

Louisiana Geological Survey

QUATERNARY GEOLOGY OF THE LOWER MISSISSIPPI VALLEY

compiled by
Roger T. Saucier and John I. Snead

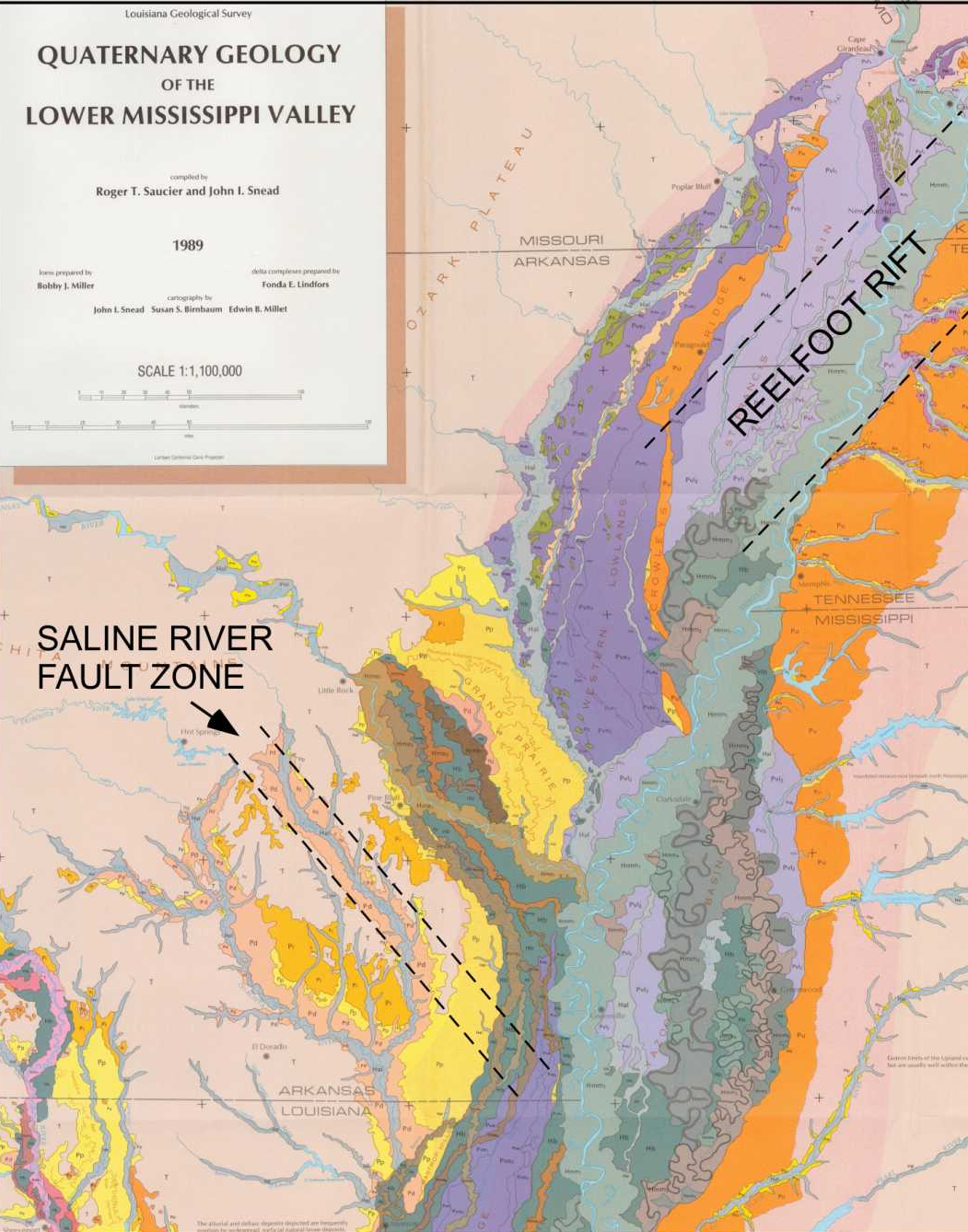
1989

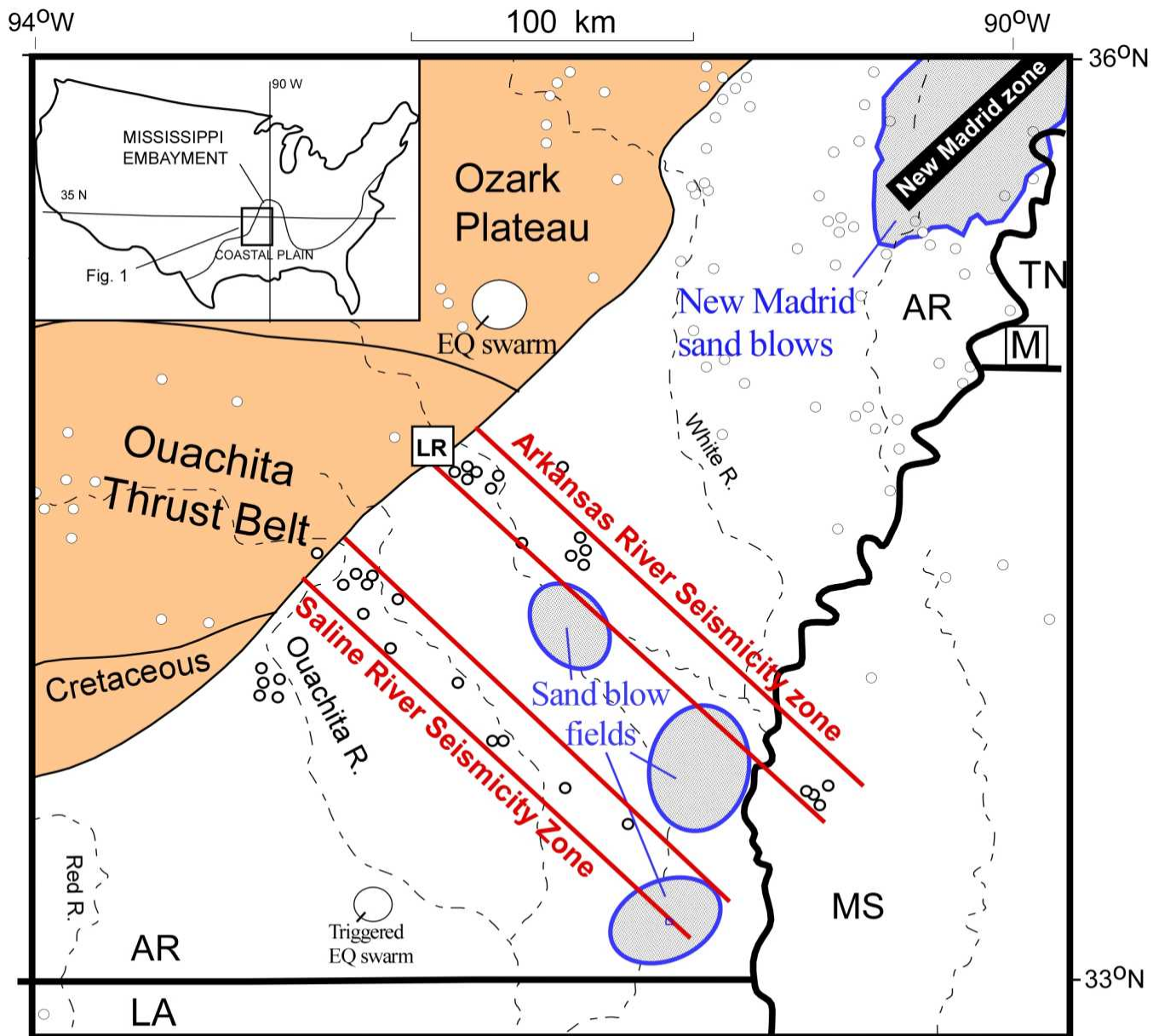
maps prepared by
Bobby J. Miller

delta complexes prepared by
Fonda E. Lindfors

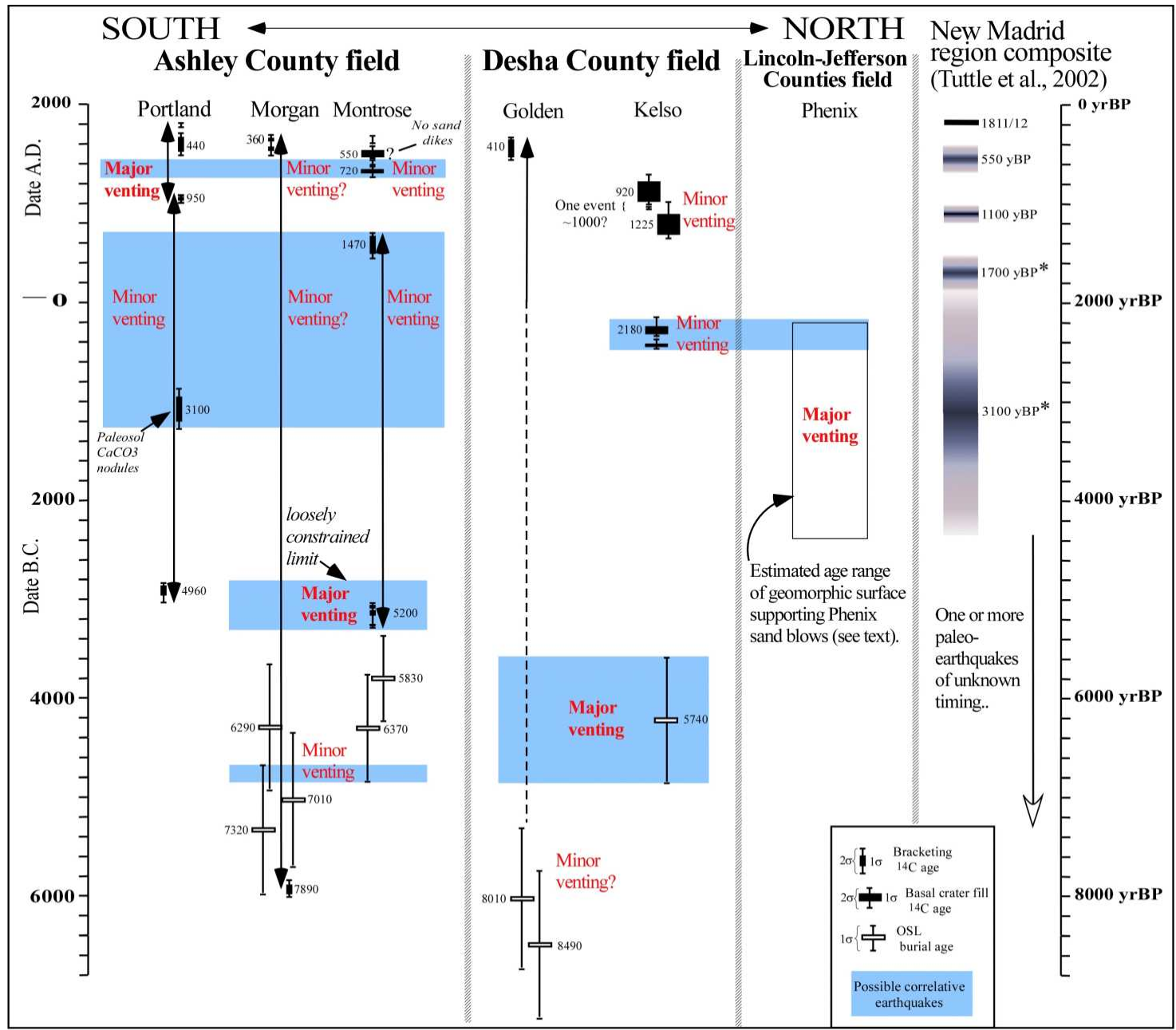
cartography by
John I. Snead Susan S. Binbaum Edwin B. Millet

