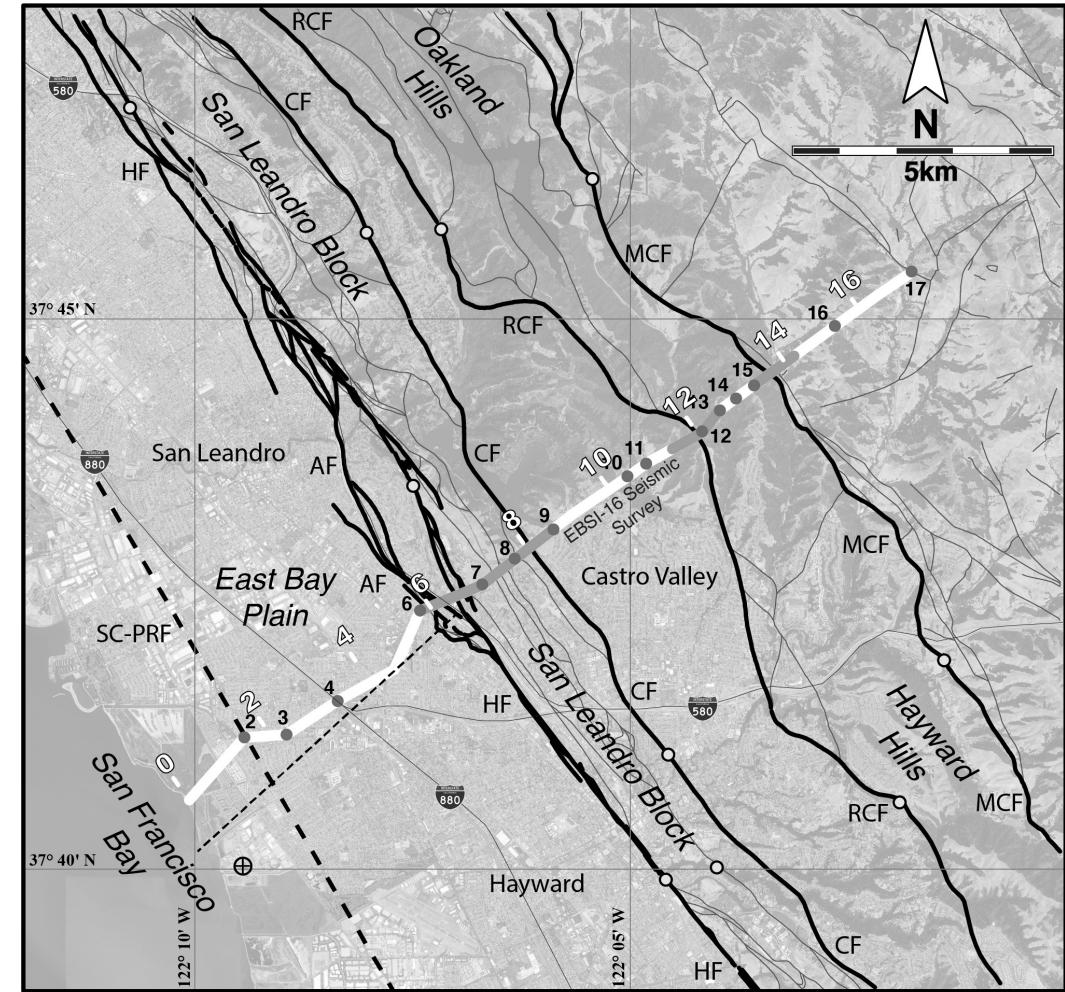
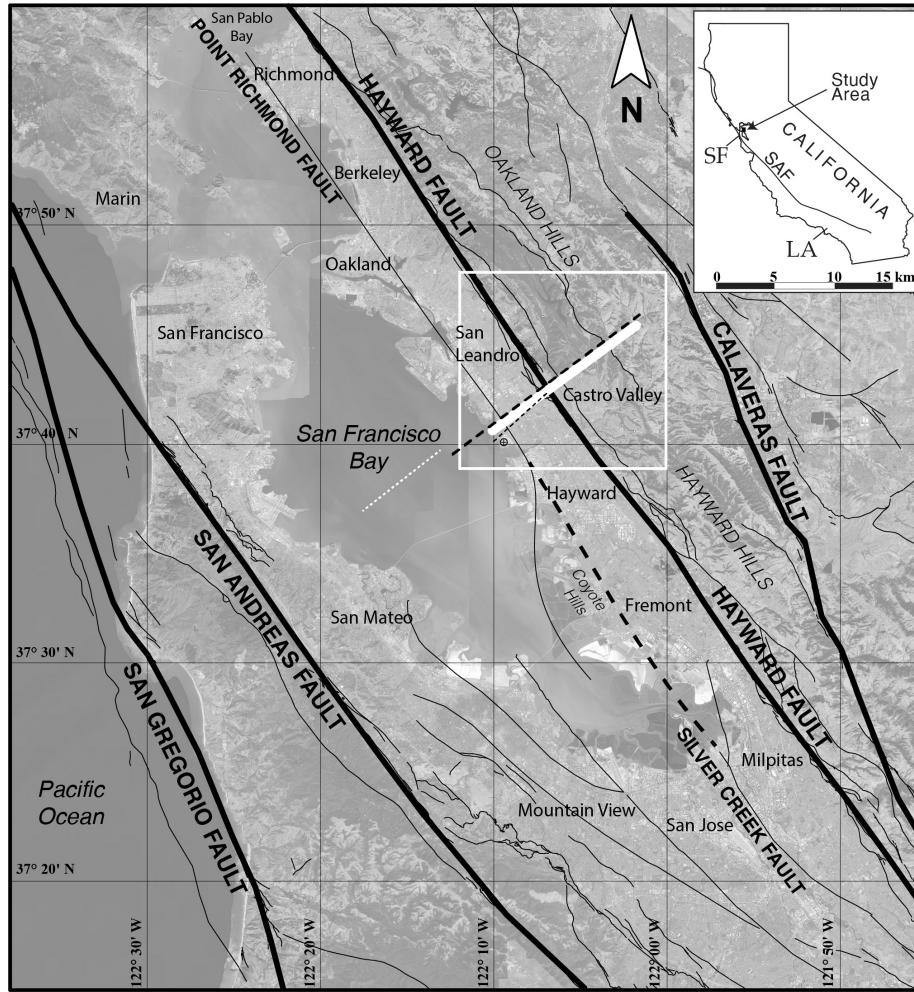
