



2013 Midwest Chapter Meeting Midwest Dredging: Successes & Challenges



Rock Pinnacle Surveying

For: Durocher Marine

Mississippi River, Thebes, Illinois



* Mississippi River Barge
Transportation in Jeopardy

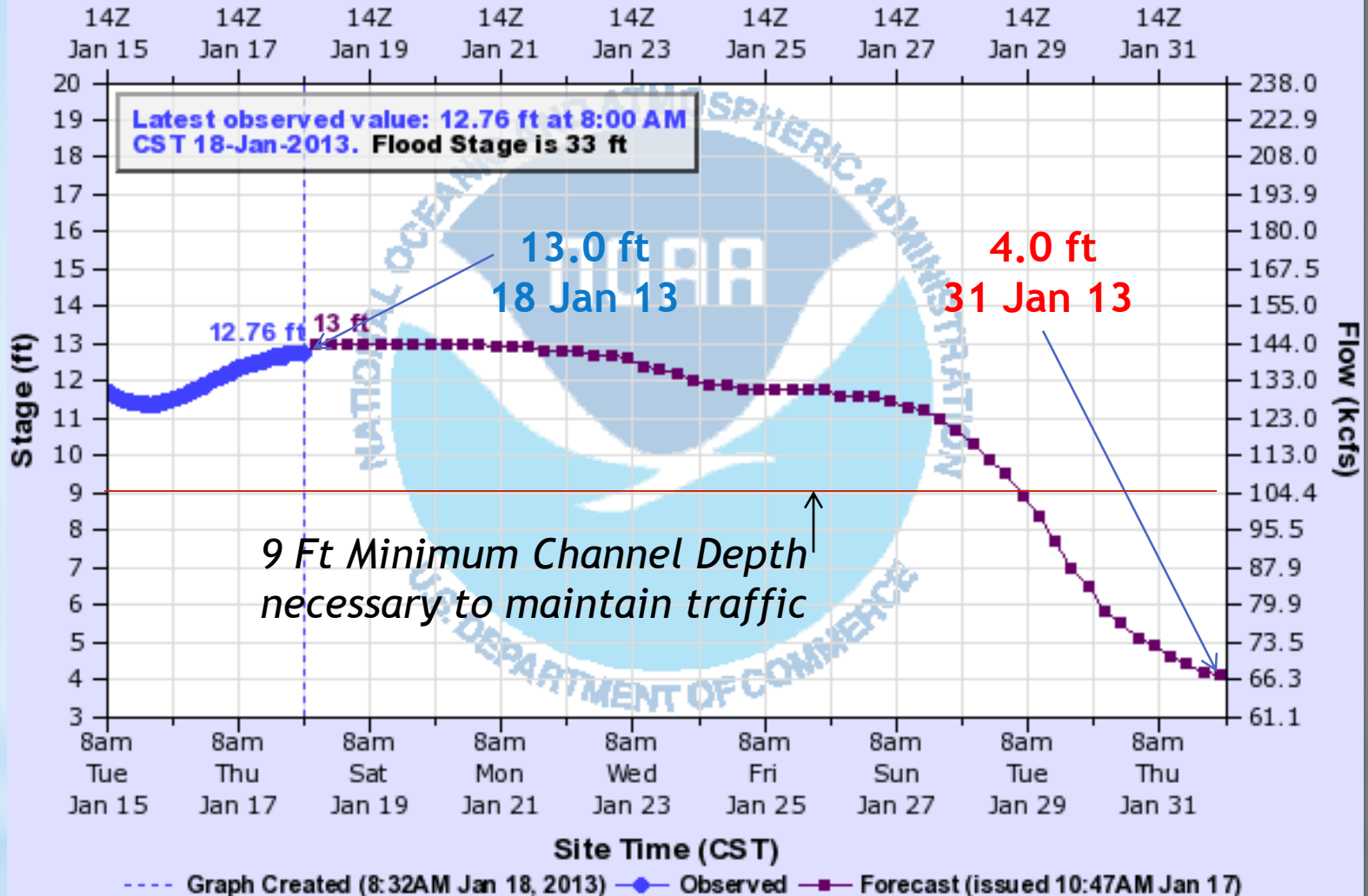
Thebes, Illinois



*Thebes, Illinois Low Water

MISSISSIPPI RIVER AT THEBES

Universal Time (UTC)