SCALE 1:1,100,000

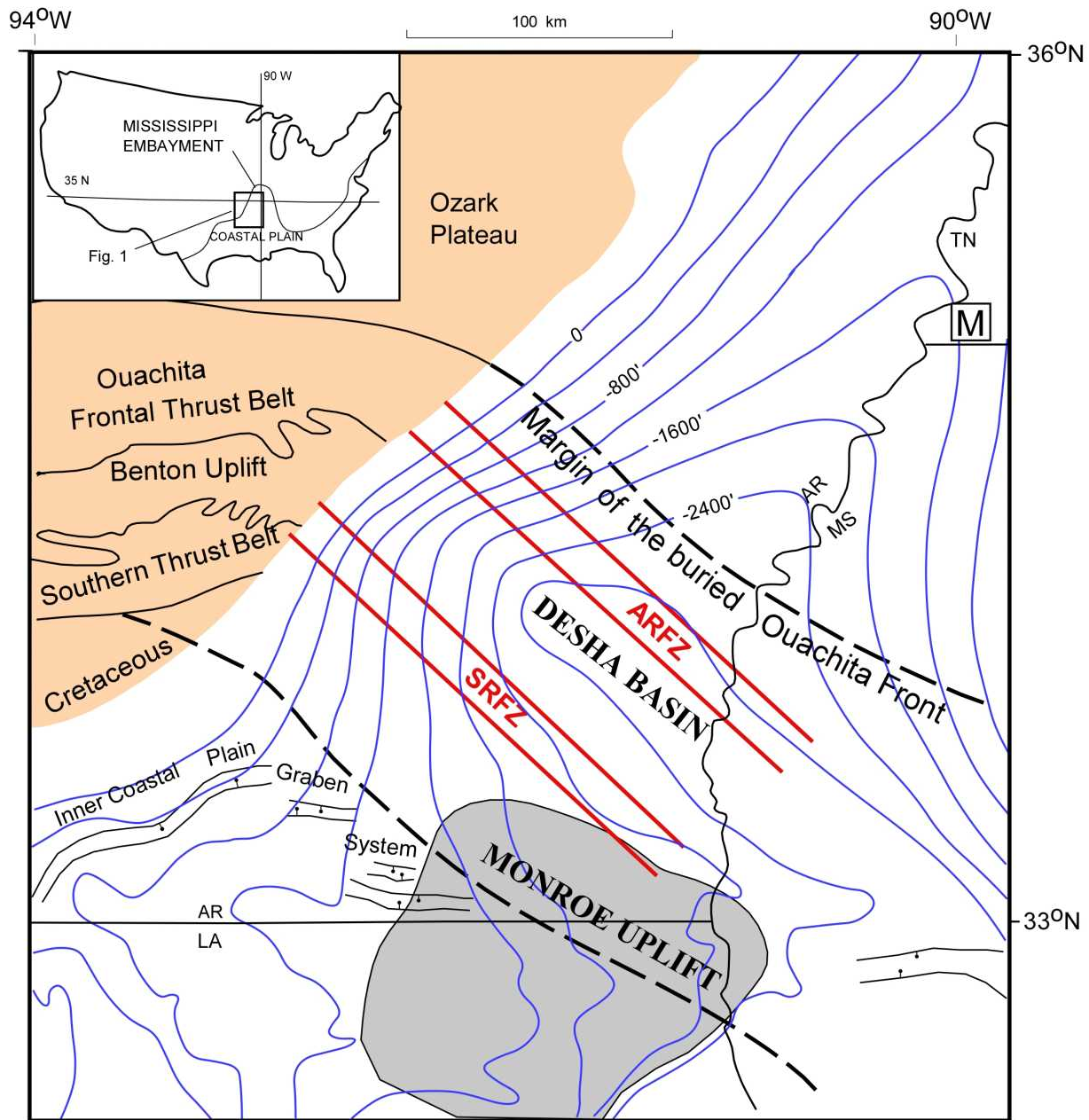




**SOUTHWESTERN MISSISSIPPI EMBAYMENT
SEISMICITY AND SAND BLOWS**



SOUTHERN MISSISSIPPI EMBAYMENT LIQUEFACTION CHRONOLOGY



STRUCTURAL CONTOURS ON THE TOP OF THE PALEOCENE MIDWAY SHALE

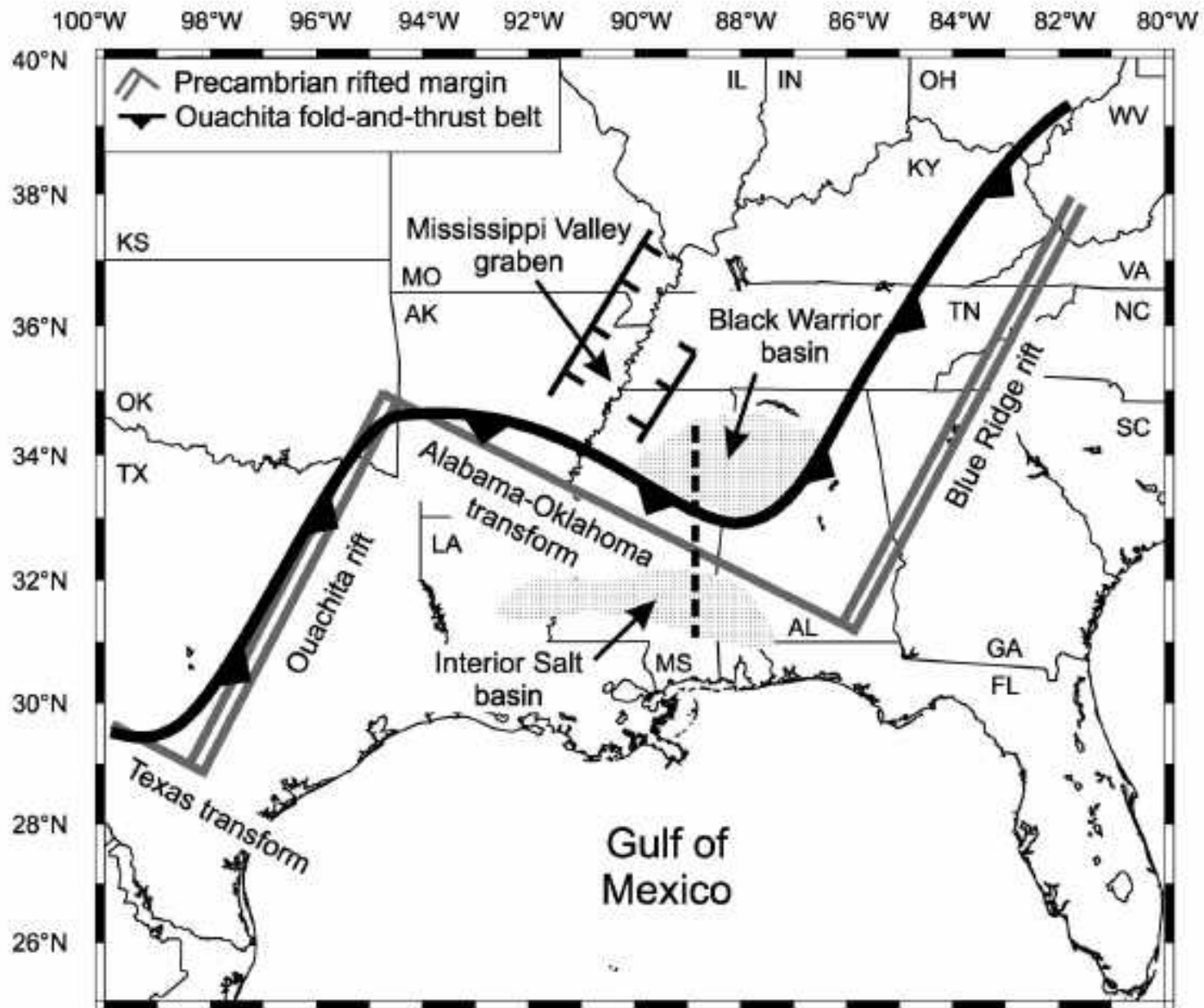