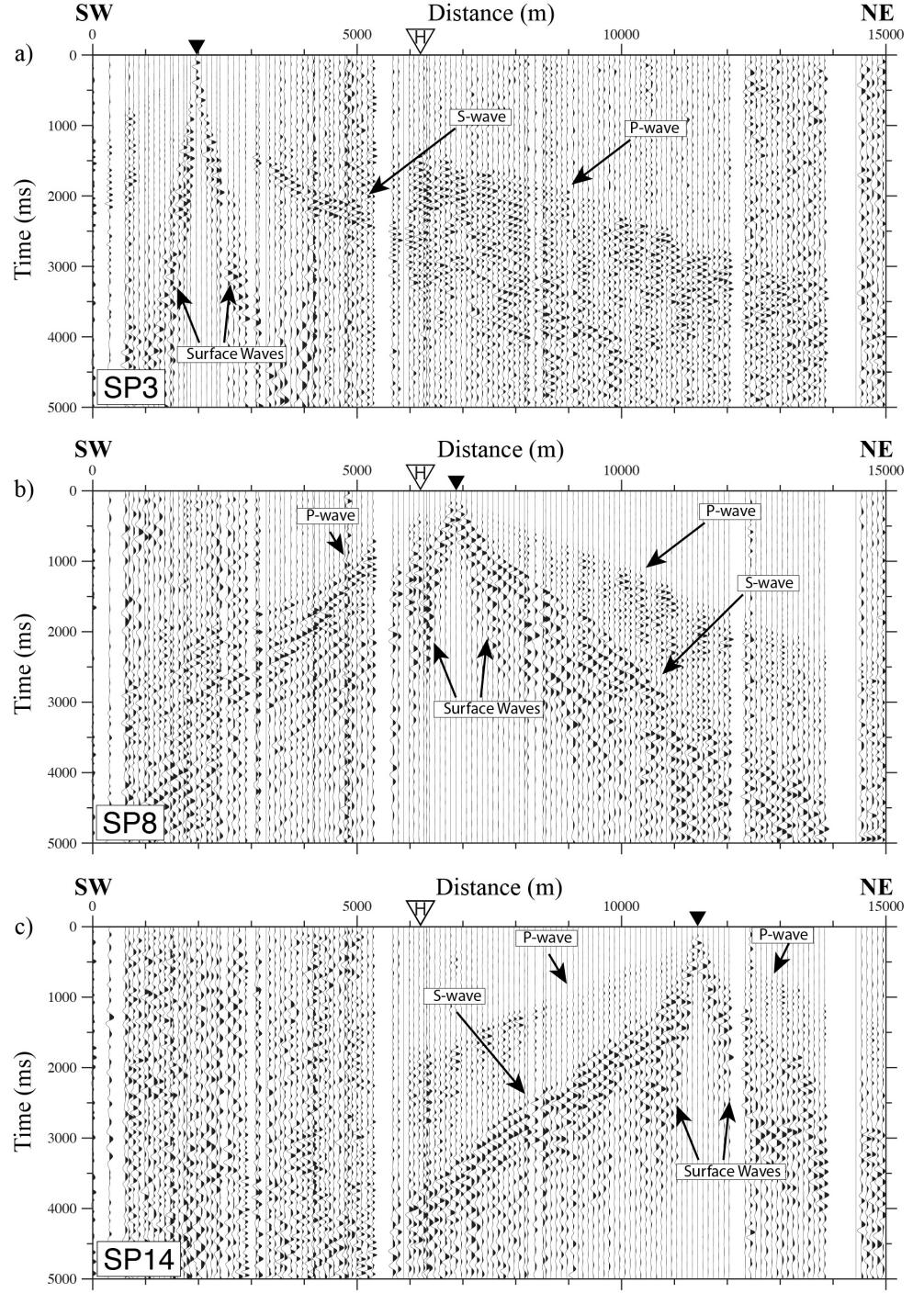
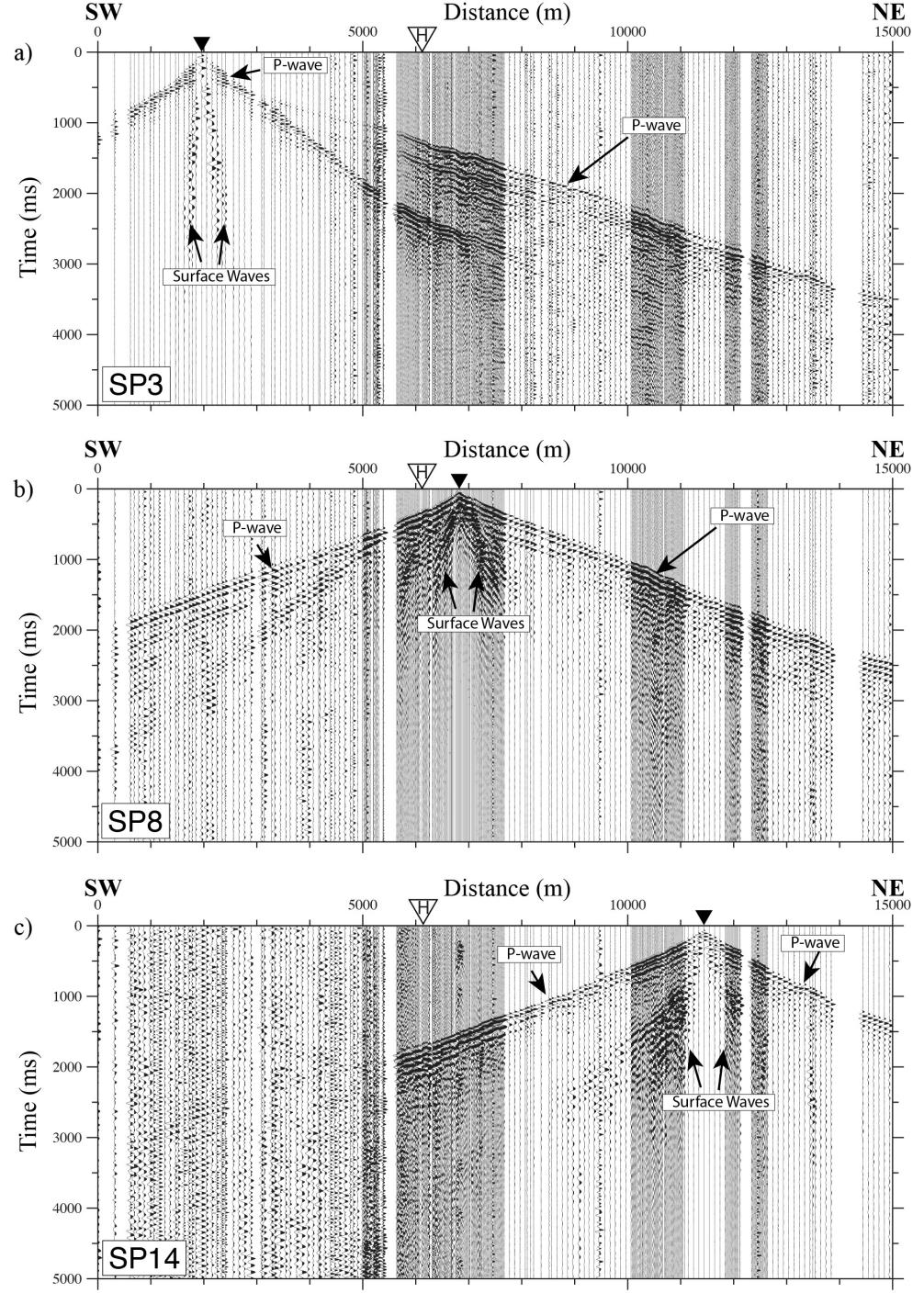