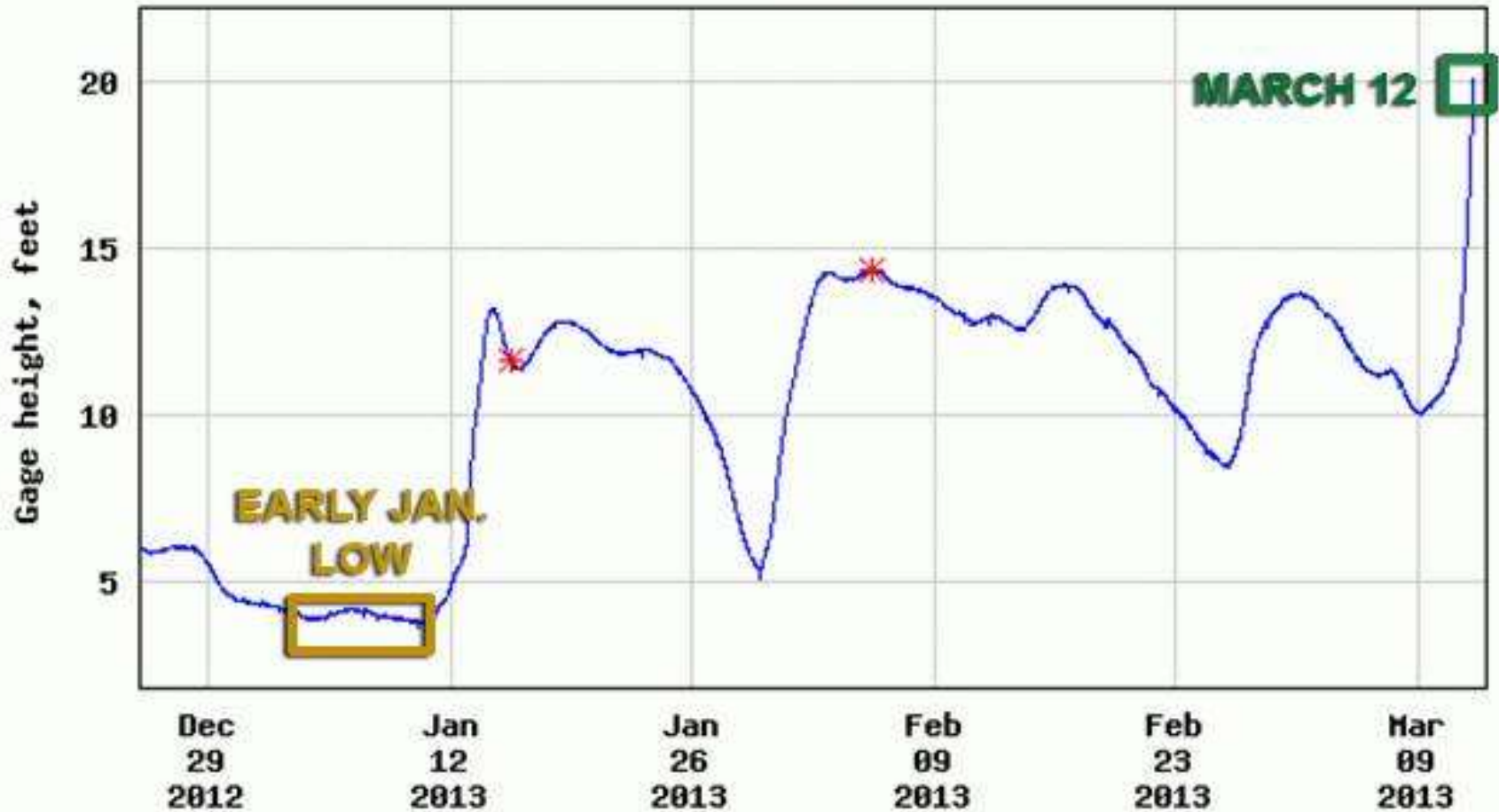


THBI2(plotting HGIRG) "Gage 0" Datum: 300'

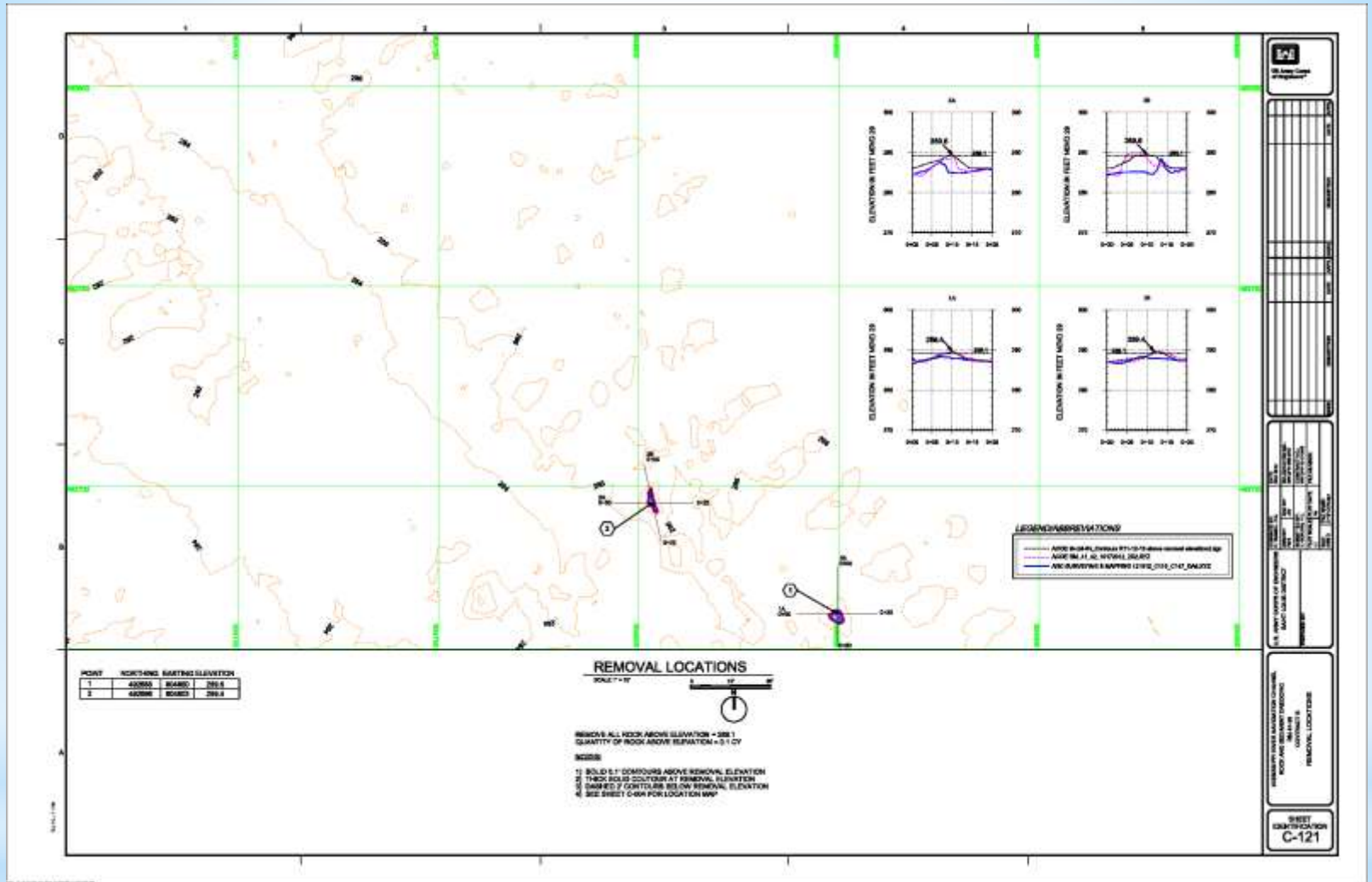
Observations courtesy of US Geological Survey

