

Avances en la Geología en torno a la Reserva Nacional Altos de Lircay

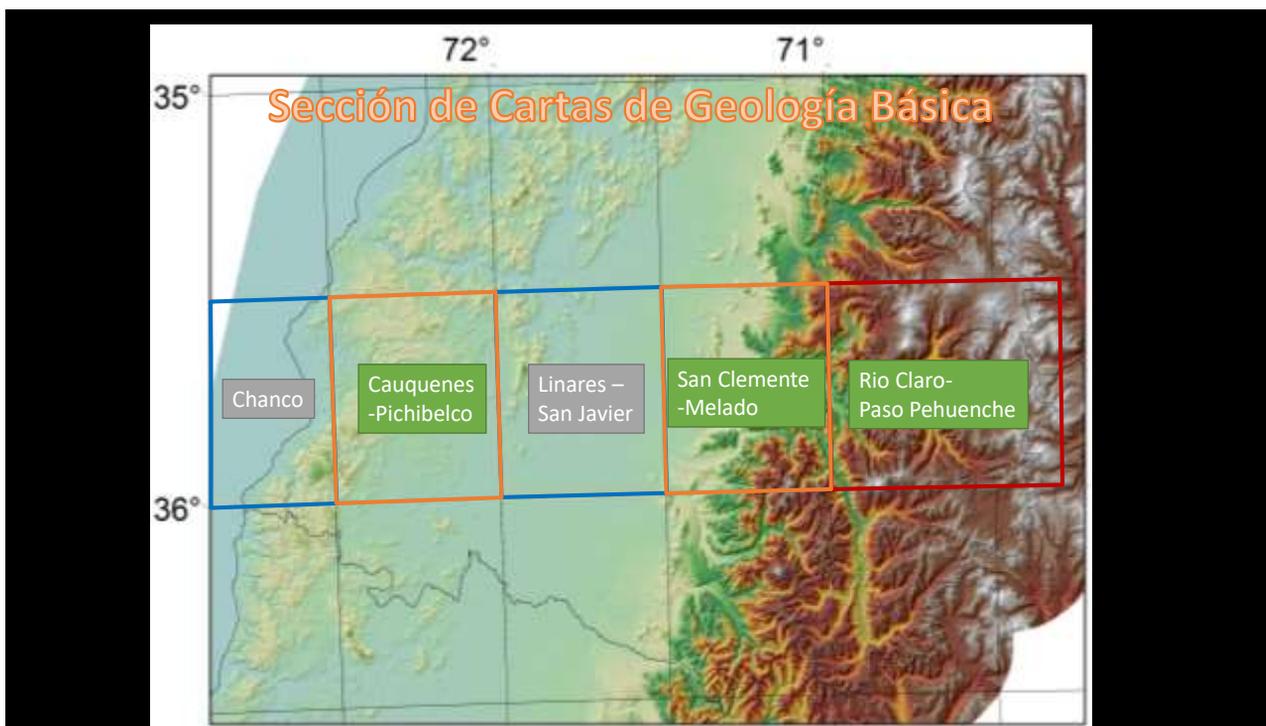
*Una historia de cerca de 30 Millones de
años*



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Departamento de Geología General
SERNAGEOMIN

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1. Geología General

3

Generalidades acerca de la Tierra

4

La Tierra **está viva** y ha evolucionado desde hace mucho tiempo

¿Cuántos años tiene la Tierra?

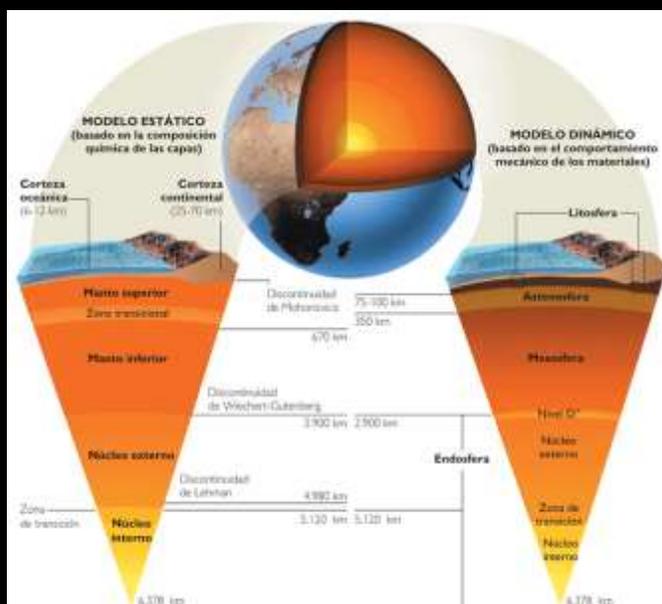
4.600 Millones de años!!!!



Tomado de Chong 2001

5

Estructura interna Actual



6

Teoría de Tectónica de Placas

7



Alfred Wegener 1912

Propuso la hipótesis de

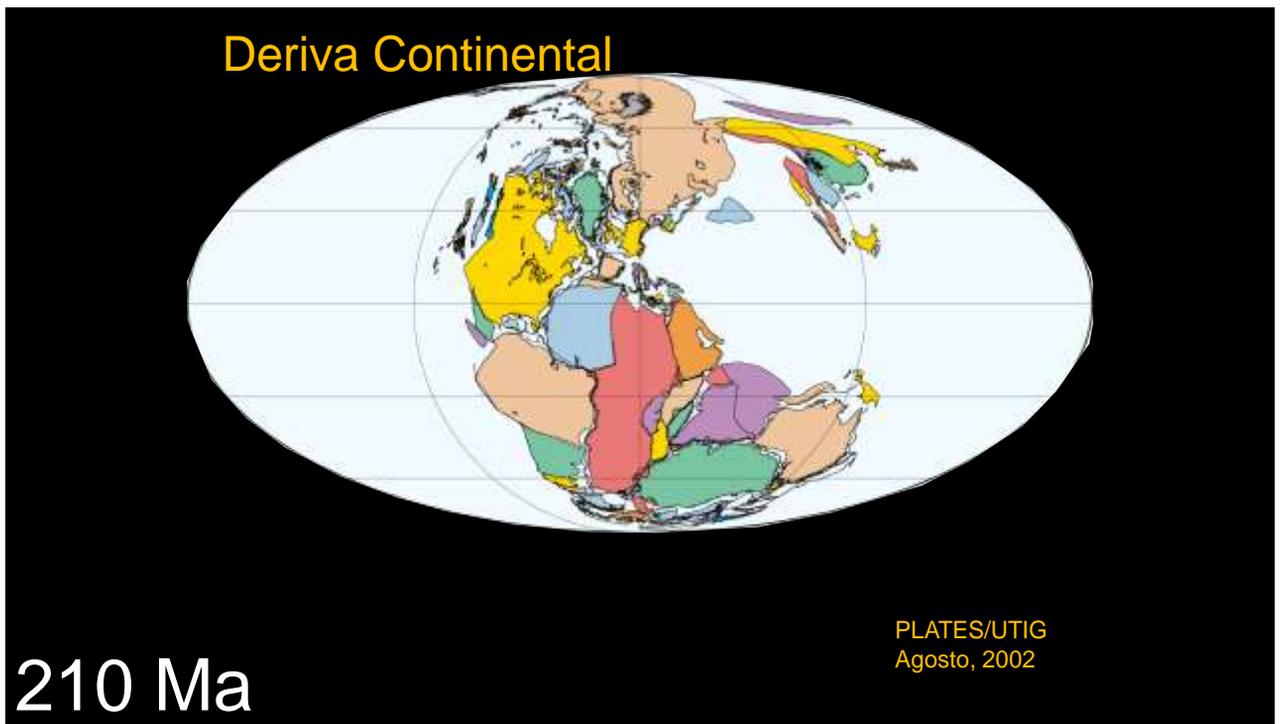
La Deriva Continental

...su teoría recién fue aceptada por la comunidad científica
en los años **60's 70's!!!**

