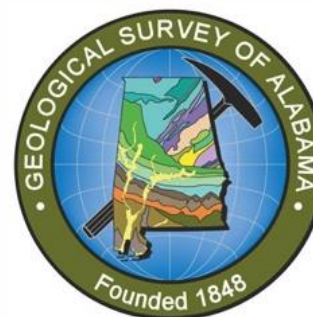


SOUTHEAST OFFSHORE STORAGE RESOURCE ASSESSMENT (SOSRA)
PROJECT NUMBER: DE-FE0026086

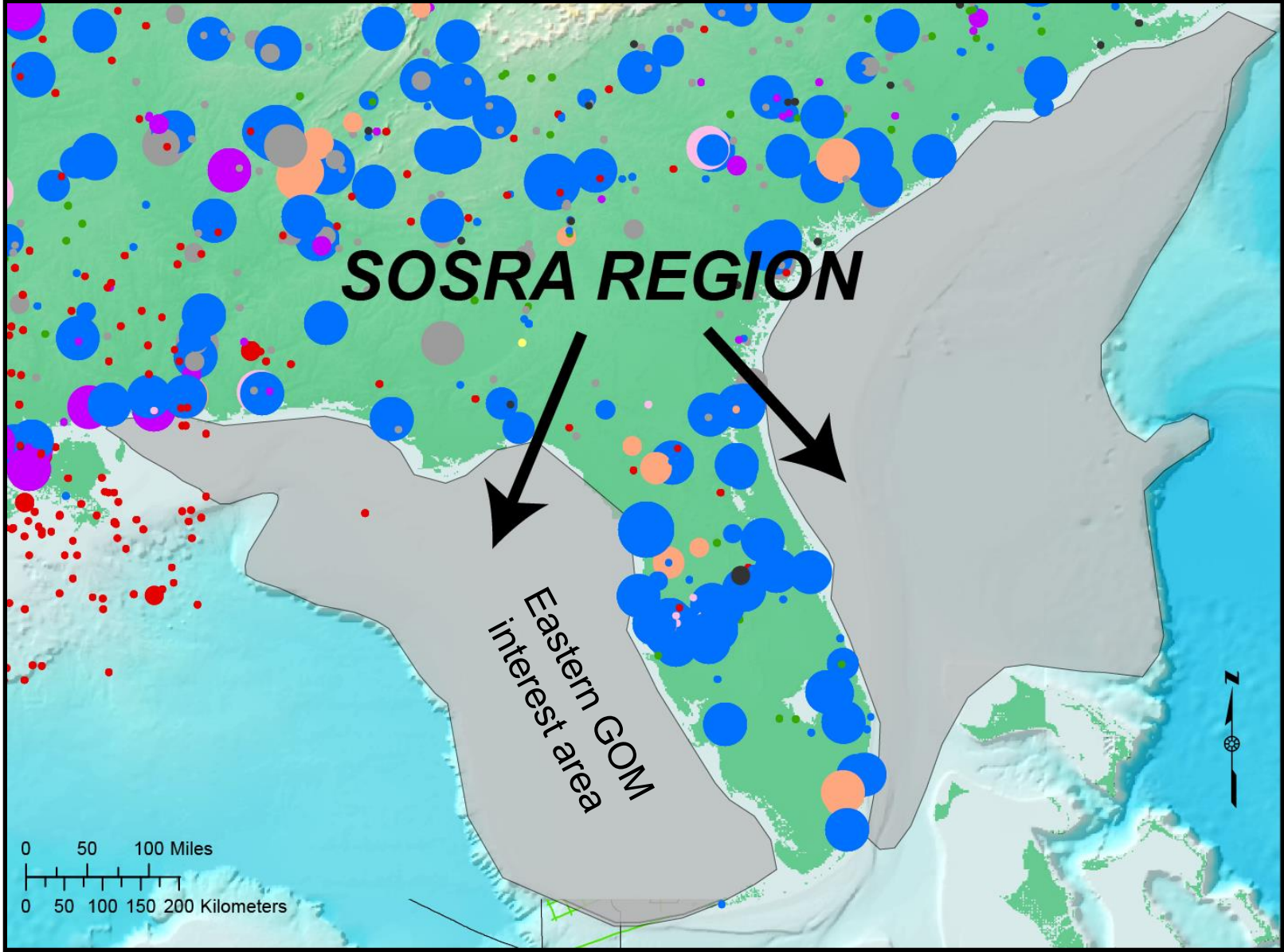
EASTERN GULF OF MEXICO

Jack C. Pashin and Jenny Meng, Oklahoma State University
Denise J. Hills, Guohai Jin, and Marcella R. Redden, Geological Survey of Alabama

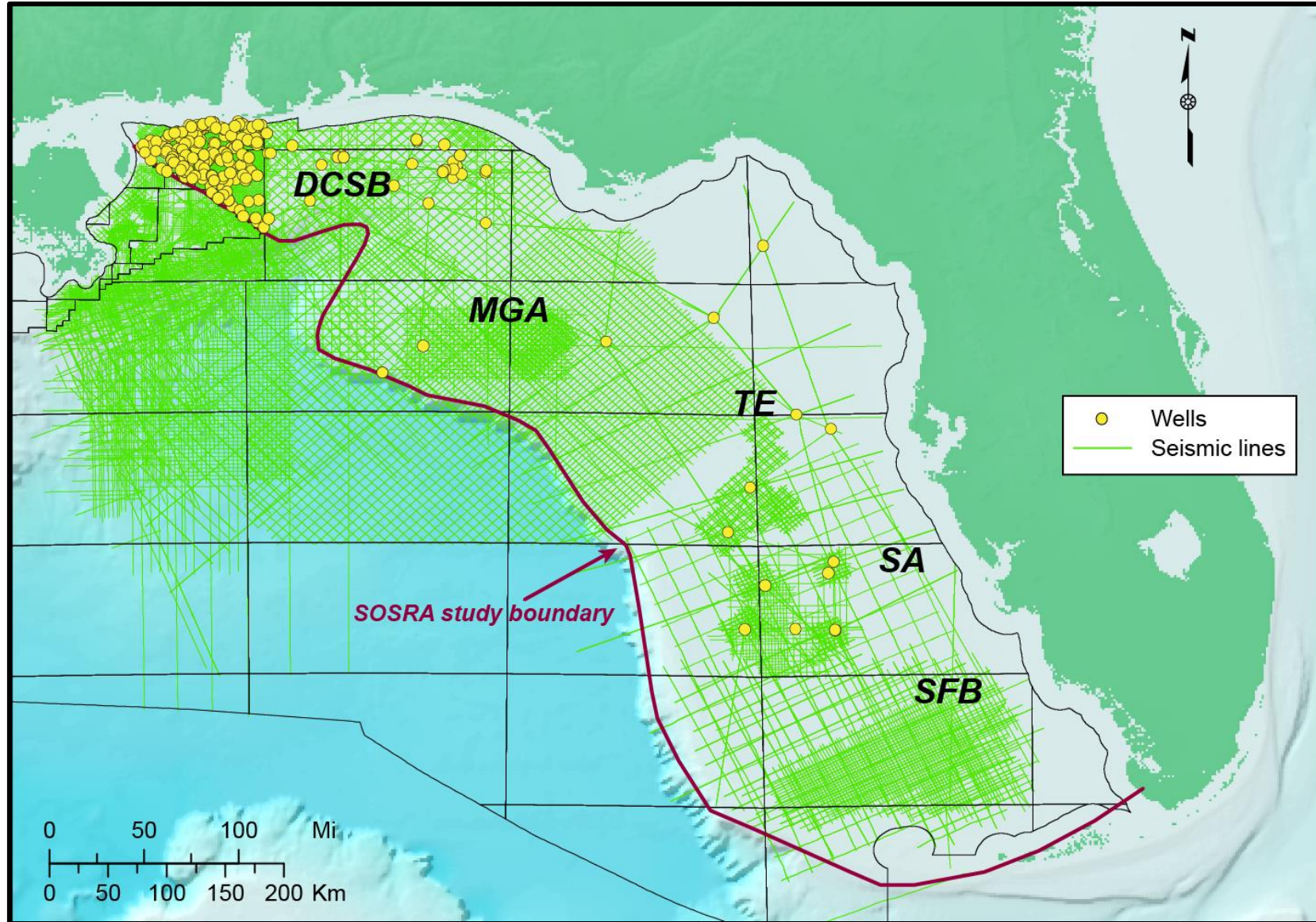


SECARB 12th Annual Stakeholders' Briefing
Hyatt Regency, Atlanta, GA
March 8-9, 2017