Decreasing River Stages

USGS 07022000 Mississippi River at Thebes, IL



*Thebes, Illinois River Stages



* Pinnacle Location & Removal



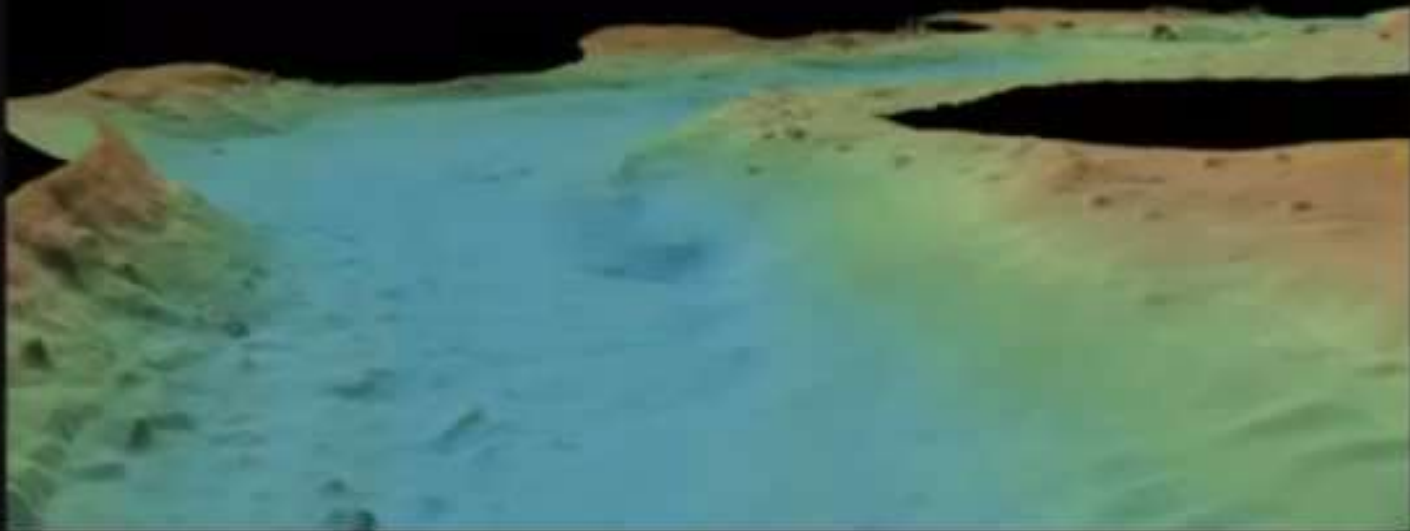
* Pre-Excavation Survey

512 Beams - 400/200 kHz - 165 Degree Swath
15 ft of water - 100 ft wide swath

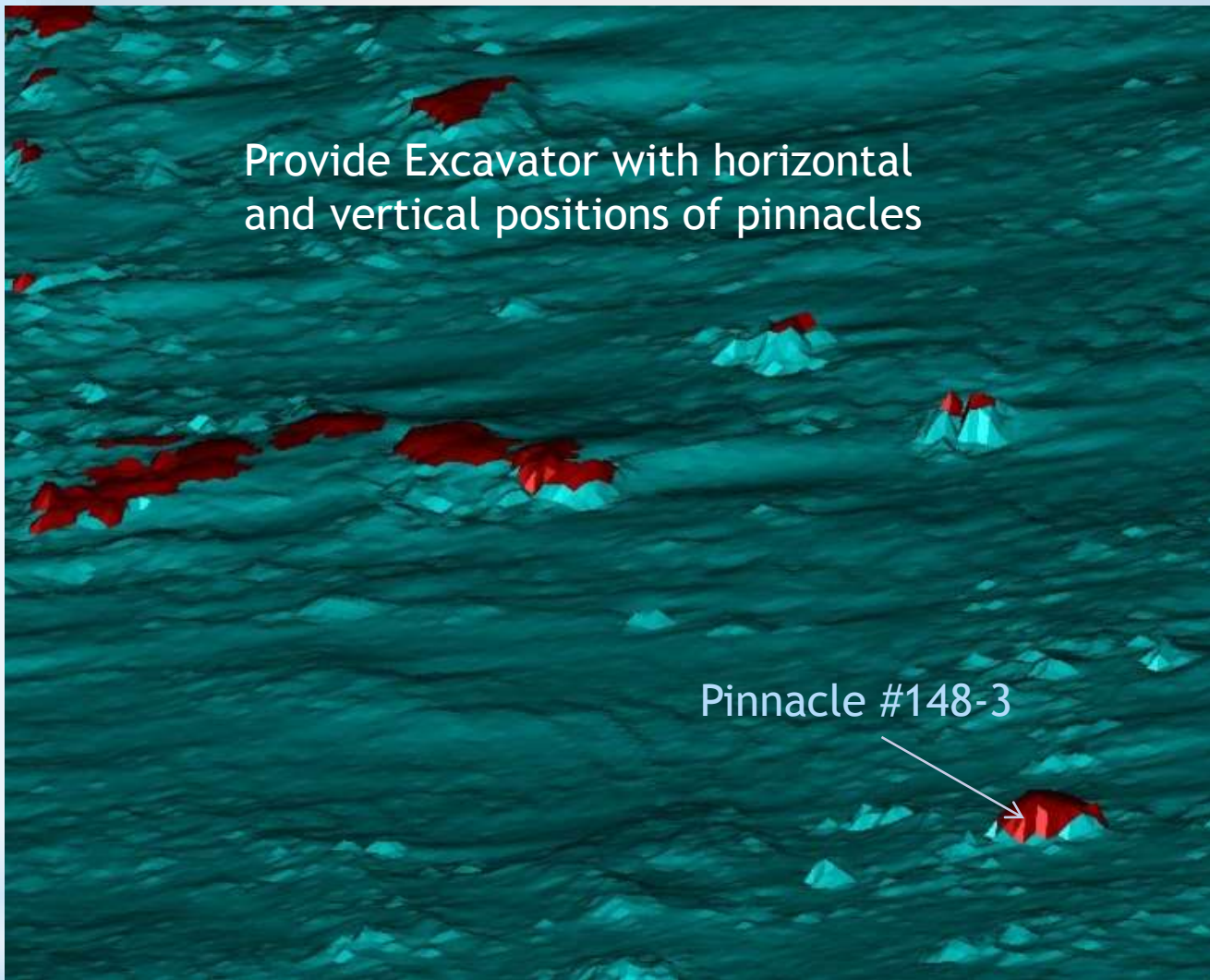


* Reson 7125 Multibeam Sounder