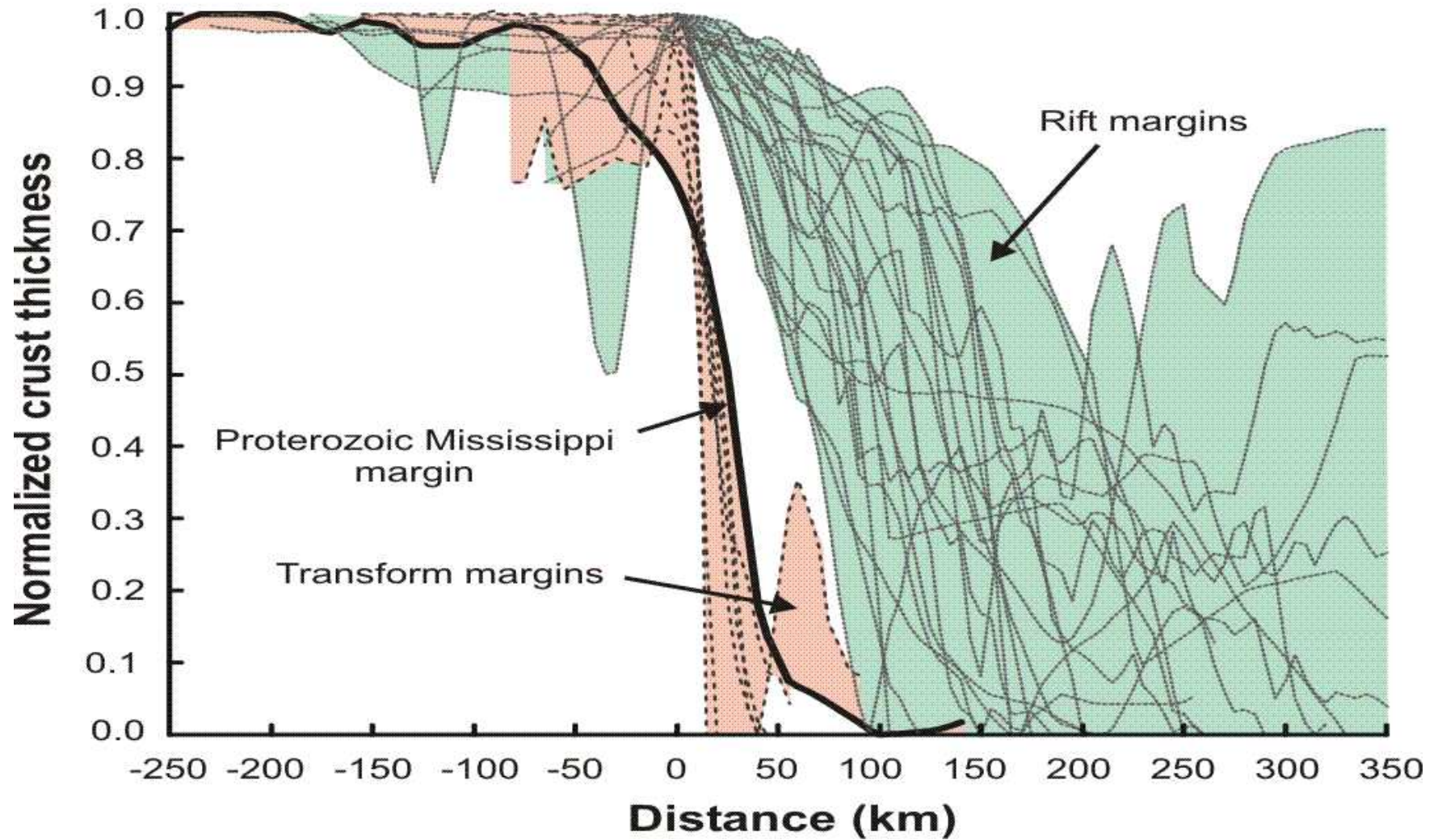
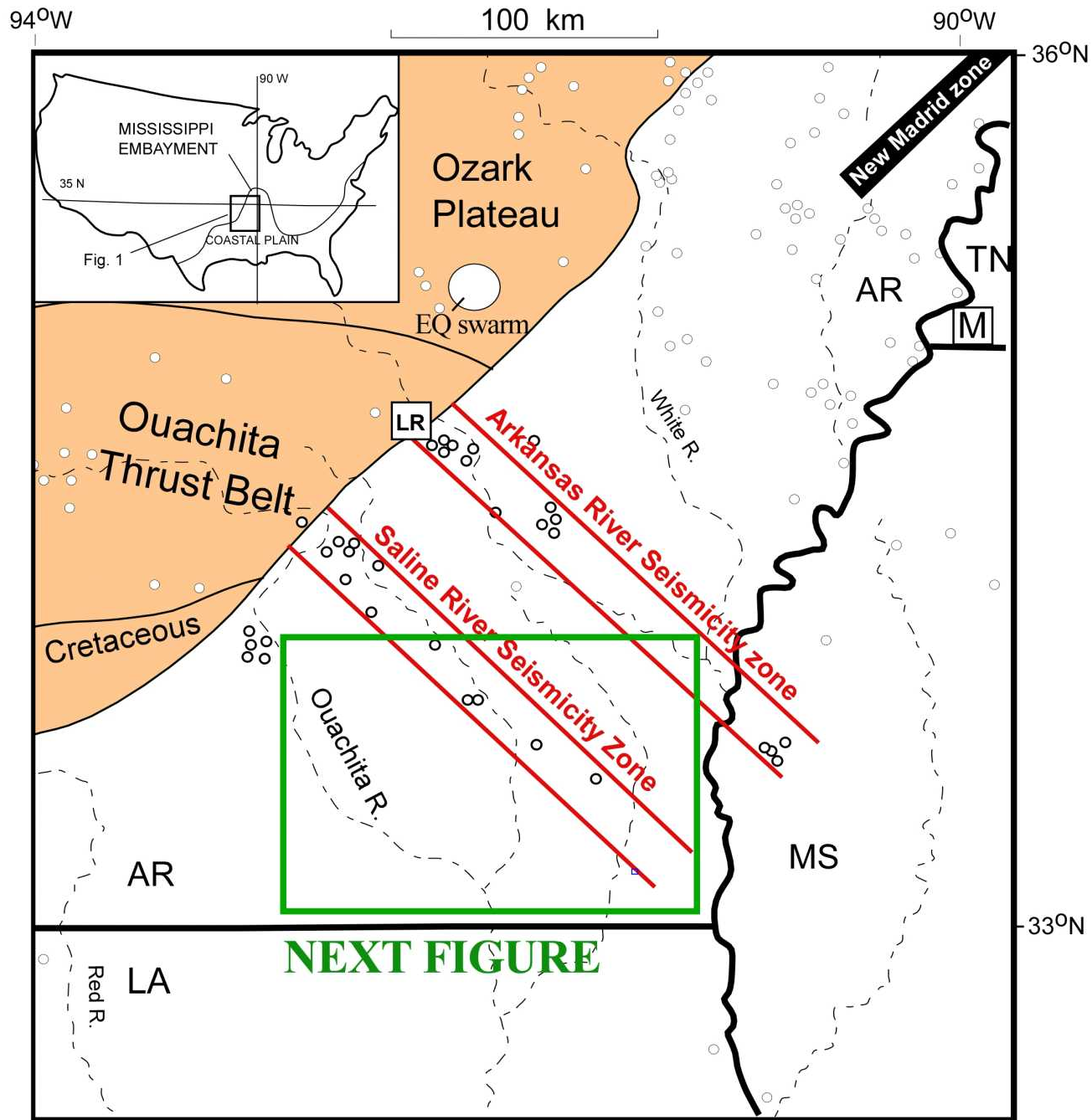


Figure 1. Simplified tectonic map of southeastern North America (after Thomas, 1991). Dashed line shows location of profile in Figure 2. Small letters indicate state names.