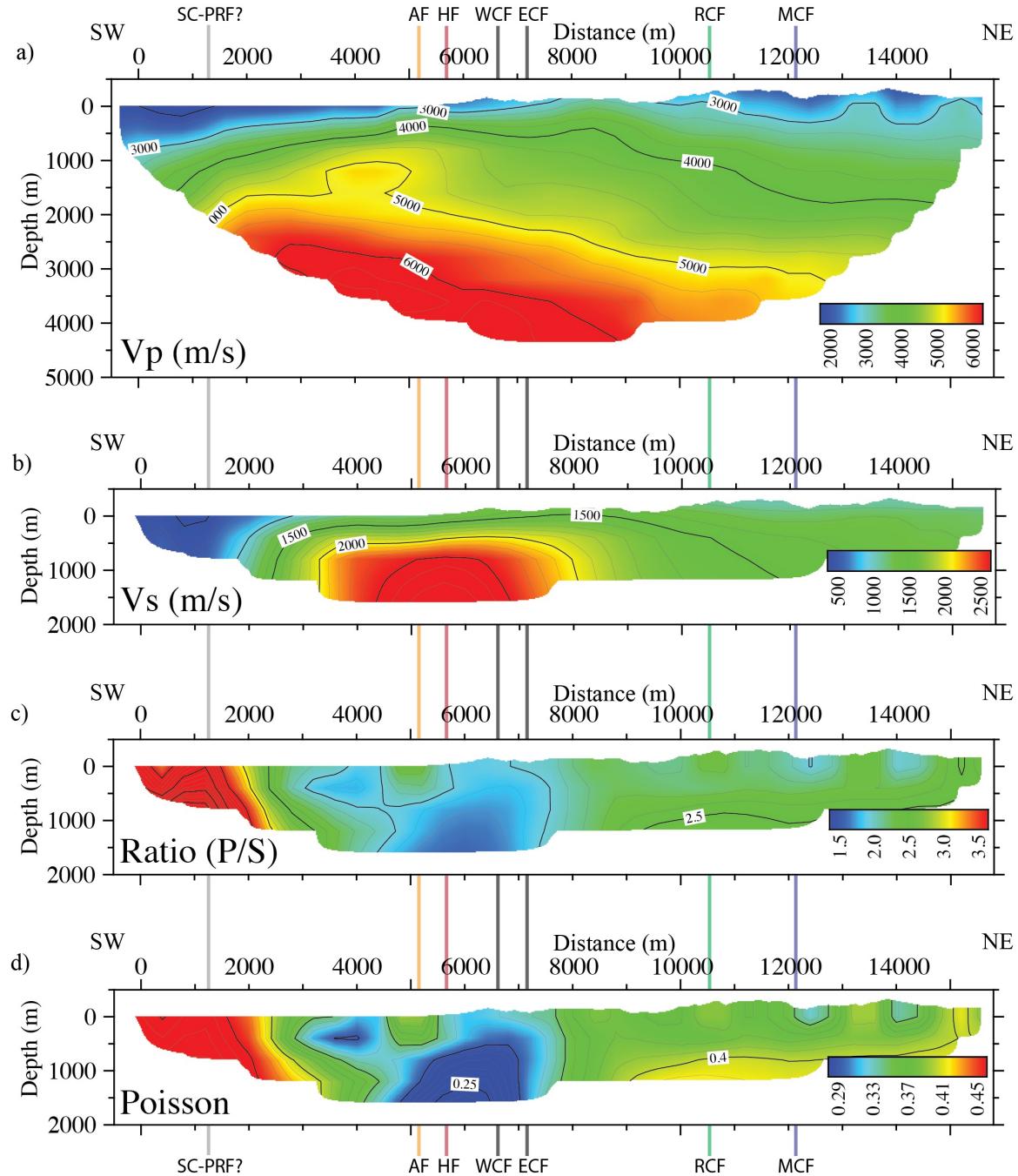
East Bay Seismic Imaging 2016

L. Strayer, R. Catchings, J. Chan, M. Goldman, A. McEvilly, and J. Suppe

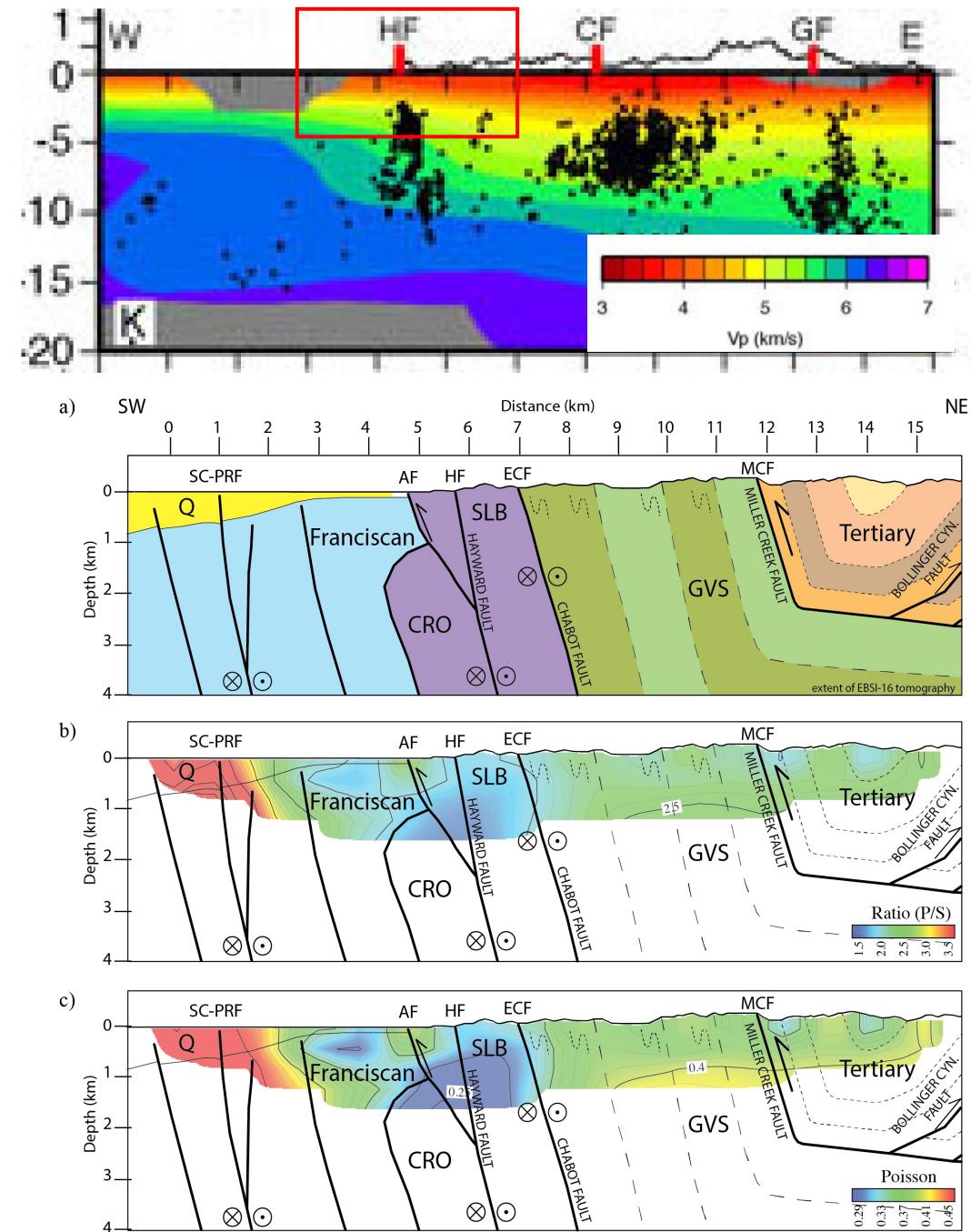




EBSI V_p, V_s, V_p/V_s, and PR



Hardebeck V_p & EBSI Interpretations



East Bay Plain High Res Seismic and Gravity

Catchings et al.. 2006

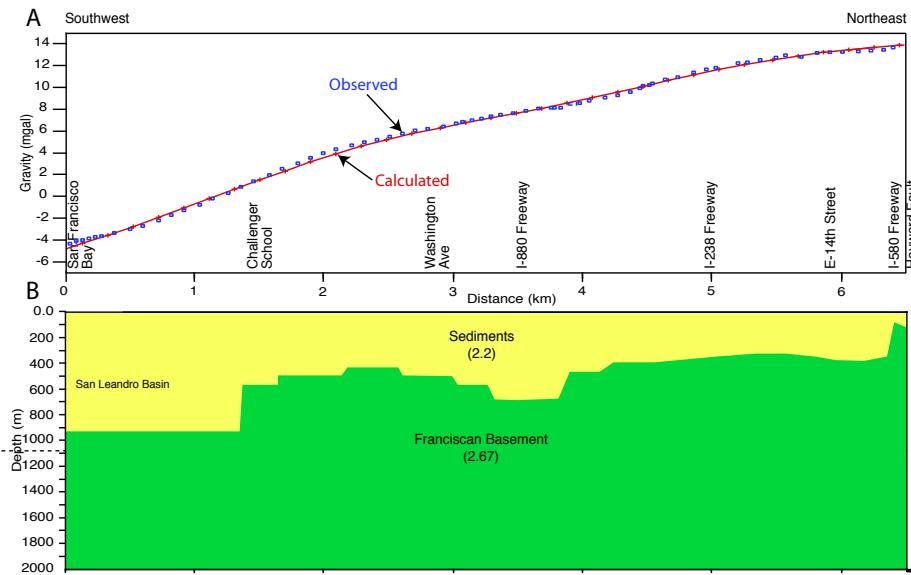
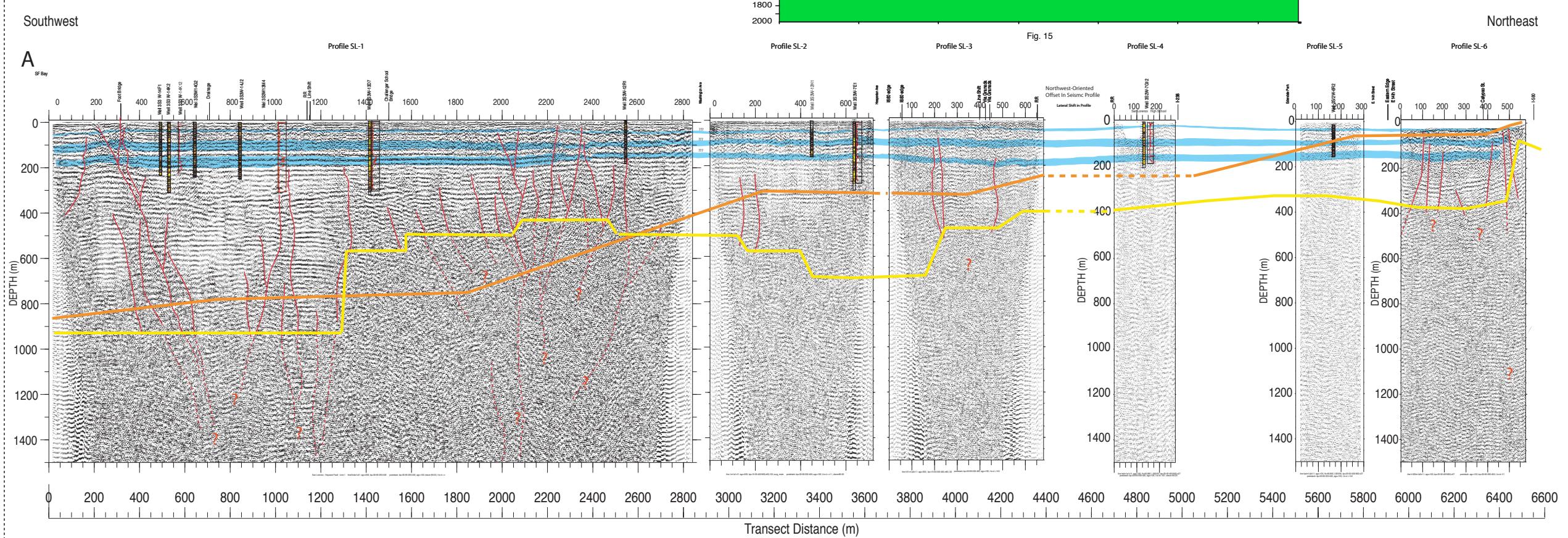