SUMMARY — SOSRA



STUDY AREA AND SUBREGIONS



DCSB DeSoto Canyon
Salt Basin

MGA Middle Ground
Arch

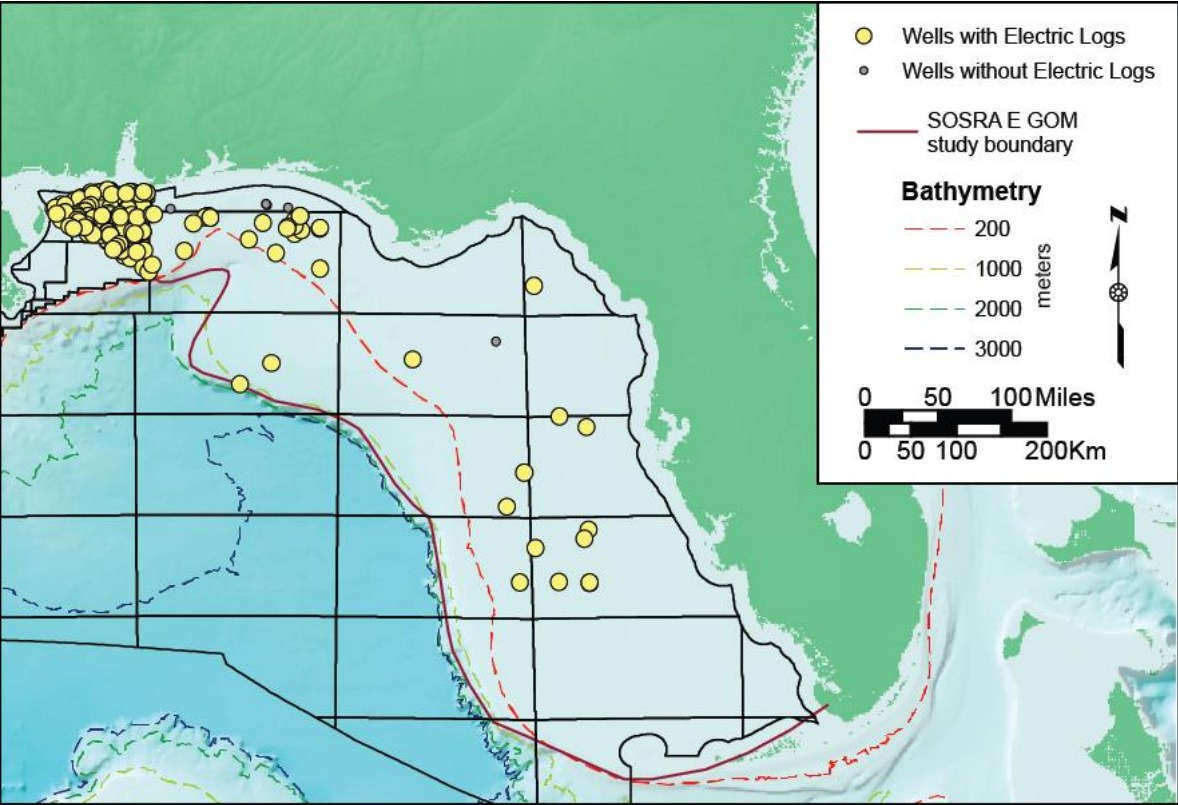
TE Tampa
Embayment

SA Sarasota Arch

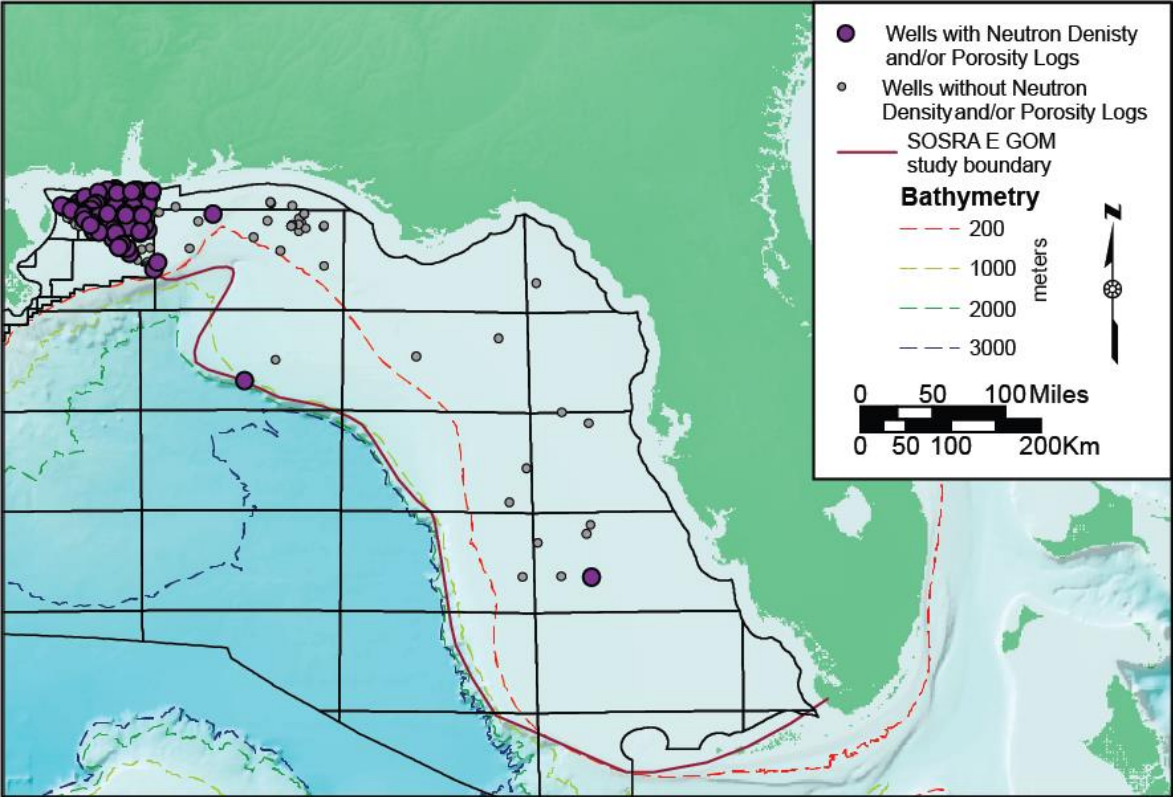
SFB South Florida
Basin