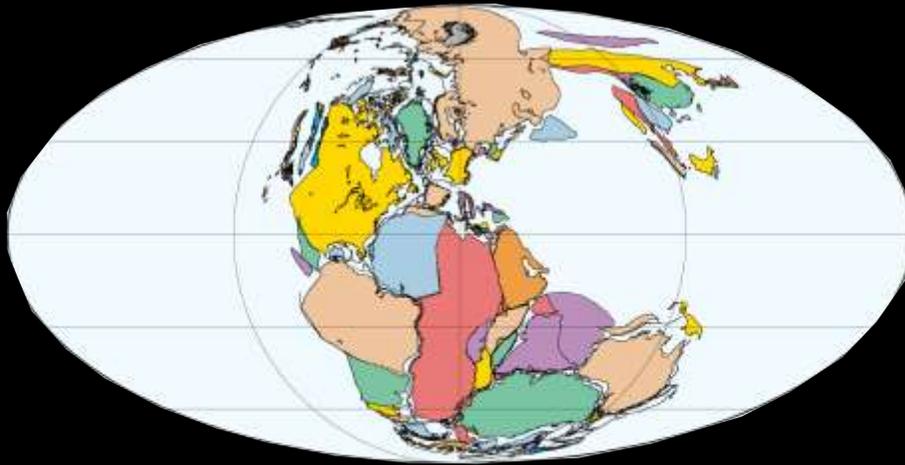
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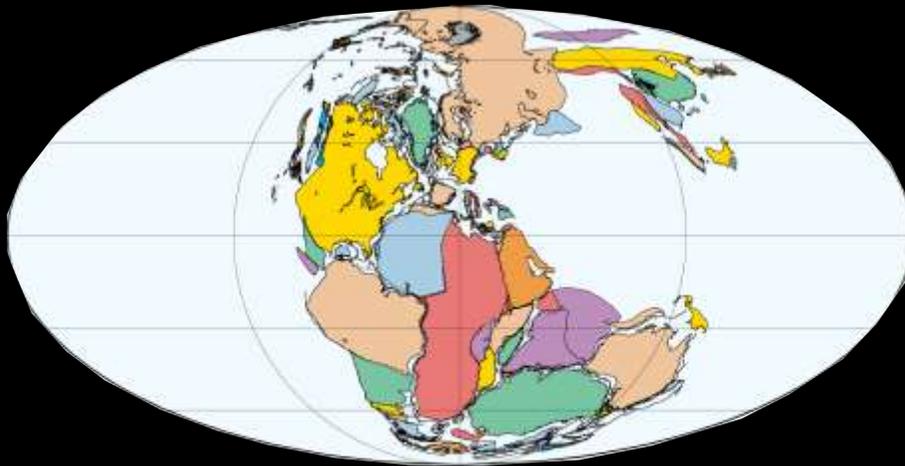