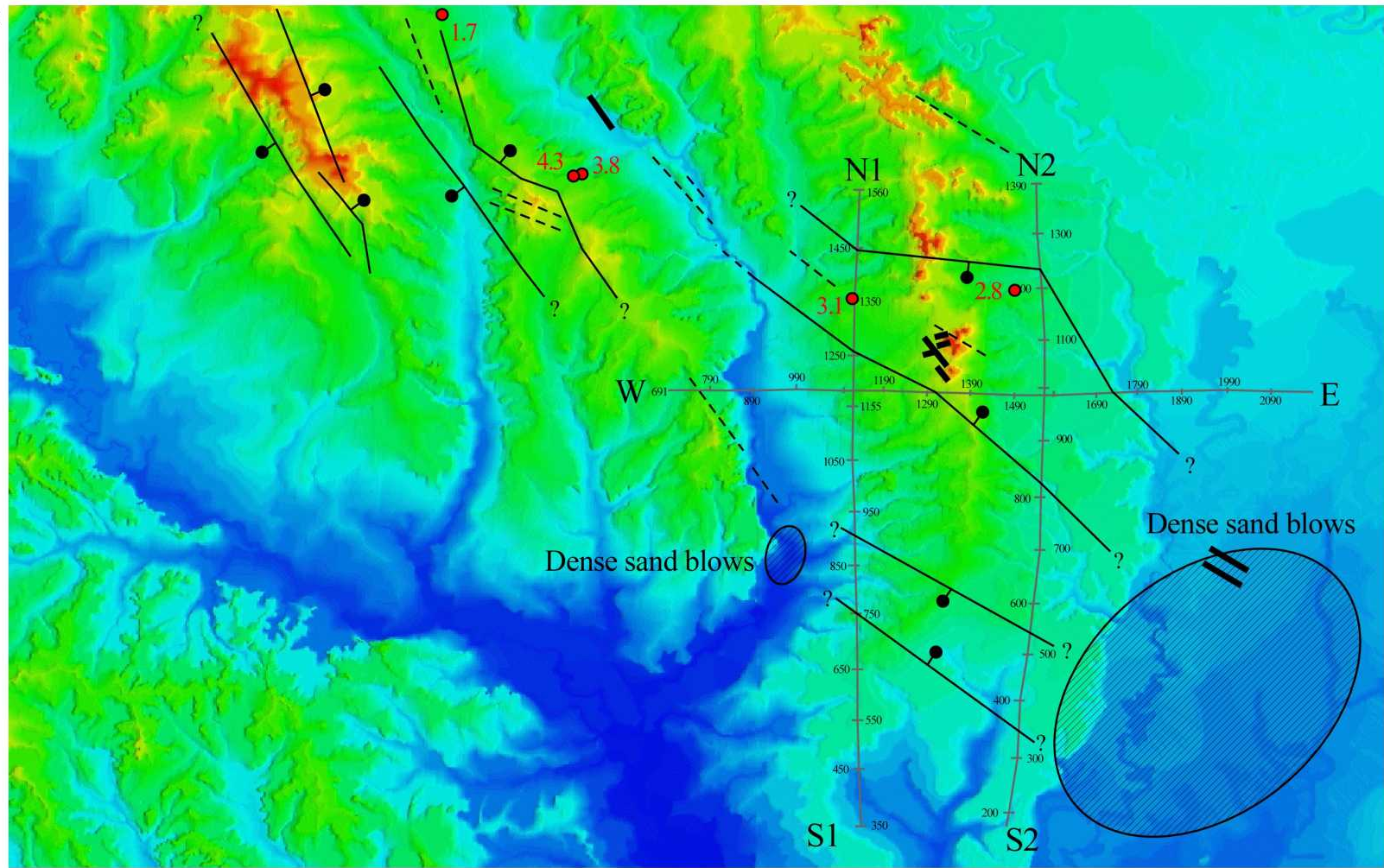
Harry et al., 2003





92.85°
33.99°

SOUTHEASTERN SEGMENT OF SALINE RIVER FAULT ZONE



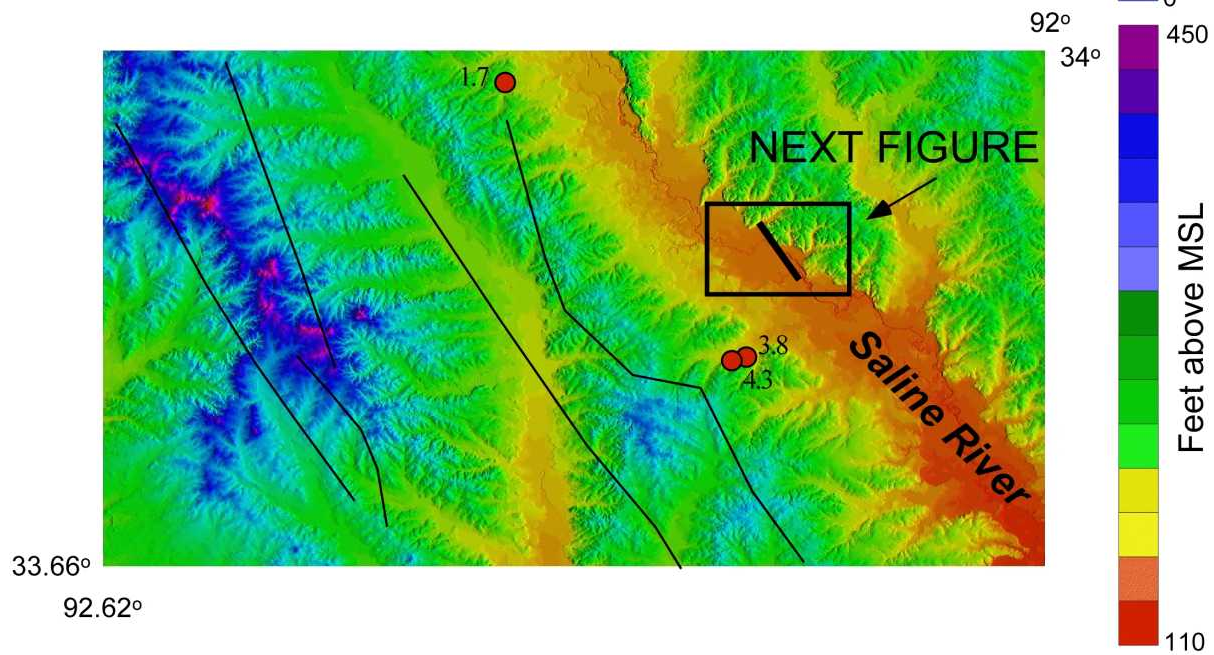
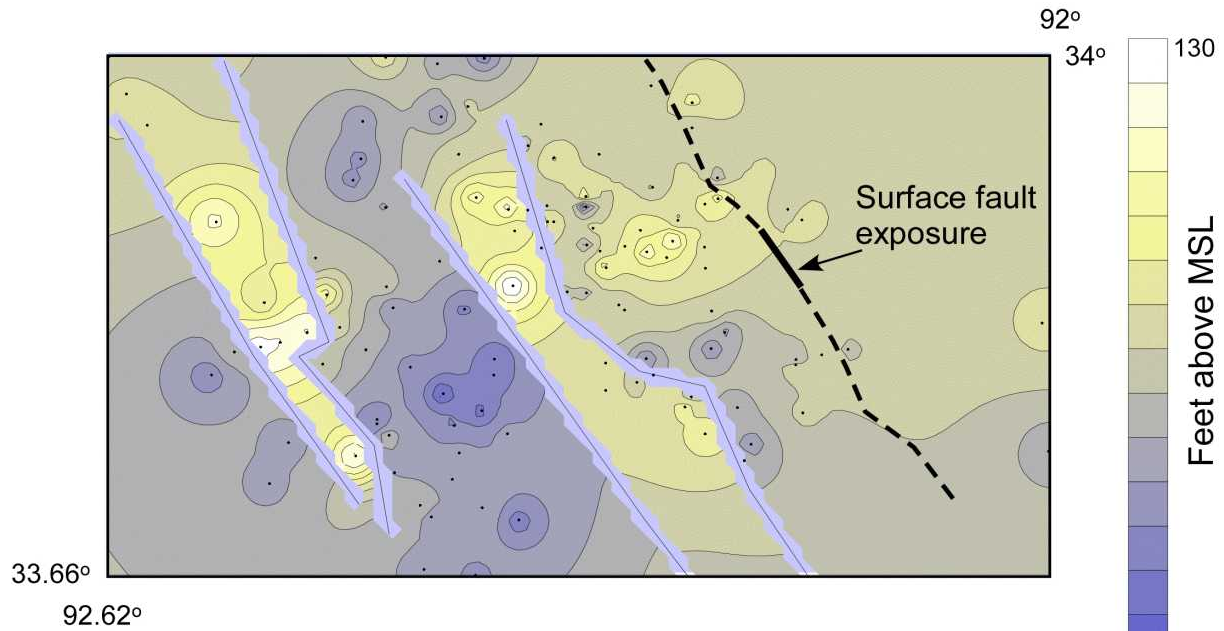
33.01°

