Geologic Carbon Sequestration Opportunities for Maryland

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References:

Conn, Baum, Mudd, Gunnelfsen: Potential for Geologic Storage of CO2 in Western Maryland — Phase I Studies, 2004.

Wickstrom et al, Characterization of Geologic Sequestration Opportunities in the MRCSP Region, Phase I report, 2010.

Multiple in draft / press, documents from the Mid-West Regional Carbon Sequestration Partnership and the Mid-Atlantic Offshore Carbon Sequestration Partnership

Evaluation of Opportunities

Geologic Setting

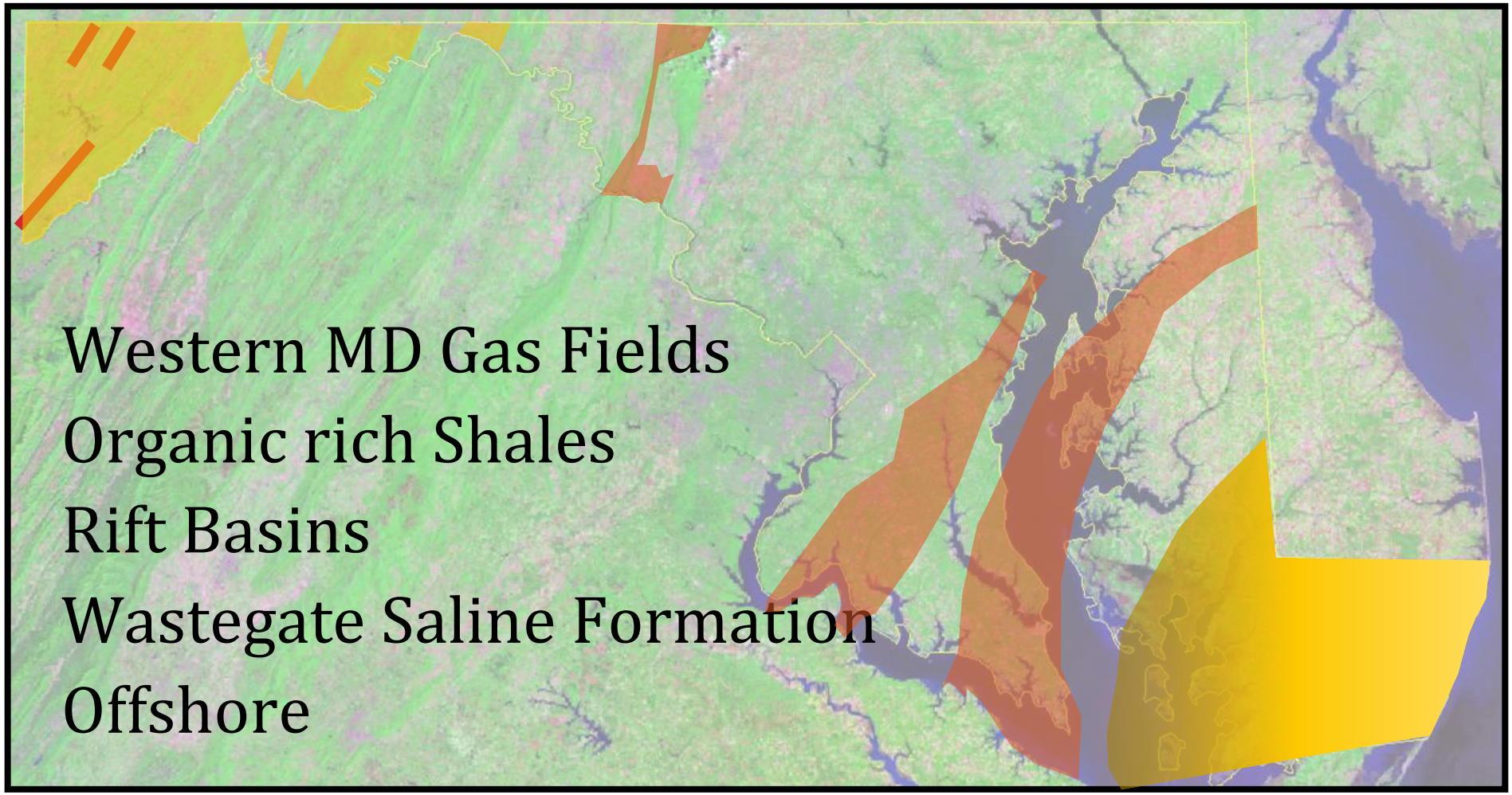
Risk

Scale (Porosity / Size of formation)

