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

OPEN-FILE REPORT
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Text accompanies map

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

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

A cooperative project of the U.S. Geological Survey, Denver, Colorado
and the URS Corporation.

2003

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

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

Un proyecto de cooperacion entre el U.S. Geological Survey, Denver, Colorado
y el URS Corporation

2003

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
- 1-5 mm/yr
- 0.2-1 mm/yr
- <0.2 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
- Monocline

OTHER SYMBOLS
- Location of fault section boundary
- 15 Peru fault number (PE-15)

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
- 1-5 mm/año
- 0.2-1 mm/año
- <0.2 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)

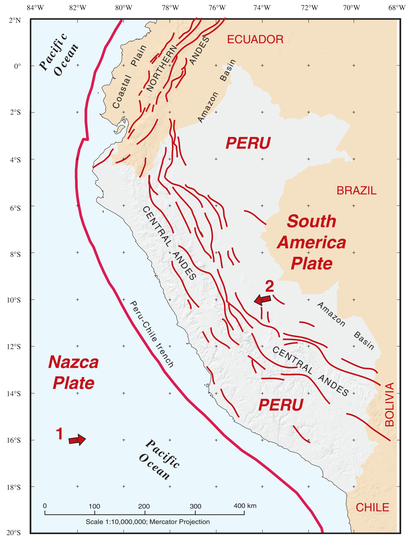
PLIEGUES
- Anticlinal
- Sinclinal
- Monoclinal

OTROS SIMBOLICOS
- Extremidad de sección de falla
- 15 Numero de falla de Peru (PE-15)

QUATERNARY FAULTS OF PERU
FALLAS CUATERNARIAS DE PERU

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)
PE-01	Amotape fault zone	Reverse	<1.6 Ma	<1 (?)
PE-02	Shitari fault	Sinistral	<15 ka	<1 (?)
PE-03	Chaquilbamba fault	Normal	Historic (1937)	<1 (?)
PE-04	Eastern Boundary fault	Normal	<15 ka(?)	1-5(?)
PE-05	Quiches fault	Normal	Historic (1946)	<1
PE-06	Cordillera Blanca fault zone	---------	---------	----
PE-06a	Section A	Normal	<15 ka	<1
PE-06b	Section B	Normal	<15 ka	1-5
PE-06c	Section C	Normal	<15 ka	1-5
PE-06d	Section D	Normal	<15 ka	1-5
PE-07	Cayesh fault	Normal	<1.6 Ma	<1
PE-08	Huaytalpallana fault	Reverse, sinistral	Historic (1969)	<1 (?)
PE-09	Cuzco fault zone	Normal	Historic (1965 & 1986)	0.2-1
PE-10	Ocongate fault zone	Normal	<15 ka	0.2-1
PE-11	Vilcanota River (fault system)	Normal	<1.6 Ma	<0.2
PE-12	Trigal fault	Normal	<15 ka	0.2-1
PE-13	Solarpampa fault	Normal	<15 ka	0.2-1
PE-14	Machado Chico fault	Normal	<1.6 Ma	<0.2
PE-15	Pampa Huanocolo fault	Normal	<1.6 Ma	<0.2
PE-16	Cerro Cordilleras fault	---------	---------	----
PE-16a	Northern section	Normal	<1.6 Ma	<0.2
PE-16b	Central section	Normal	<15 ka	<0.2
PE-16c	Southern section	Normal	<1.6 Ma	<0.2
PE-17	Unnamed fault west of Rio Moquegua	Normal	<1.6 Ma	<0.2
PE-18	Chololo fault	Normal	<15 ka	<0.2
PE-19	Cerro Loreto fault	Normal	<1.6 Ma	<0.2
PE-20	Chaspaya fault	Normal	<15 ka	<0.2
PE-21	Cerro Chascoso fault	Normal	<1.6 Ma	<0.2
PE-22	Altos los Chilenos fault	Normal	<1.6 Ma	<0.2
PE-23	Cerro Morrito fault	Normal	<1.6 Ma	<0.2
PE-24	Pampa Trapiche fault	Normal	<1.6 Ma	<0.2
PE-25	Toquepala fault	---------	---------	----
PE-25a	Western section	Normal	<15 ka	0.2-1.0
PE-25b	Eastern section	Normal	<15 ka	0.2-1.0
PE-26	Micalaco fault	Normal	<1.6 Ma	<0.2
PE-27	Pampa del Purgatorio fault	---------	---------	----
PE-27a	Western section	Normal	<15 ka	0.2-1.0
PE-27b	Eastern section	Normal	<15 ka	0.2-1.0
PE-28	Villacollo fault	---------	---------	----
PE-28a	Northern section	Normal	<1.6 Ma	<0.2
PE-28b	Southern section	Normal	<1.6 Ma	<0.2
PE-29	Cerro Rocoso fault	Normal	<1.6 Ma	<0.2
PE-30	Cerro Caquilluco fault	Unknown	<1.6 Ma	<0.2
PE-31	San Francisco fault	Normal	<1.6 Ma	<0.2
PE-32	Peru-Chile trench (Nazca subduction zone)	Thrust	Historic (2001, many prior)	>5 (75-80)

