

California Energy Commission –  
Nuclear Issues Workshop  
July 26, 2011

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- Characterizing active faults and submarine landslides
1. Work underway – seafloor mapping
  2. Unknowns, needed research

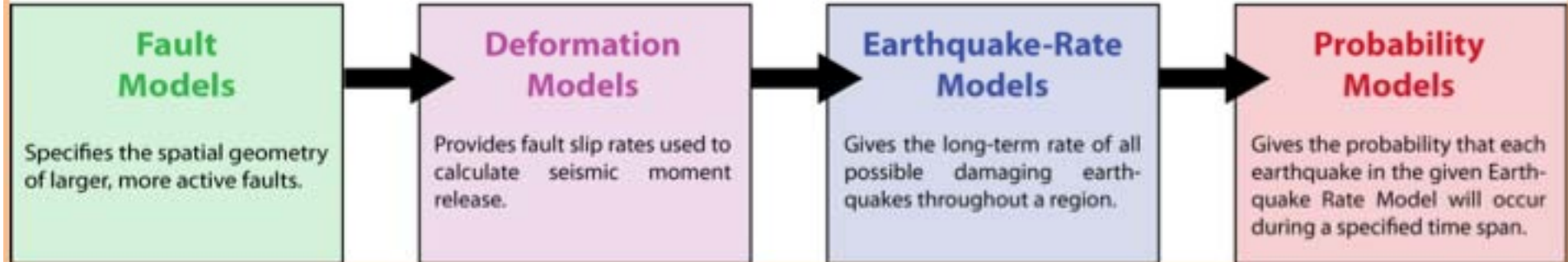
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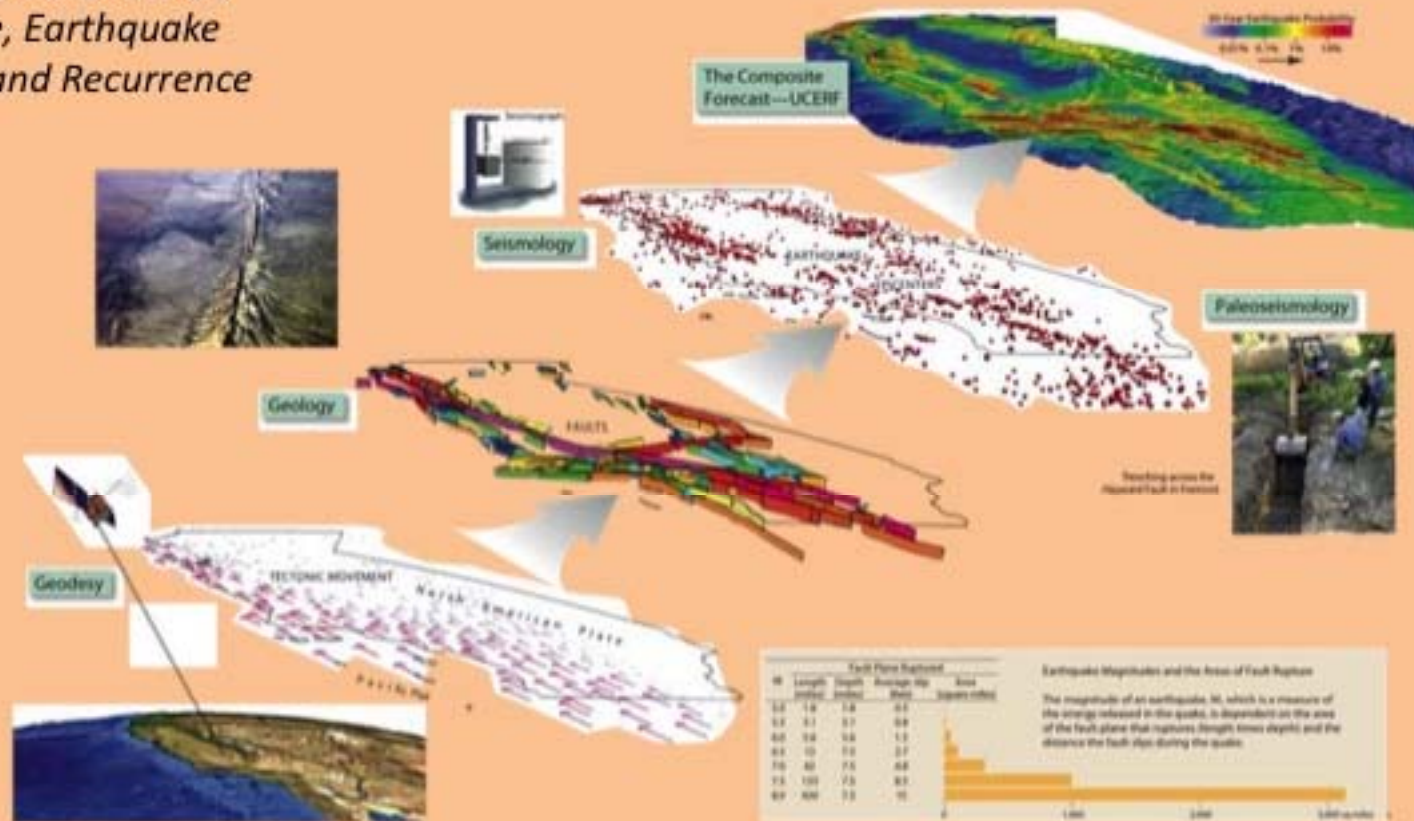
DATE JUL 26 2011