Distance to CO2 Source

Economics

Maryland Geologic Opportunities



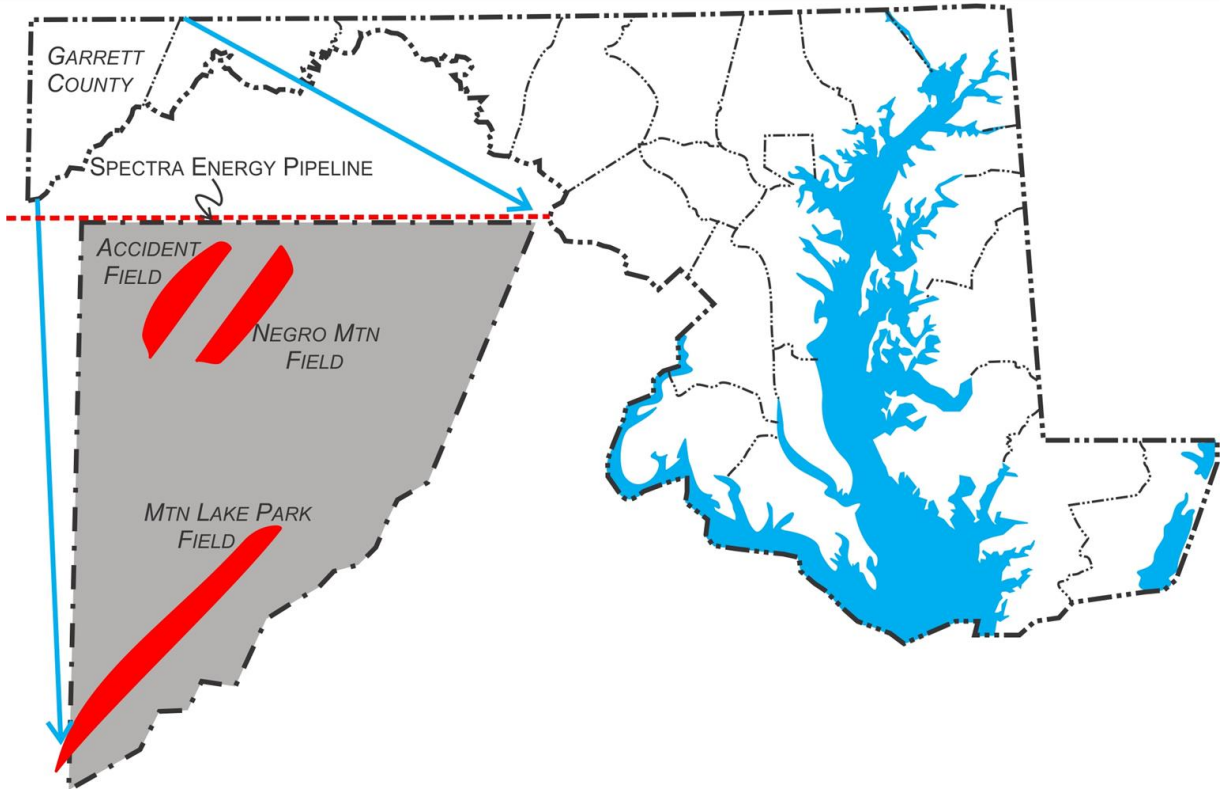
Western Maryland Gas Fields

Oriskany sandstone

1 Gigaton CO2 estimate

Potential Leakage in Mountain Lake Park Field

Competing interests



