

Rafael Sandrea is President of *IPC Petroleum Consultants, Inc.*, a Tulsa based international petroleum consulting firm which specializes in oil and gas reserves appraisals and risk analysis for international upstream petroleum investments. He is very active giving Webinars, Masterclasses online, and speaking on the themes of reserves, IOR/EOR, shale oil and gas assessment, and global oil & gas supply, around the world.

Dr. Sandrea is a life-member of the SPE, and member of the UN Ad Hoc Group of Experts on Fossil Resources – Geneva. He has published over 40 technical papers covering areas such as risk analysis for international upstream petroleum investments; appraisal of global oil and gas reserves – conventional and unconventional; development of algorithms for estimating the production capacity of new oil and gas fields, for estimating the reserves of mature oil & gas fields; global offshore oil reserves potential; assessment of global oil and gas resources, and their potential for enhanced oil recovery – EOR. Together with Dr. Ralph Nielsen, he has published the book: "Dynamics of Petroleum Reservoirs under Gas Injection", Gulf Publishing, which has been used in petroleum engineering schools worldwide. He recently co-authored the book: "Mexico-History of Oil Exploration", PennWellBooks.com, Sept. 2018. He is a member of the Penn Energy Research Emissary expert marketplace program: info@emissary.io.

His latest research reports: "U.S. Crude Oil Production Potential: A Stochastic Outlook through 2030", July 2012; "Comprehensive Assessment of World Crude Oil Supply through 2030", March 2012; and "An In-Depth View of Future World Oil & Gas Supply – A Production Capacity Model" – 2011, are available through PennEnergy's Oil & Gas Journal Research Center: www.PennEnergyResearch.com. Search for "crude oil supply". Several of his articles have been featured in *CNN Money, Finding Petroleum.com*, *Seeking Alpha.com*, and *Petroleum World.com*. They are available on *IPC's* website: www.ipc66.com. He has also written several Blogs for The Financial Times, PennEnergy Research Center, and MIT. He holds a PhD in petroleum engineering from Penn State University.