10



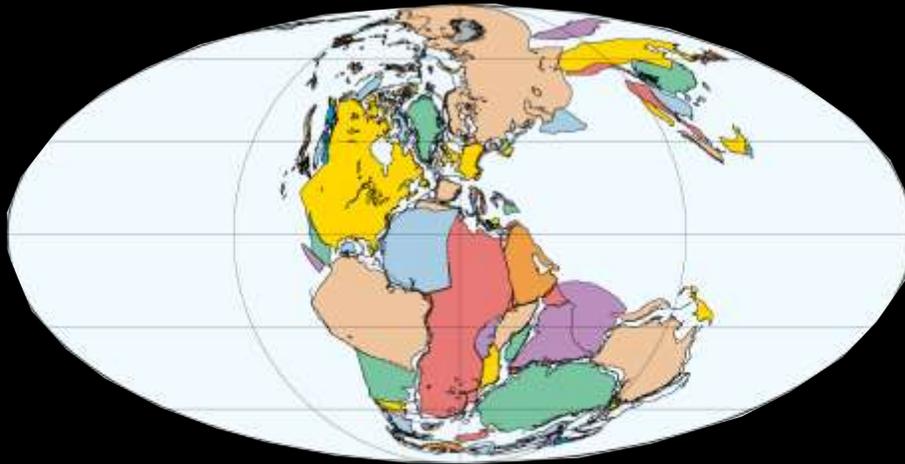
200 Ma

11



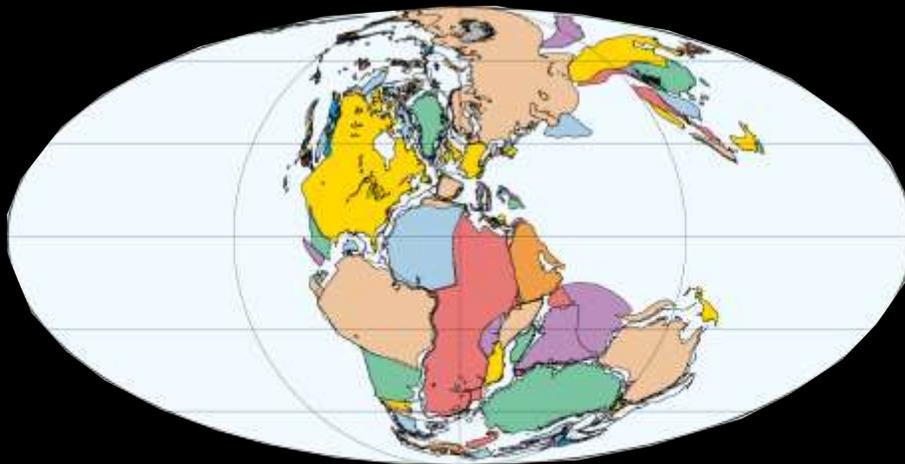
190 Ma

12



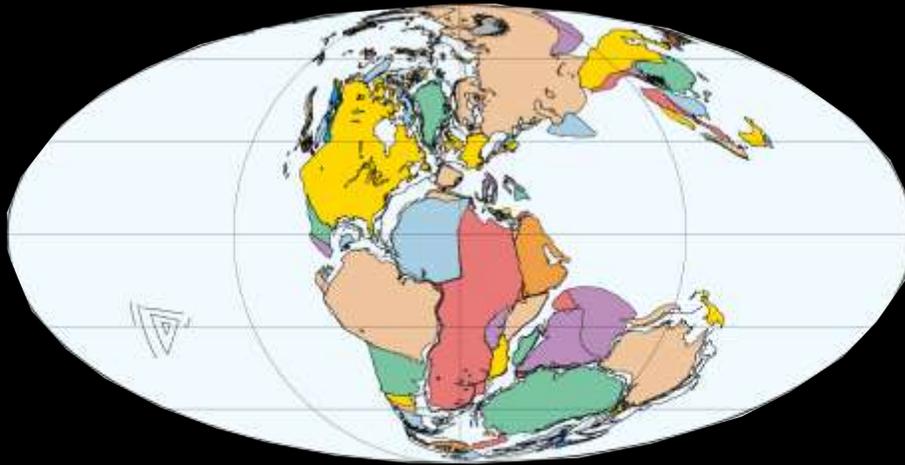
180 Ma

13



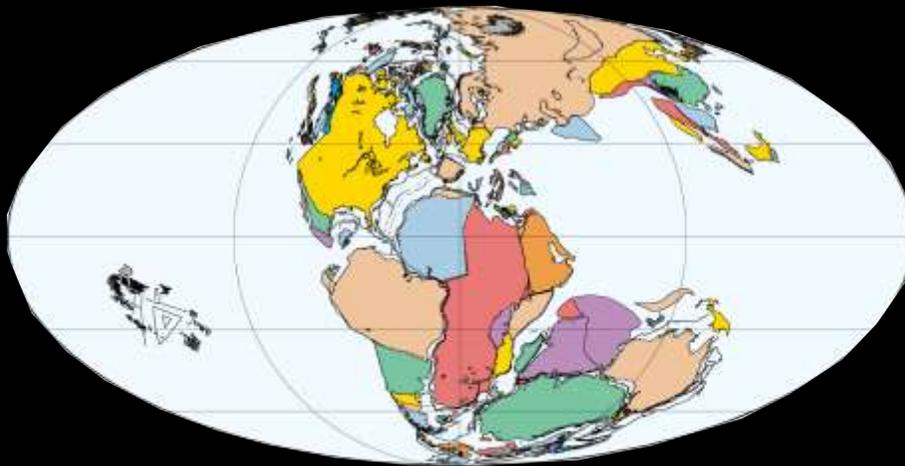
170 Ma

14



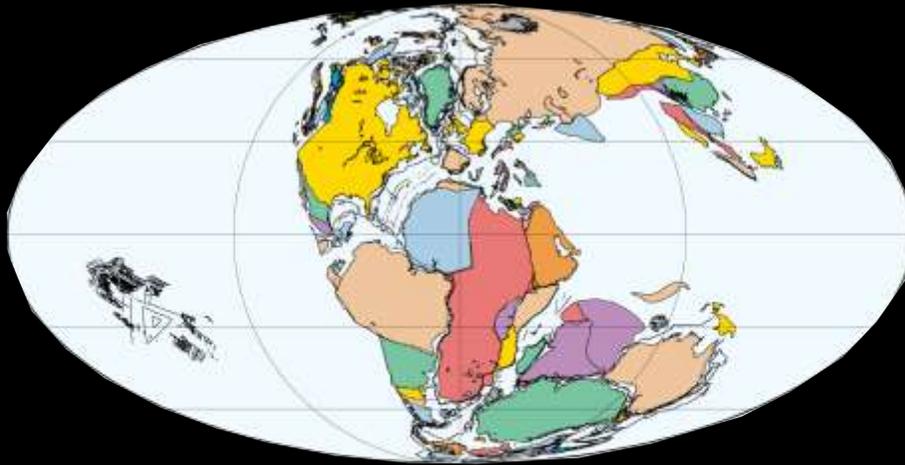
160 Ma

15



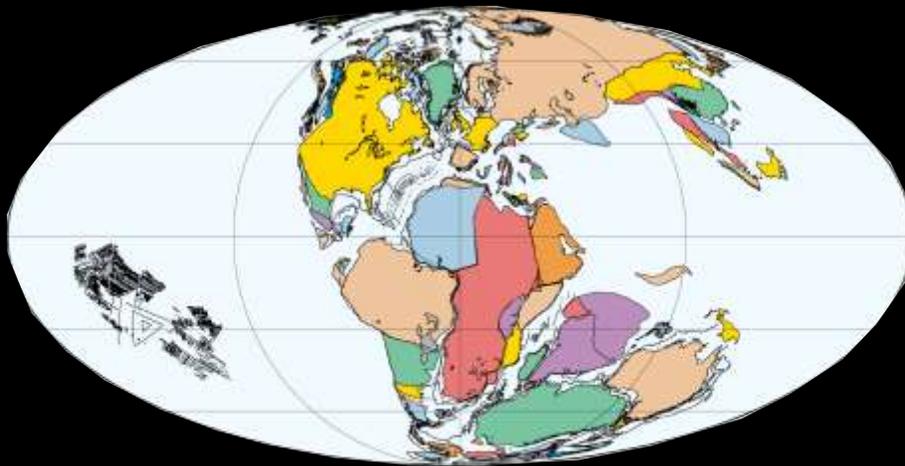
150 Ma

16



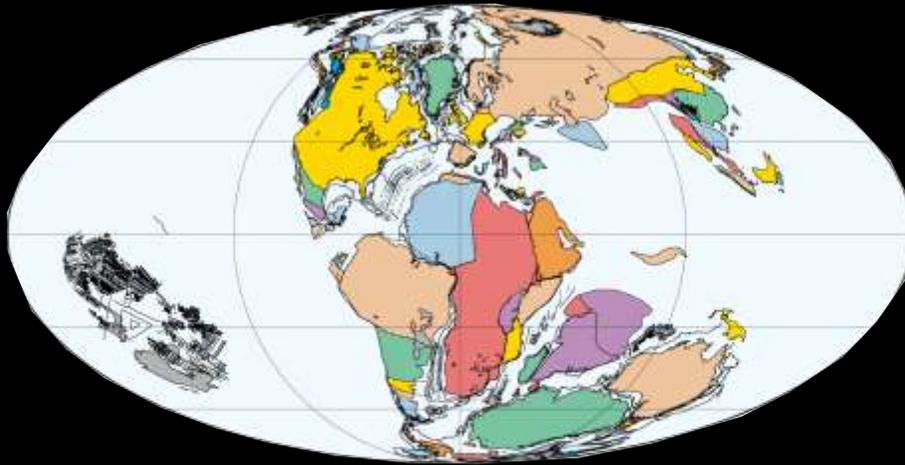
140 Ma

17



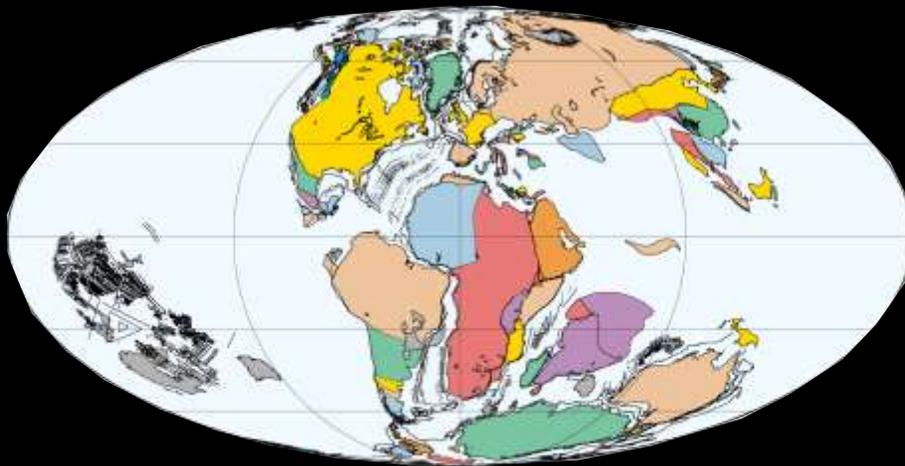