Horizontal and Vertical Positioning accomplished utilizing
RTK/DGPS from ACOE local control
xyz files provided to excavator for use with Dredge Pack
onboard software



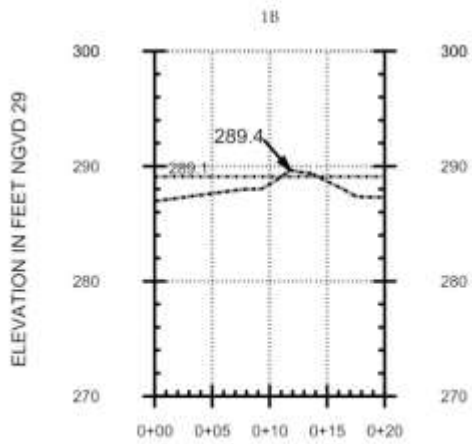
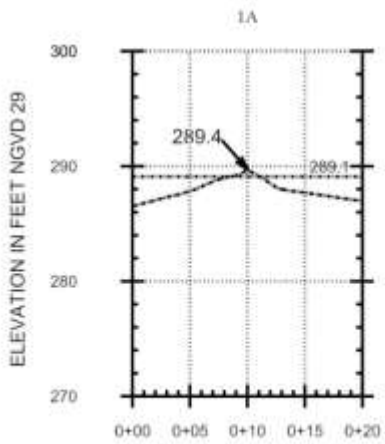
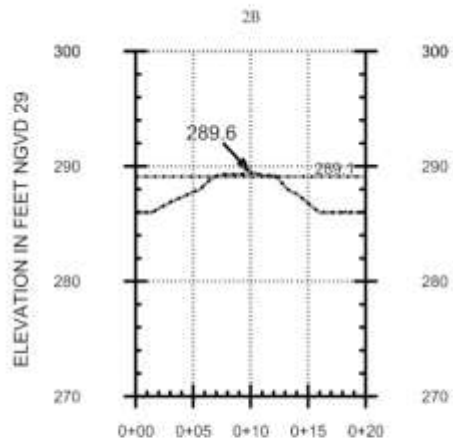
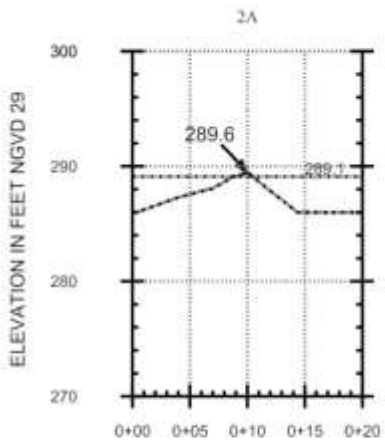
*Pre-Excavation Survey



