SPE Distinguished Lecturer Mayank Malik from Chevron Energy on 23<sup>th</sup> January 2017 at 13:00 hrs, room 106, 1<sup>st</sup> floor, A-4, AGH University of Science and Technology, Krakow, Poland





Mayank Malik is the global formation testing expert at Chevron Energy Technology Company and is a champion for advancing research on microfracturing.

He holds a BS degree in mechanical engineering from Delhi College of Engineering, an MS degree in mechanical engineering from University of Toronto and a PhD in petroleum engineering from the University of Texas at Austin.

Malik has authored numerous papers on petrophysics, formation testing, and microfracturing. He serves on the SPE Reservoir Description and Dynamics advisory committee and is the chairman of the SPWLA Formation Testing Special Interest Group.

## **Abstract**

## "How Can Microfracturing Improve Reservoir Management?"

Microfracturing is an excellent method of obtaining direct stress measurements, not only in shales but also in conventional reservoirs. Recent advances have shown that microfracturing can help improve reservoir management by guiding well placement, completion design, and perforation strategy.

Microfracturing consists of isolating small test intervals in a well between inflatable packers, increasing the pressure until a small fracture forms and, by conducting a few injection and shut-in cycles, extending the fracture beyond the influence of the wellbore.

This talk describes the microfracturing process and presents several examples that led to increased hydrocarbon recovery by efficient stimulation and/or completion design.

Case studies presented range from optimizing hydraulic fracturing in unconventionals, determining safe waterflood injection rates in brownfields, and improving perforation placement in ultradeepwater reservoirs.