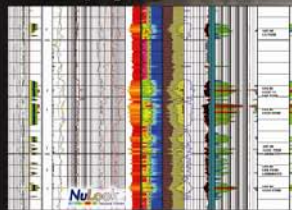
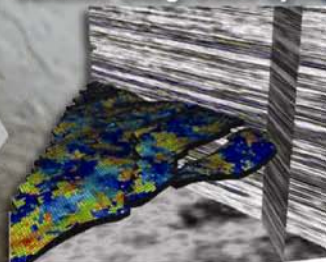


NuLook processing is the cornerstone of any NuView project as specified rock properties are distributed across an area where spatial relevance and reservoir interconnectivity become more clearly focused.

NuLook Normalization & Petrophysical Outputs

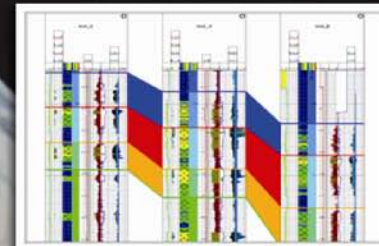


Seismic Integration Option



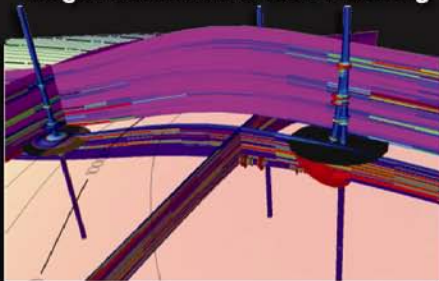
Seismic horizon data can be directly imported into a project maintaining structural integrity and fault control.

Well Correlation & Fence Diagrams



Well correlations and fence diagrams can be viewed from all directions and perspectives. Tops can be easily changed as the geology dictates.

Target Definition & Well Planning



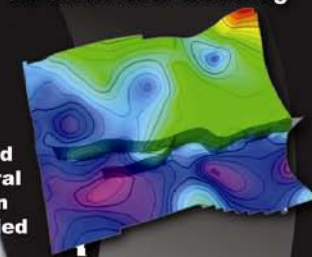
Once a geological model is completed recommendations can be made as to drill site locations, well planning, and field development strategies.

NuView™

Reservoir Vision

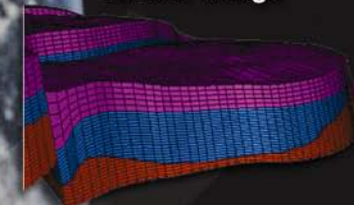
The NuView process utilizes NuLook's textural analysis and key petrophysical outputs to provide a field-wide 3D presentation. The customer receives a structural and stratigraphic depiction for more precise correlation and better defined lithologic, stratigraphic, and structural anomalies or discontinuities. The service provides the customer with a better understanding of the spatial relationships within a field related to well and field performance utilizing key inputs such as textural permeability and reservoir quality as related to pore size variance.

3D Structural Modeling



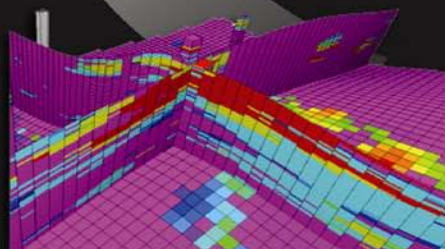
Imported structural data can be verified and enhanced as geological modeling helps to better define the relationships between surfaces and faults.

3D Grid Design



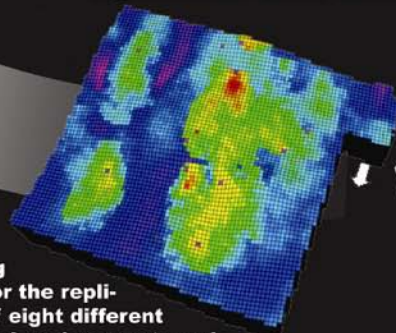
The modeling grid is where the appropriate well log resolution, grid azimuth, and fluid flow orientation is established.

Detailed Property Modeling



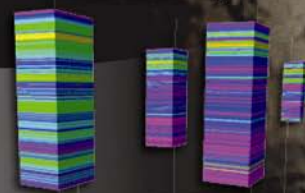
The depositional systems model is populated with high definition NuLook petrophysical properties.