130 Ma

18



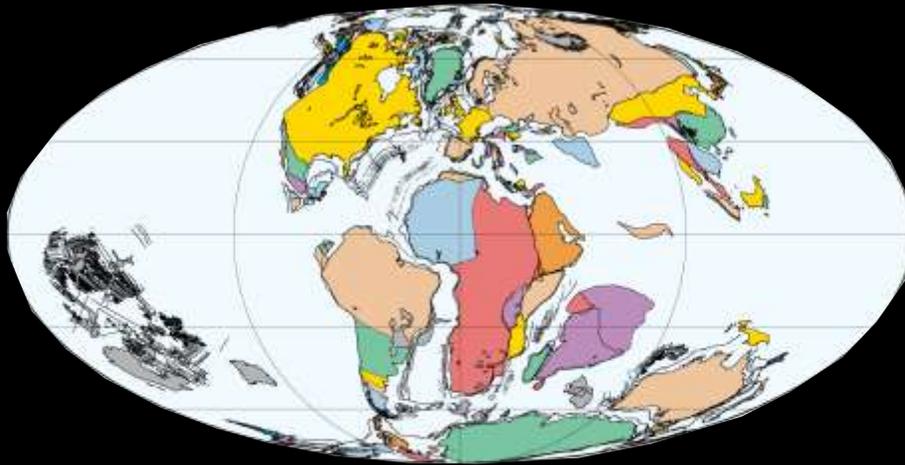
120 Ma

19



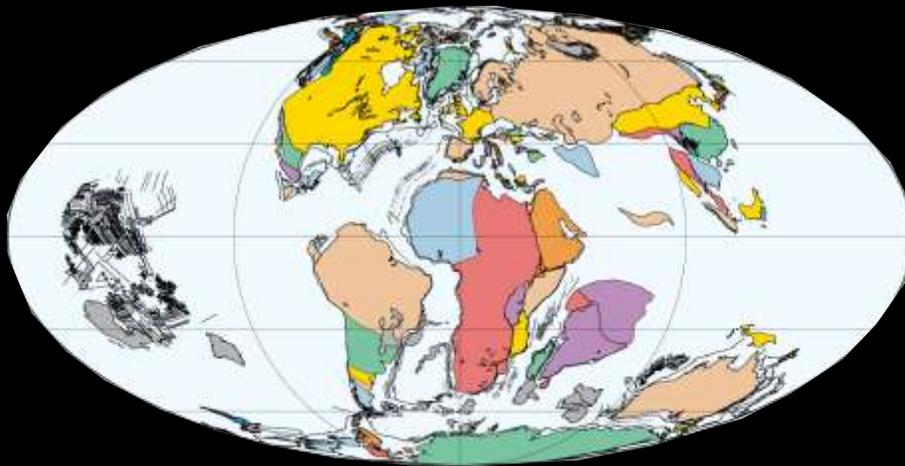
110 Ma

20



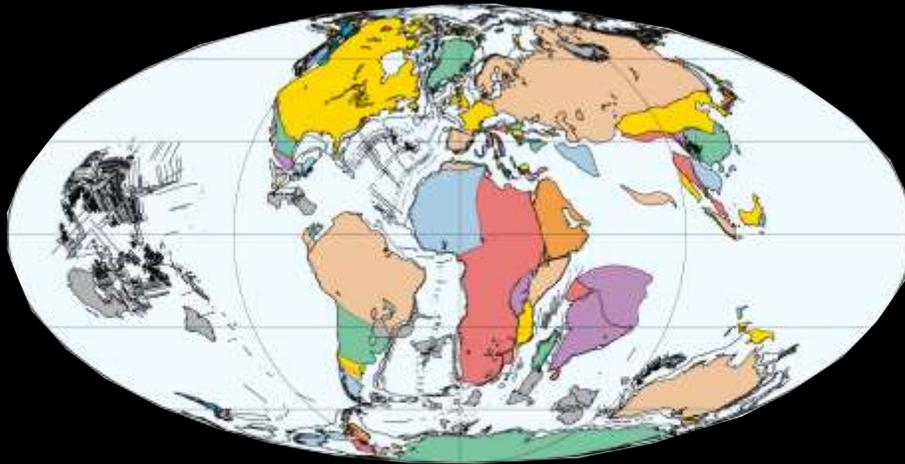
100 Ma

21



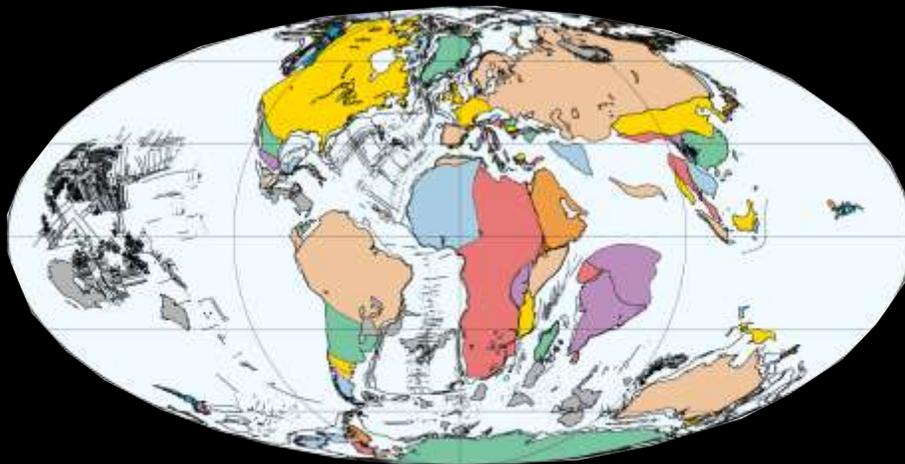
90 Ma

22



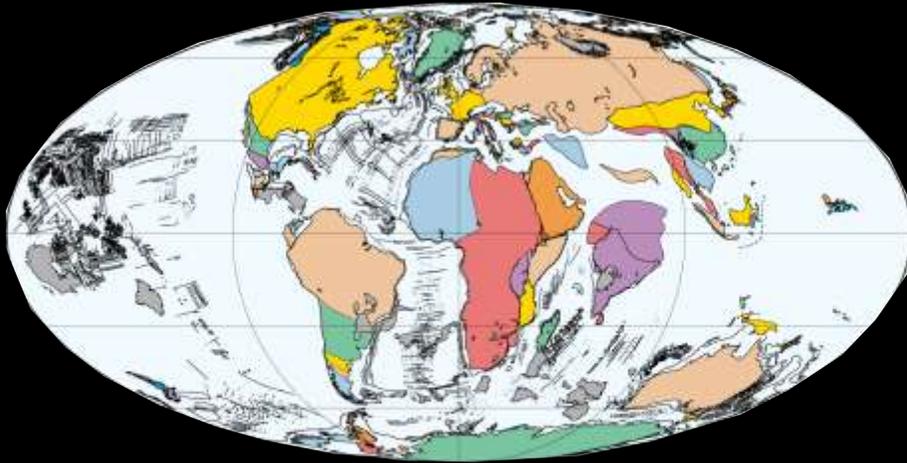
80 Ma

23



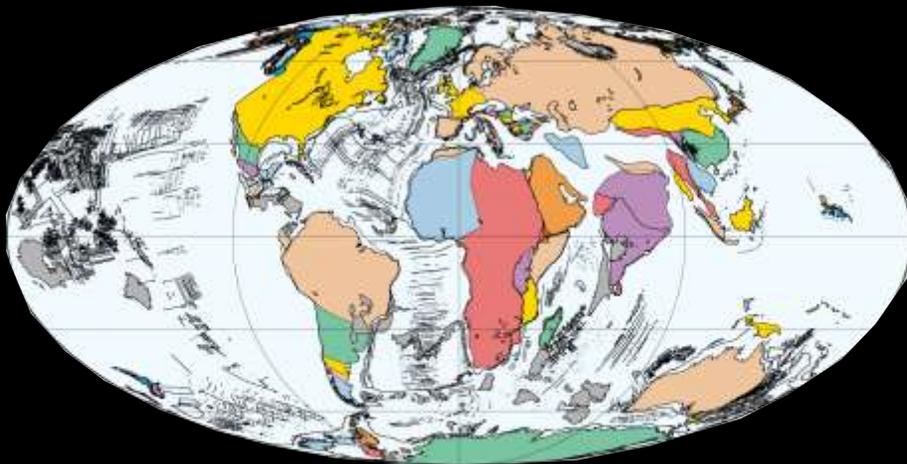
70 Ma

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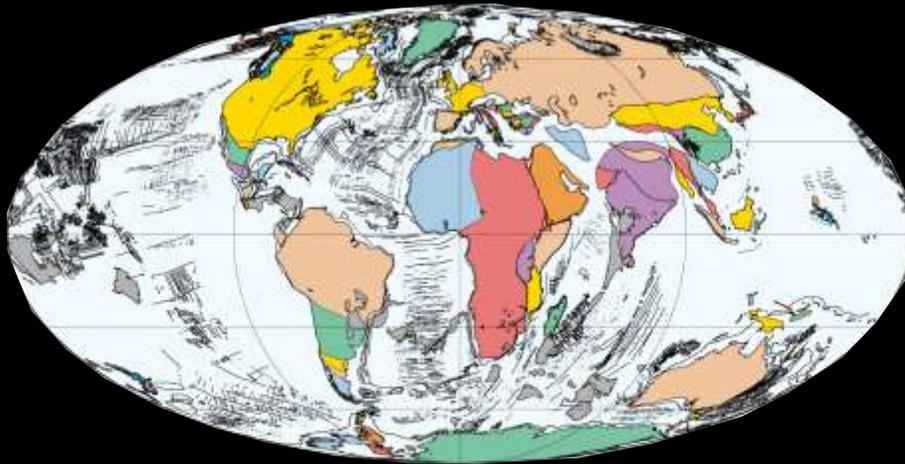
60 Ma

