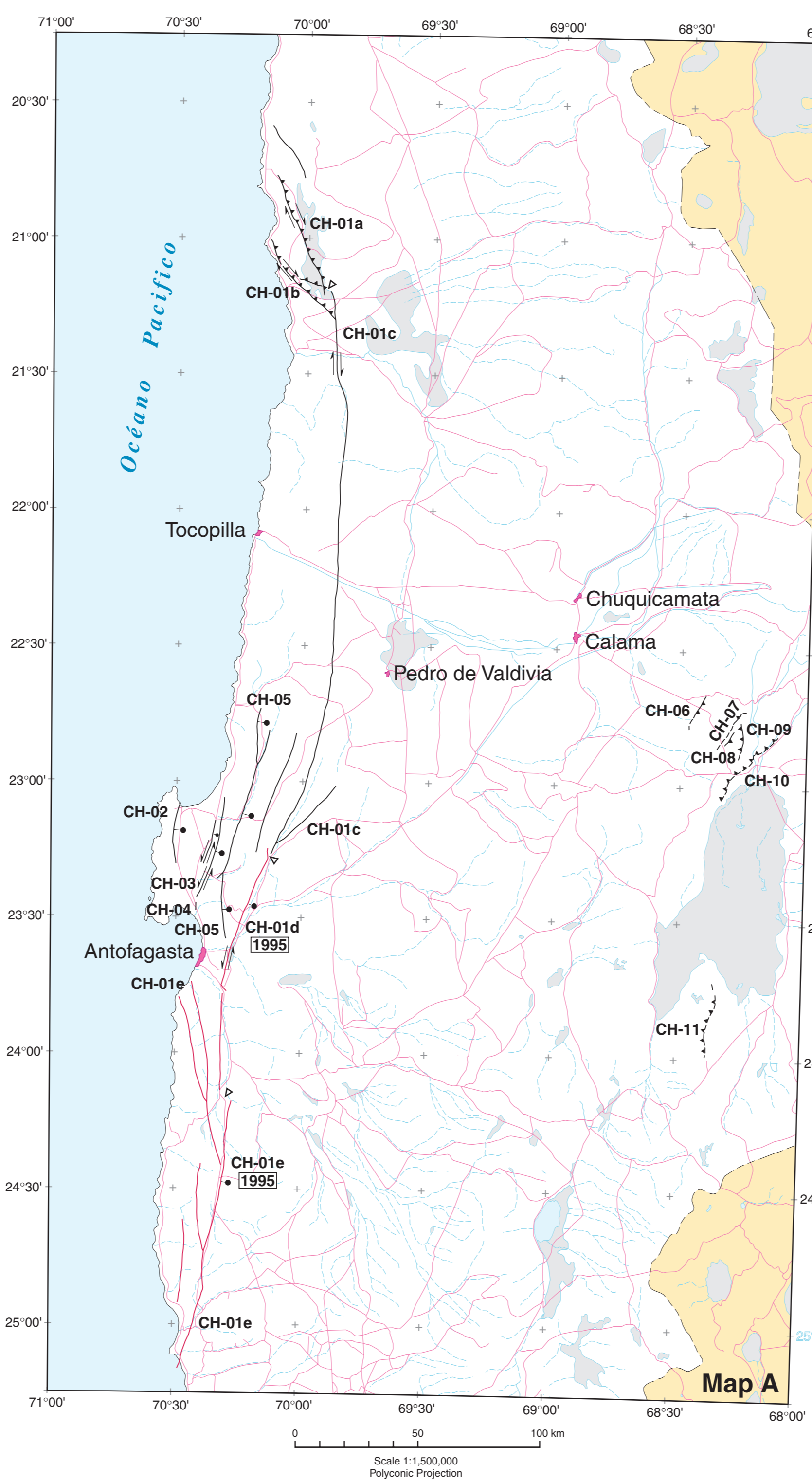
Number	Name of structure	Sense of movement (major/minor)	Time of most recent movement	Slip rate (mm/yr)
CH-01	Atacama fault (falla de Atacama)	Dextral-reverse	<1.6 Ma	Unknown/desconocida
CH-01a	Salar Grande fault (falla del Salar Grande)	Dextral-reverse	<1.6 Ma	Unknown/desconocida
CH-01b	Punta de Lobos fault (falla de Punta de Lobos)	Dextral-reverse	<1.6 Ma	Unknown/desconocida
CH-01c	Fault north of Carmen Salar (falla norte del Salar del Carmen)	Dextral-reverse	<1.6 Ma	Unknown/desconocida
CH-01d	Fault south of Carmen Salar (falla sur del Salar del Carmen)	Normal	Historic (1995)	Unknown/desconocida
CH-01e	Sierra de Remolinos fault (falla de Sierra de Remolinos)	Normal	Historic (1995)	Unknown/desconocida
CH-02	Morro Mejillones fault (falla del Morro Mejillones)	Normal	<1.6 Ma	Unknown/desconocida
CH-03	Cerro Gordo fault, Atacama fault zone (falla del Cerro Gordo, sistema falla de Atacama)	Normal-sinistral	<1.6 Ma (<15 ka?)	Unknown/desconocida
CH-04	Cerro Moreno fault, Atacama fault zone (falla del Cerro Moreno, sistema falla de Atacama)	Normal-sinistral	<1.6 Ma (<15 ka?)	Unknown/desconocida
CH-05	Cerro Fortuna fault, Atacama fault zone (falla Cerro Fortuna, sistema falla de Atacama)	Normal	<1.6 Ma	Unknown/desconocida
CH-06	Western Back Thrust of Cerro de Purilactis (Falla Frontal Back Thrust del Cerro de Purilactis)	Reverse	<1.6 Ma	Unknown/desconocida
CH-07	Frontal Domeyko Thrust of Llano de la Paicenia (Falla Frontal Domeyko Thrust del Llano de la Paicenia)	Reverse	<1.6 Ma	Unknown/desconocida
CH-08	Ignimbrite Back Thrust of Llano de la Paicenia (Falla Ignimbrite Back Thrust del Llano de la Paicenia)	Reverse	<1.6 Ma	Unknown/desconocida
CH-09	Eastern Frontal Thrust of Llano de la Paicenia (Falla Frontal Eastern Thrust del Llano de la Paicenia)	Reverse	<1.6 Ma	Unknown/desconocida
CH-10	Cordillera of the Sal Frontal Thrust fault (Falla Frontal Thrust de la Cordillera de la Sal)	Reverse	<1.6 Ma	Unknown/desconocida
CH-11	Tuacacane fault (falla Tuacacane)	Reverse	<1.6 Ma	Unknown/desconocida
CH-12	Faults south of Caldera (fallas al sur de Caldera)	Normal	<1.6 Ma (<125 ka)	0.30
CH-13	Faults East of Bahía Inglesa (fallas este de Bahía Inglesa)	Normal	<1.6 Ma (<125 ka)	0.27
CH-14	Faults of Alto del Fraile (fallas de Alto del Fraile)	Normal	<1.6 Ma	Unknown/desconocida
CH-15	Fault of San José de Maipo (falla de San José de Maipo)	Reverse	<1.6 Ma	Unknown/desconocida
CH-16	Fault of Esperanza (falla de Esperanza)	Reverse	<1.6 Ma	Unknown/desconocida
CH-17	Fault of Victoria (falla de Victoria)	Reverse	<1.6 Ma	Unknown/desconocida
CH-18a	Liquiñe-Ofqui fault (falla de Liquiñe-Ofqui)	Dextral	<1.6 Ma	Unknown/desconocida
CH-18b	Rionero fault (falla de Rionero)	Dextral	<1.6 Ma	Unknown/desconocida
CH-18c	Horropirén fault (falla de Horropirén)	Dextral	<1.6 Ma	Unknown/desconocida
CH-18d	Puyupueri fault (falla de Puyupueri)	Dextral	<1.6 Ma	Unknown/desconocida
CH-19	San Rafael fault (falla de San Rafael)	Dextral	<1.6 Ma	Unknown/desconocida
CH-20	Río San Juan fault (falla Río San Juan)	Sinistral	<1.6 Ma	Unknown/desconocida
CH-20a	Lago Fagnano fault (falla Lago Fagnano)	Sinistral and sinistral-normal	<1.6 Ma (<15 ka?)	Unknown/desconocida
CH-20b	Western section (sección occidental)	Sinistral and sinistral-normal	<1.6 Ma (<15 ka?)	Unknown/desconocida
CH-20c	Eastern section (sección oriental)	Sinistral and sinistral-normal	<1.6 Ma (<15 ka?)	Unknown/desconocida

