Distance from trench axis (km)
75
0
Conical
pH = 12.5
South Chamorro
pH = 12.5
Asùt Tesoru
pH = 12.5
Fantangiña
pH = 11.0
Yinazao
pH = 11.2
B Ca Na K
Dip-slip motion
Horizontal motion (toward)
Horizontal motion (away)
Serpentine mud volcano
Conduit of mud volcano
Greenschist pod
Blueschist pod
K CO_3^{2-} SO_4^{2-} B
Rb Cs Mn Fe Co
Na/Cl Gd/Tb
Ca Sr B Li
Rb Cs Ba
Na/Cl Gd/Tb
Ca Sr Cs Ce
Carbonate chimneys
Forearc sediment
Brucite chimneys
Trench axis
Pacific plate seamount
Horst block
Horst block
Graben
Forearc mantle
Prehnite-Pumpellyite
Greenschist
Blueschist
Decollement
<80°C
Carbonate dissolution; sediment compaction, serpentine + brucite; H_2
200°C–80°C
Clay diagenesis and desorbed water release
<300°C
Clay decomposition and fluid freshening - lawsonite-albite/ lawsonite blueschist
Direction of subduction
Depth (km)
0
5
10
15
20
25