GEOPHYSICAL WELL LOGS

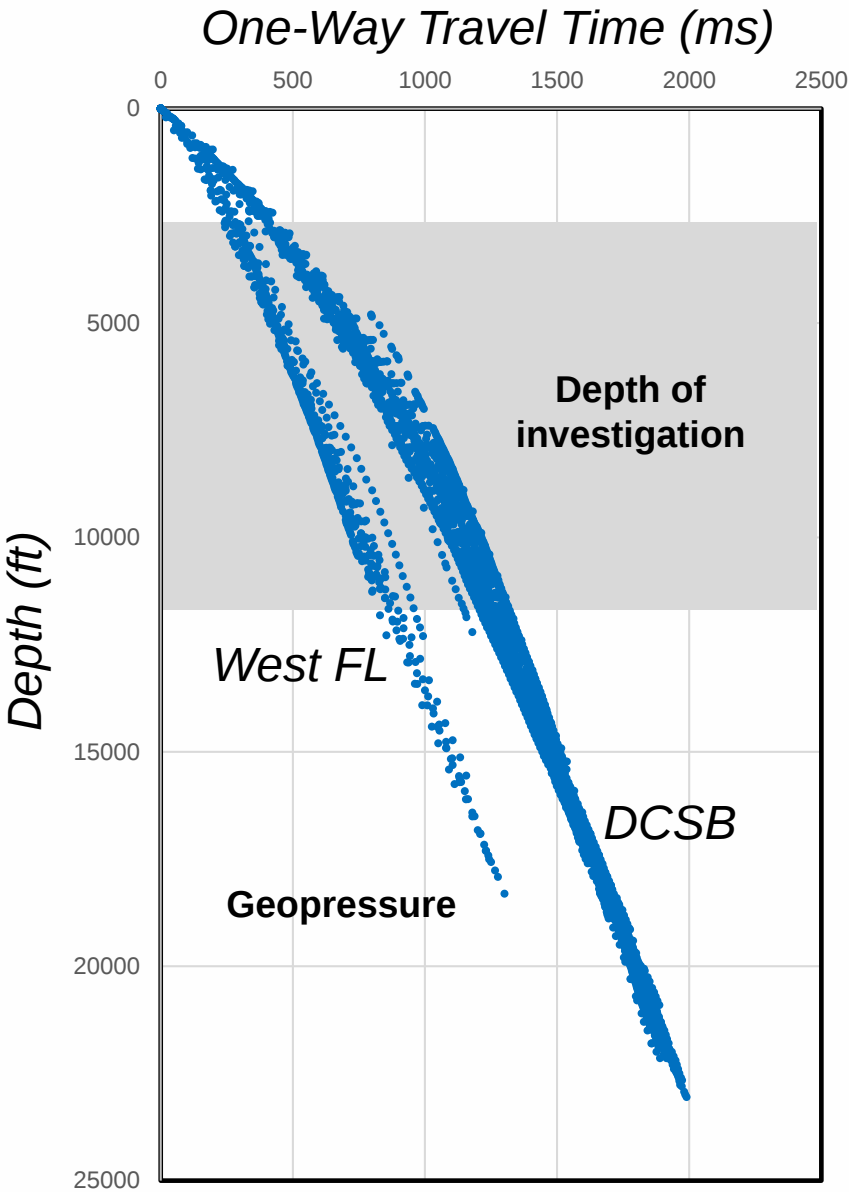
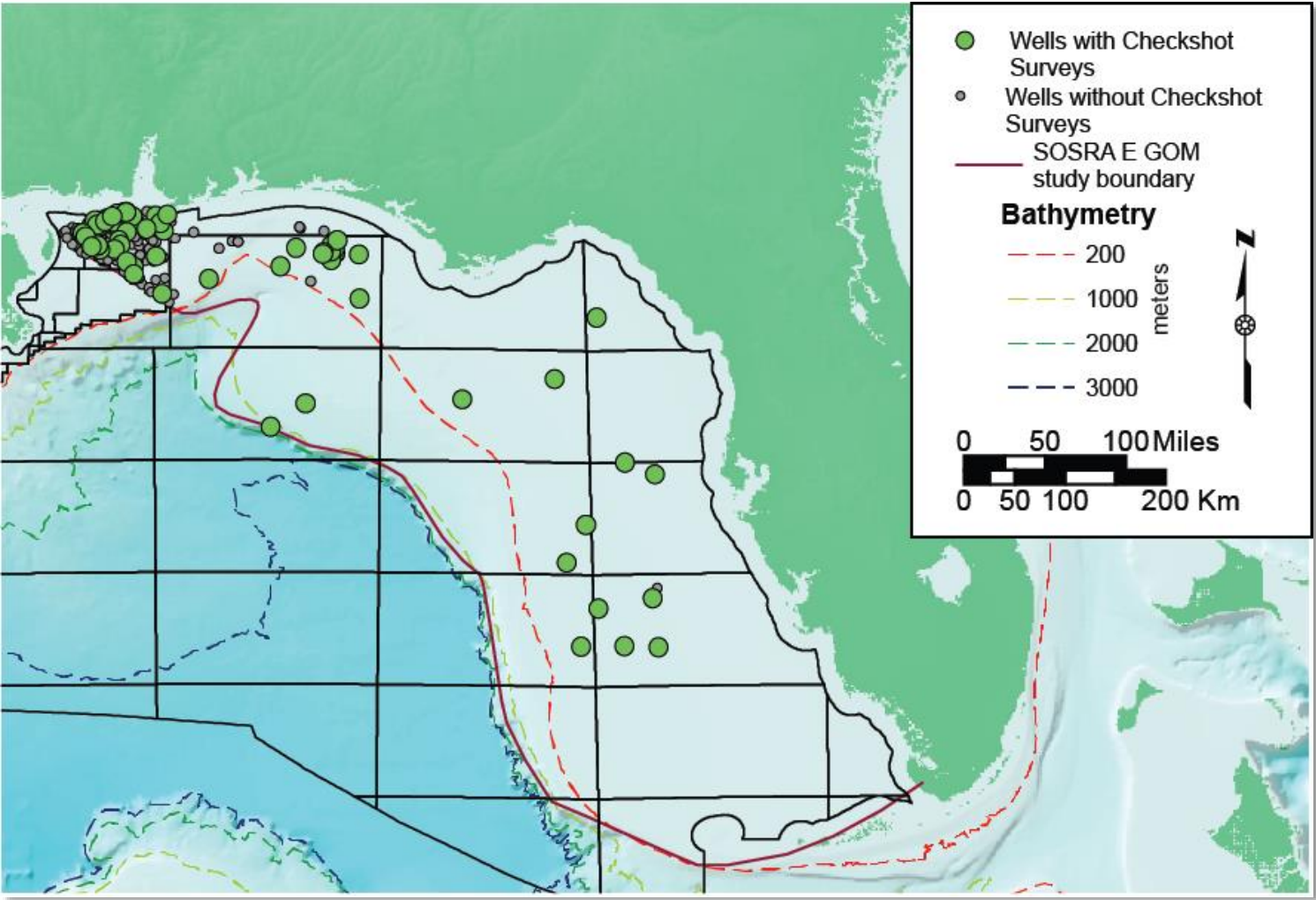
Gamma Ray, SP-Resistivity, Bulk Density Logs



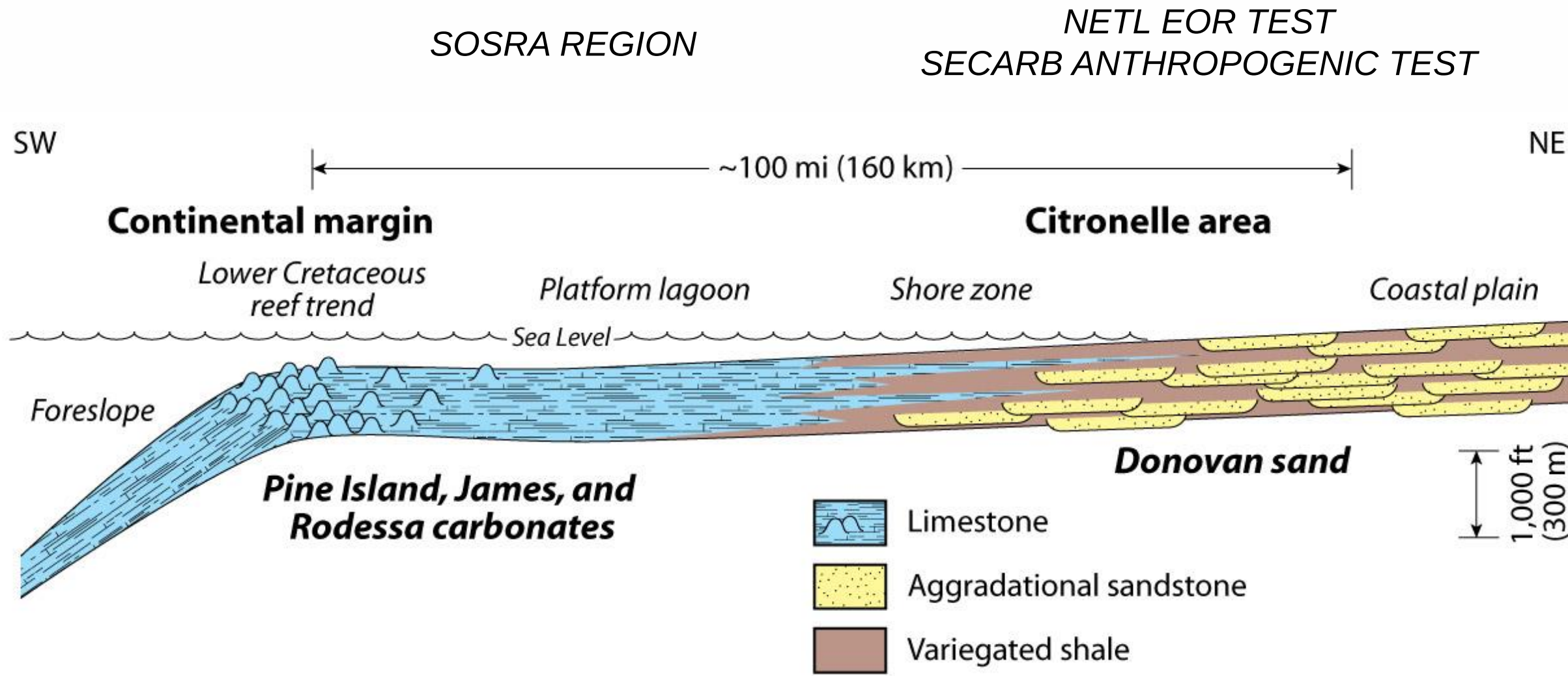
Compensated Neutron and Density Porosity Logs