Fig. 15

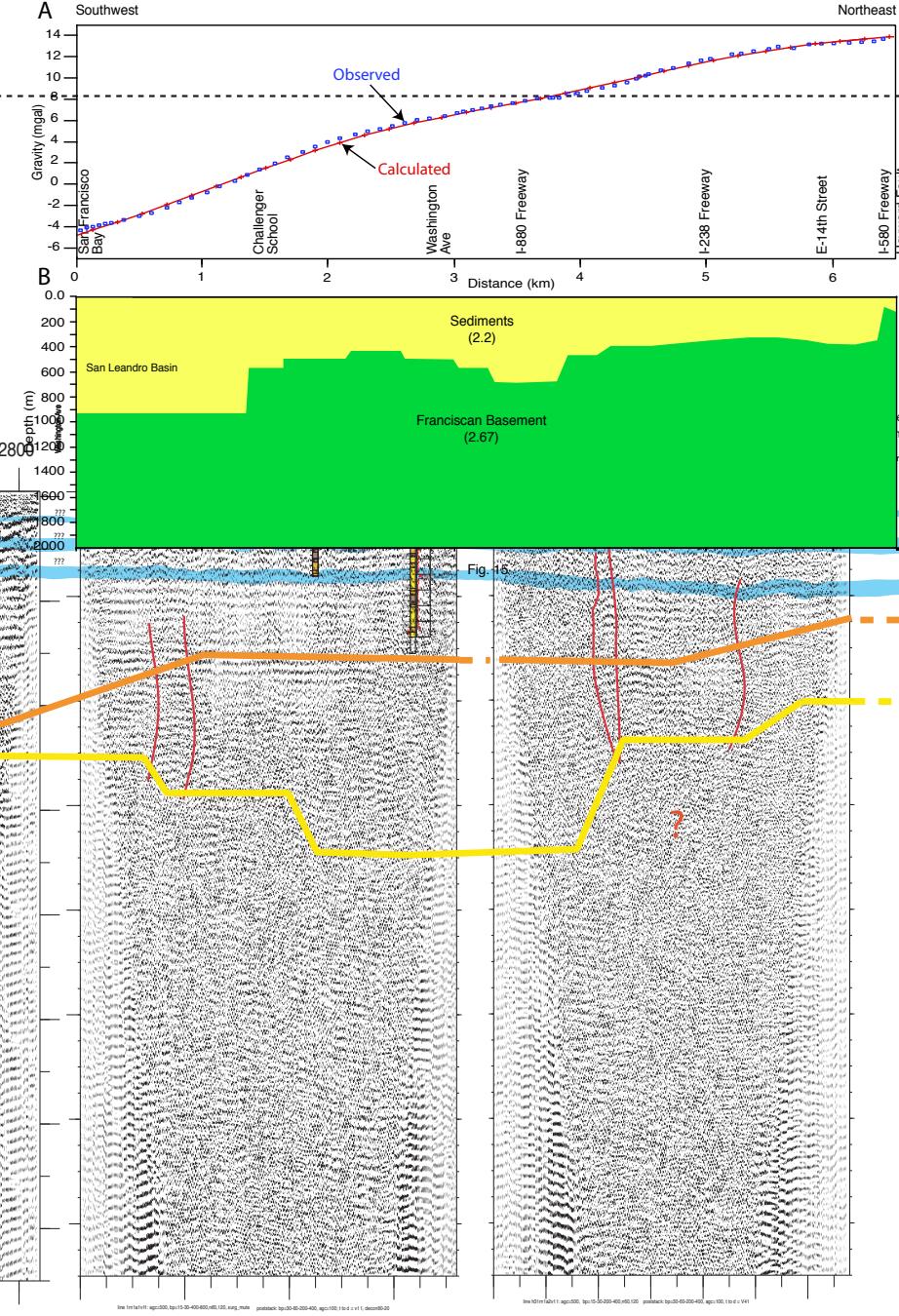
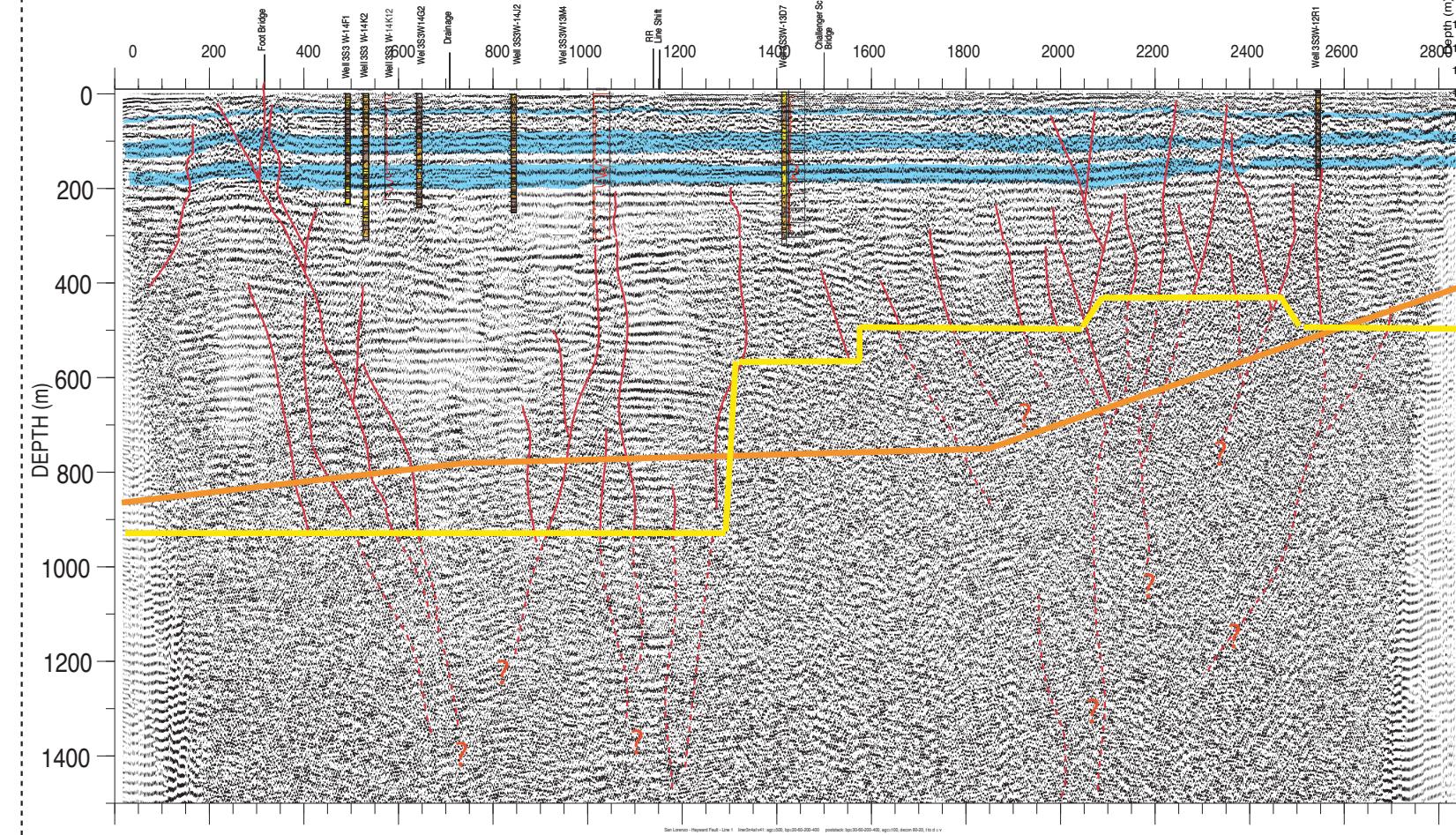