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 (bar and ball on downthrown block)
- FOLDS
- Anticline
 - Syncline
- OTHER SYMBOLS
- Location of fault section boundary

SIMBOLOGIA DEL MAPA

- EDAD DE ÚLTIMA RUPTURA SUPERFICIAL
- Histórica (año)
 - Holoceno (<10,000 años) o post glacial (<15,000 años)
 - Cuaternario, 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
 - Intendida u oculta
- TIPO DE ESTRUCTURA
- FALLAS
- Falla inversa o comentario (triángulos en bloque superior)
 - Falla de rumbo dextral
 - Falla de rumbo sinistral
 - Falla normal (bolita en bloque hundido)
- PLIEGUES
- Anticlinal
 - Sinclinal
- OTROS SIMBOLÓGICOS
- Extremidad de sección de falla



International Lithosphere Program (ILP)
Programa Internacional de la Litósfera (I.L.P.)



Research Institute for Development (IRD)
Institut de Recherche pour le Développement (IRD)



University of Chile (UC)
Universidad de Chile (UC)

Digital data prepared with ARCGIS/INFO version 7.2.1 running under Silex version 2.6 on a Unix workstation. Last revision May 25, 2000.
Map prepared by L.A. Bradley using Adobe Illustrator version 9.0. Last revision October, 2000.
This map was prepared on request, directly from digital files, on an electronic plotter. It is also available as a PDF file at <http://geowebwood.cr.usgs.gov>.
This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade, product, or firm names is for descriptive purposes and does not imply endorsement by the U.S. Government.