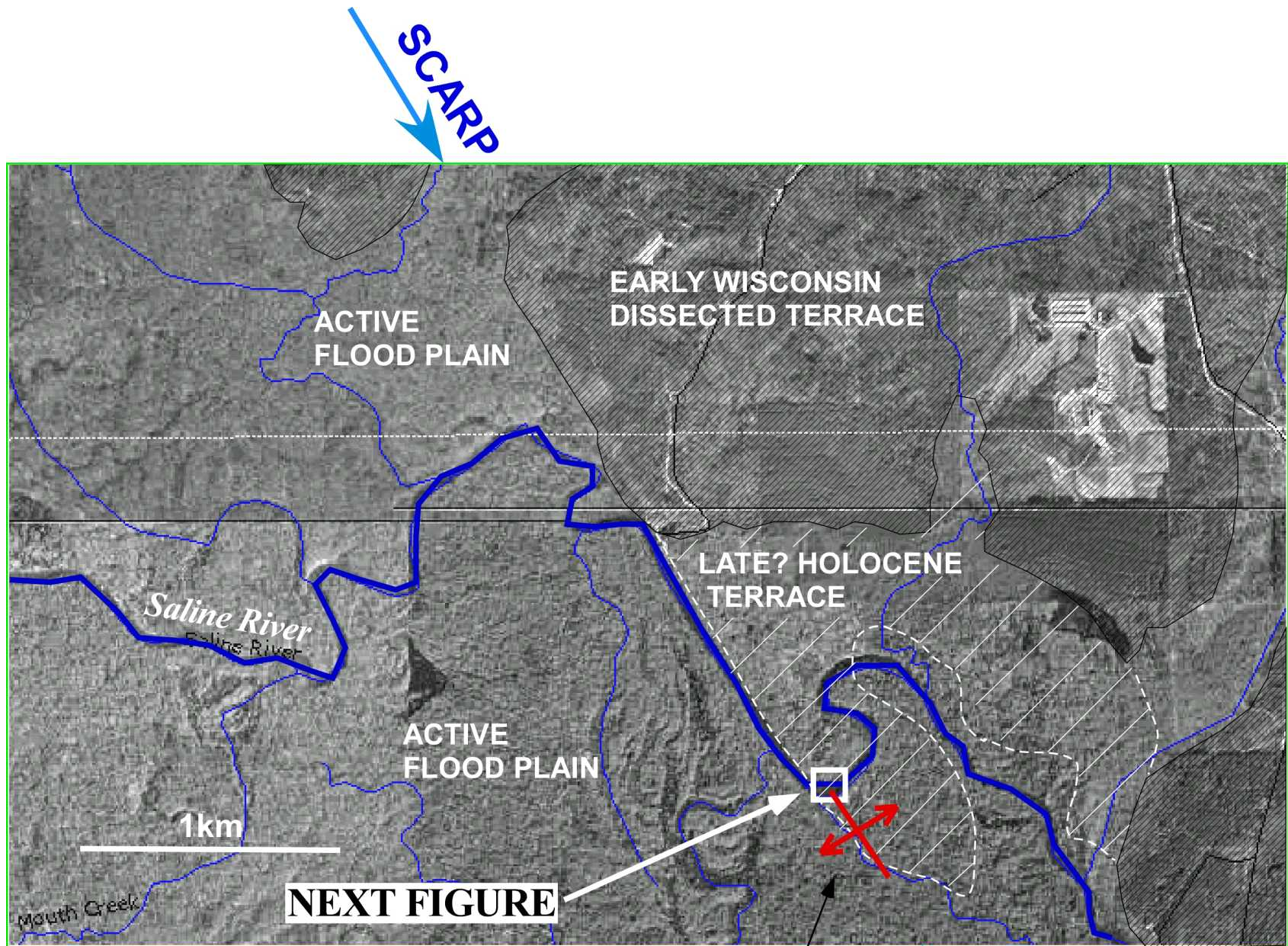
- Known surface faulting
- - - Known sub-surface faulting
- - - - Linear topographic scarps

50 km

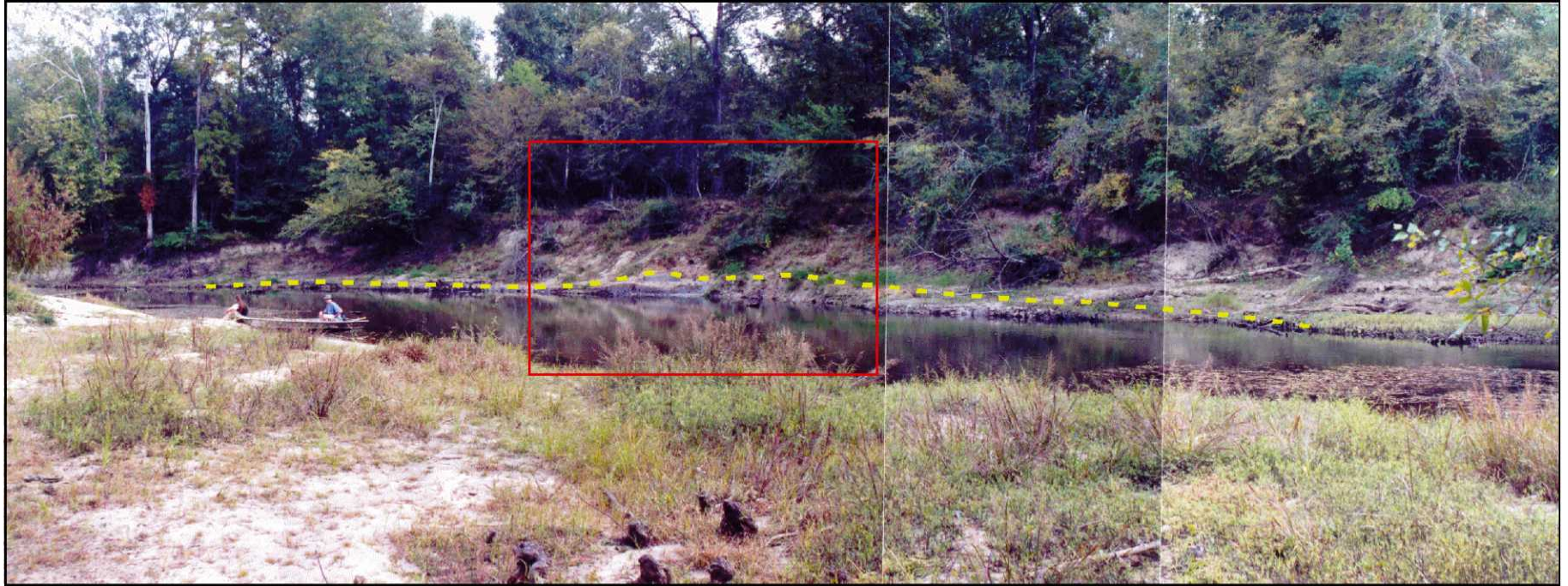
91.29°

STRUCTURAL CONTOURS ON EOCENE COCKFIELD FM MARKER BED

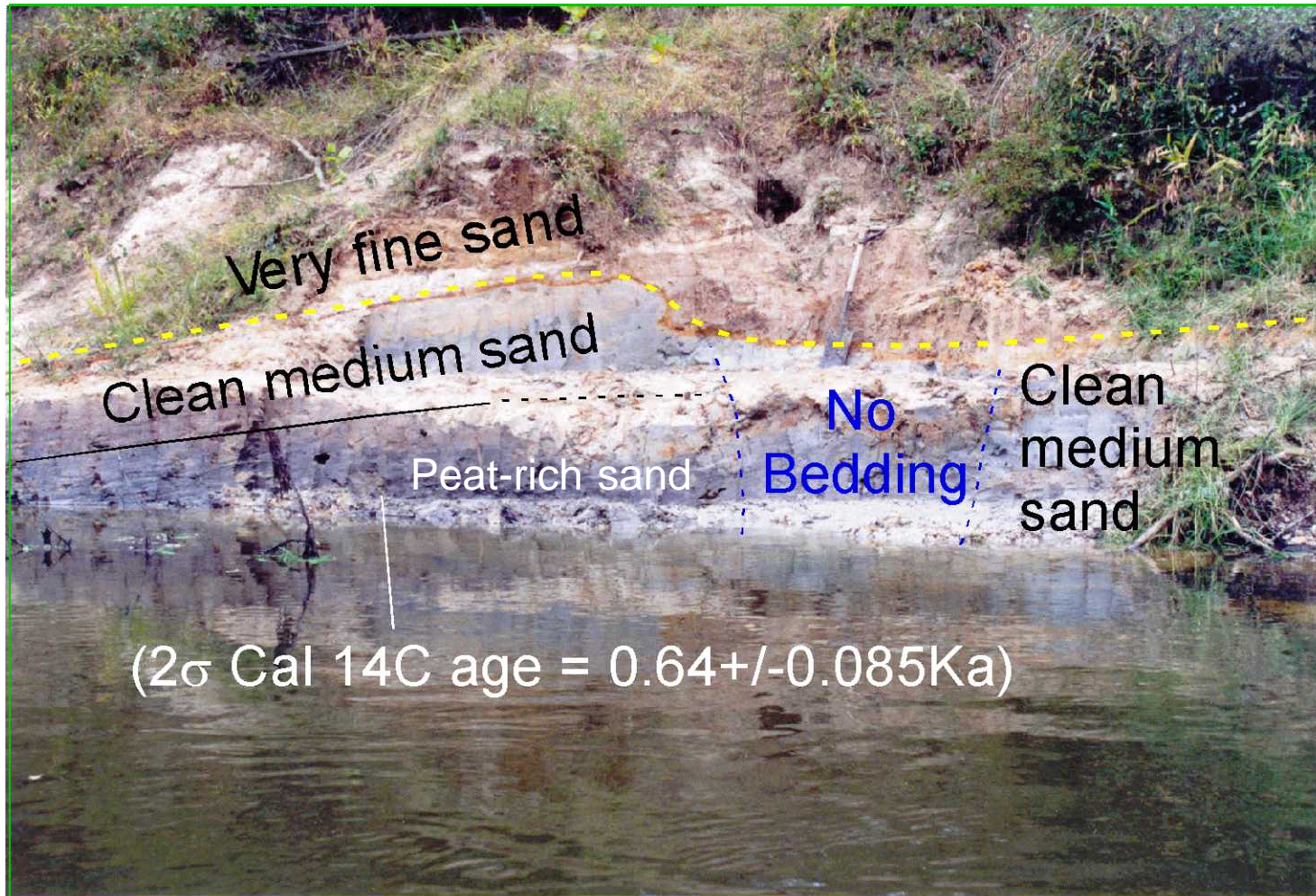




Axis of anticline exposed in cut-bank of river.