25



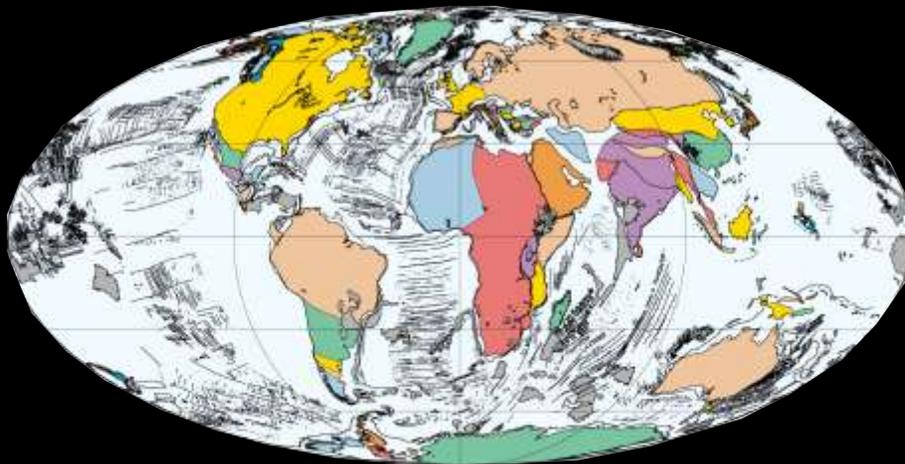
50 Ma

26



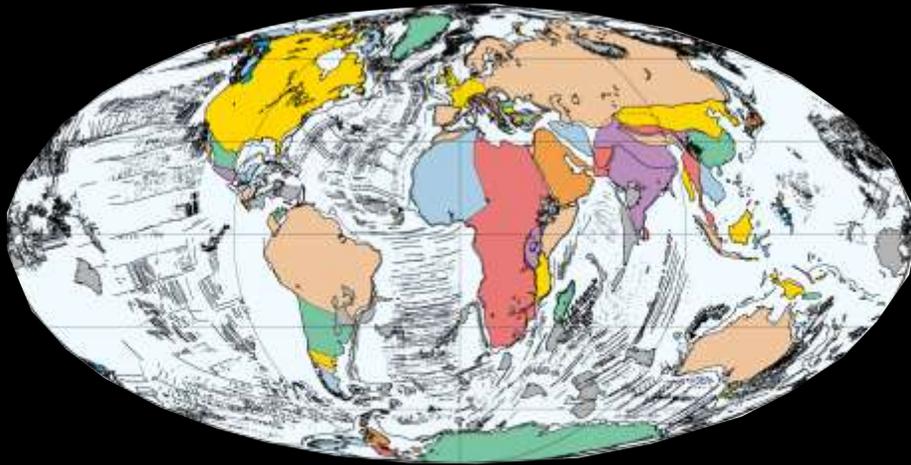
40 Ma

27



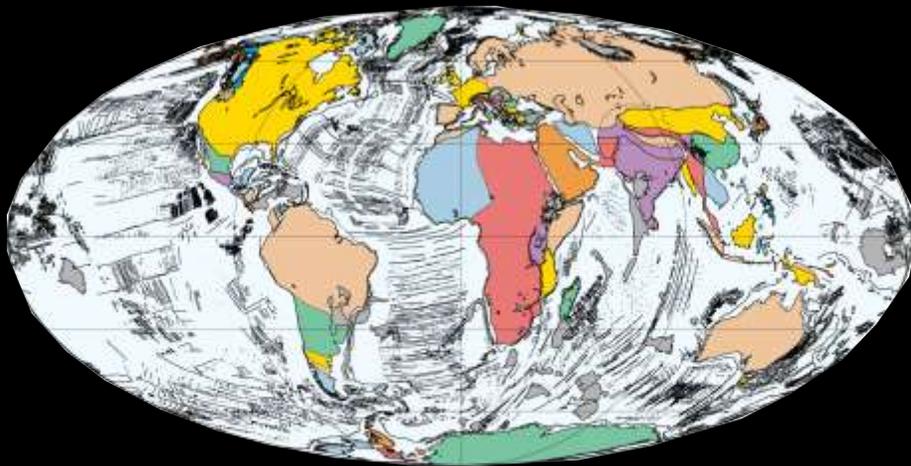
30 Ma

28



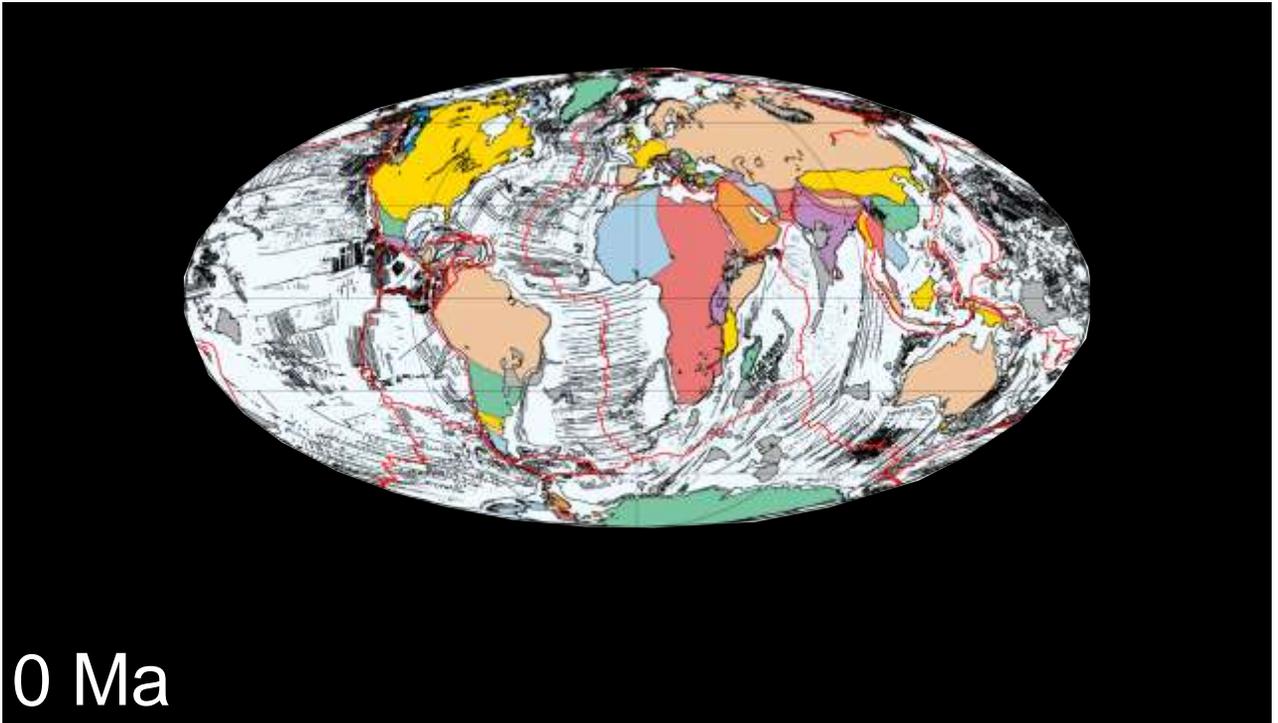
20 Ma

29



10 Ma

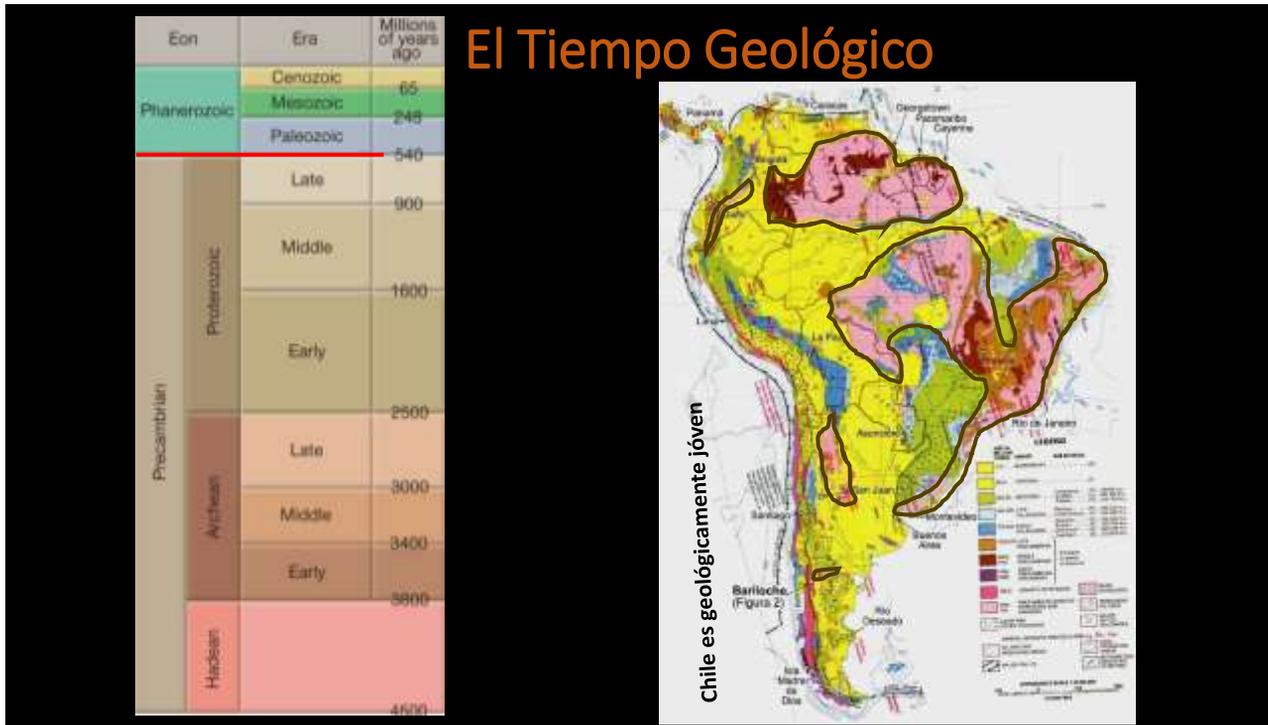
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Contexto Chileno

