GPS velocities shown with respect to San Nicolas Island. The western Transverse Ranges (wTR) are the area of E-W structure that is outlined in the inset by the heavy dashed curve; another such curve outlines the Inner Borderland. Elevations decrease from north to south across the wTR to a string of deep bathymetric and sedimentary foreland basins. Ventura basin and Santa Barbara basin are internal to the wTR and interrupt the regional topographic gradient. GPS vectors selected from Shen et al., (2003), and are corrected for the effects of large earthquakes but not modeled for locked faults. The "x"s on islands indicate velocities too slow to represent with arrows. Lower hemisphere earthquake focal mechanisms, labeled by year, are from USGS and SCEC (1994), with location of 1930 earthquake (open circle) from Hauksson and Saldivar (1986). Large earthquakes such as the 1952 Kern County, the 1857 San Andreas, and the 1818 and 1925 Santa Barbara earthquakes are not shown. The surface or seafloor traces, or upper edges of blind faults are from the Southern California Earthquake Center Community Fault Model (CFM; Plesch and Shaw, 2002). Where CFM faults are not available, faults are from Sorlien et al. (1999b), Jennings (1994), and Sorlien et al.,(2005). Faults in the northwest part of the figure are mapped at depth on a ~12 Ma horizon. Gray faults in Santa Barbara basin are mapped at the top Monterey Formation (~6 Ma). A=Anacapa Island; EWF=Elsinore-Whittier fault; HF=Hollywood fault (linked to unlabeled Raymond fault to east); L.A.=Los Angeles (downtown); NIF=Newport-Inglewood fault, PV=Palos Verdes Peninsula and Hills, PVF=Palos Verdes fault; SCF=San Clemente Fault; Scrl=Santa Cruz Island; ScrIF=Santa Cruz Island fault, SCr-CRF=Santa Cruz-Catalina Ridge fault; SGF=San Gabriel fault; SPBF=San Pedro Basin fault; SRI=Santa Rosa Island; TF=Tarzana Fan; V=Ventura; VB=Ventura sedimentary basin. On the inset, PVA is Palos Verdes anticlinorium. The Northern Channel Islands anticlinorium underlies the Northern Channel Islands. SOURCE: Modified from Sorlien et al. (2005).

Locus Map

Legend

—— Proposed Pipeline Alignment

Refer to text above for explanation.

Regional Fault Map

OceanWay Secure Energy

Figure: 6-5
Date: June 2006

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