SEISMIC VELOCITY SURVEYS



CRETACEOUS FACIES



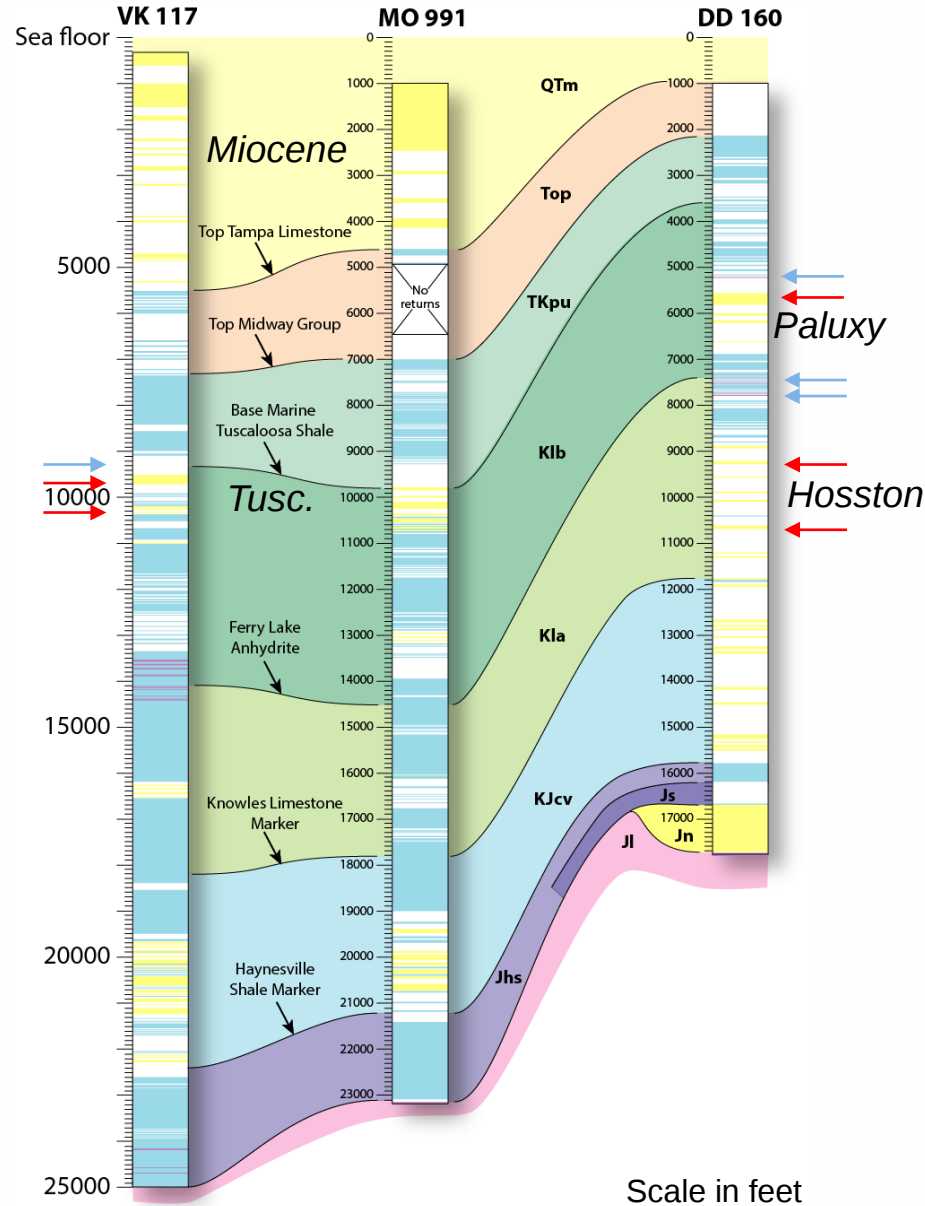
Pashin et al. (2014)

DESOTO CANYON SALT BASIN - LITHOLOGIC COLUMNS

*Major objectives in
Miocene sandstone,
Tuscaloosa Group,
Paluxy Formation,
Hosston Formation*

*Abundant regional
seals*

→ Seal
→ Sink



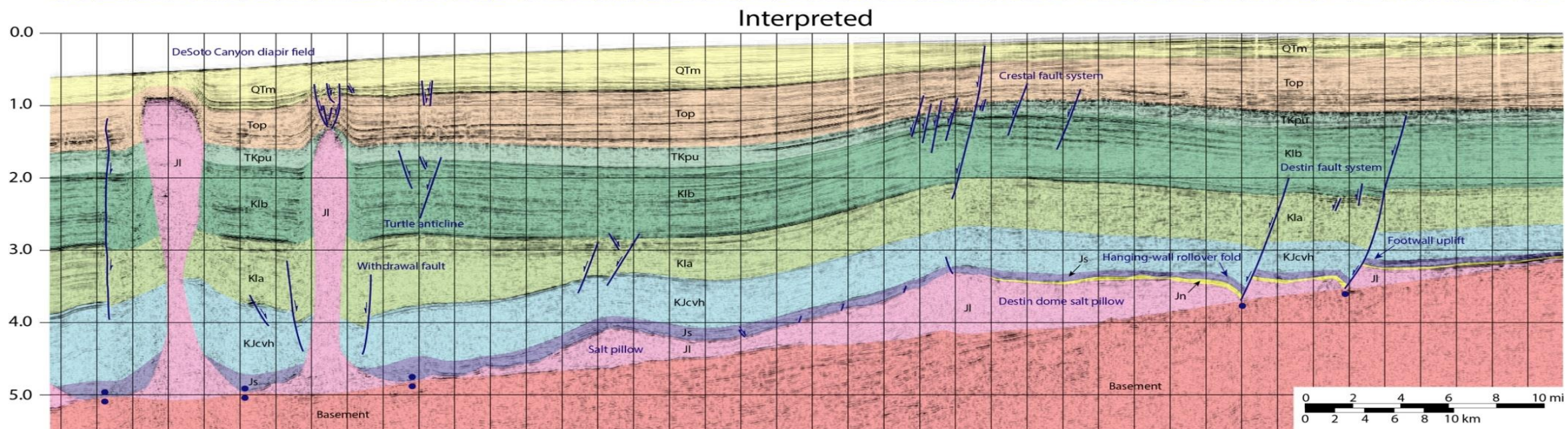
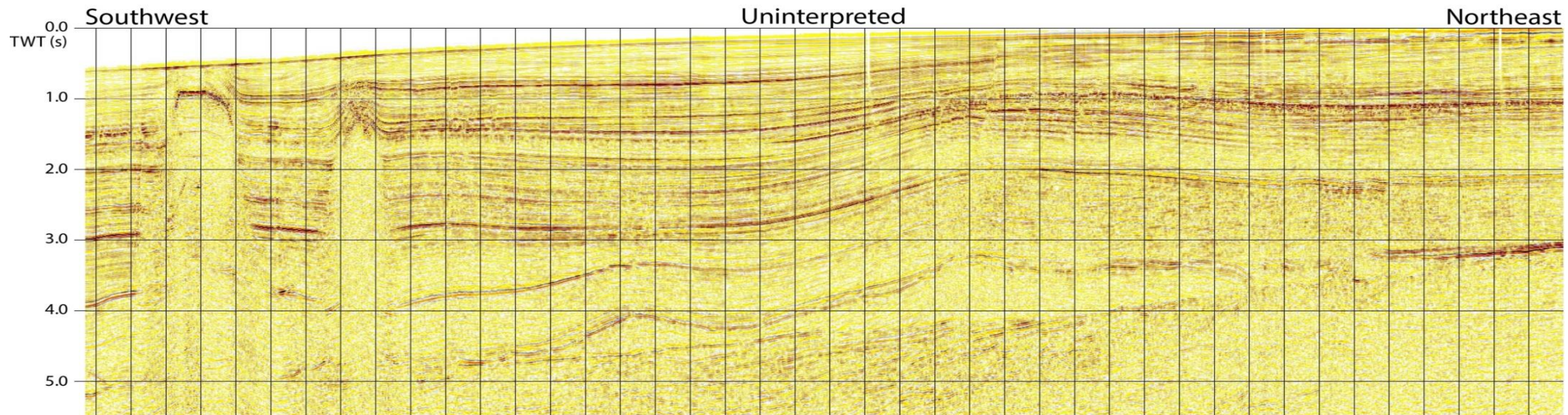
Lithology