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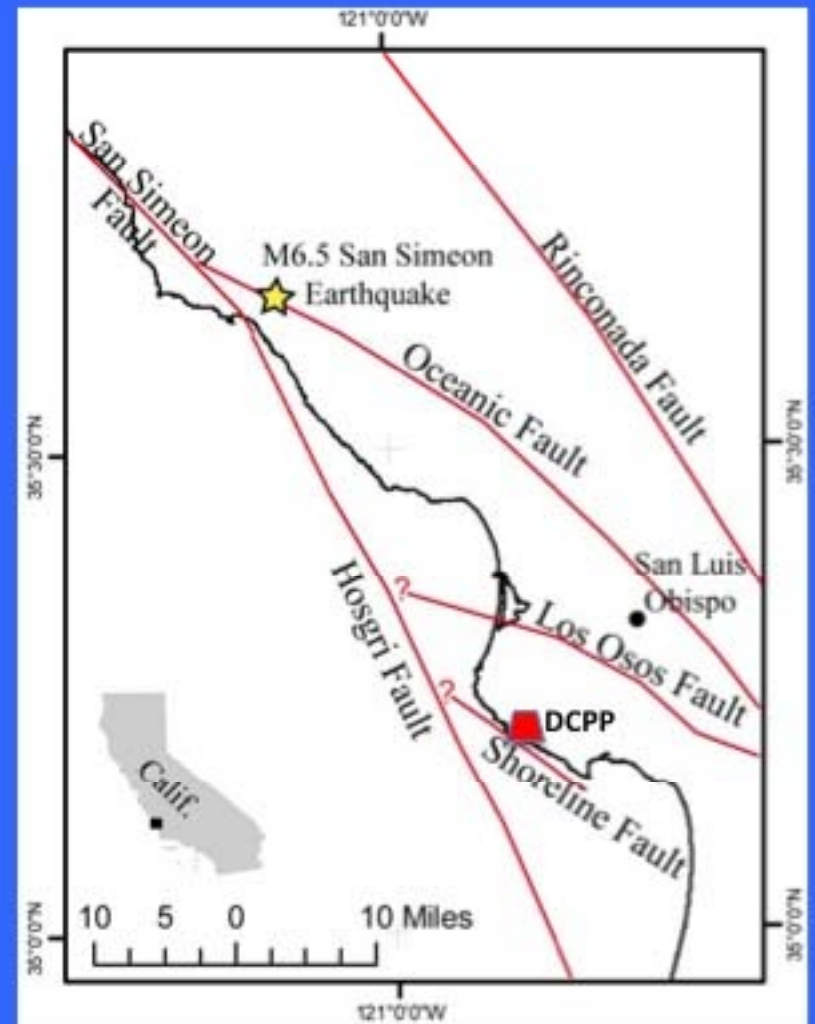
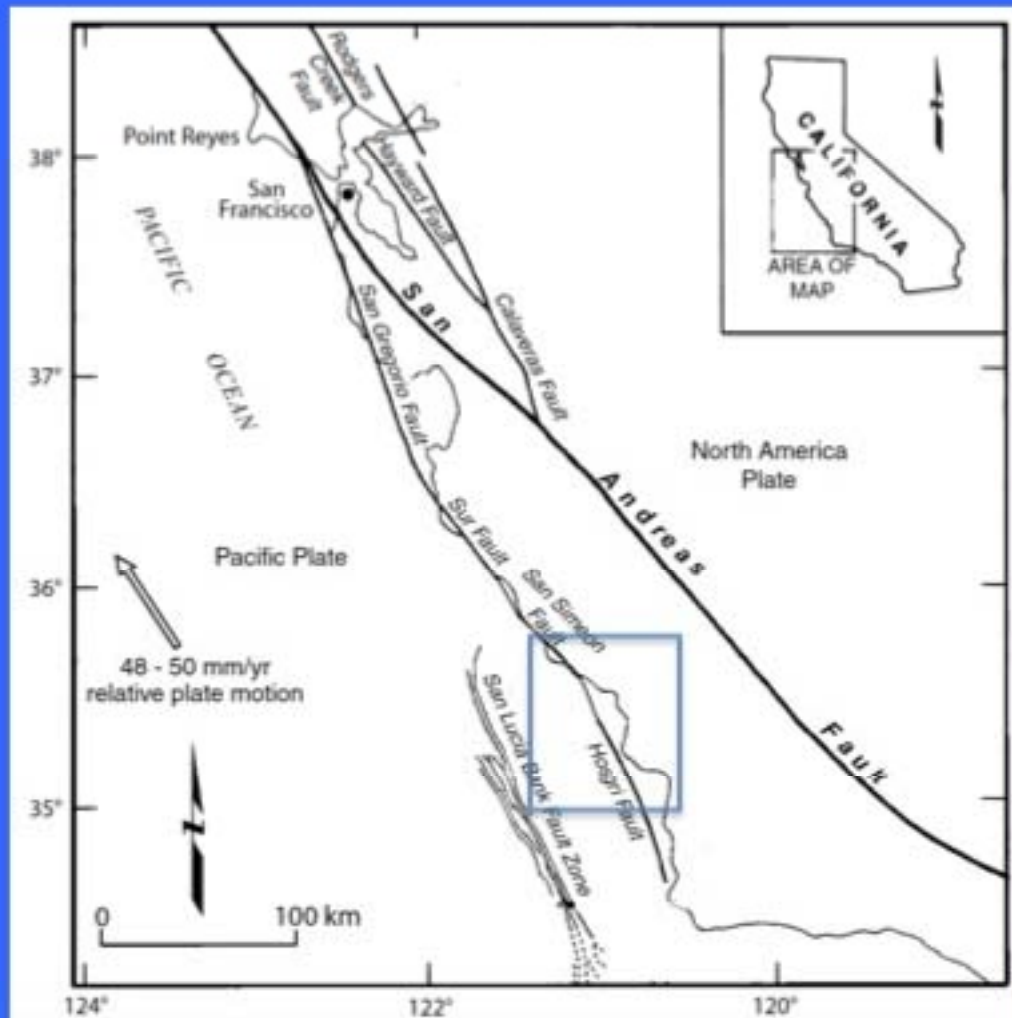
# Components of the Uniform California Earthquake Rupture Forecast 2



*Location, Length, Dip,  
Slip Rate, Earthquake  
History and Recurrence*







Modified from Hanson et al. (2004)