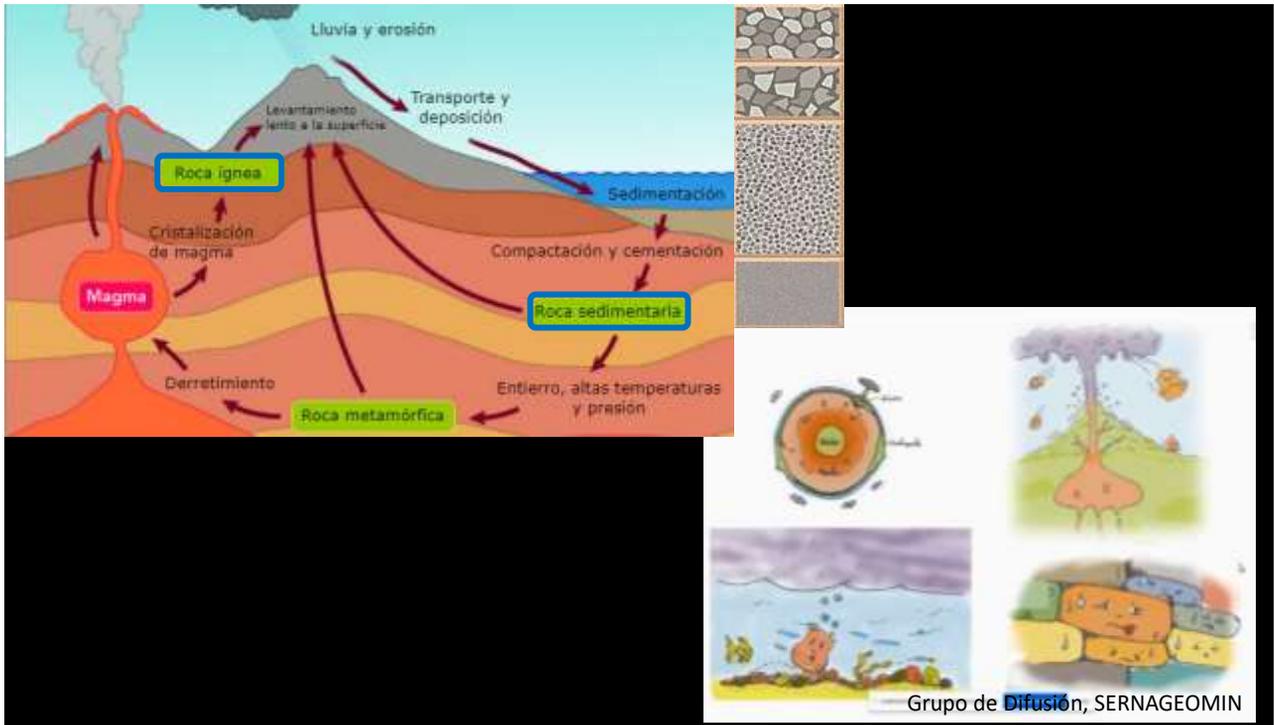
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USGS
United States Geological Survey

Fragmentos

Cristales tamaño similar

Cristales distinto tamaño

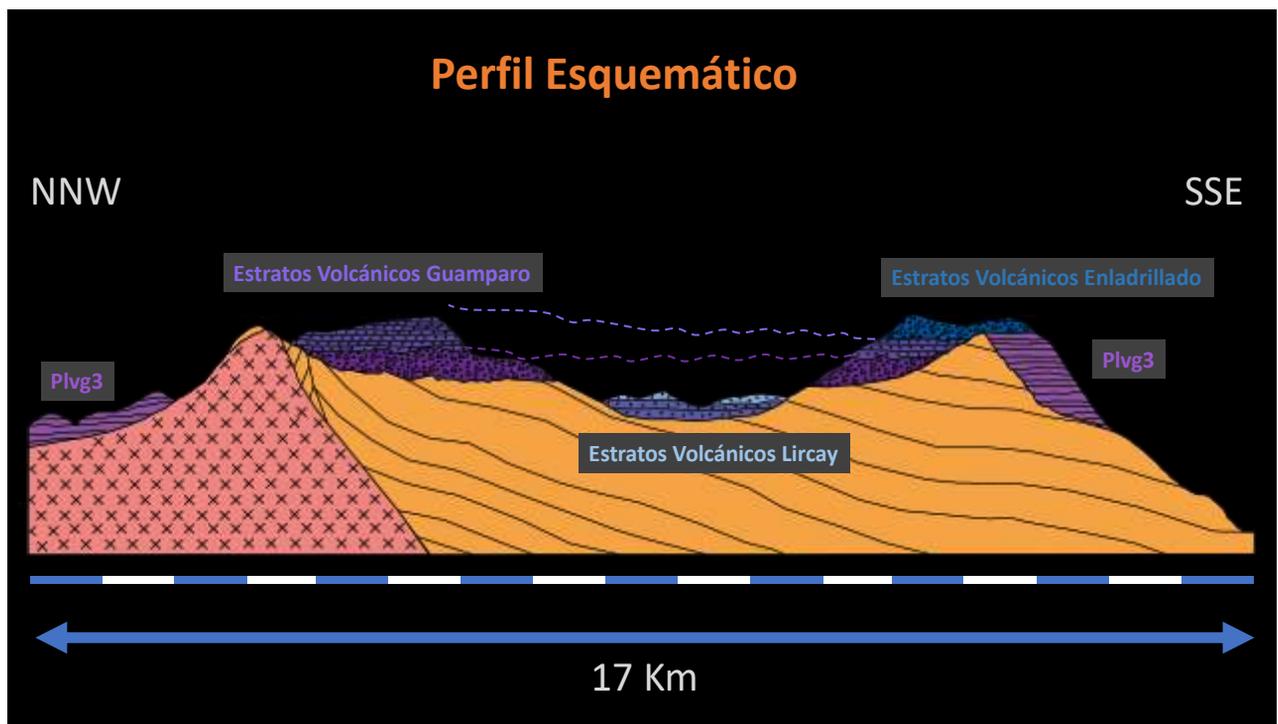
1 mm

Most volcano hazards are associated with eruptions. However, some hazards, such as lahars and debris avalanches, can occur even when a volcano is not erupting.

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- <https://www.youtube.com/watch?v=5dHfD5kG5KY>
- Erupción Explosiva. Flujo Piroclástico
- <https://www.youtube.com/watch?v=GocXN7EQb3Q>
- Erupción efusiva Volcan de Fuego , Guatemala 13-10-2018

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Tomada de Google Earth Pro
Verónica Hernández - Montañas

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Laguna del Alto Grupo Rocas Antiguas

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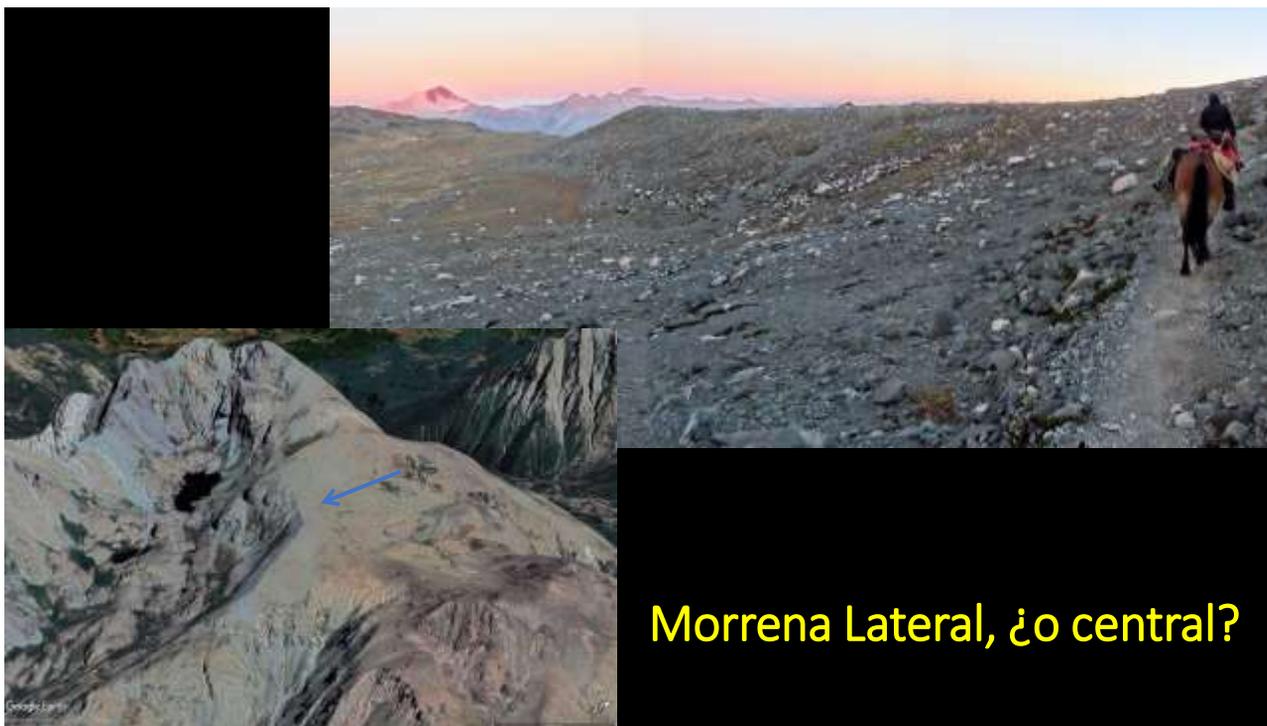
Laguna del Alto Grupo Depósitos Jóvenes (registro Glaciar)

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Forma: Circo Glaciar



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Morrena Lateral, ¿o central?