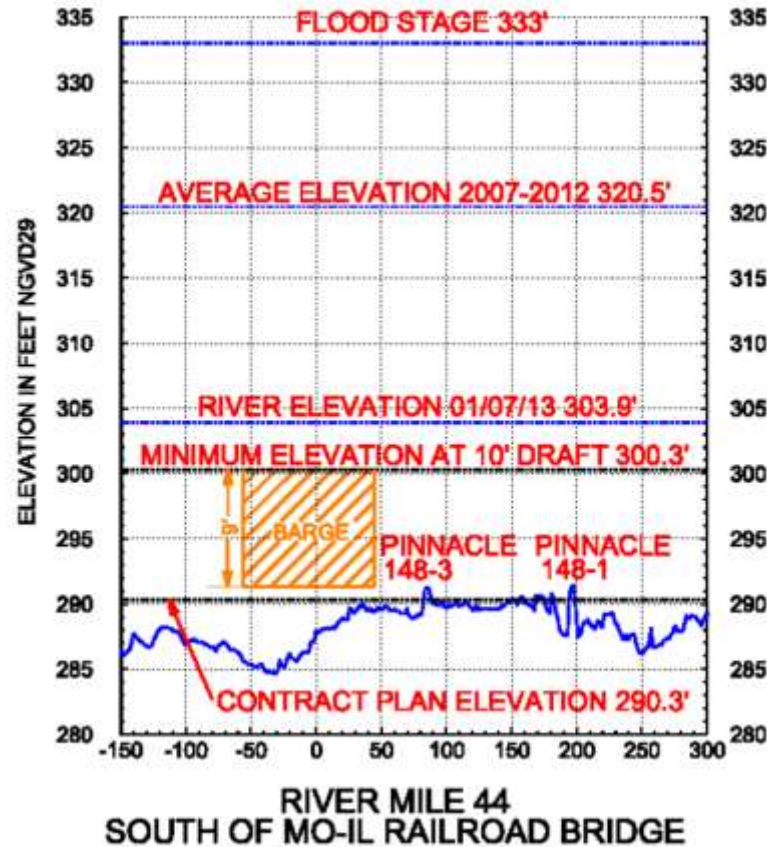
* Multibeam Bathymetry
Rock Pinnacles to be Removed