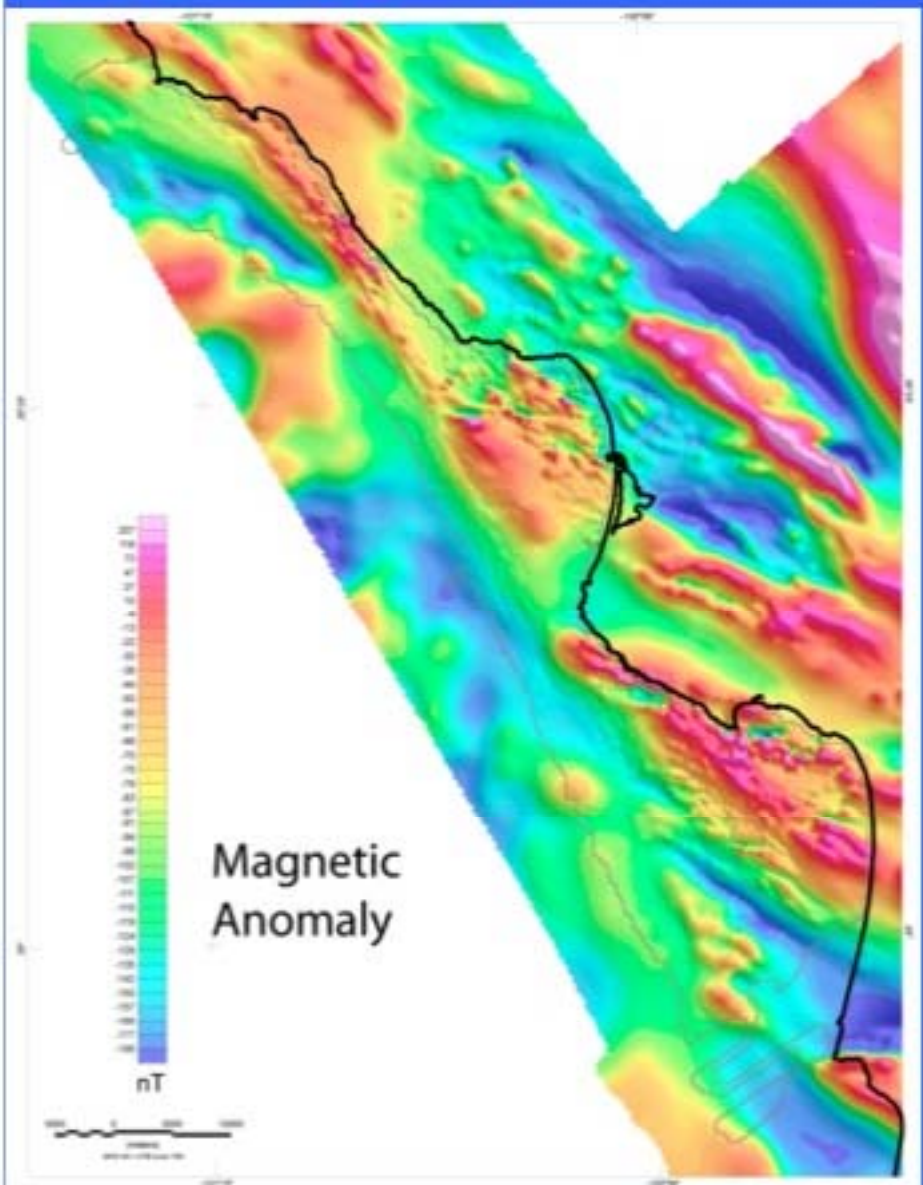
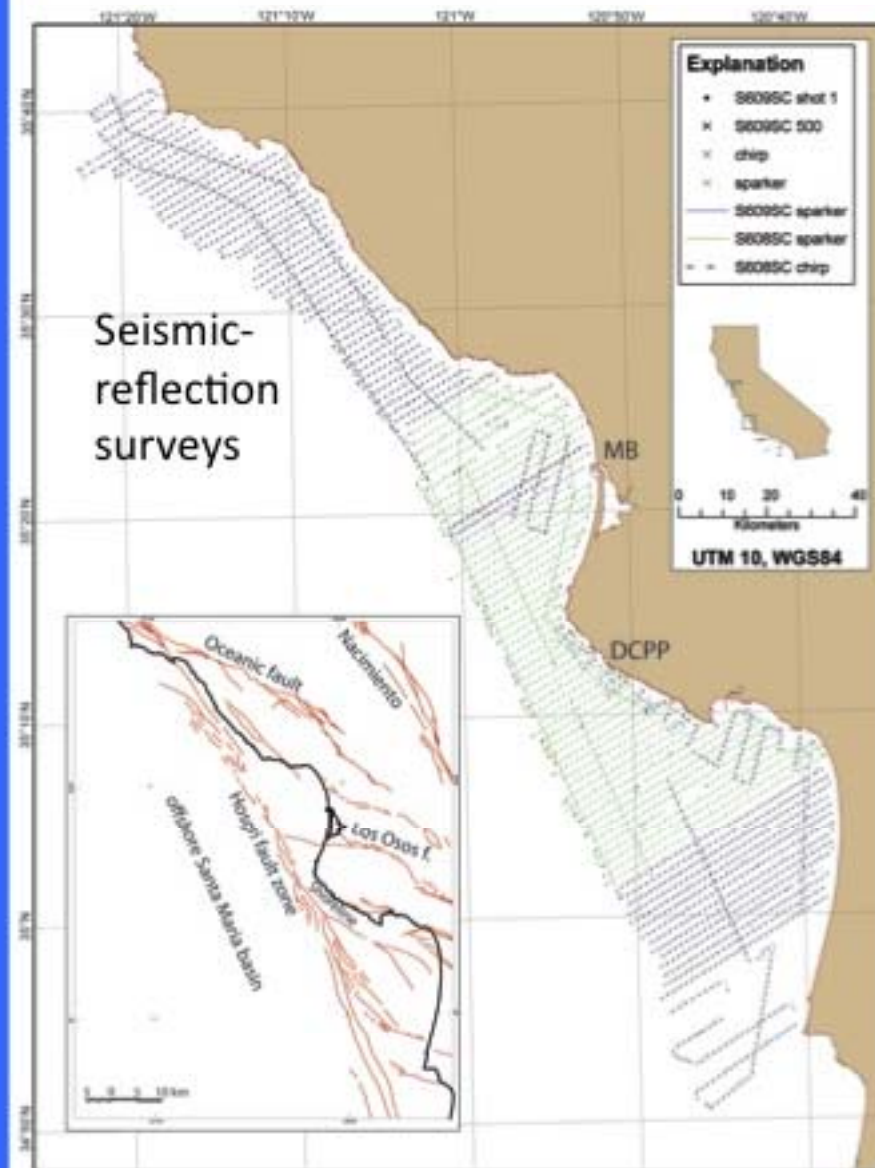
Pismo Beach to Piedras Blancas