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El Guamparo y Enladrillado Grupo Rocas Jóvenes (Volcanismo pre Glaciar)

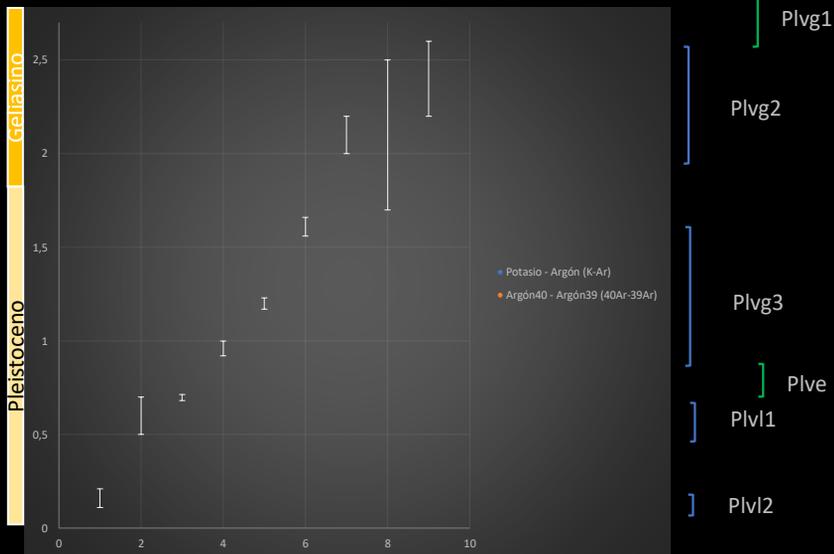
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Problemas Geológicos

• Complejo Volcánico Vilches

Gelasiano
Plioceno o
Pleistoceno?

K-Ar Drake (1976)
 $^{40}\text{Ar}/^{39}\text{Ar}$ RNVV sin publicar

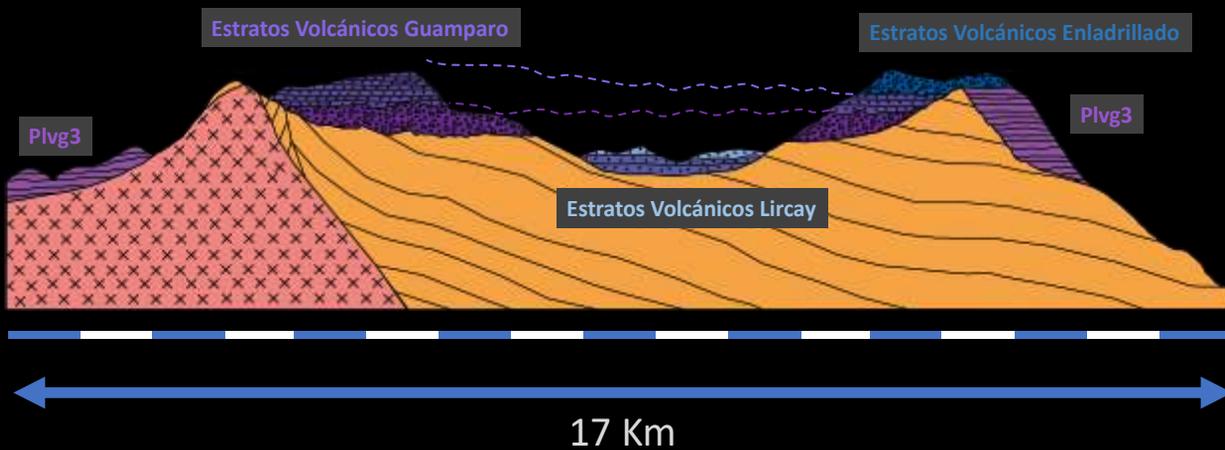


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Perfil Esquemático

NNW

SSE



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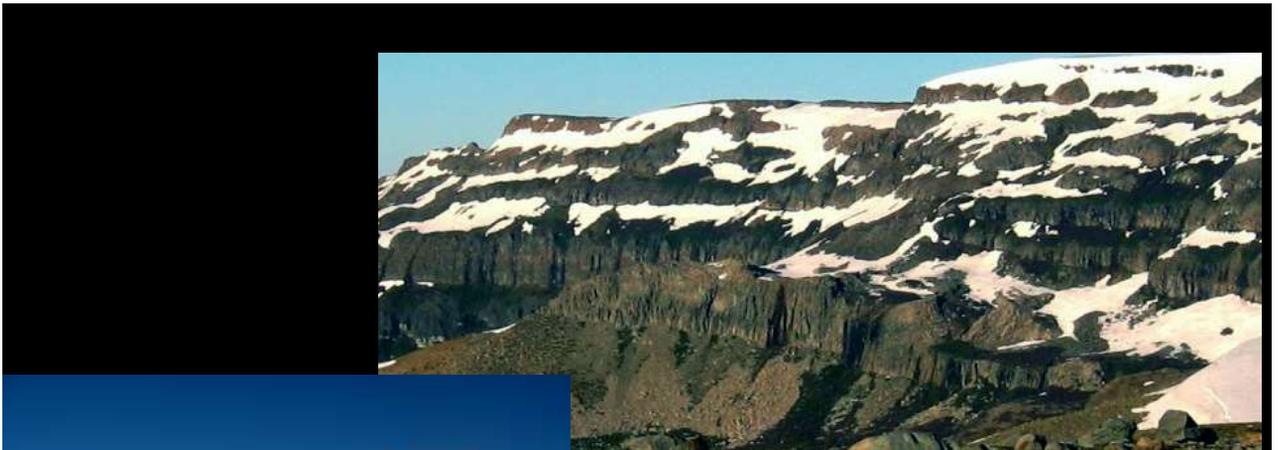


Guamparo.
Rxs Jóvenes sobre
Rxs antiguas (3
Cuernos)



Tomada de Google Earth: Christian Latorre_Tres Cuernos

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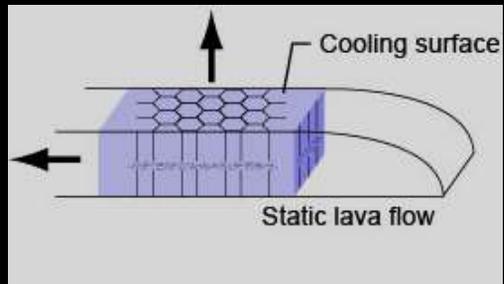
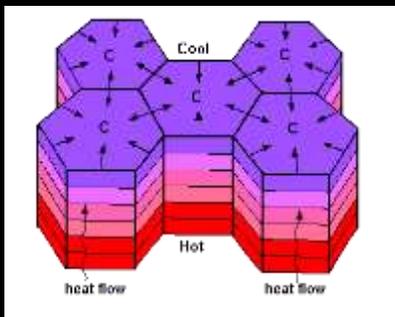
Tomada de Google Earth: Christian Latorre_Tres Cuernos



Tomada de Google Earth: Christian Latorre_El Guamparo

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Diaclasamiento columnar (Enfriamiento lento)



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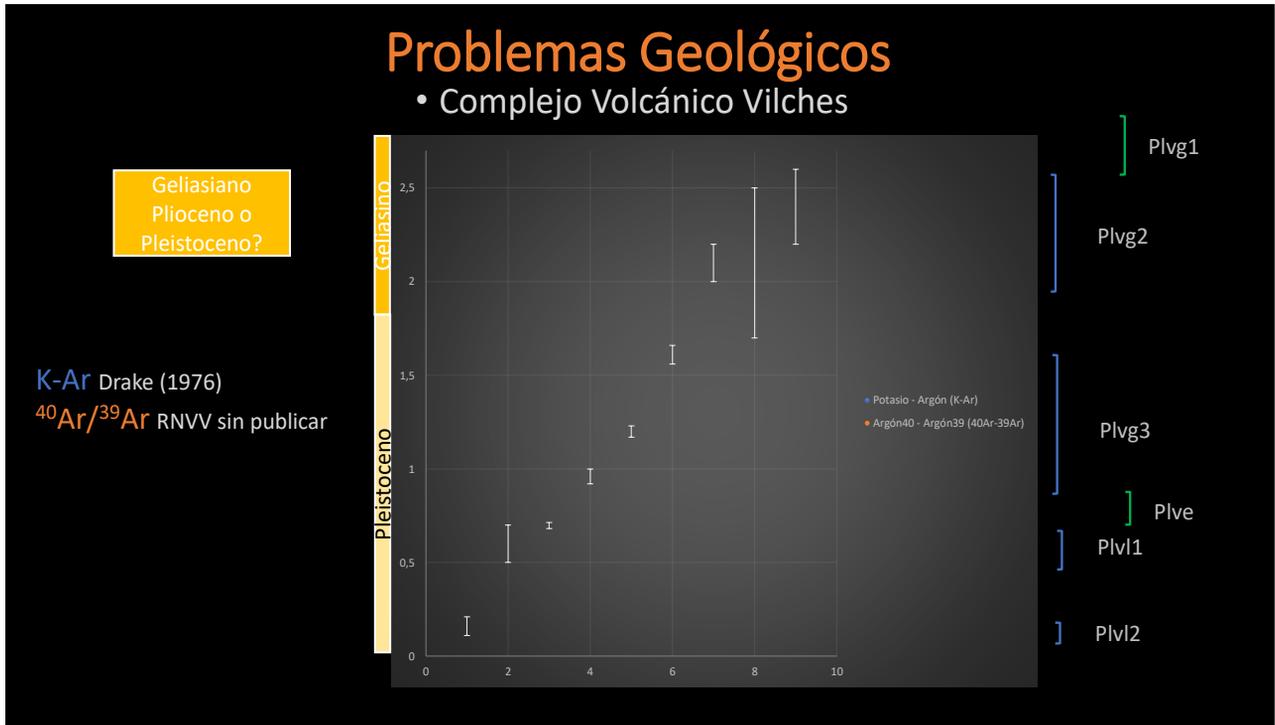
58



