

Productivity Is in the Process

World Energy Monthly Review talks to Allen Howard, president and CEO, NuTech Energy Alliance



World Energy Monthly Review: Let's begin with an overview of your company.

Howard: NuTech Energy Alliance was formed in 1998 in Houston, Texas. Our initial product was a petrophysical model that used conventional logging data to provide simulated magnetic resonance outputs. Magnetic resonance technology was introduced to the industry in the early 1990s and became a valuable tool in identifying key information such as irreducible water and movable fluid – the fluid in the pore space that has the ability to move and connect to permeability.

Through several generations of product development, NuTech has advanced our technology to a full spectral look. Our primary product, NuLook Textural Vision (NTV), provides a complete petrophysical picture by complementing conventional log data with a process-controller pore size distribution for a quantified textural permeability plus a risk-assessed petrophysical analysis. Adding the textural dimension allows our customers to see productive intervals more clearly and accurately.

With NTV as our focal product, we have added several new product lines that utilize NTV's textural attributes. Our NuStim Stimulation Vision product provides optimal well completion techniques, predicting corresponding hydrocarbon rates and enabling selection of the best procedure for a company's economic parameters. Our NuView Reservoir Vision product incorporates our NTV outputs into a field-wide 3D platform, providing comprehensive understanding of the reservoir.

World Energy Monthly Review: You appear to take a process-driven approach to your business systems.

Howard: Yes, all three business units are built around our process-oriented approach. NTV, as our primary product, provides critical outputs necessary for our other products, NuStim and NuView.

Our goal is to arrive at a complete understanding of the reservoir we are evaluating, the effective porosity relationships of the rock, and the conductive and nonconductive relationships within its pore space. This "reservoir" approach is what we refer to as "NuVision." We have found this approach to be quite effective in evaluating older, existing fields. We believe, as we expand domestically and internationally, a complete NuVision package will become our primary product offering.

World Energy Monthly Review: How does NTV contribute to estimated production rates?

Howard: Taking our outputs from NTV, we identify key information necessary for the completion design such as permeability, water contact, and where the proposed stimulation will migrate within the structure. Our program calculates the potential production results for up to 30 completion scenarios, selecting the design strategy that achieves optimal rate while staying away from water zones and is the most cost efficient. By incorporating our NTV outputs into this process, we are able to predict potential production rates under each completion scenario with a high degree of accuracy. This is all done on a very fast turnaround to enable our customers to make decisions quickly.

World Energy Monthly Review: Is there an area or play that responds especially well to your process?

Howard: Our technology covers the spectrum of every major basin in the world, including complex basins with carbonate environments. This fall we will release a new product, the NuPlex carbonate solution, which evaluates dolomites and limestones in a whole new way versus current conventional evaluation methods. NuPlex will take us into markets where complex rocks have traditionally been difficult to evaluate.

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