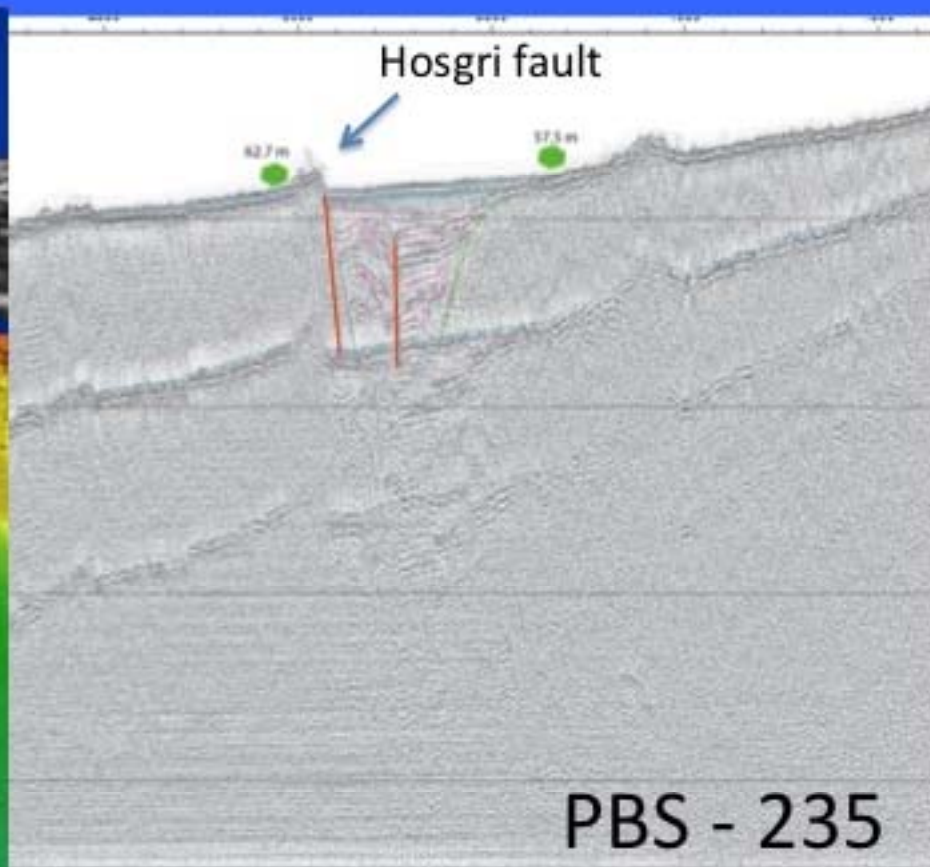
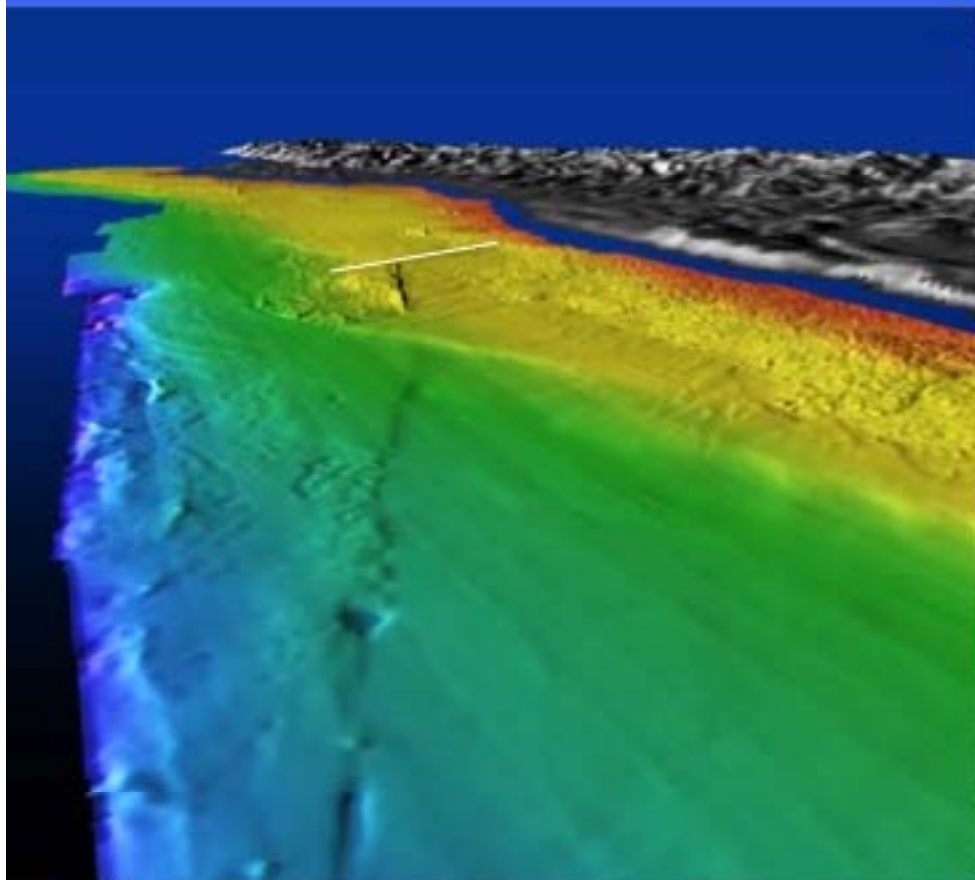
High Resolution Bathymetry