MountainLake Gas Field

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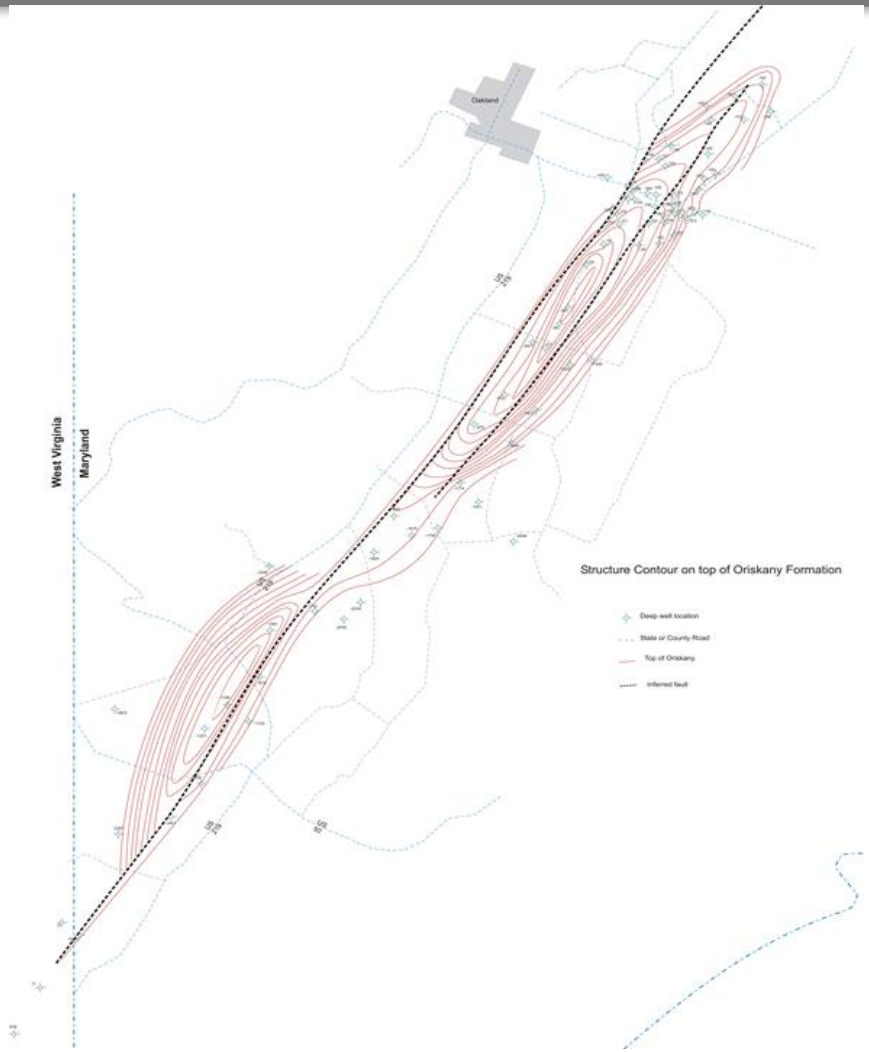
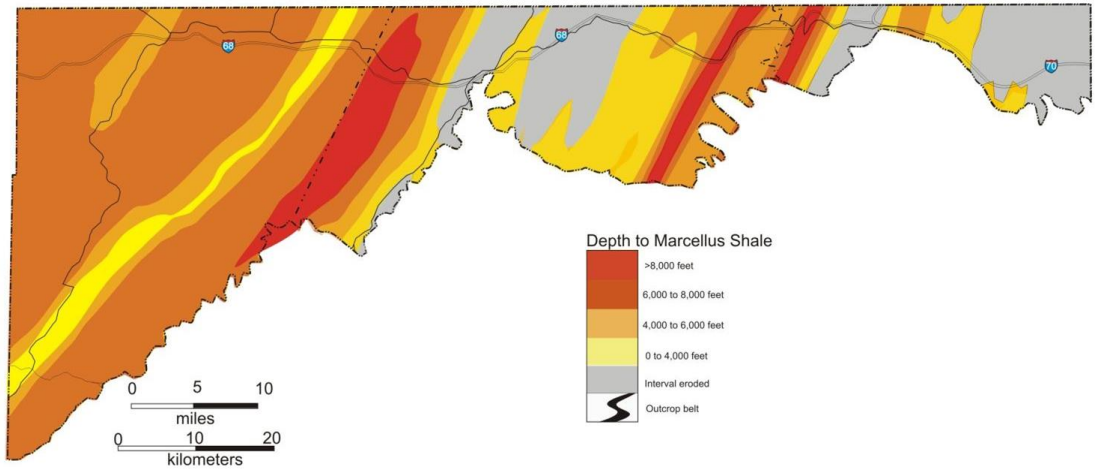
New Geologic Interpretation of Mountain Lake Park Field shows that it is two isolated fields.