	Shale
	Sandstone
	Limestone
	Anhydrite, Salt

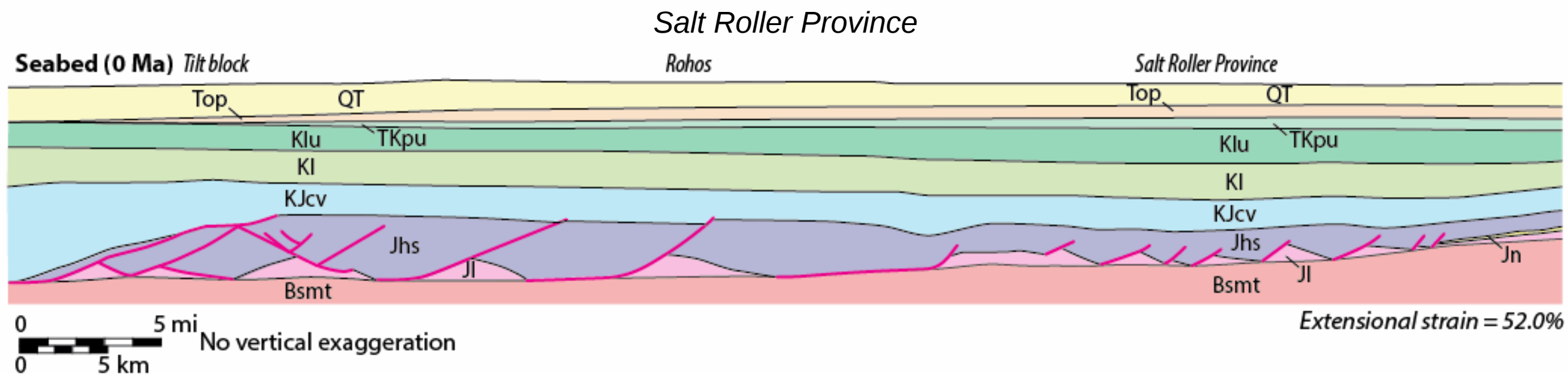
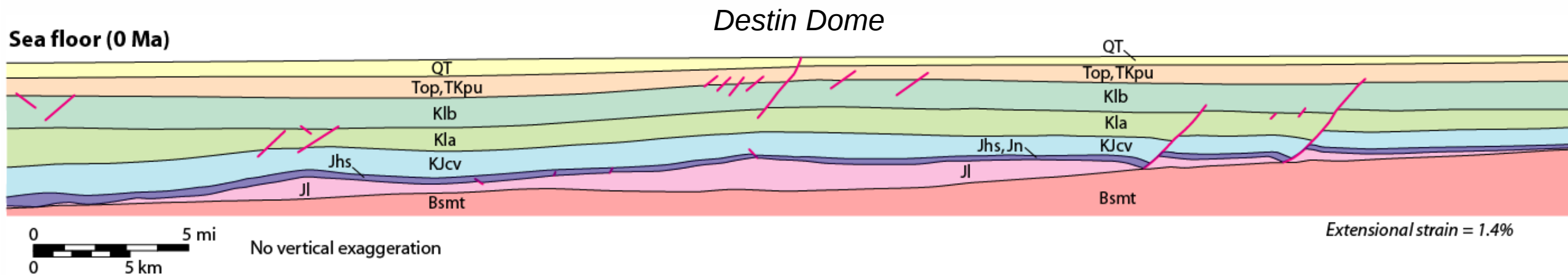
Stratigraphy

QTm	Quaternary-Miocene
Top	Oligocene-Paleocene
TKpu	Paleocene-Upper Cretaceous
Klb	Lower Cretaceous B
Kla	Lower Cretaceous A
KJcv	Cotton Valley Group
Jhs	Haynesville and Smackover Formations
Js	Smackover Formation
Jn	Norphlet Formation
JI	Louann Salt