California Seafloor Mapping Program

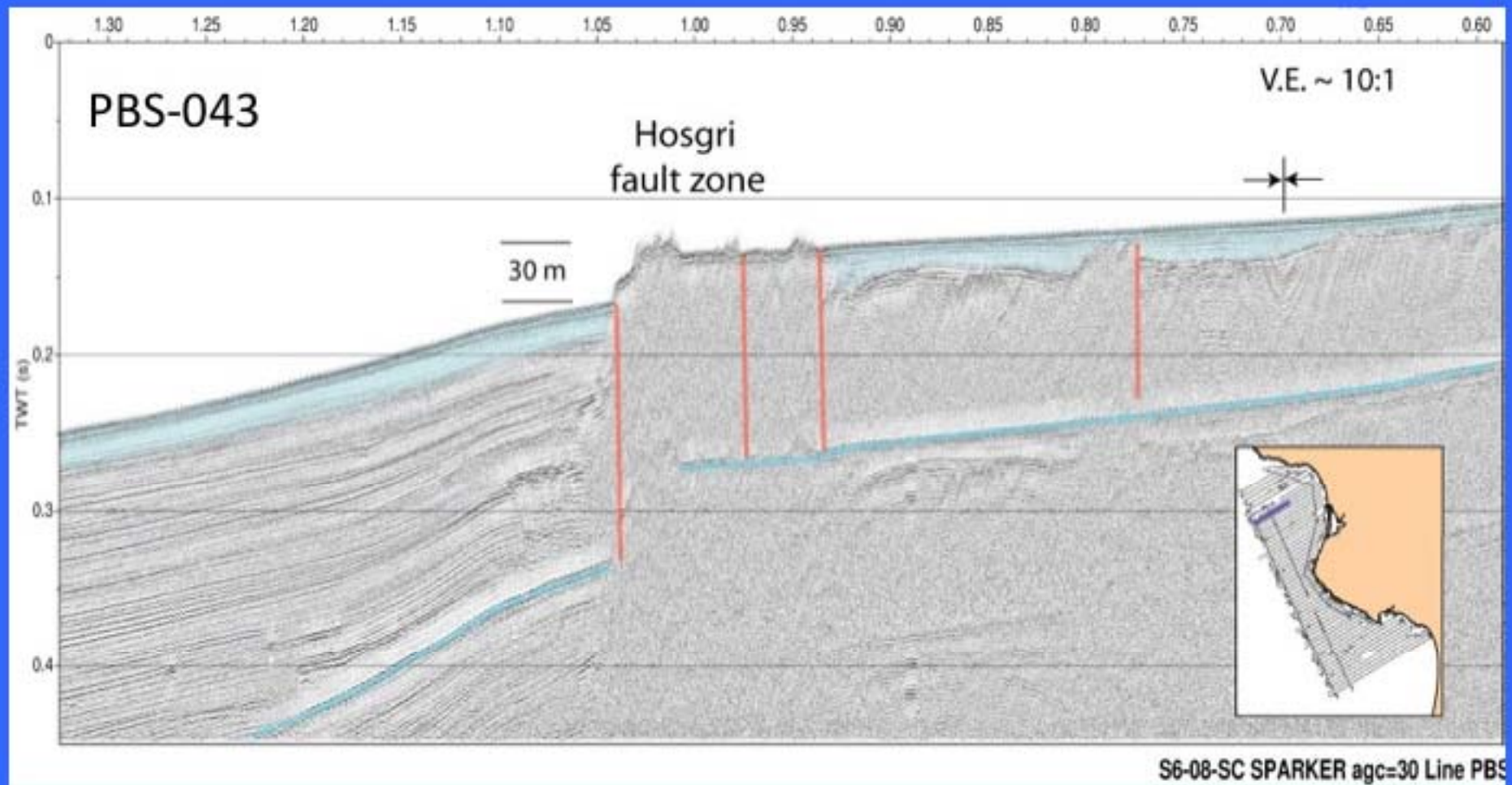
Parker Allwardt and Sam Johnson