River Anticline in cut bank at southeastern end of straight reach of the Saline River



Very fine sand

Clean medium sand

Peat-rich sand

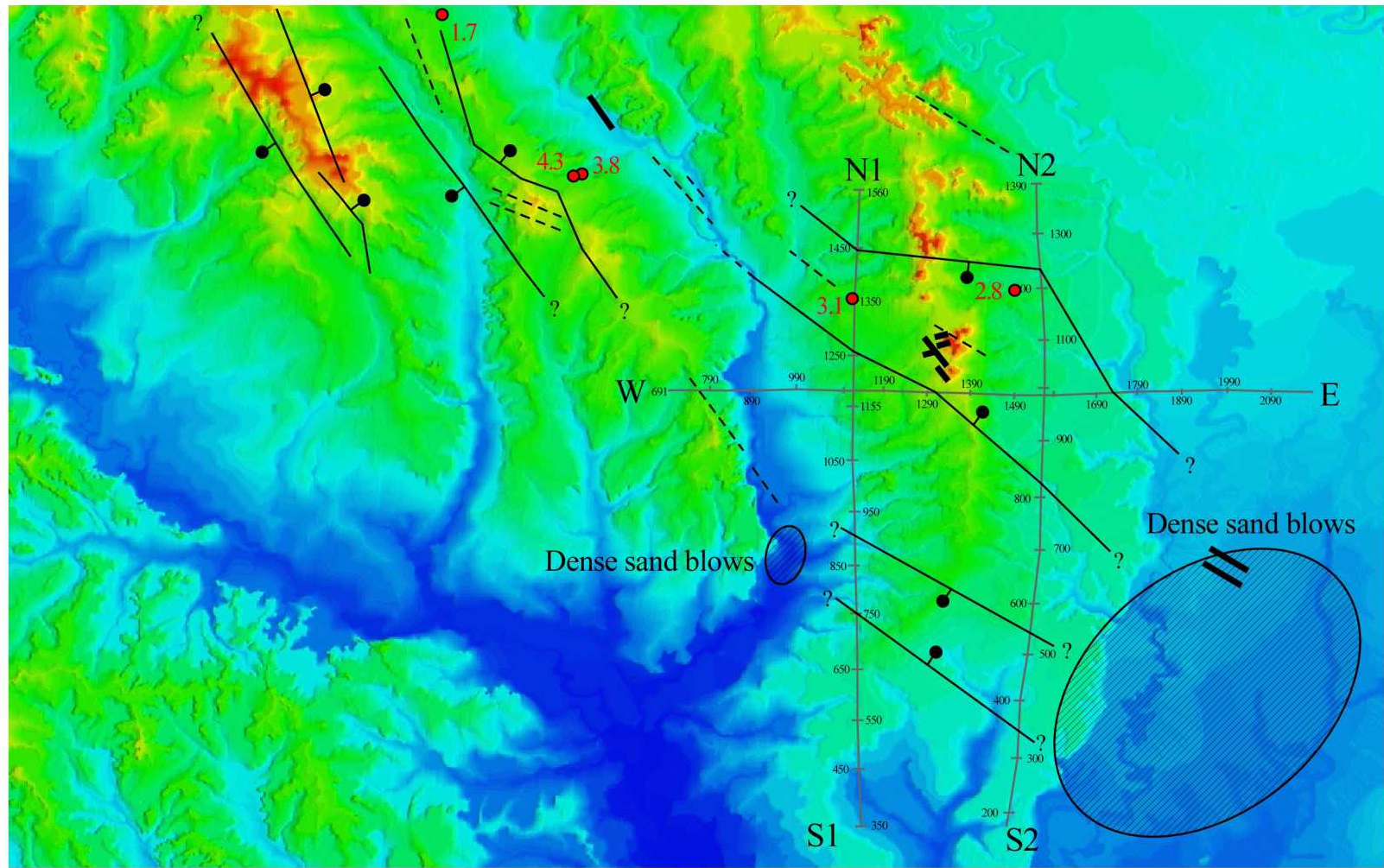
No
Bedding

Clean
medium
sand

(2σ Cal 14C age = 0.64+/-0.085Ka)

92.85°
33.99°

SOUTHEASTERN SEGMENT OF SALINE RIVER FAULT ZONE



33.01°

- Known surface faulting
- - - Known sub-surface faulting
- - - - Linear topographic scarps