Additional research is needed to determine cap rock structure above the fields and if the fields are isolated.



Organic Rich Shales

Organic rich shales (Marcellus and Utica)not only provide storage but also provide *<u>remineralization</u>*.



Not a current option for MD due to fracking moratorium, but is an option to export to Pennsylvania and West Virginia

Triassic Rift Basins

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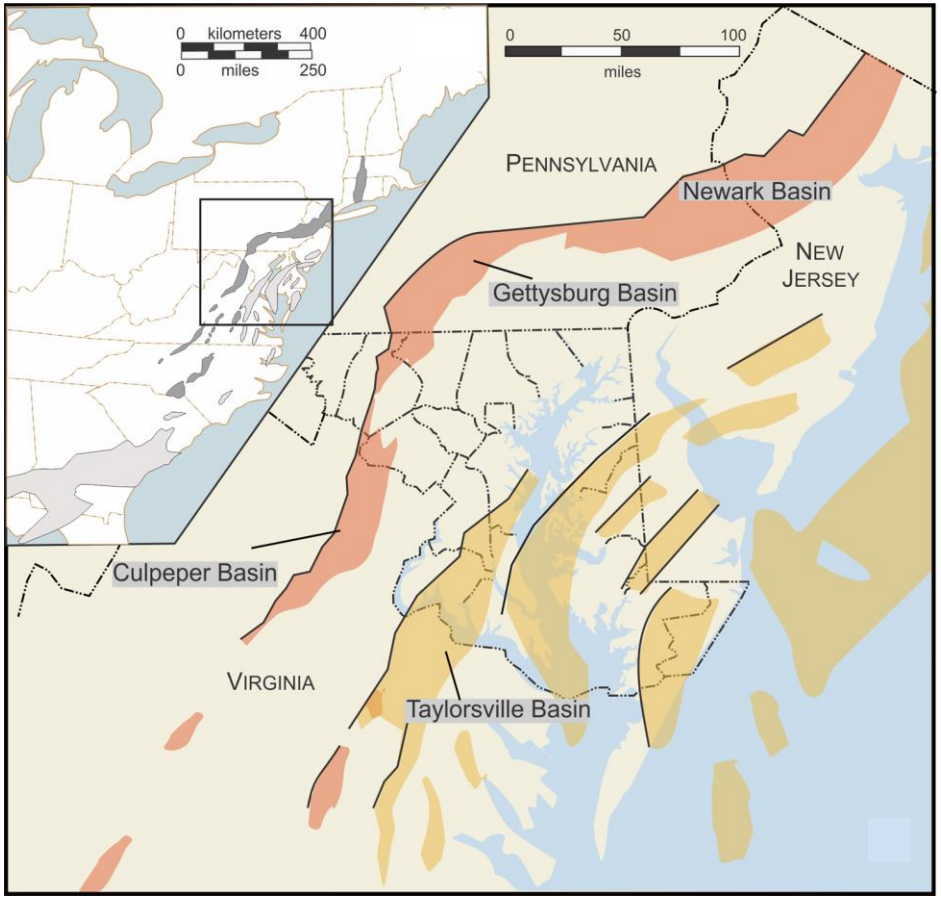
Complex geologic nature.

More research needs to be performed to characterize these fields.