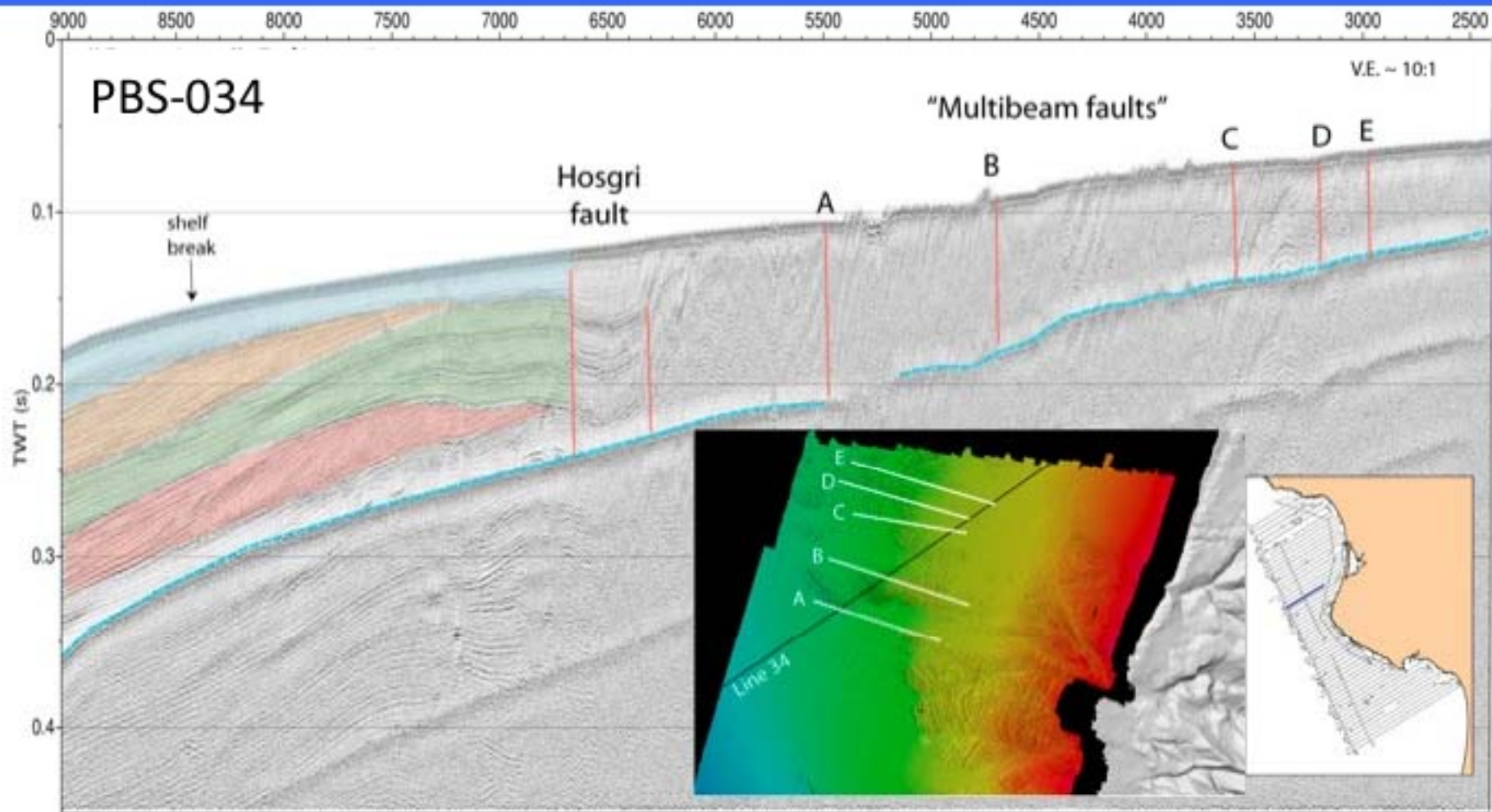






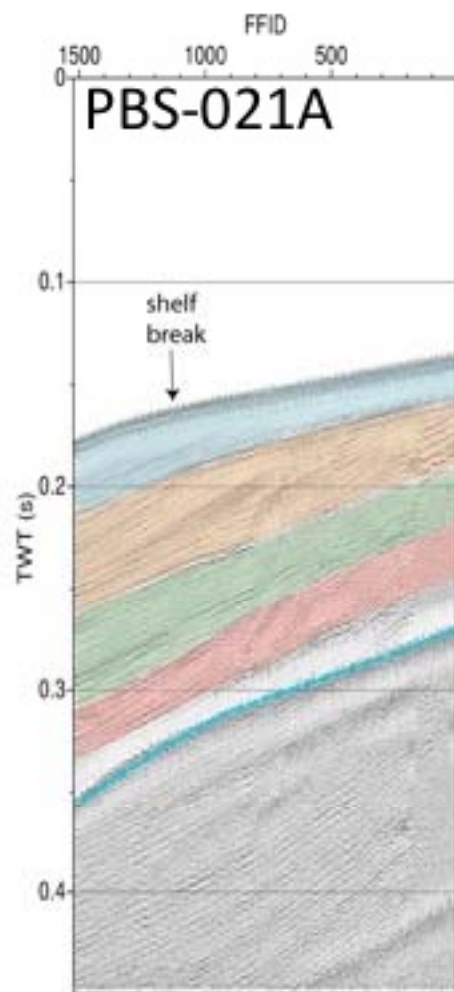




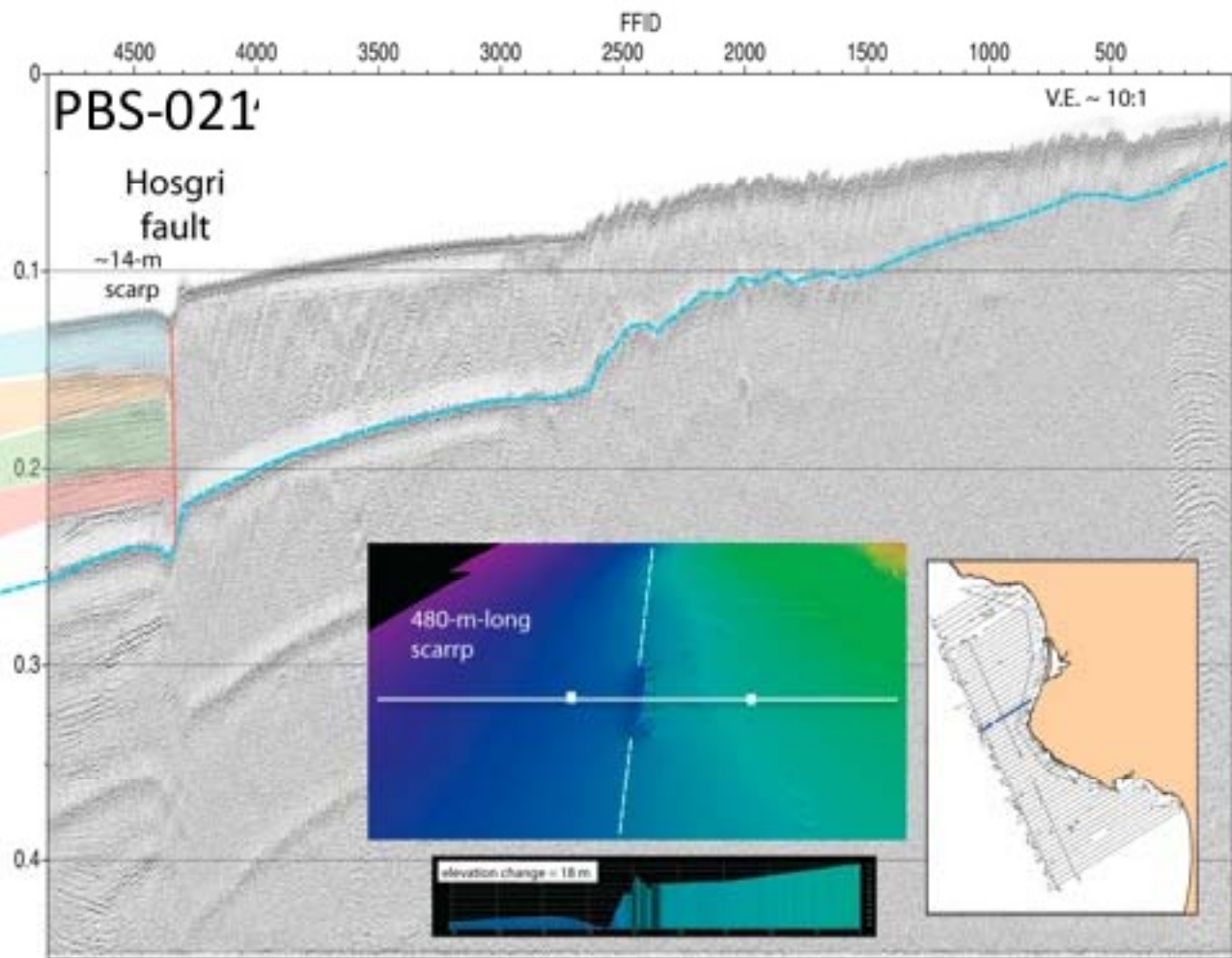