East Bay Plain High Res Seismic and Gravity

Catchings et al.: 2006

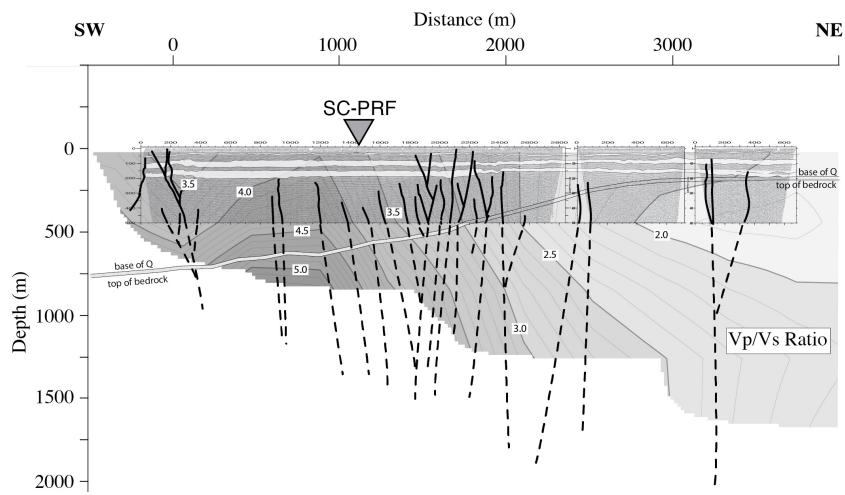
Southwest

A



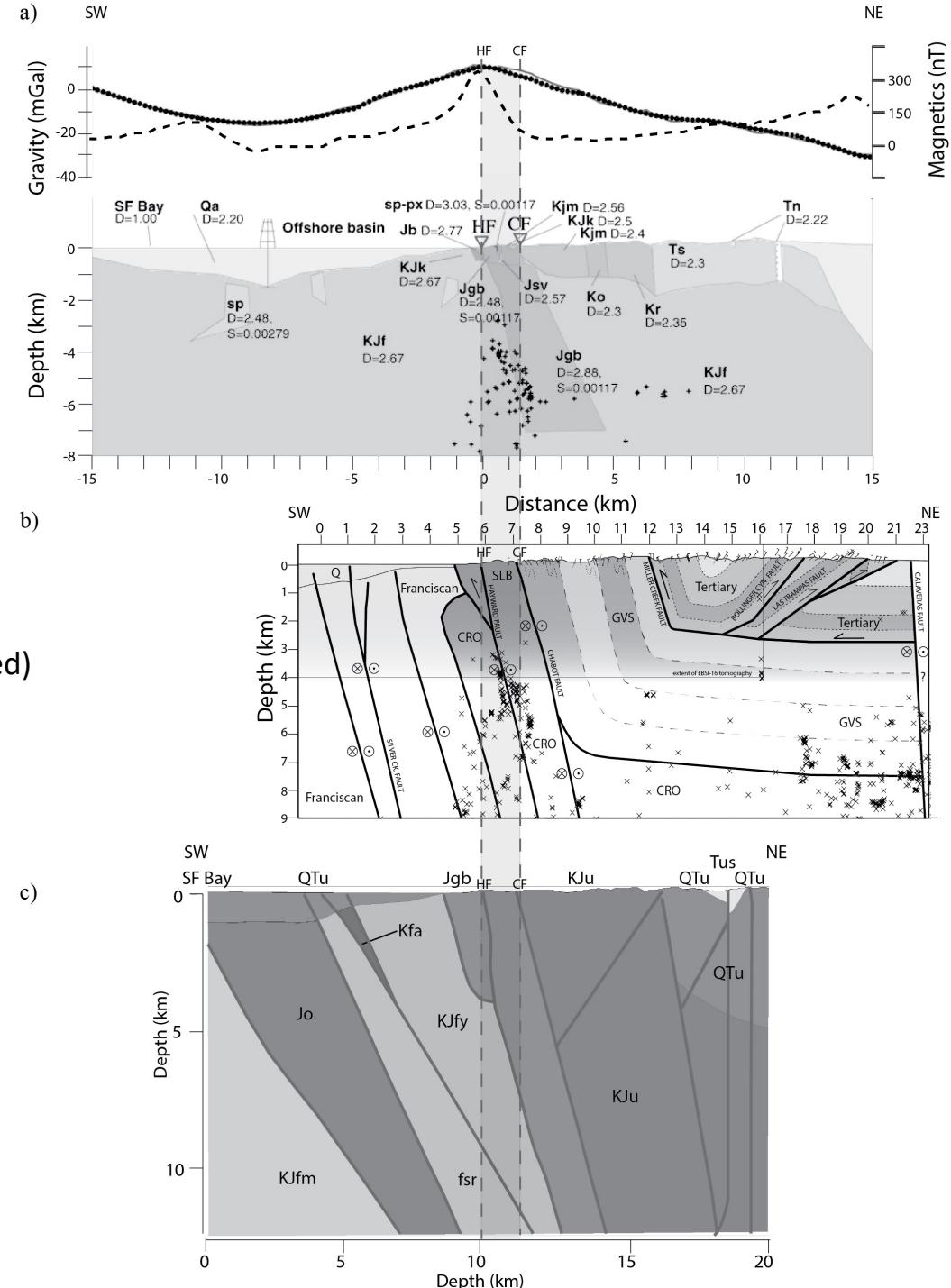
Comparison of Models

Ponce et al. (2003)

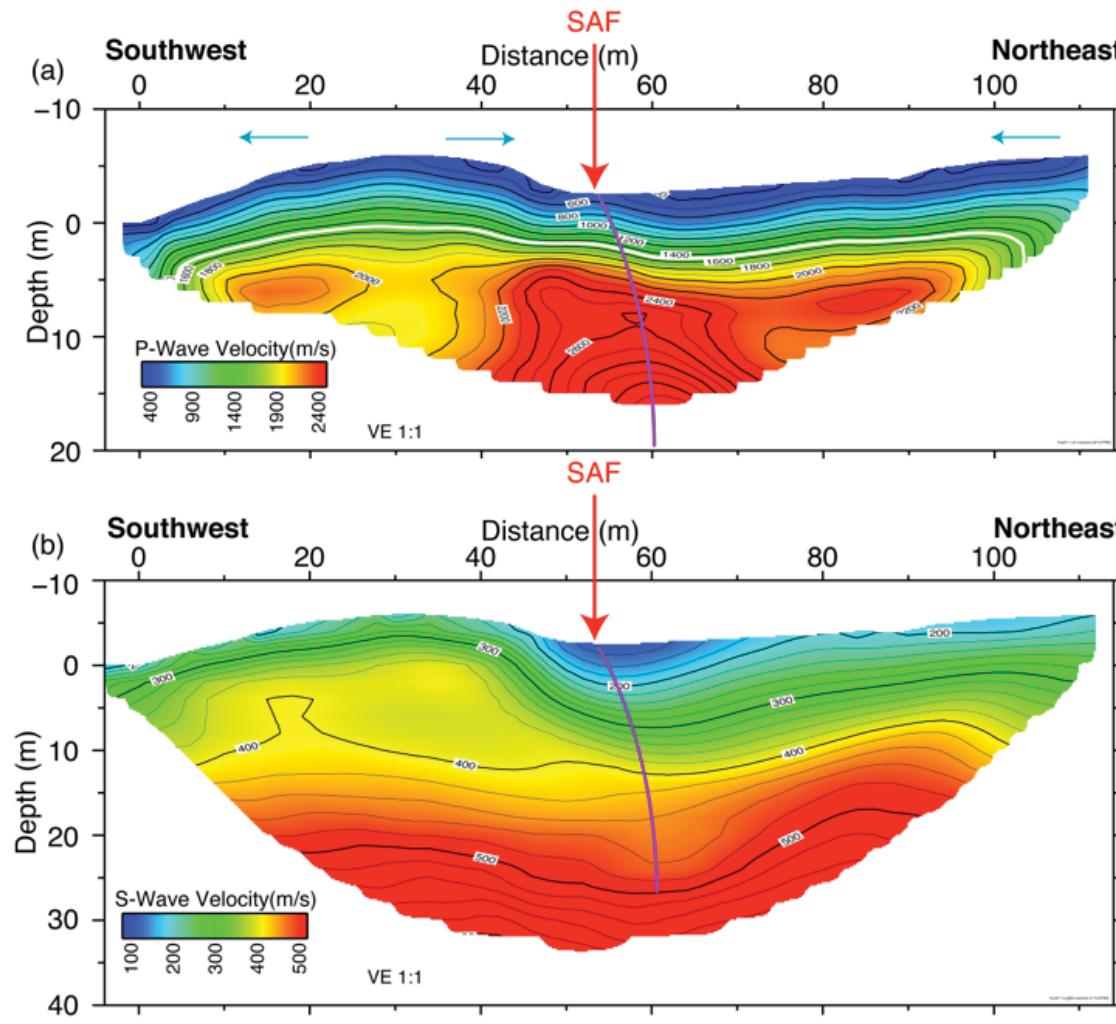
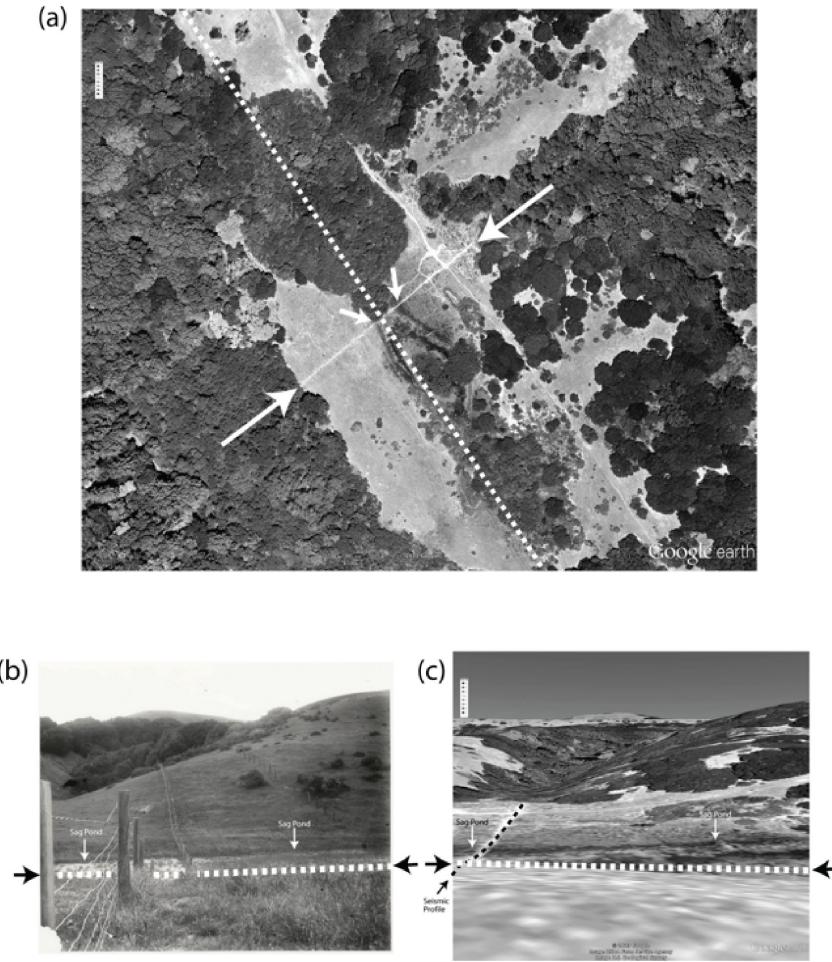


