

Seismic Refraction/Wide-Angle Reflection Profiling across the Hidaka Collision Zone, Hokkaido Japan

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In 1999 and 2000, extensive seismic refraction/wide-angle experiments were conducted in Hokkaido, Japan. Our 227-km long E-W profile line was set to cross the Hidaka Mountains, which has been formed by the collision between Kuril Forearc and the Northeast Japan Arc since Middle Miocene. Our results strongly suggest the obduction of the Kuril Forearc onto the NE Japan Arc. The crustal structure west of the Hidaka Mountains is characterized by thick sedimentary sequence and a velocity reversal within it. This gives an important constraint on the deformation rate of the southern half of Hokkaido.