DIAGRAM OF MAJOR PLATE BOUNDARY FAULTS FOR PERU
ESQUEMA DE FALLAS LIMITES DE PLACAS PARA PERU



ILP FAULT MAPS	USGS OPEN-FILE REPORT NO.
1. ARGENTINA	00-103
2. BOLIVIA	00-293, Plate 1
3. BRAZIL	00-230
4. CHILE	00-283, Plate 2
5. COLOMBIA	02-284
6. COSTA RICA	98-481
7. ECUADOR	02-284
8. PANAMA	98-779
9. PERU	This report
10. MANGUA, NI.	00-437
11. VENEZUELA	00-018

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RELATIVE PLATE MOTION

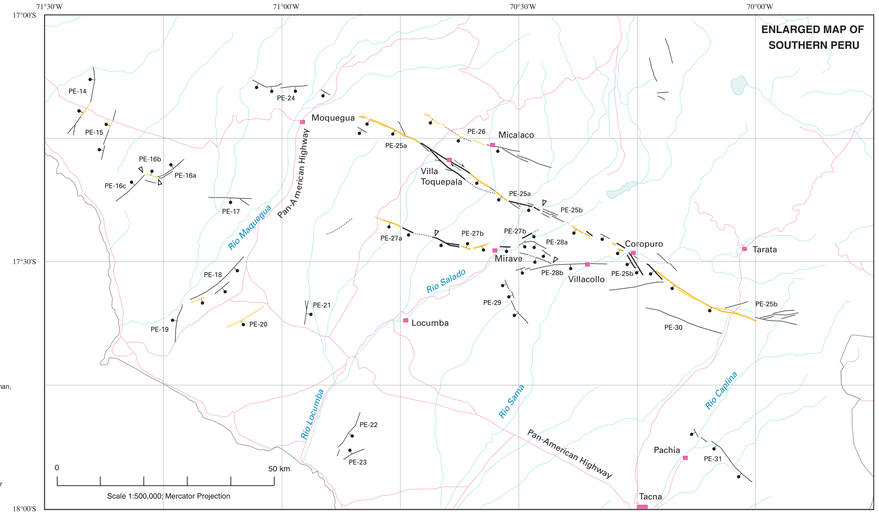
No.	Location	Fixed Plate	Moving Plate	Velocity	Direction
1	82°W, 14°S	South America	Nazca	8.0 cm/yr	82.9°
2	74°W, 10°S	Nazca	South America	7.8 cm/yr	258.1°

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

International Lithosphere Program (ILP)

Programa Internacional de la Litósfera (ILP)

ENLARGED MAP OF SOUTHERN PERU



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Digital data prepared by Richard L. Dart with ARC/INFO version 7.2.1 running under Solaris version 2.6 on a Unix workstation. Last revision August 2003.

Map prepared by M.N. Machette and Margo Johnson using Adobe Illustrator version 10.0. Last revision November 2003.

This map is available as a PDF file at http://ccgg.cr.usgs.gov/pubs/ofrs/

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