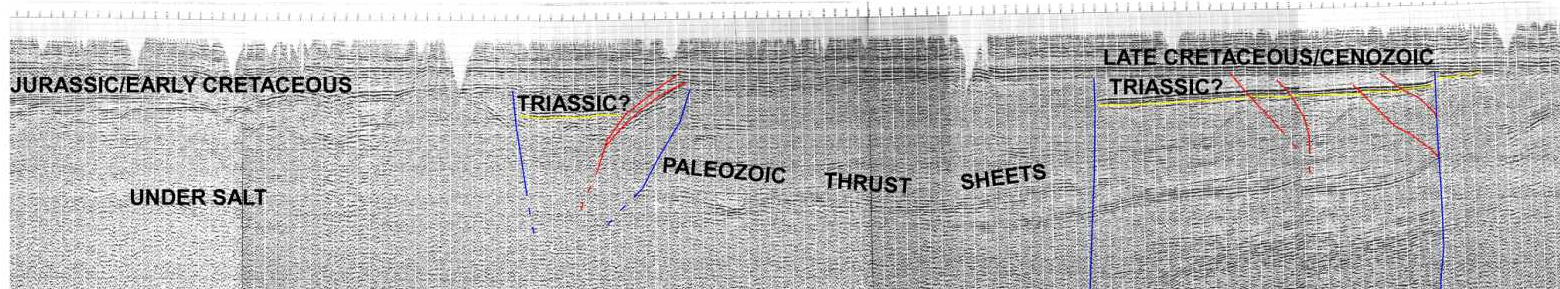
50 km

91.29°

South

N1 SEISMIC PROFILE

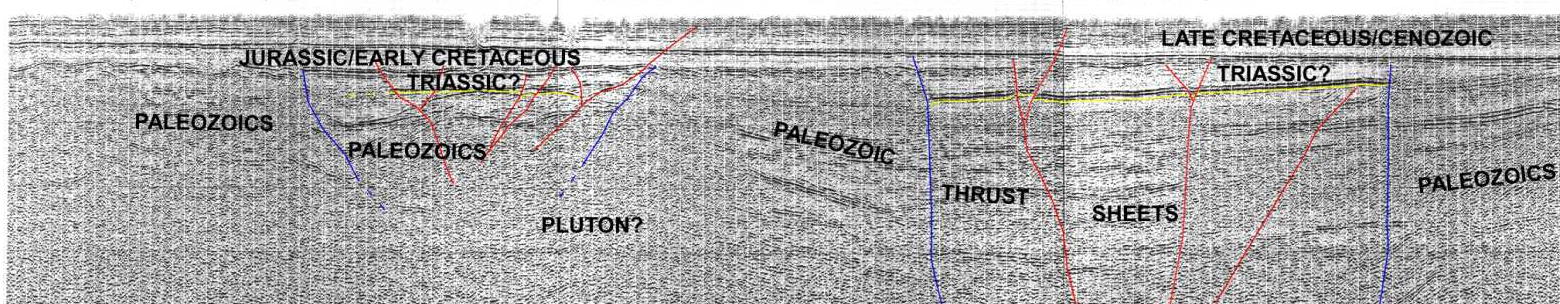
North



South

N2 SEISMIC PROFILE

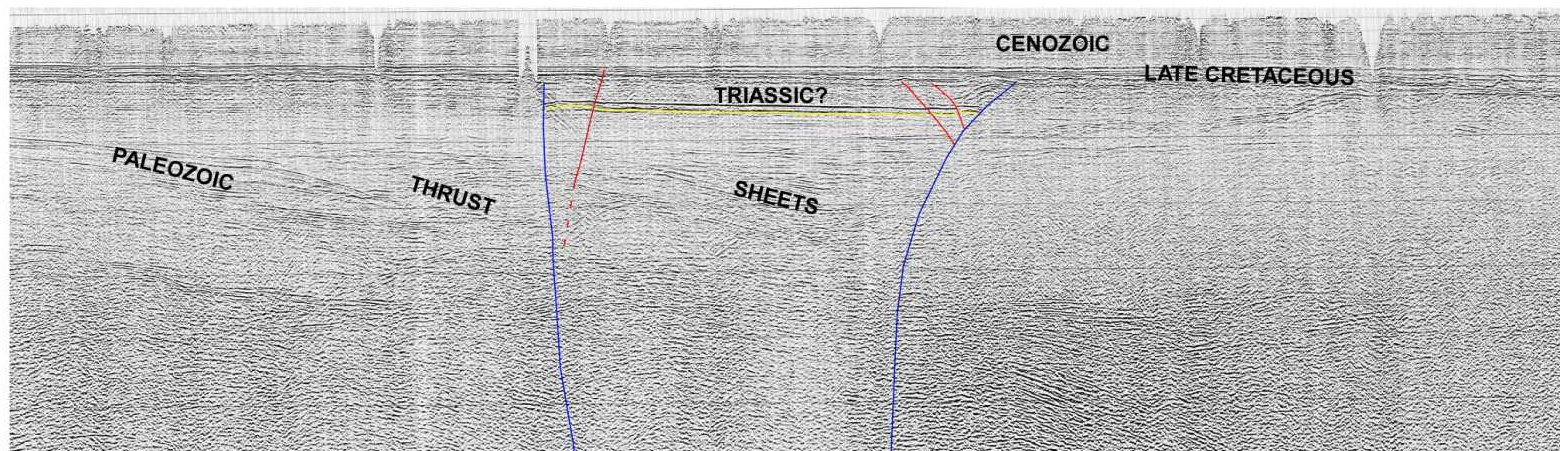
North



West

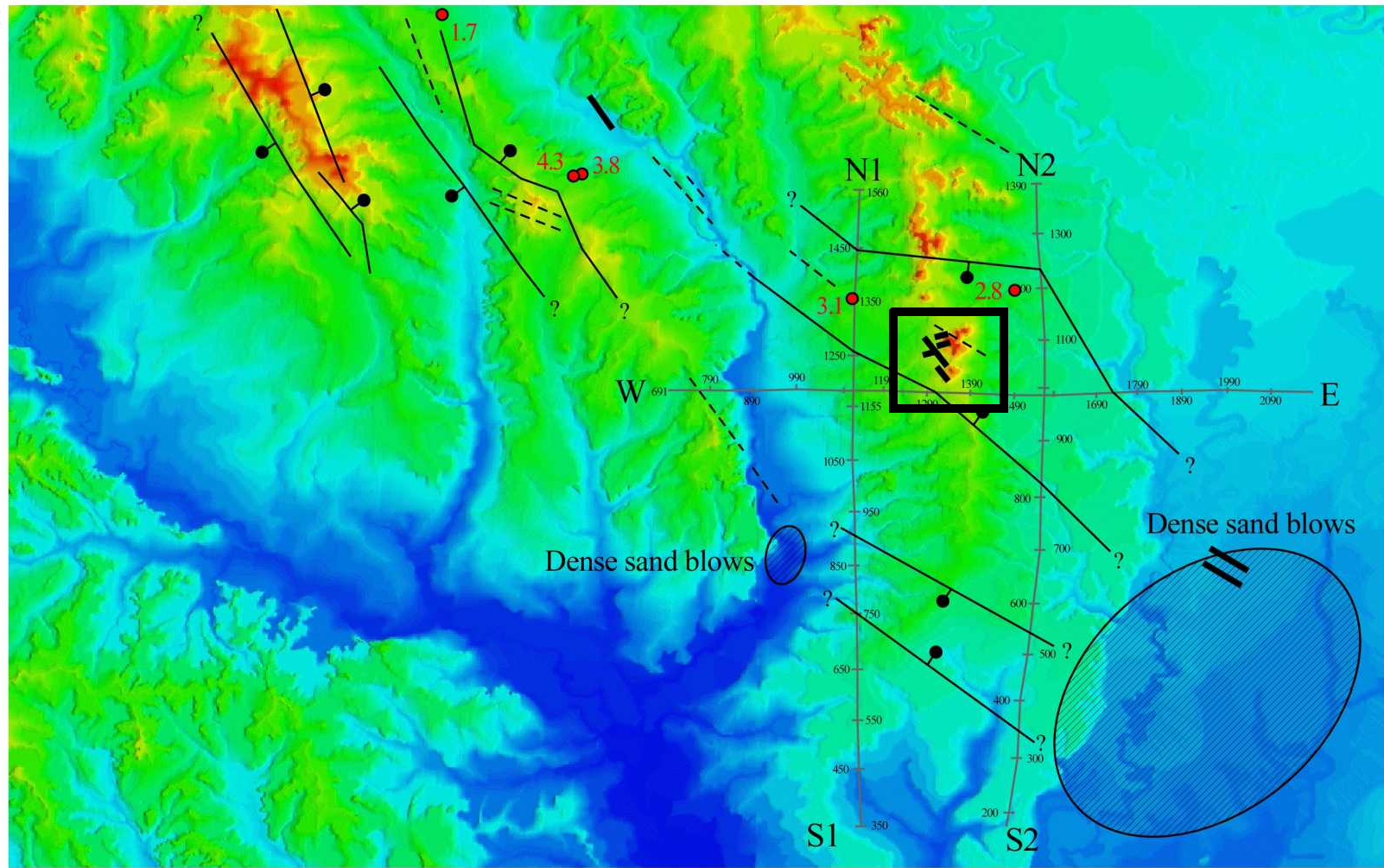
E-W SEISMIC PROFILE

East



92.85°
33.99°

SOUTHEASTERN SEGMENT OF SALINE RIVER FAULT ZONE

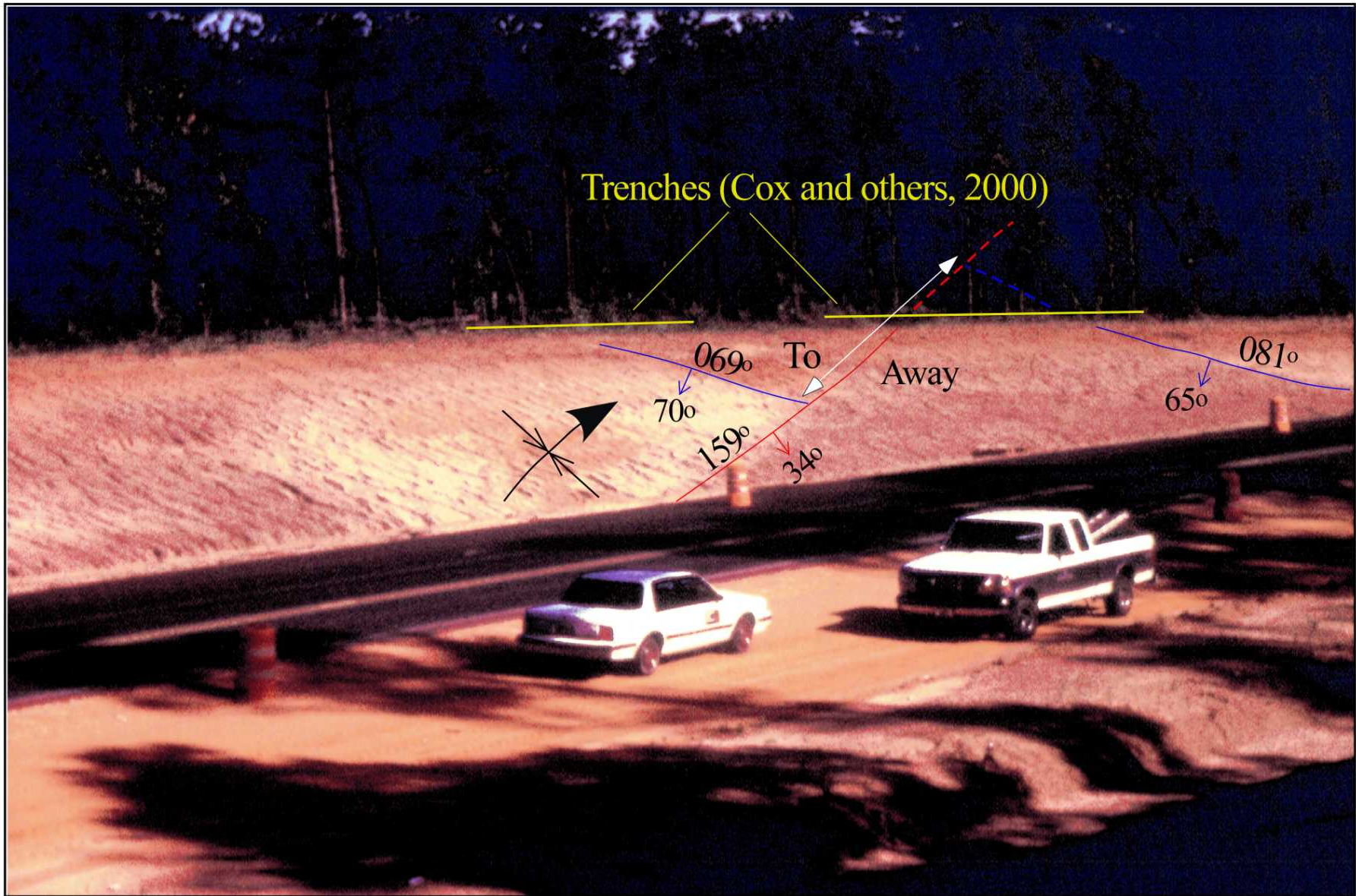


33.01°

- Known surface faulting
- Known sub-surface faulting
- Linear topographic scarps