Strayer et al. (submitted)

Phelps et al. (2008)



Similar Tomography Image:, San Andreas Fault, 1906 Surface Rupture Zone, SF Peninsula



P wave: V_p
Highest in Fault
Zone Due to
Water
Saturation

S wave: V_s
Low in Fault
Zone Due to
Shear
Modulus
Reduction

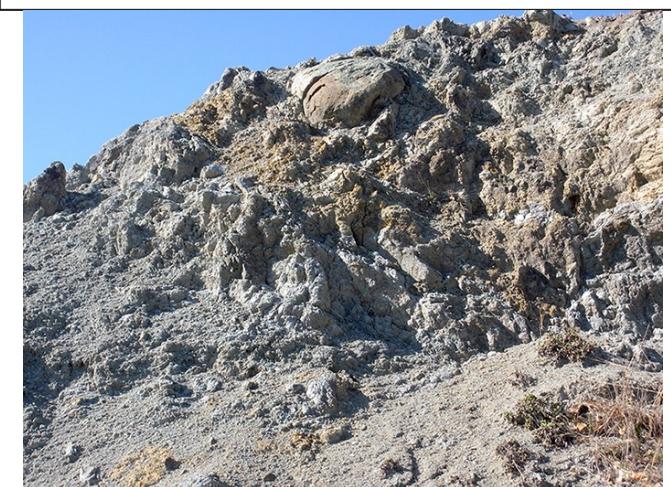
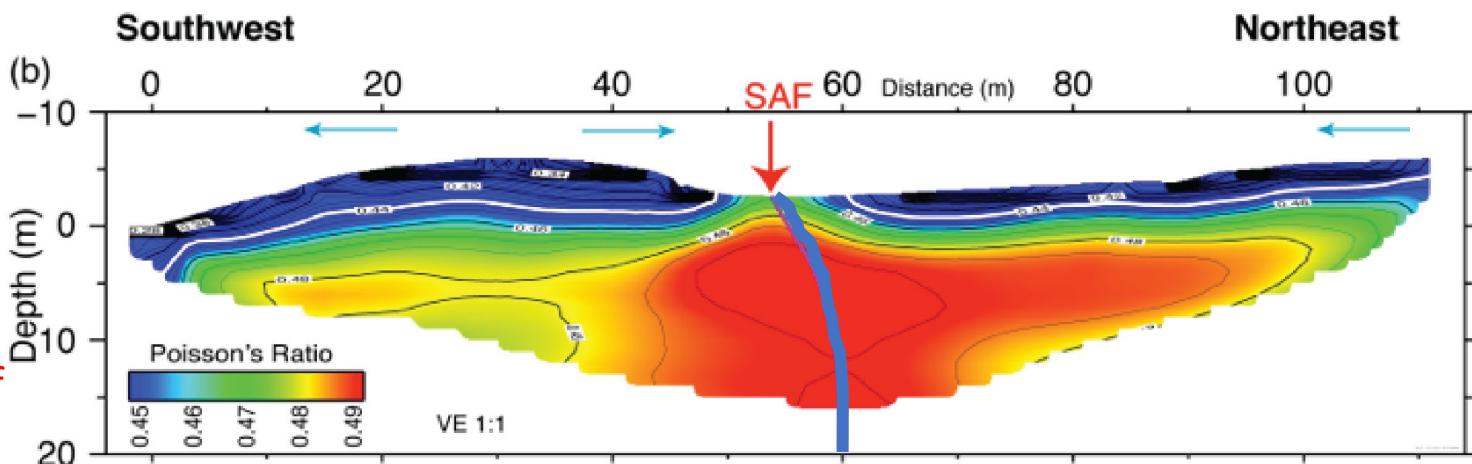
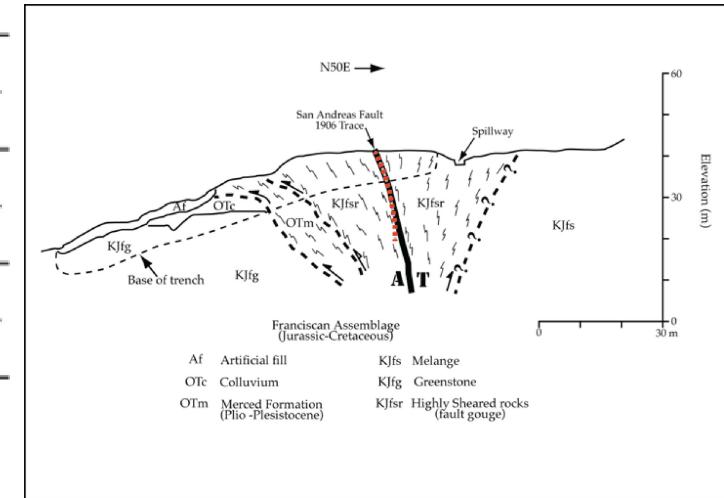
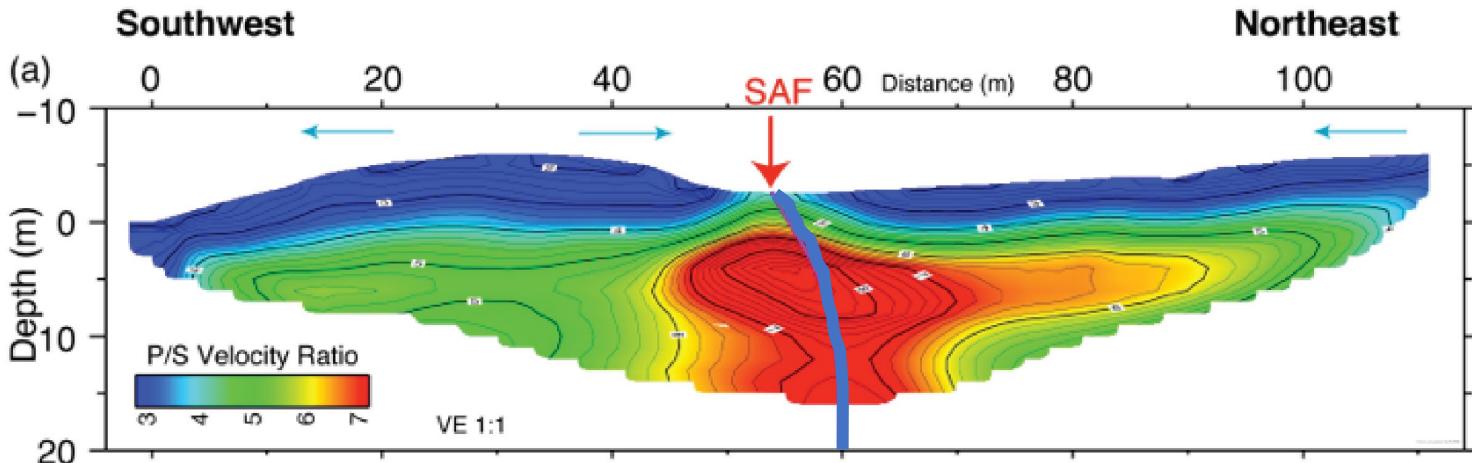
Similar Tomography Image:
San Andreas Fault, 1906 Surface Rupture Zone, SF Peninsula