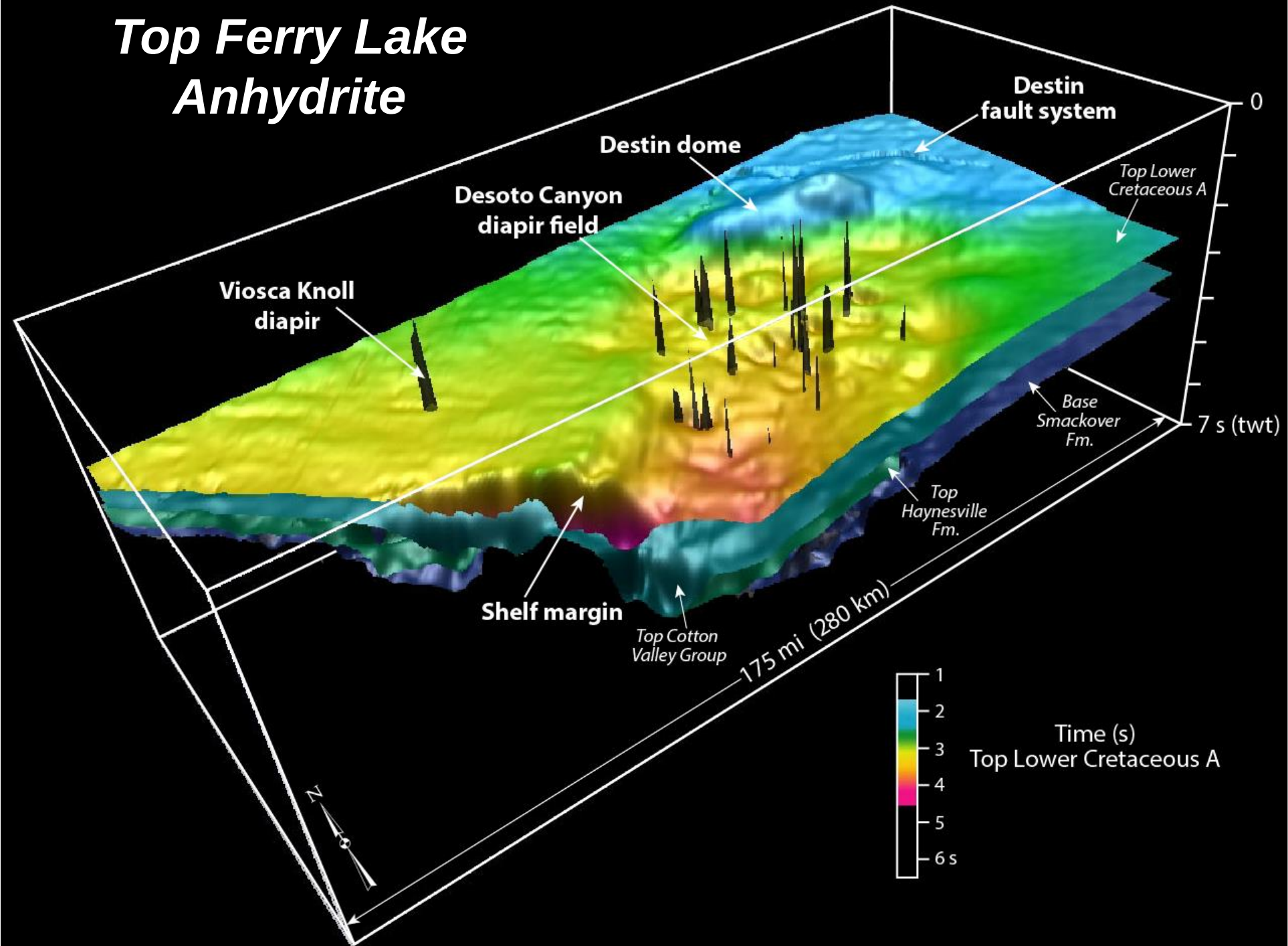
DCSB DESTIN DOME



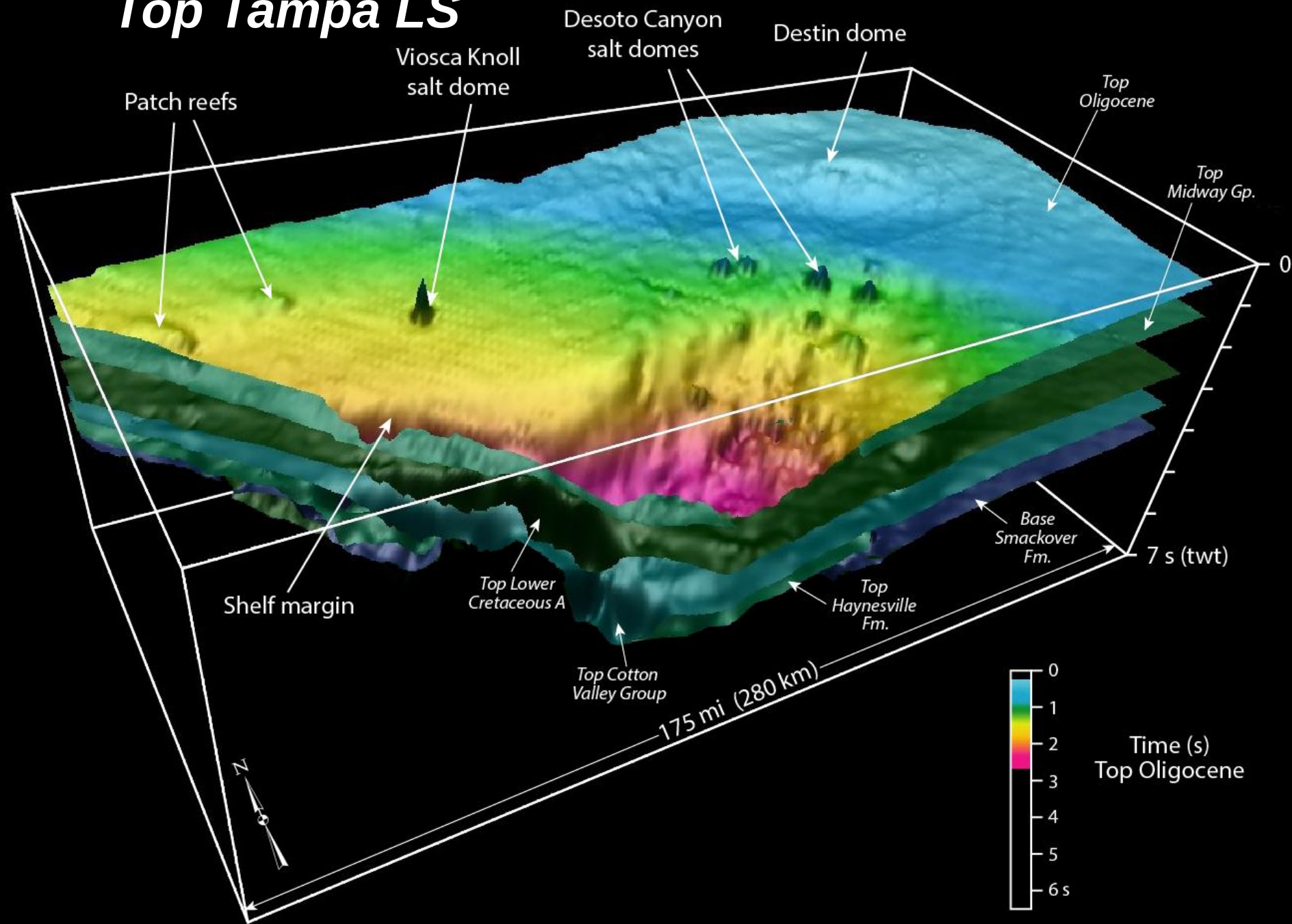
DEPTH CONVERTED STRUCTURAL CROSS SECTIONS, DESOTO CANYON SALT BASIN



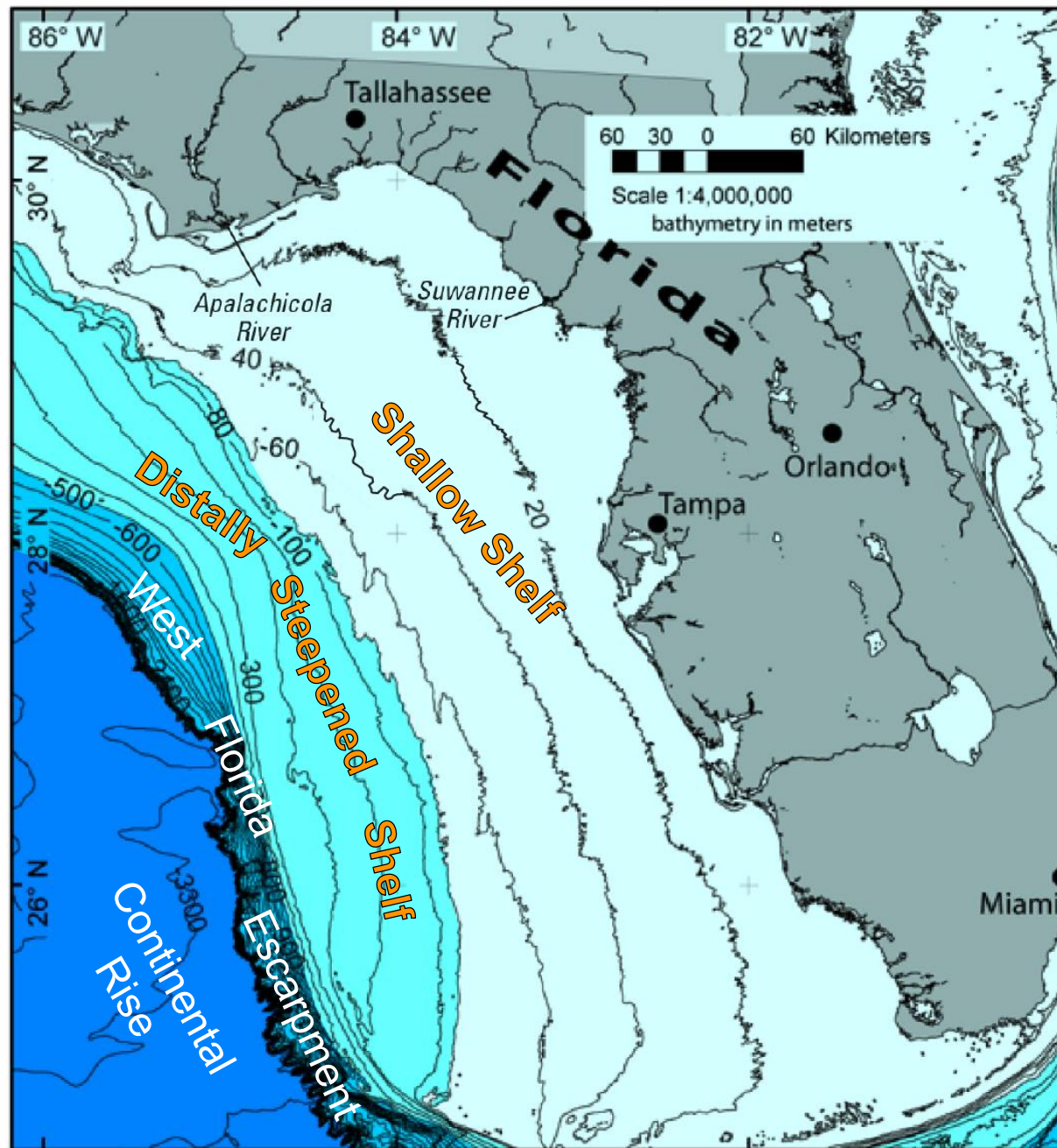
Top Ferry Lake Anhydrite



Top Tampa LS

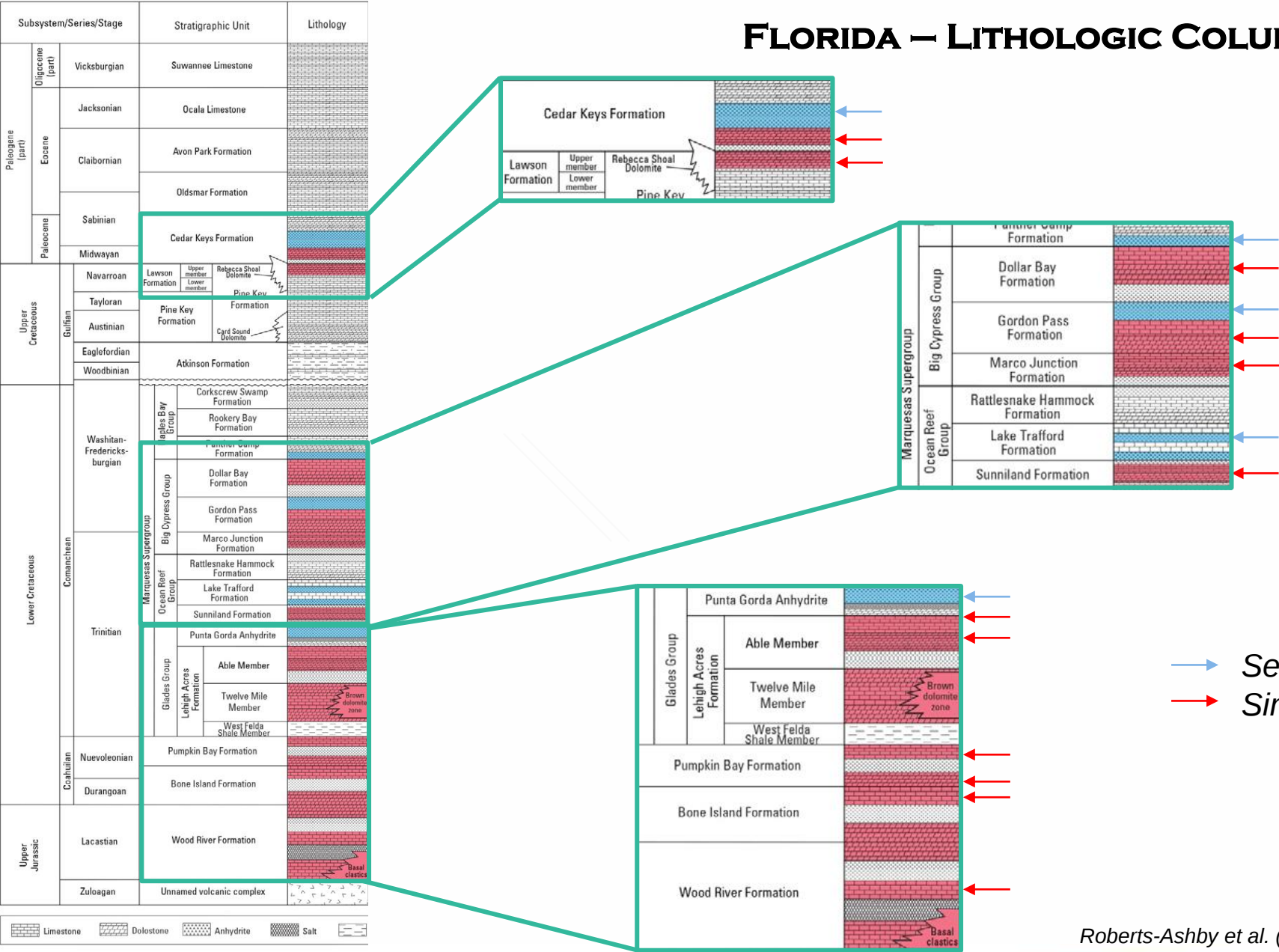