50 km

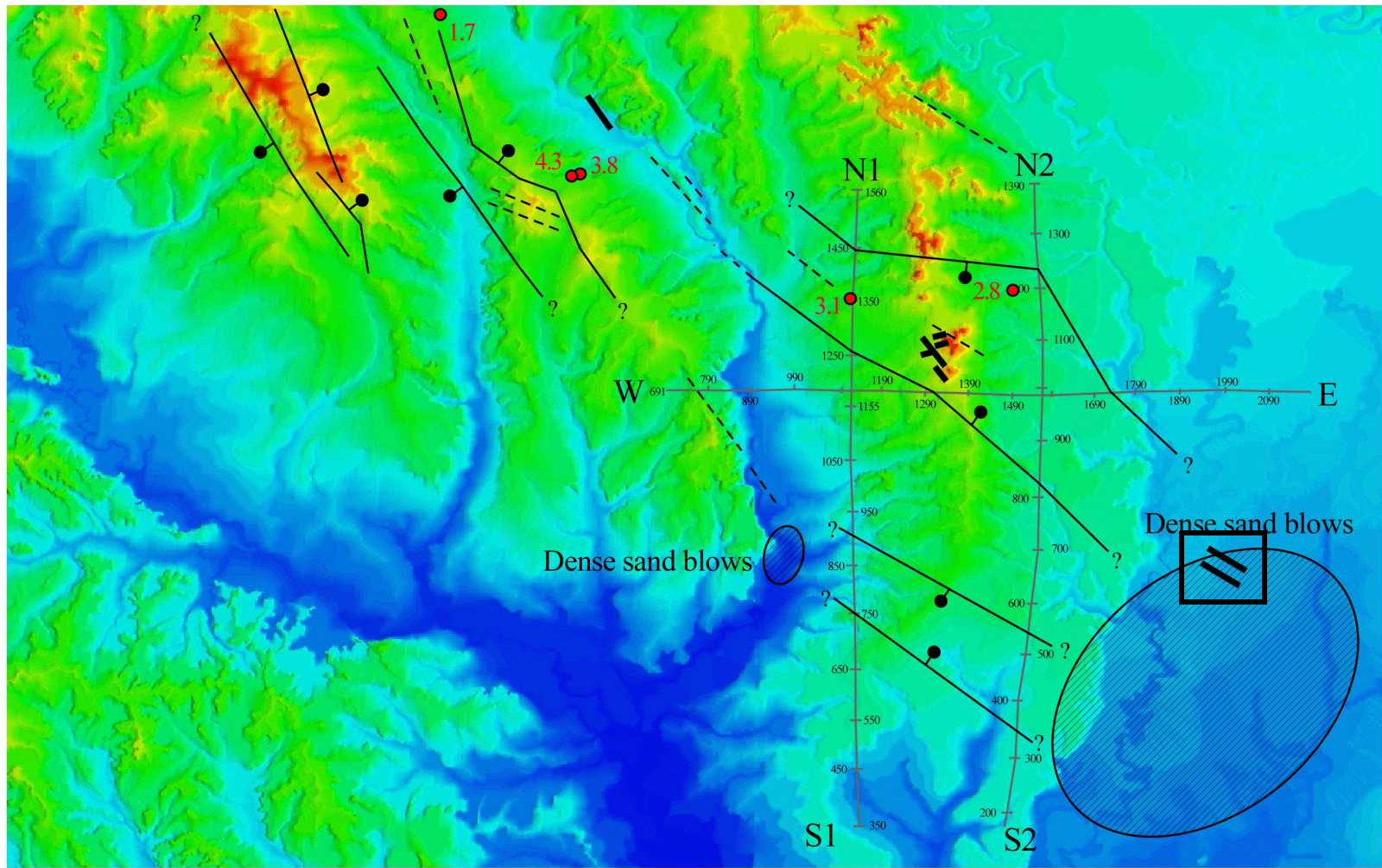
91.29°



A FAULT EXPOSURE IN A ROADCUT AT MONTICELLO, ARKANSAS

92.85°
33.99°

SOUTHEASTERN SEGMENT OF SALINE RIVER FAULT ZONE



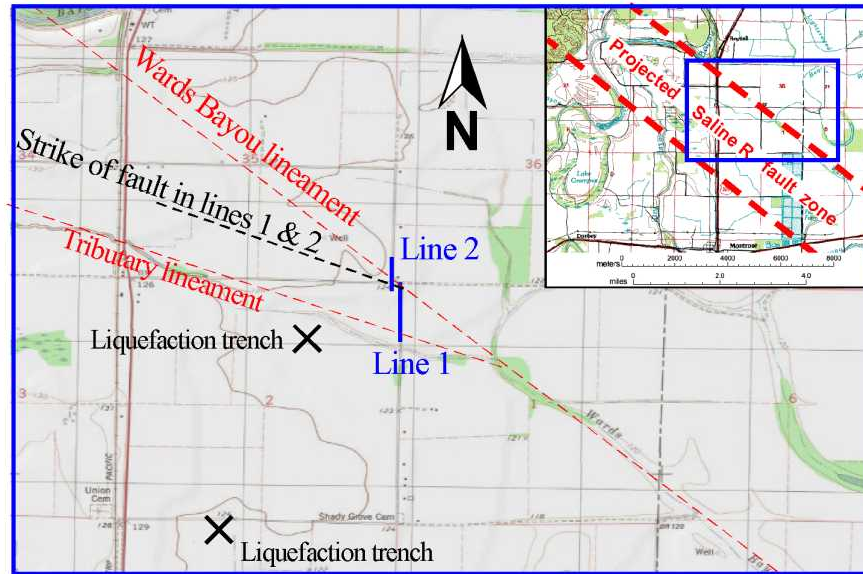
33.01°

- Known surface faulting
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- - - - Linear topographic scarps

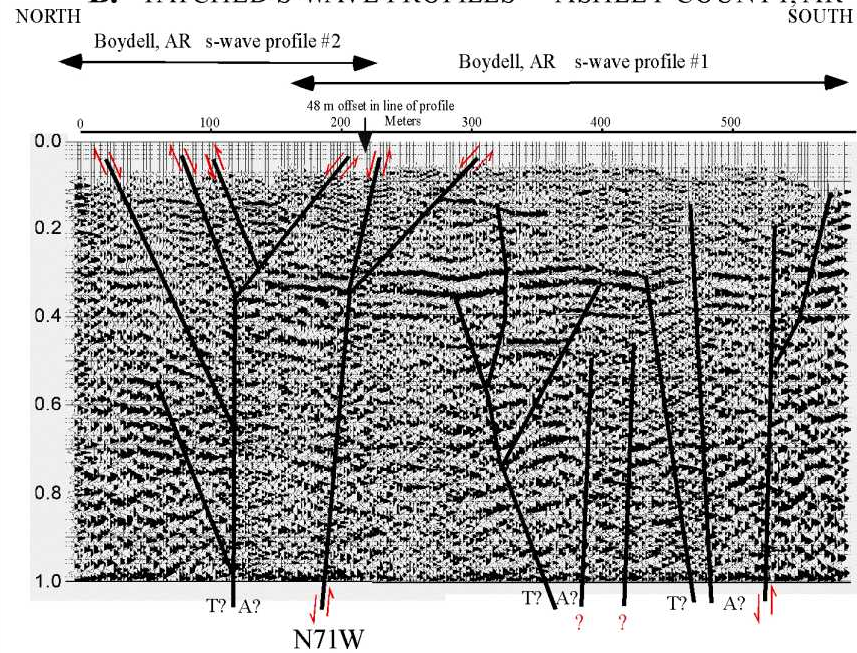
50 km

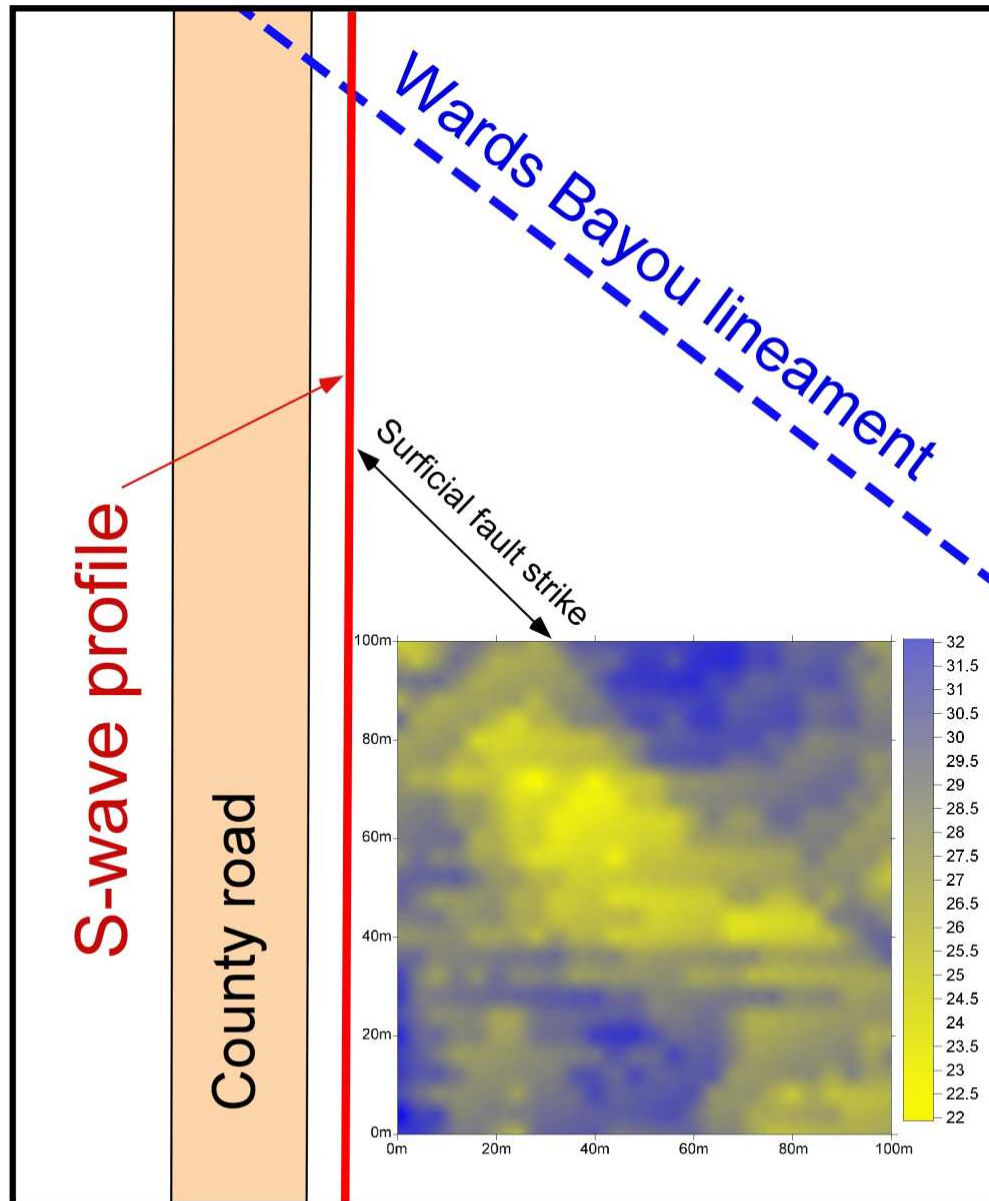
91.29°

A. LOCATIONS OF ASHLEY COUNTY SEISMIC REFLECTION PROFILES



B. PATCHED S-WAVE PROFILES ASHLEY COUNTY, AR





Ground conductivity (millimhos)
Ashley County, AR seismic profile site