Fault Zone
Known From
1906 Surface
Rupture

High Ratios
Within Fault
Zone

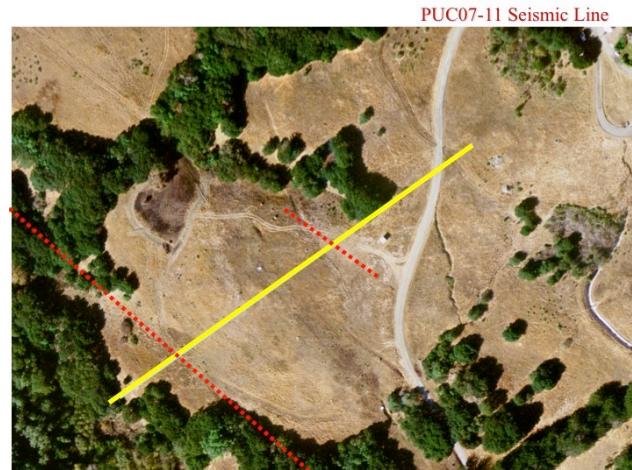
High Ratios
Below Top of
Groundwater

Vertical Zone of
High Ratios
Defines Fault



Catchings et al., 2014

Similar Tomography Image: San Andreas Fault, 1906 Surface Rupture Zone, SF Peninsula

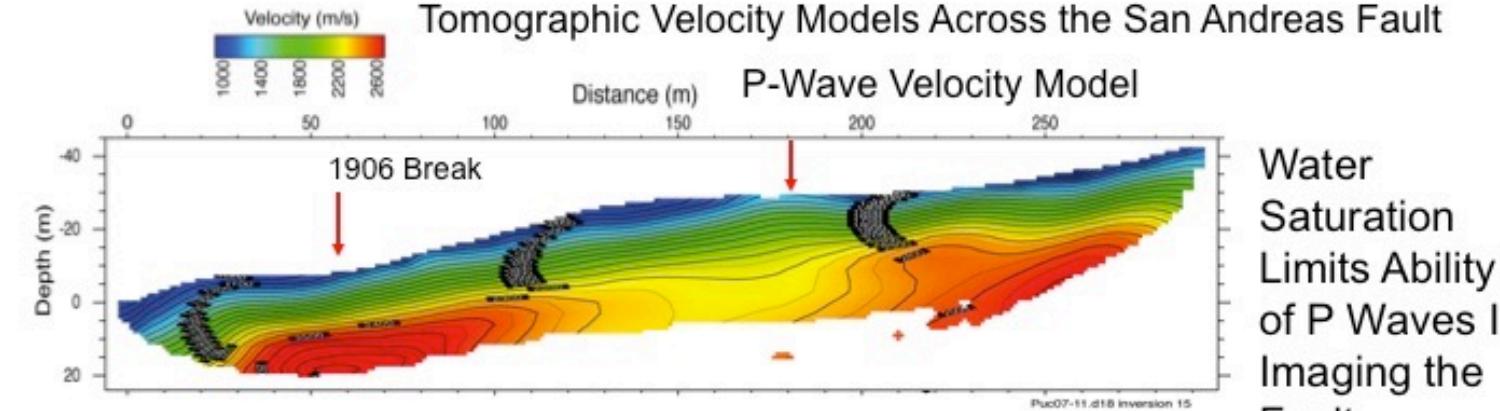


V_p:

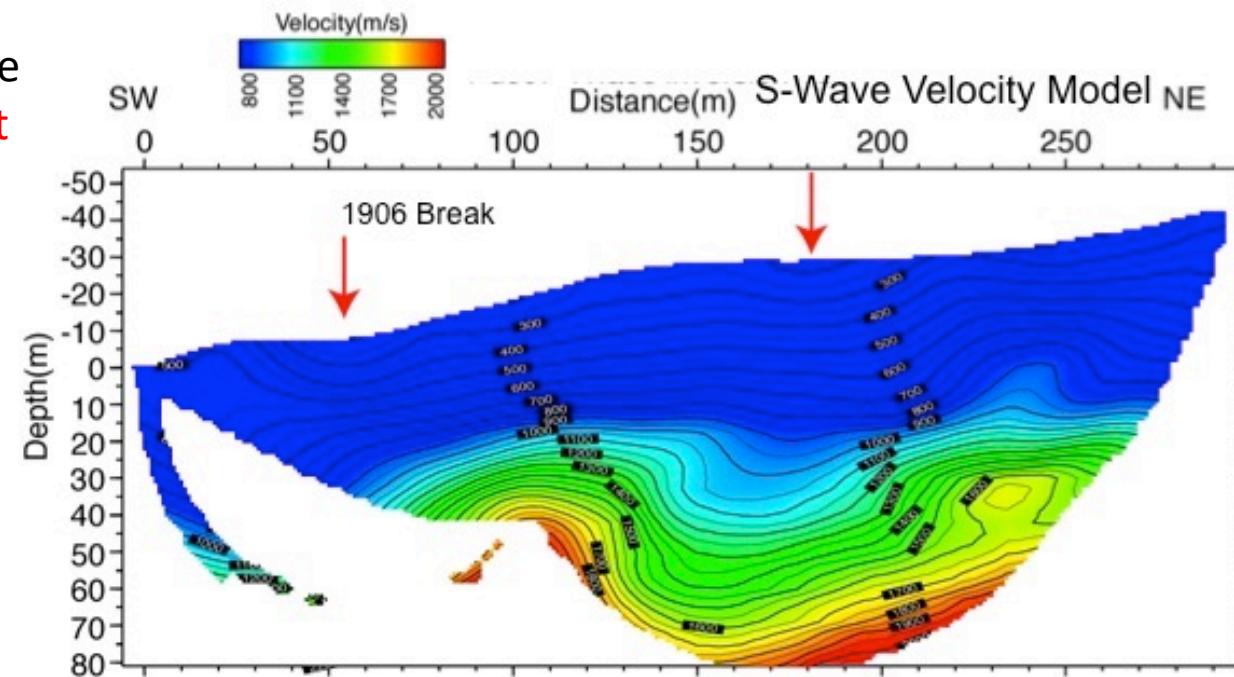
- Largely Uniform V_p Near Surface
- Fault Zone Low-Velocity Zone At Depth (V_p > 2500 m/s)

V_s:

- Low-Velocity Zone Fault Zone



Water Saturation Limits Ability of P Waves In Imaging the Fault



S waves Delineates the Fault As A Low Velocity Zone

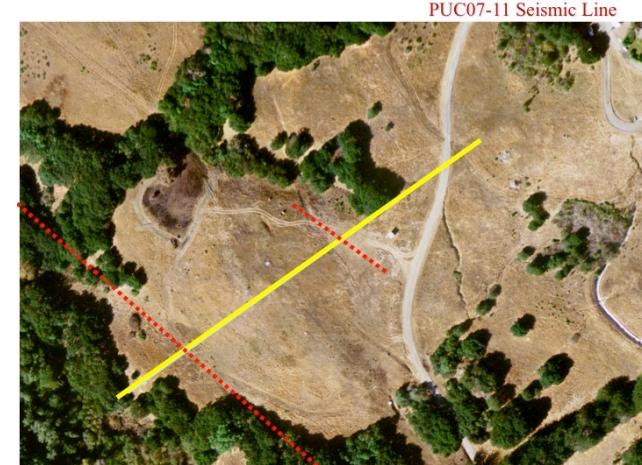
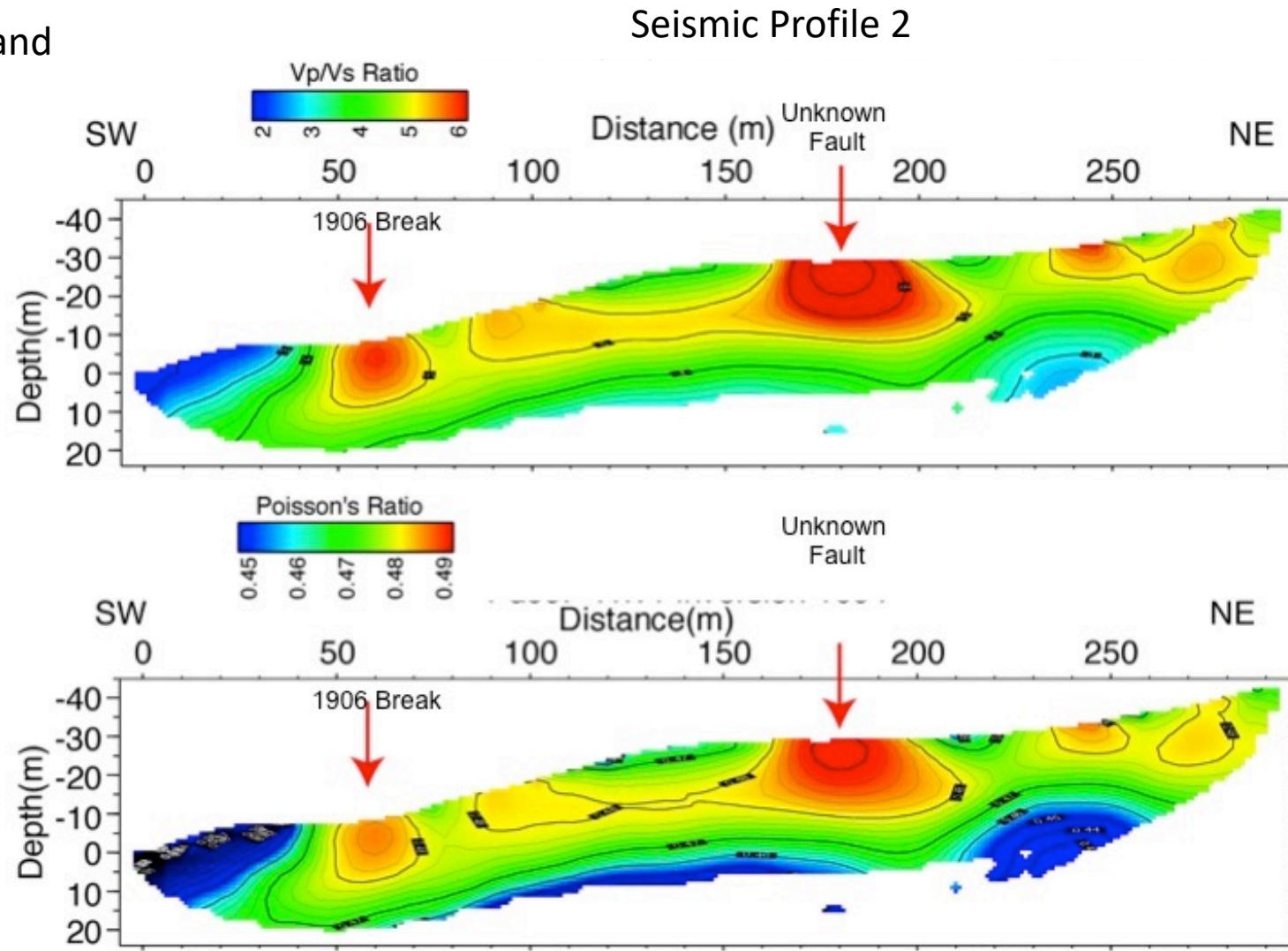
Similar Tomography Image: San Andreas Fault, 1906 Surface Rupture Zone, SF Peninsula

Two Fault Traces
Inferred By Vp/Vs and
Poisson's Ratio

High Ratios
Within Fault
Zone

Lateral High
Ratios = Top of
Groundwater

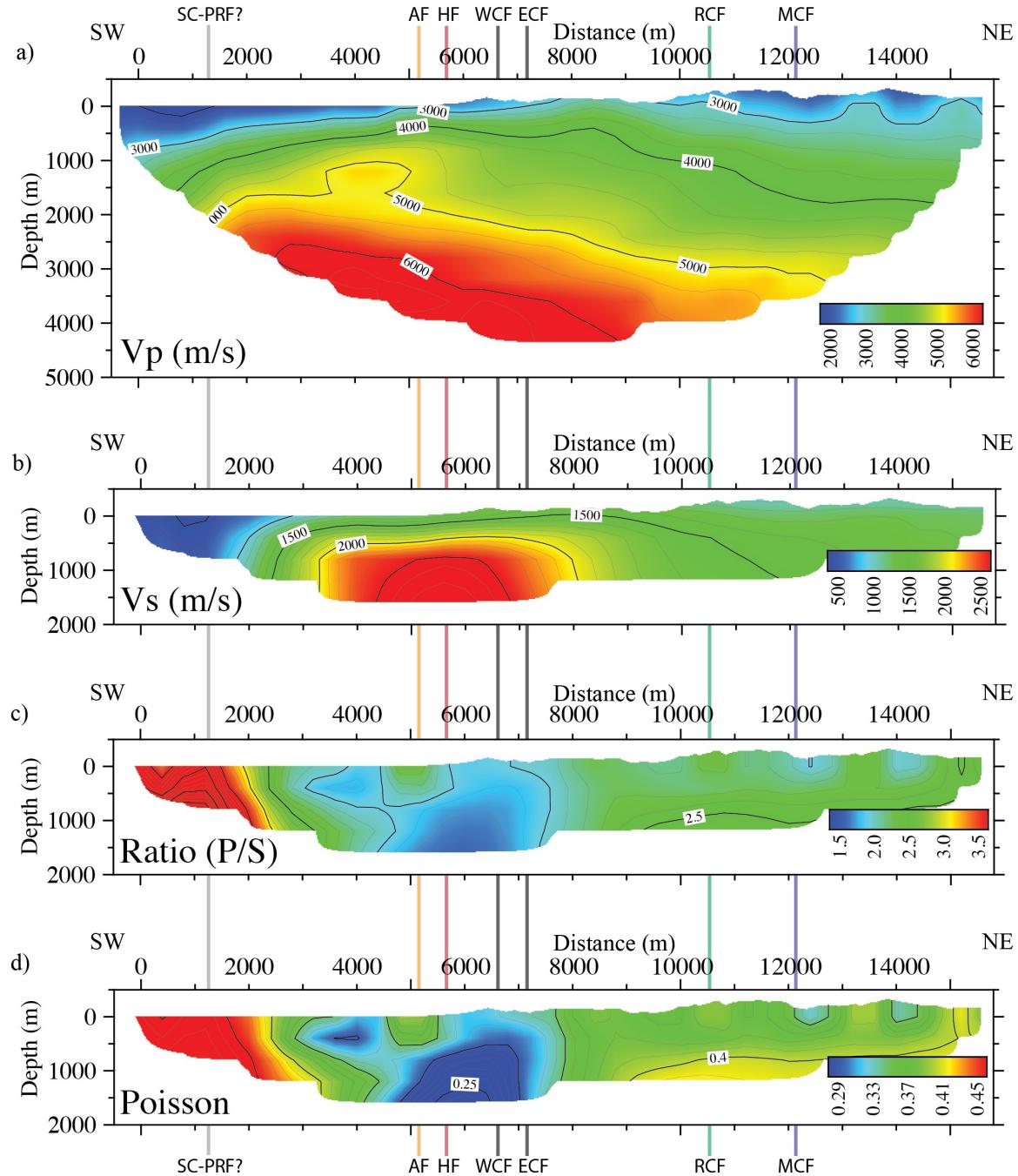
Vertical Highest
Ratios = Fault
Zone



Trenching Confirms Faults At High
Vp/Vs and Poisson's Ratio Zones



EBSI V_p, V_s, V_p/V_s, and PR



Hardebeck V_p & EBSI Interpretations