WEST FLORIDA SHELF BATHYMETRY



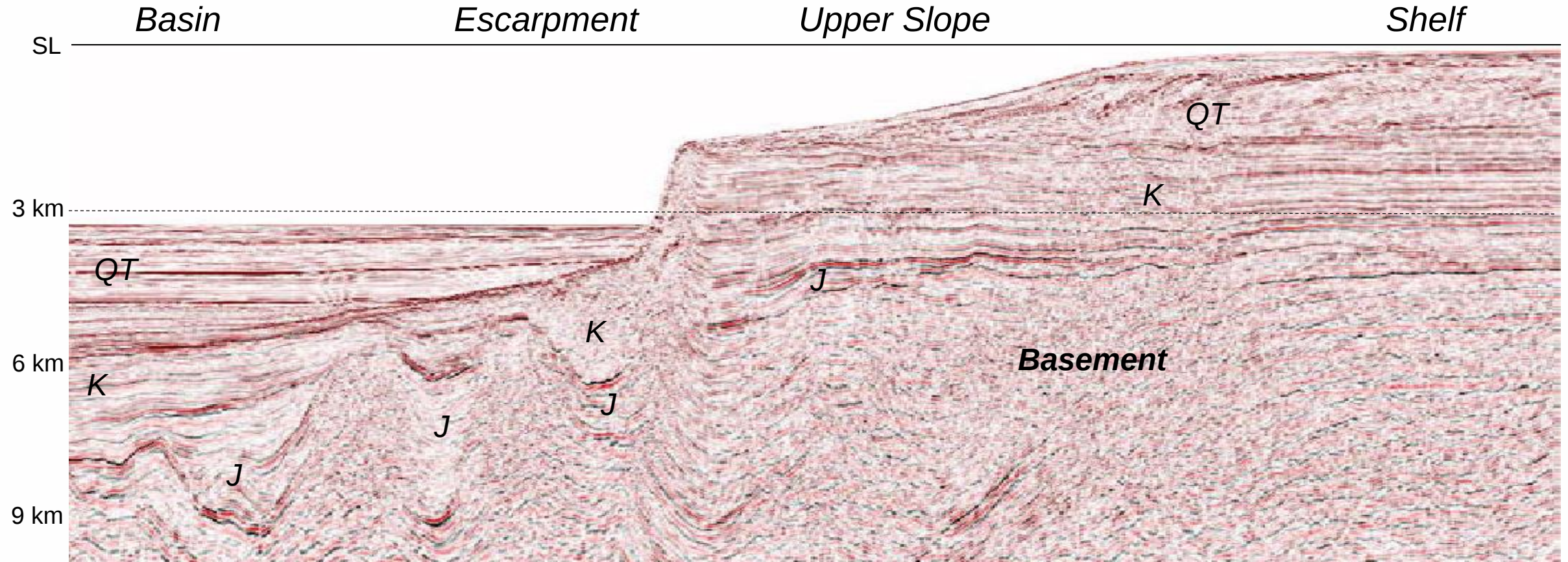
- Broad, shallow, region near shore (NE of 80 m contour).
- Distally steepening outer shelf leading to West Florida Escarpment.

FLORIDA – LITHOLOGIC COLUMN



Roberts-Ashby et al. (2015)