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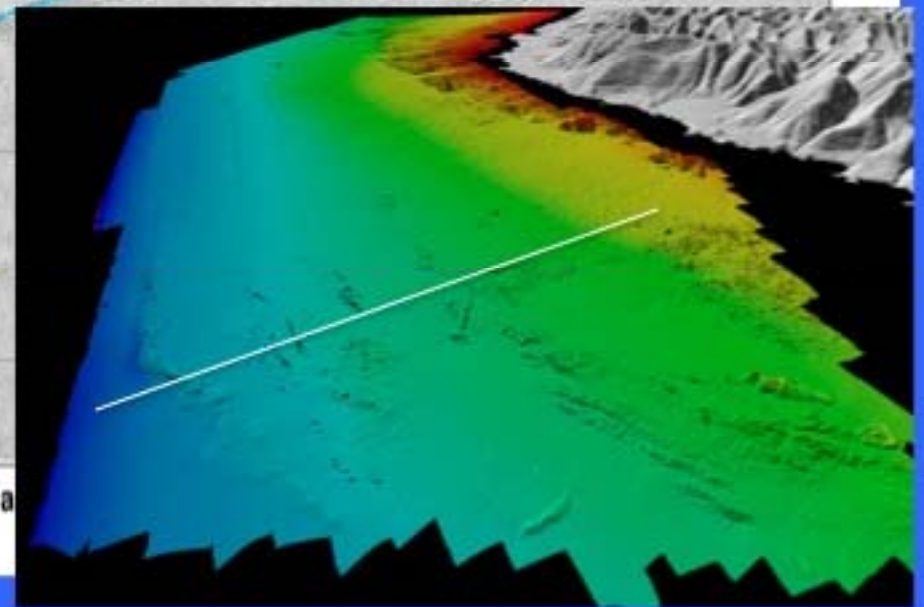
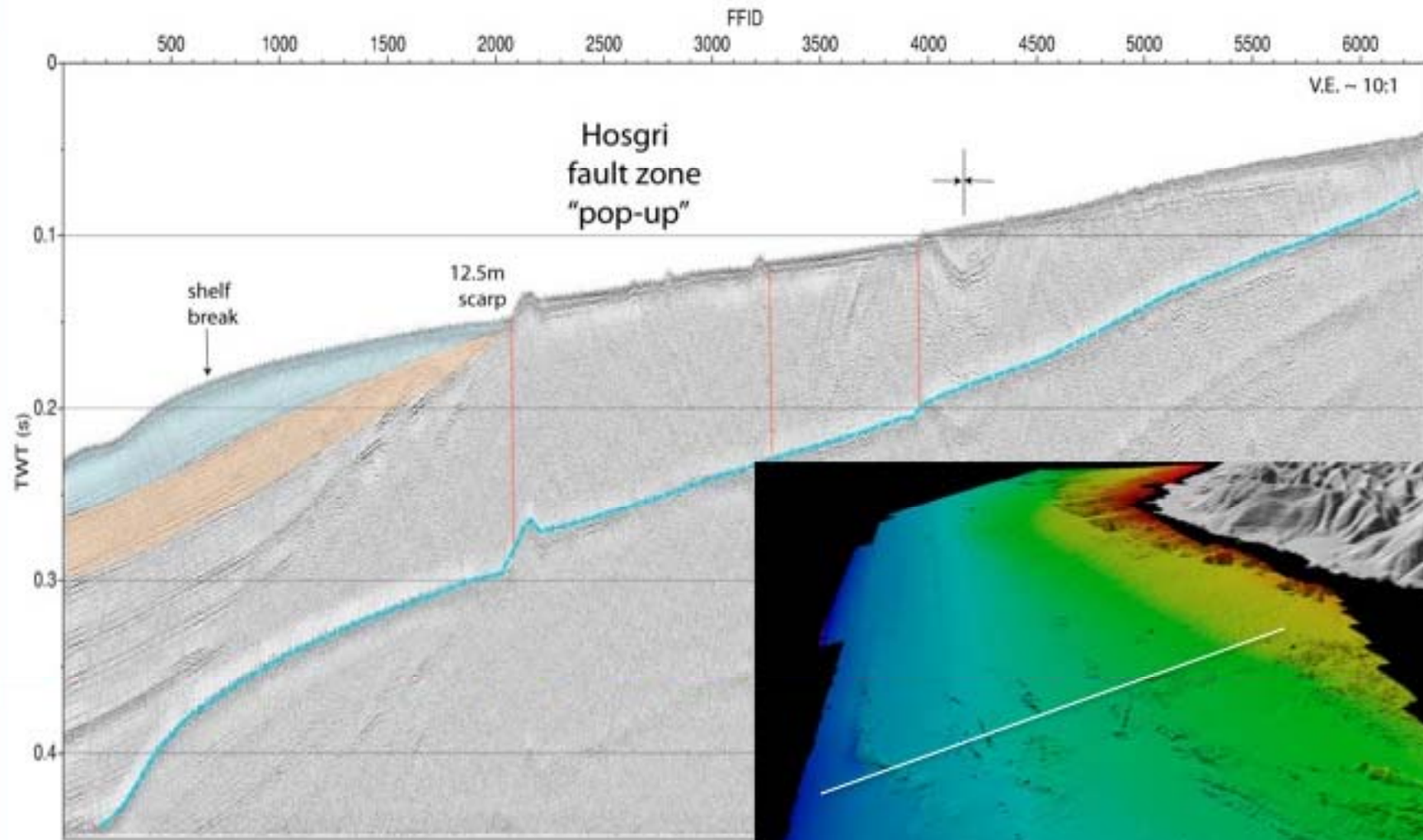