* Backhoe Excavator



Before Pinnacle Removal



* Mississippi River Cross-Section



* Drill Barge

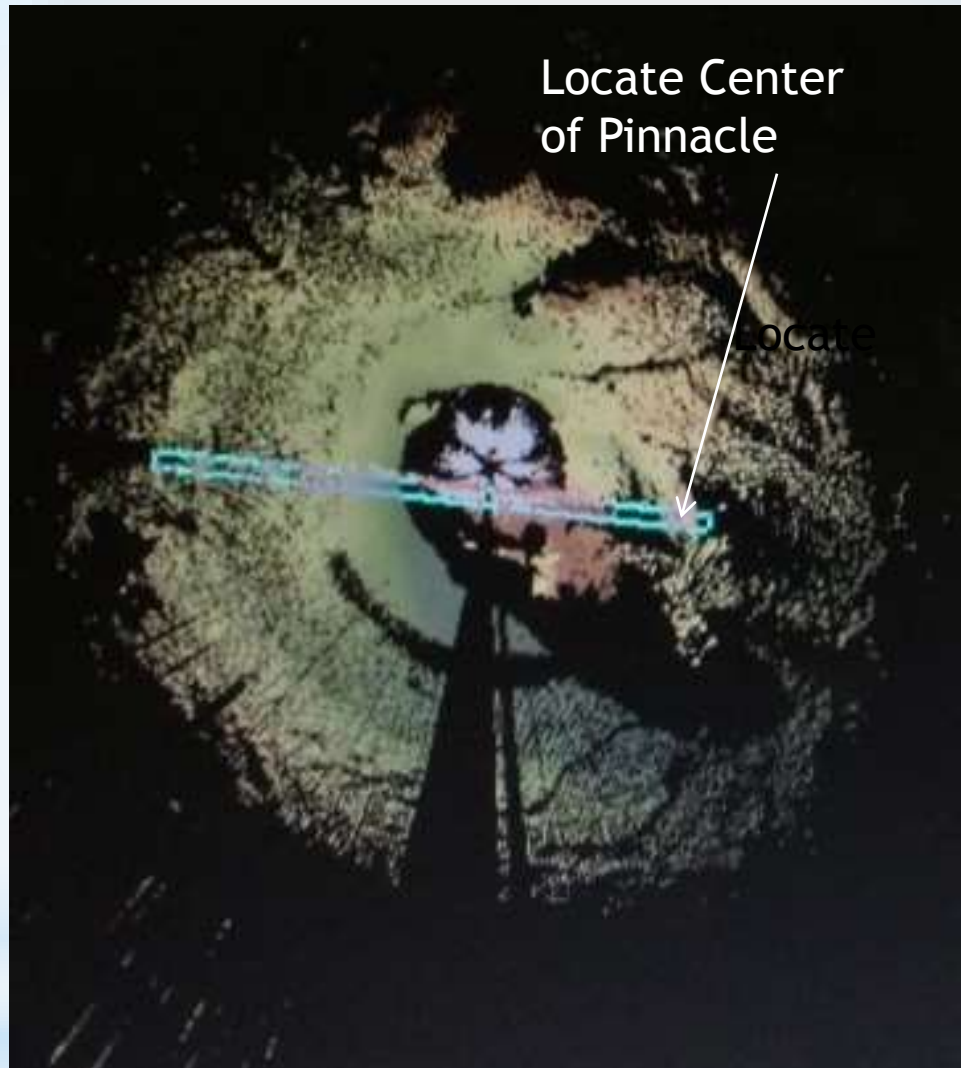


Blueview Sonar Scanner
Mounted on Barge

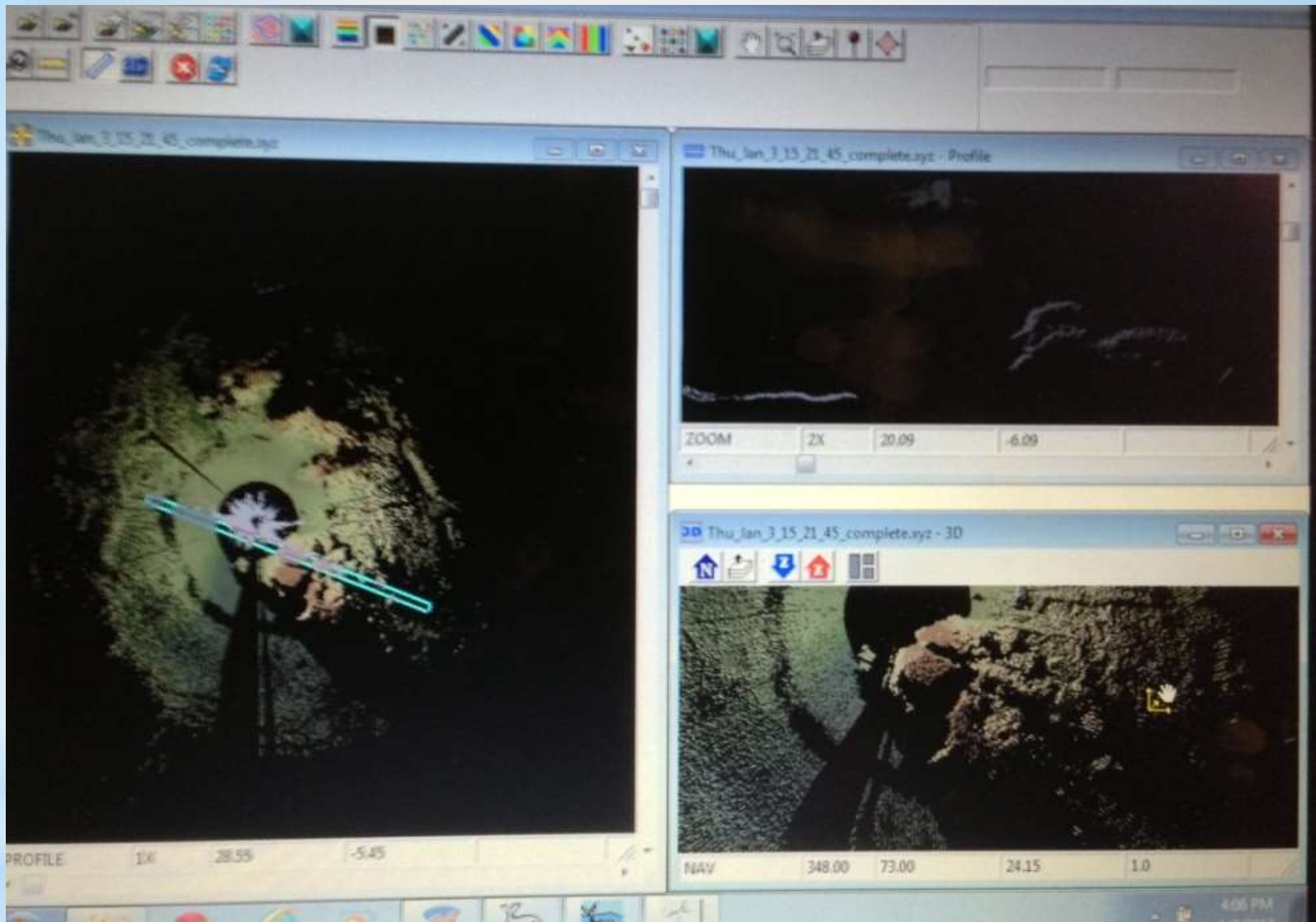
* Lower Blueview Sonar Scanner



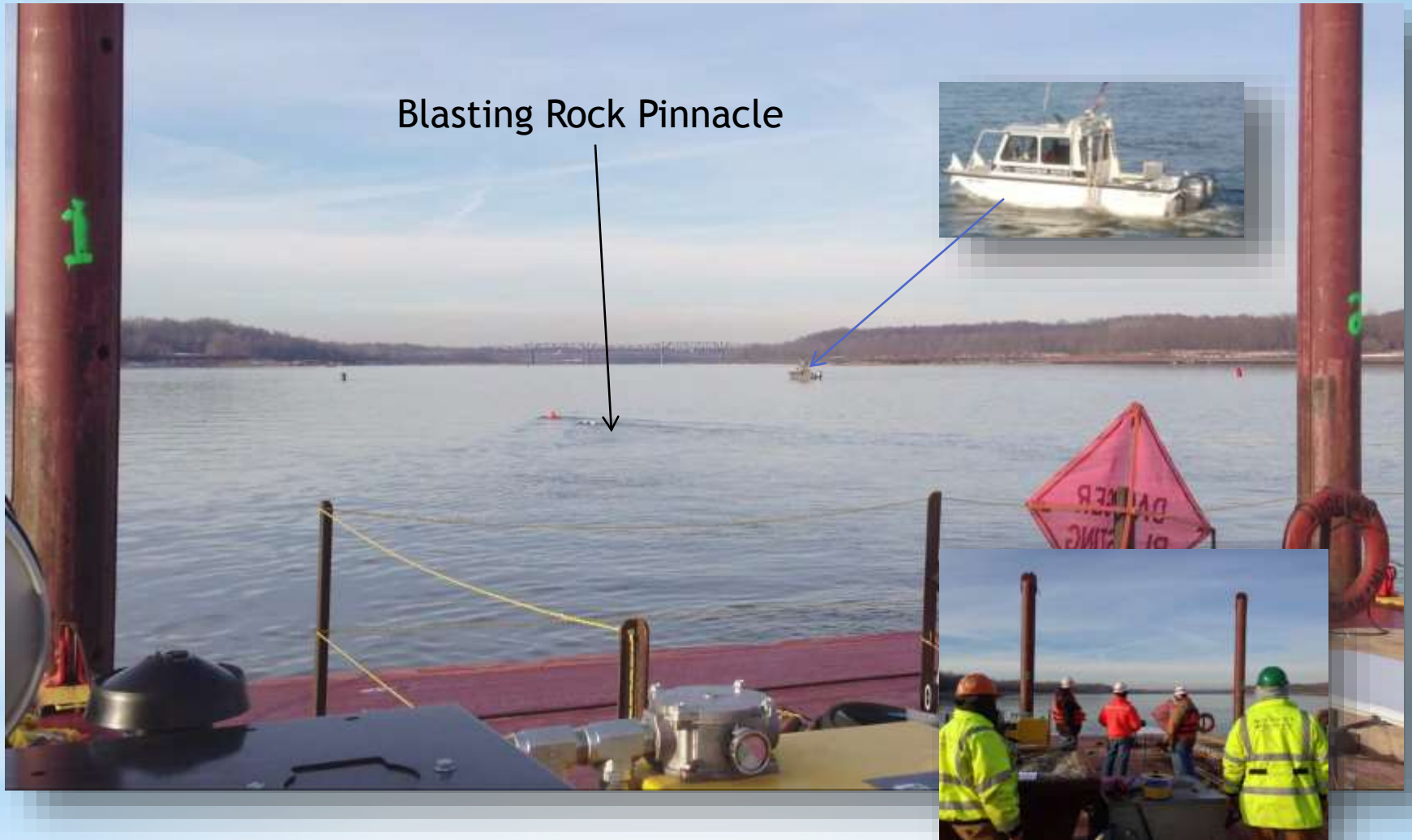