Depositional Facies Modeling



Facies modeling allows for the replication of eight different geological environments and depositional systems.

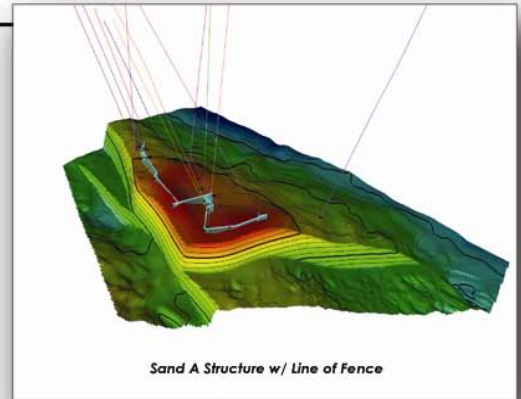
Well Blocking



NuLook attributes are assigned to grid cells in the blocking process.

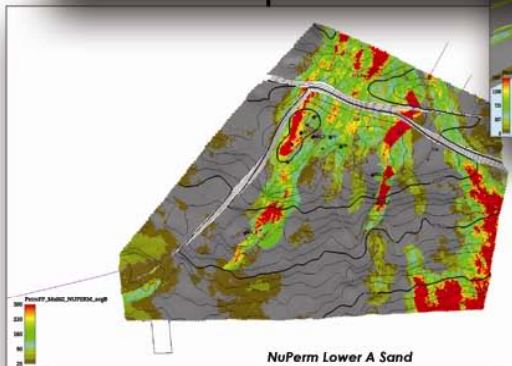
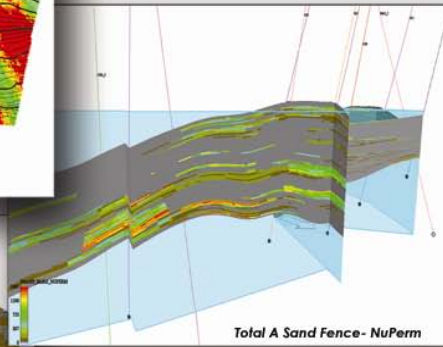
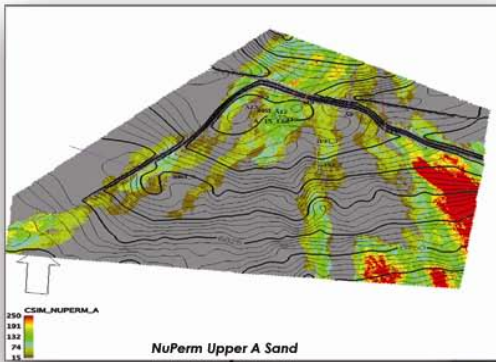
Project Objectives:

NuTech was asked to build a 3D Geological Model to explore and confirm the structural validity of the project area through seismic data imports. The client wanted to better understand the depositional environment of the objective reservoirs and their respective relationships to one another. NuLook Textural Vision™ petrophysical outputs (permeability, porosities, etc.) were used to help predict reservoir quality, distribution and connectivity between wells within designated zones throughout a prescribed fault block. Pore volumetrics associated with all designated zones of interest were calculated in order to establish the original oil and/or gas in place and better understand the remaining reserves within the fault block. NuTech made recommendations regarding the necessity and/or placement of future wells.



Executive Summary:

Eleven wells were included in the project. Two zones were modeled including the Upper A sand and the Lower A sand. The environment in which the objective sands were deposited appeared to be deltaic in nature and the sediments include clay rich shales, fine grained overbank deposits (silty sands), medium grained levee sands, and coarse grained channel sands. The trapping mechanism consisted of a high side closure against a down to the north fault and a down to the northwest fault, both of which placed reservoir quality sands against impermeable shales on the downthrown side.



Recommendations:

Based on the currently interpreted reservoir models and the production differentials between high permeability sands when co-mingled with a lower perm zone, NuTech recommended the following: sidetrack one of the existing wells to the west into the Upper A sand channel on the western side of the block, and drill a new well to test the Upper A zone at a location between wells J and E, two of the existing Lower A sand penetrations.