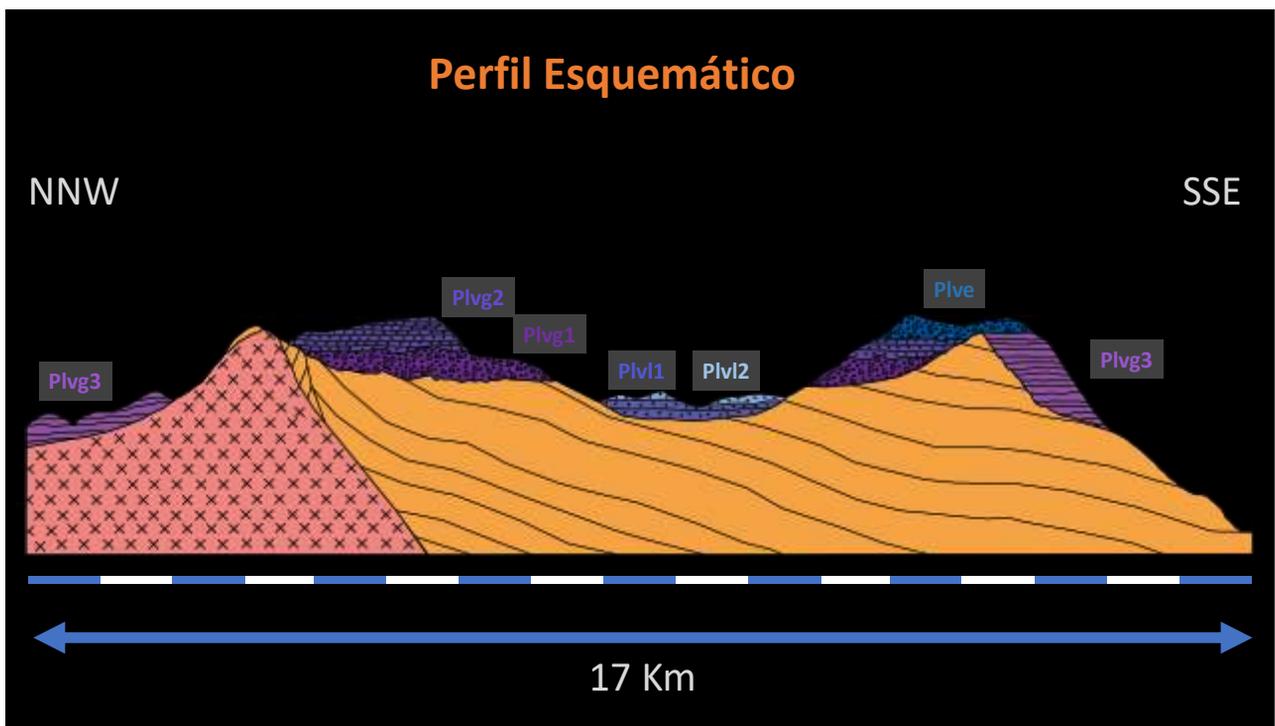
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Vilches Alto Grupo Rocas Jóvenes (Volcanismo post-Glacial)

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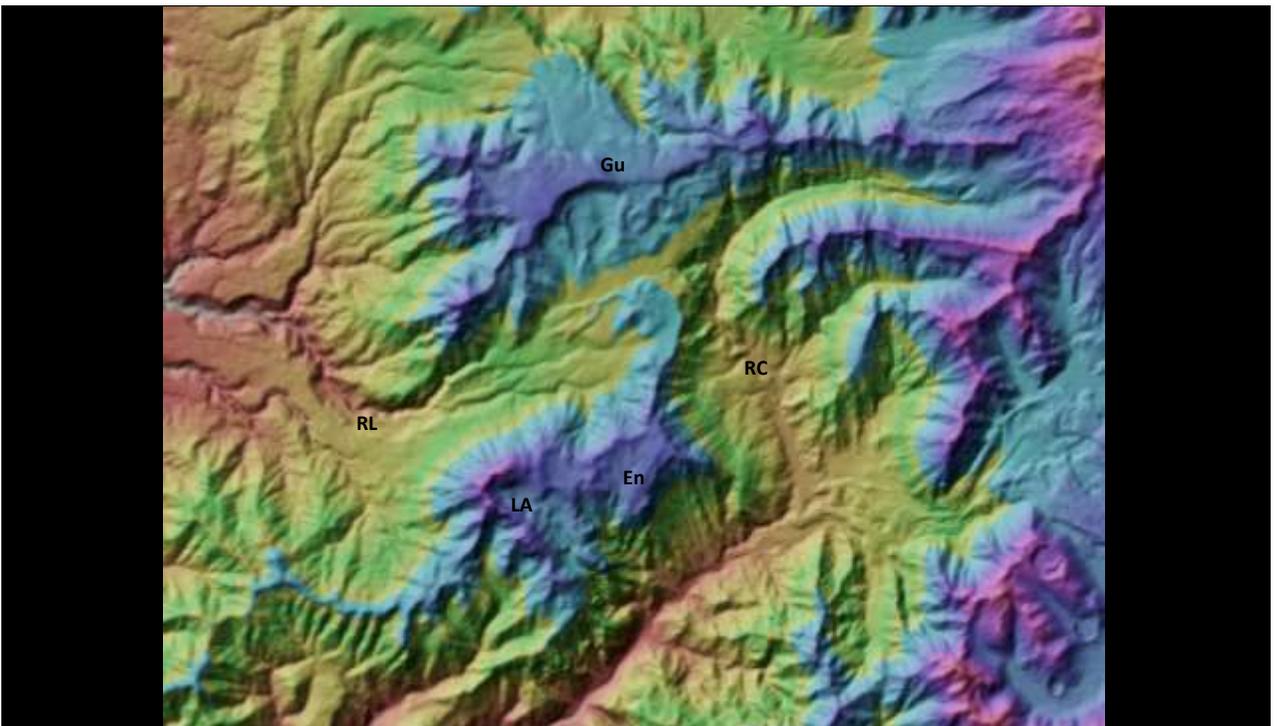


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Lava de valle? con cono individual posterior?



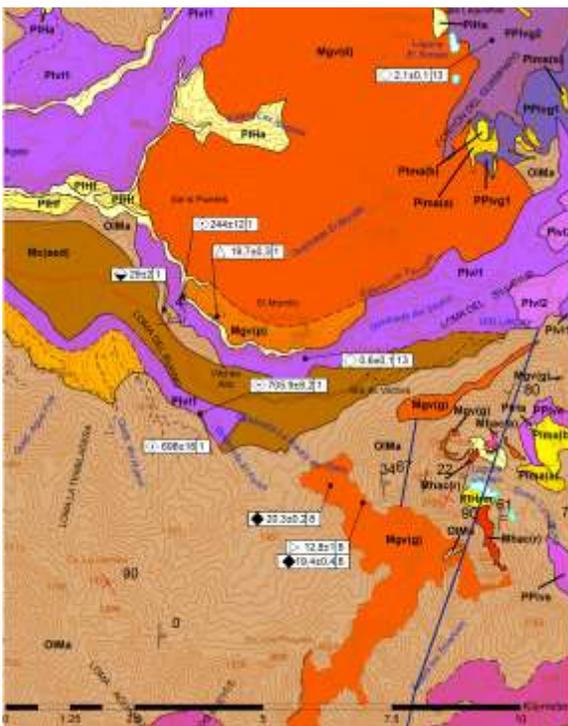
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Muchas Gracias

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