*Sonar Scanning



* Scan Rock Pinnacle



*View Drill on Pinnacle



Blasting Rock Pinnacle

* Rock Pinnacle Blasting





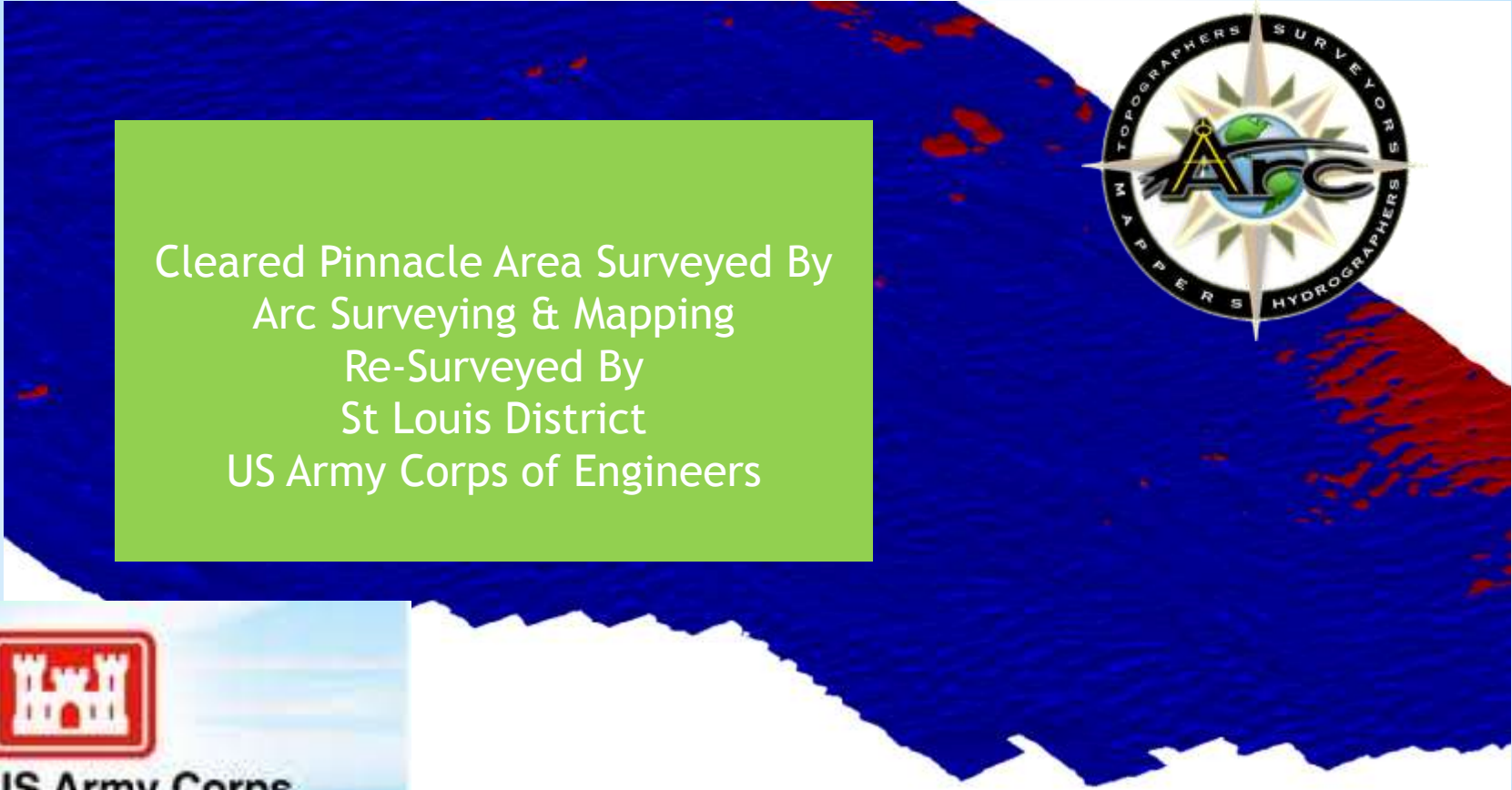
* Excavating Rock Pinnacles



* Rock Boulder Removal



* Post Blast Survey

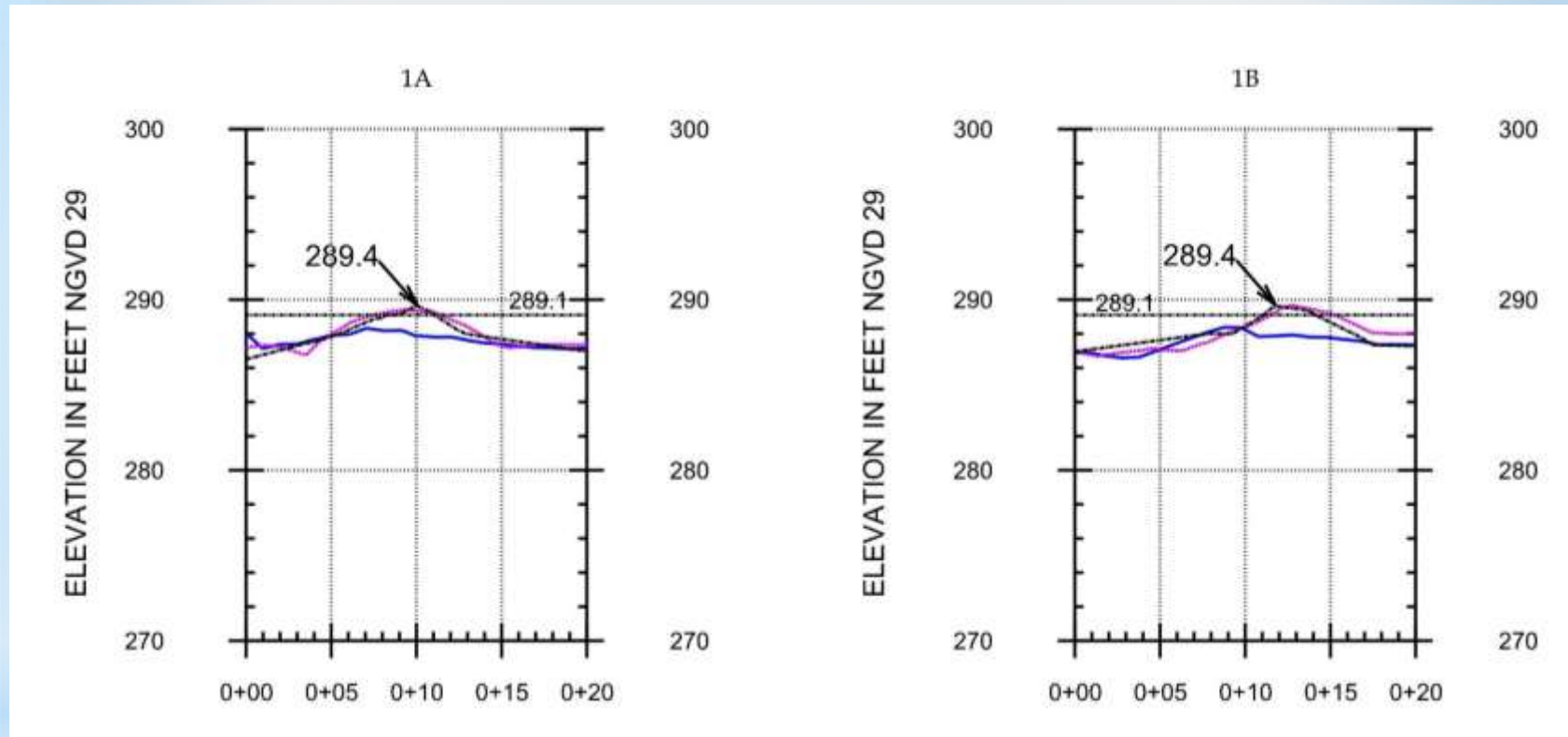


Cleared Pinnacle Area Surveyed By
Arc Surveying & Mapping
Re-Surveyed By
St Louis District
US Army Corps of Engineers



**US Army Corps
of Engineers**®
St. Louis District

* After-Dredge Clearance Survey



Before and After Pinnacle Removal



*Partners in Progress