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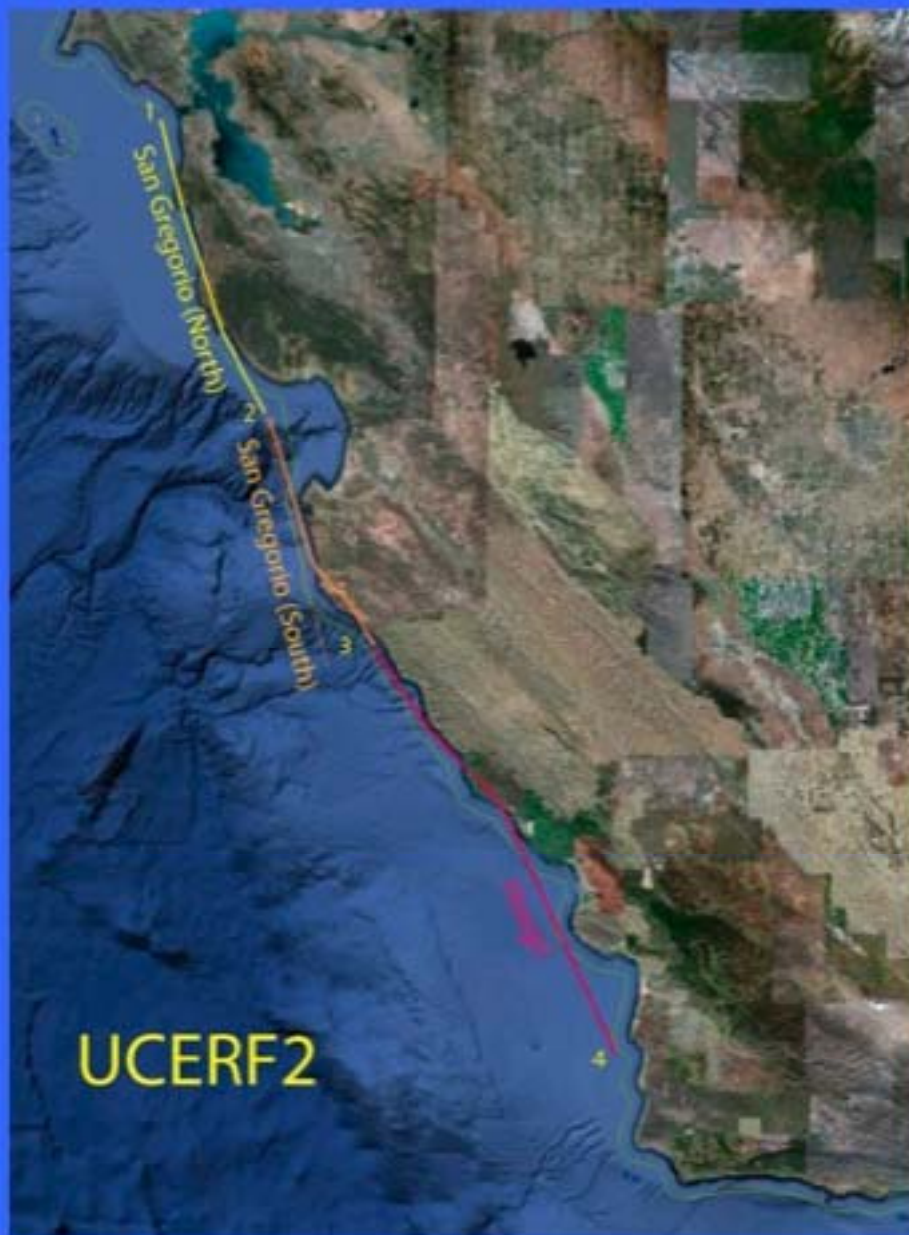
S6-08-SC SPARKER agc=30 Line PBS-021



PBS-026

S6-08-SC SPARKER a





## Unknowns – Hosgri fault

1. How long a rupture?

Offshore “section” boundaries?

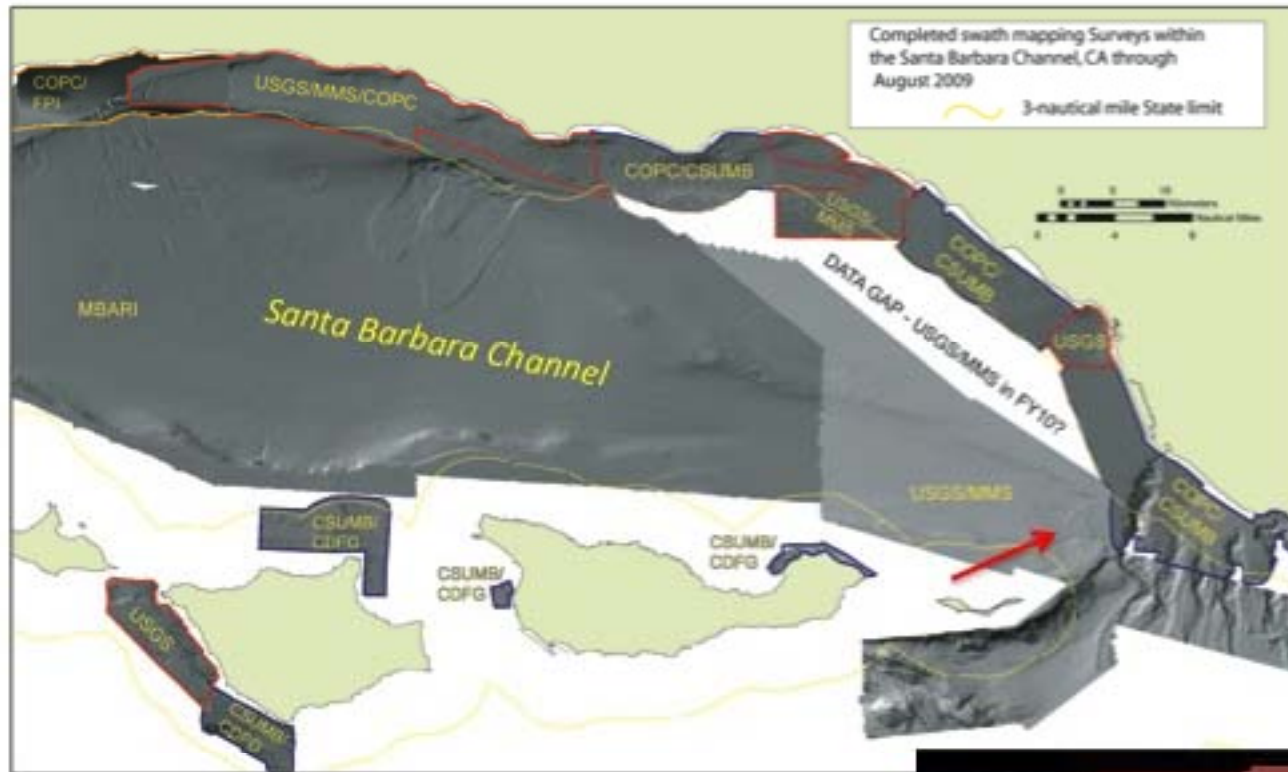
- a. San Francisco (+ 15 km)
- b. North Monterey Bay
- c. Partington Canyon
- d. Point Sal (+ 15 km)

2. How fast (slip rate)?

- a. 1-3 mm/yr (e.g., Hanson et al. 2004)
- b. 3.9 mm/yr (Meade and Hager, 2005)
- c. 2.5 mm/yr on Hosgri; 7 mm/yr on San Gregorio (Wills et al., 2007)

3. Does slip transfer to branching faults (e.g., Los Osos, Shoreline)?

4. Earthquake history? Recurrence?



# Goleta submarine landslide complex