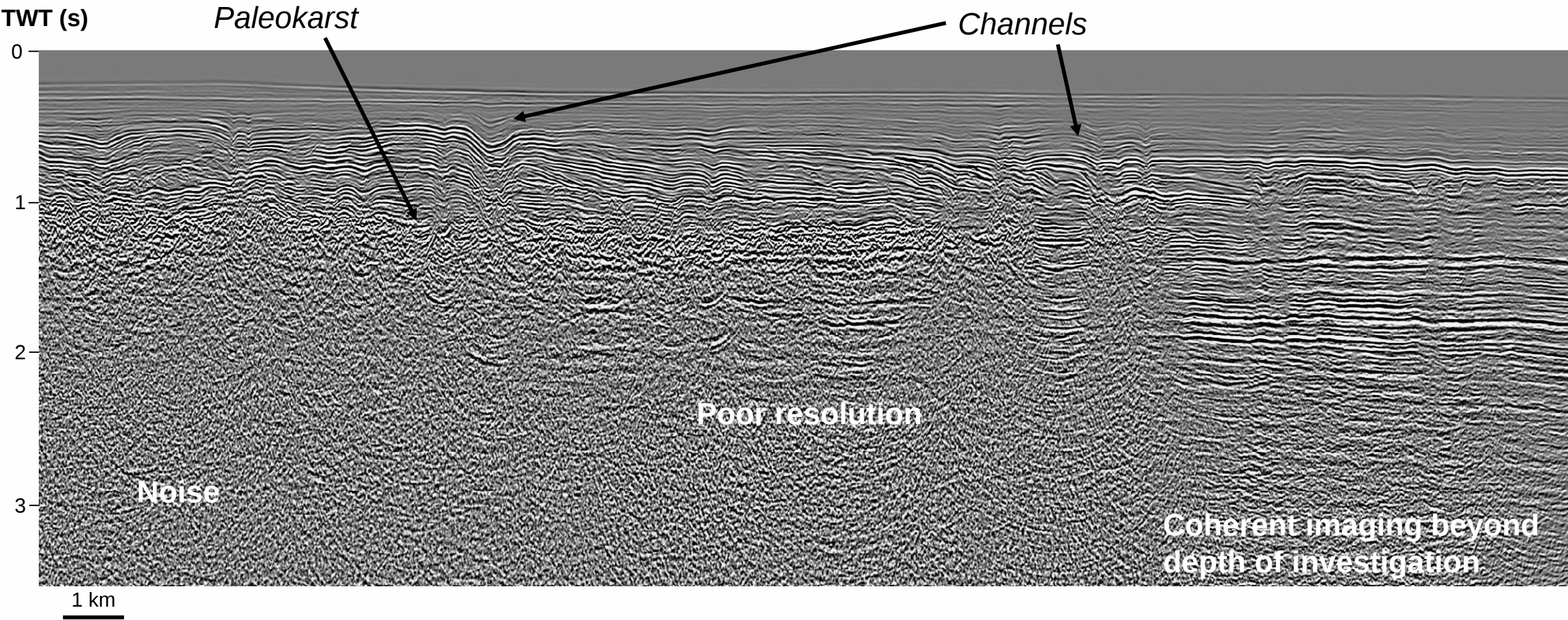
WEST FLORIDA SHELF-ESCARPMENT



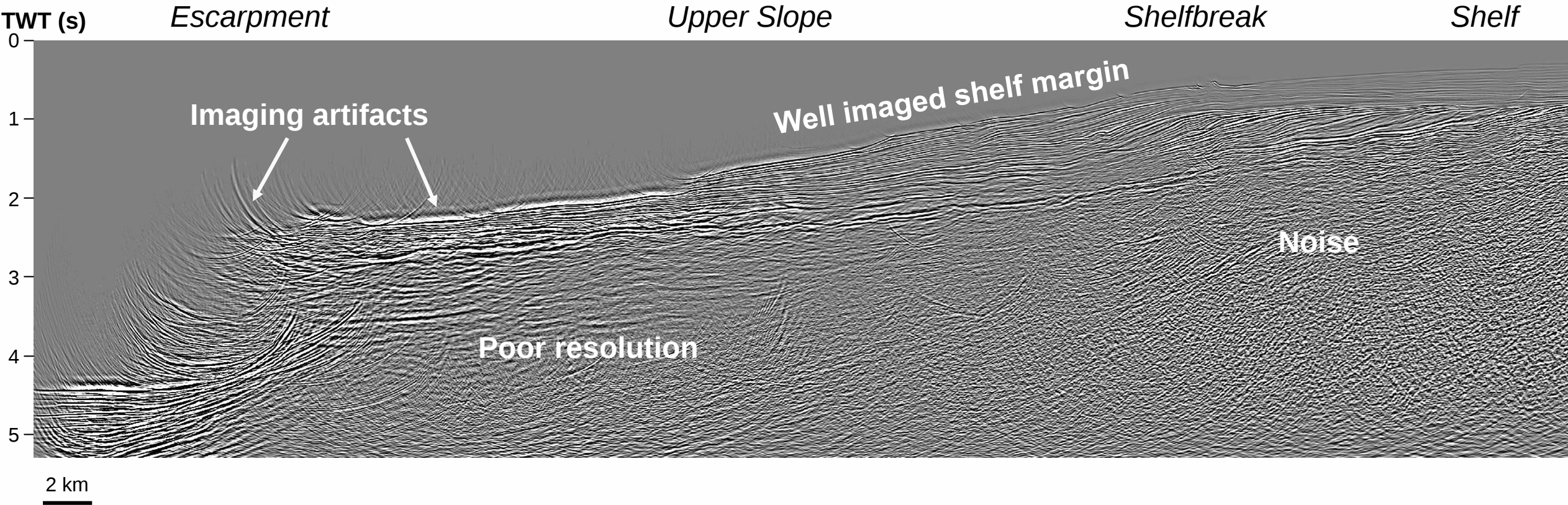
VE ~4x

Roberts and Erickson (2009)

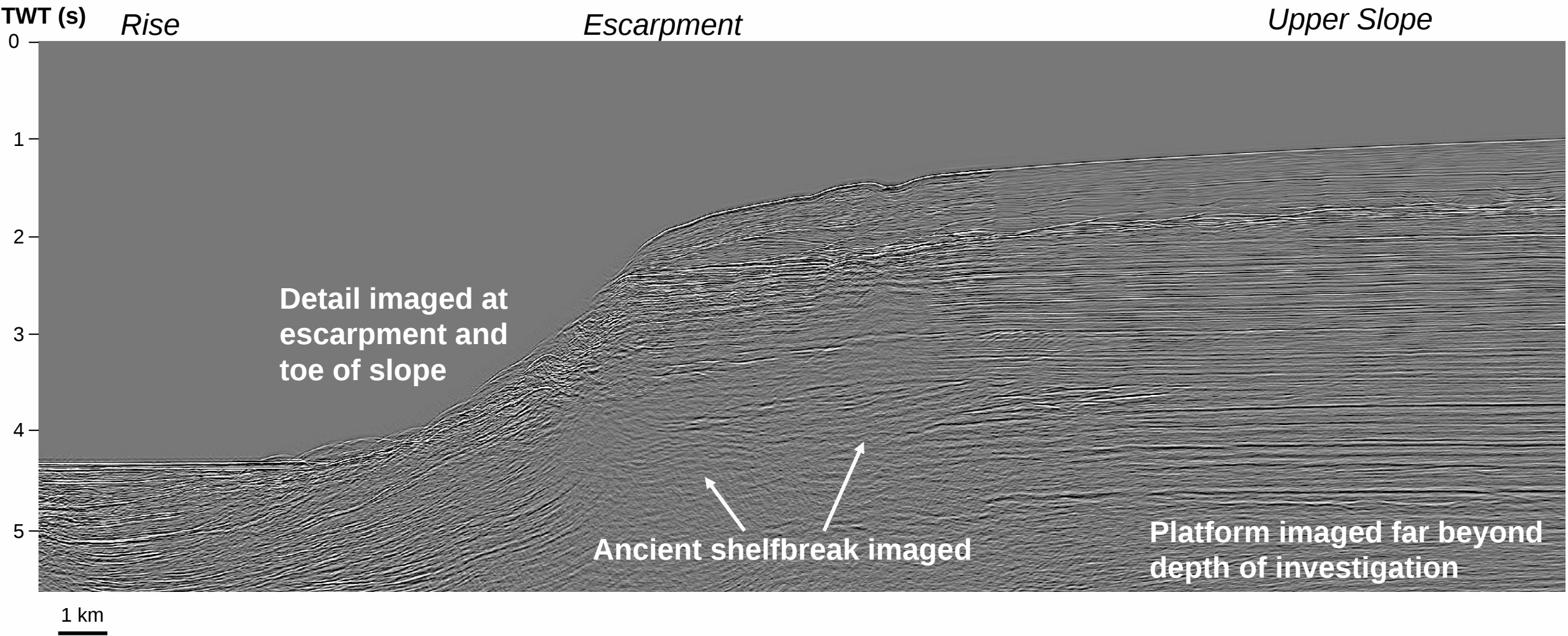
DATA QUALITY — WEST FLORIDA



DATA QUALITY — WEST FLORIDA



DATA QUALITY — WEST FLORIDA



OBSERVATIONS AND ISSUES

- Large portfolio of potential sinks and seals in eastern Gulf of Mexico region.
- Seismic and well data being interpreted.
- Geopressure >12,000 ft; main storage prospects in Cretaceous-Miocene section.
- Compensated density and neutron porosity data limited.
- Multiple sandstone formations prospective in DeSoto Canyon Salt Basin; abundant mudrock and carbonate seals, including chalk.
- Relatively simple Cretaceous carbonate platform and distally steepened Cenozoic shelf in West Florida.
- Variable seismic quality in West Florida.
- Porous dolomite below anhydrite seals.