Good Location for coincident location of power plants.

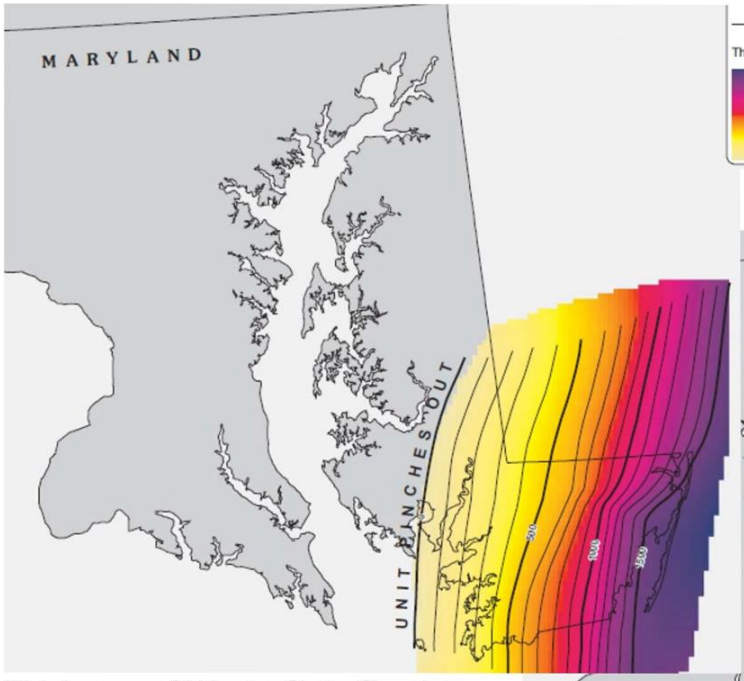
Contain storage and *<u>remineralization</u>* capabilities



Wastegate Saline Aquifer / Formation

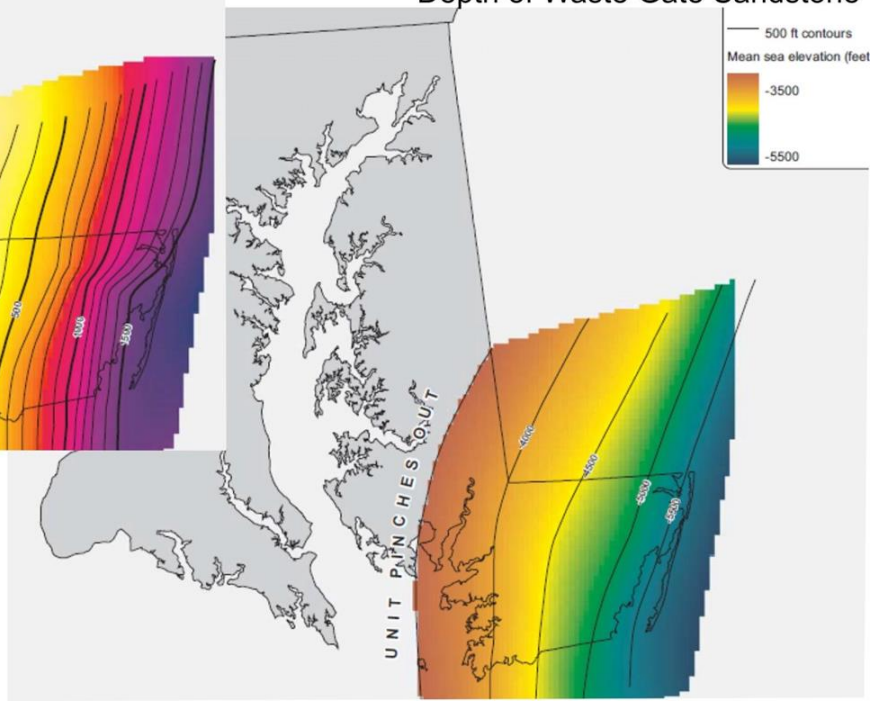
Formation with brine water (non potable) below all other aquifers

4.4 GT CO2 storage estimates in MD



Thickness of Waste Gate Sandstone

Depth of Waste Gate Sandstone

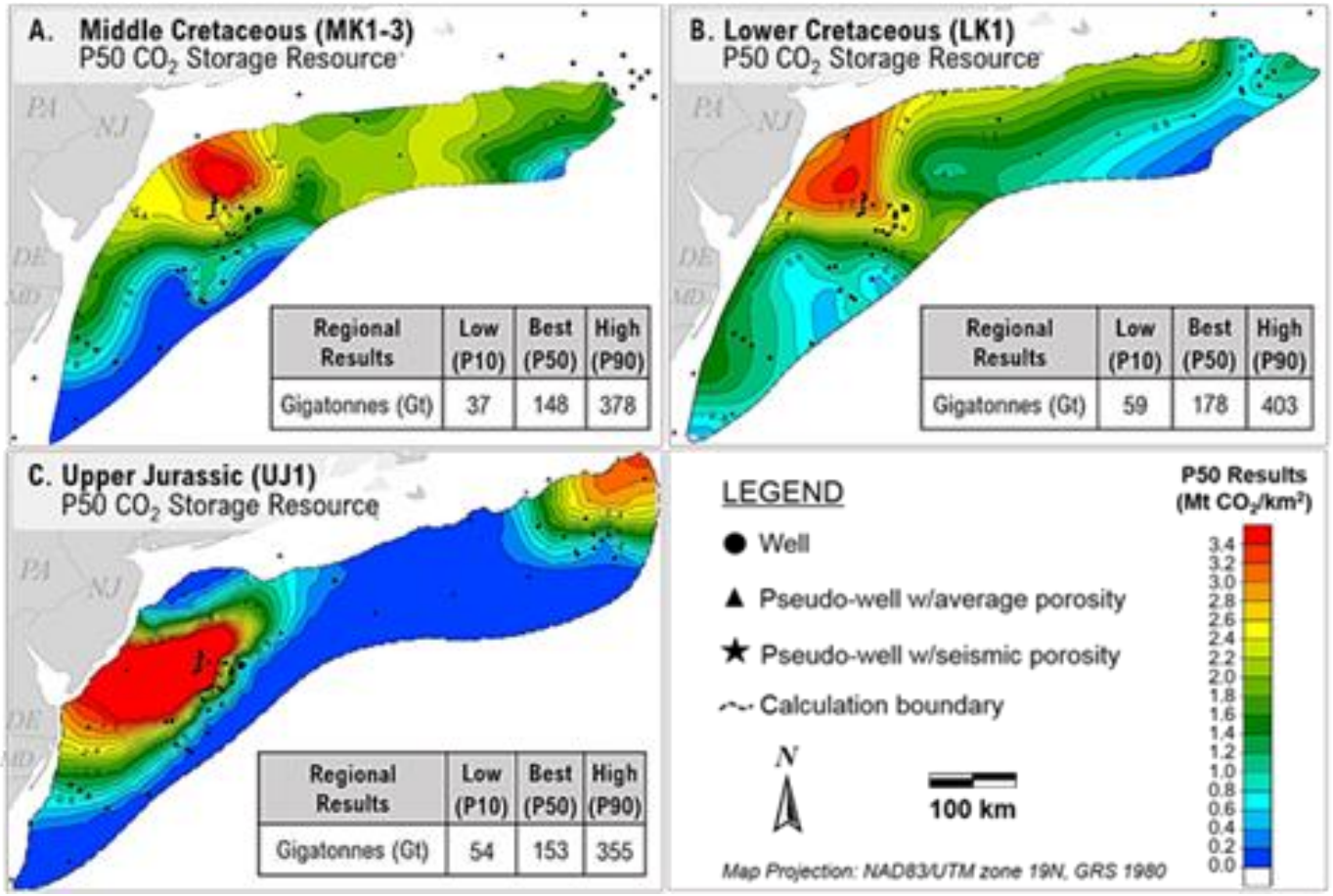


Offshore

Federal Waters

450 GT potential (Region)

Pipeline and Underwater injection



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