Thank you for your interest in our course “How to Lead in Deepwater Exploration and Production” at IMAGE ’23 in Houston. Our team of co-instructors had a vision for this course after writing “Deepwater Sedimentary Systems: Science, Discovery and Applications” (Elsevier, 806 p.) and “The Explorer’s Mindset” (estimated publish date August 15, 2023; Amazon KDP, 333 p.), realizing that the industry needs to keep producing good leaders over the next decades to ensure future resource discovery and development. This course prepared for IMAGE ’23 and sponsored by AAPG is based on the learnings described in the two books as well as several other professional and academic courses taught by the instructors at supermajor companies to universities (detailed below in instructor biographies).

In this course, we show how world-class leaders can provide huge value creation in terms of monetary, society and humanitarian growth. Overall, this course is designed to provide effective leadership skills for application in a variety of exploration and production scenarios. While developed based on the instructors’ experience in the oil and gas industry, the lessons are broadly applicable in a variety of resource and technology-based industries. Please see the outline below:

- Welcome, introductions and scope of course (JR)
- Theme I: Lessons in Leadership in Applied Geosciences, with a focus on Deepwater (JR, RW)
- Theme II: The Explorer’s Mindset (CAY, RAS)
- Theme III: Power of the Team: Team Organization and Building (LG, LF)
- Theme IV: The Business of Deepwater (RAS, LF, CAY, RW)
- Theme V: History of the US Deepwater Gulf of Mexico: How the GOM Inspired Exploration Success on a Global Scale (CAY, RAS, LF)
- Theme VI: Honest and Constructive Performance Dialogue (RW, LG, LF)
- Theme VII: Integrating Geoscience and Engineering Roles for Better Delivery of Projects Offshore (LF, RAS, CAY, RW)

The beginning of the course, Lessons in Leadership, focuses on several key attributes of leadership in exploration: the pioneering spirit, explorer’s mindset, power of the team, excellence in applied research and business acumen. Case studies from the newly published books show the diversity of leadership principles that enable discovery and prosperity. Next, the Explorer’s Mindset, based on an AAPG Distinguished Lecture and Houston Explorers Club keynote by Cindy A. Yeilding, illustrates how explorers think differently to make giant discoveries. The Business of Deepwater, based on multiple recent short courses and industry panel discussions led by Richard Sears, describes the gamechangers that set deepwater apart from other oil and gas asset classes. This theme also demonstrates why deepwater is no different from other parts of a company’s portfolio and must compete for investment. For Theme V, the US Deepwater Gulf of Mexico has been a testing ground for technology, play types and engineering breakthroughs for more than 50 years. This part of the course shows how leadership played a role in those industry “firsts” and how these successes continue to inspire discovery on a global scale. Honest and Constructive Performance Dialogue demonstrates how healthy conversations can lead to better team performance. This section includes best practices for leading up, down and peer-to-peer. Integrating Geoscience and Engineering Roles for Better Delivery of Projects Offshore shows the perspective of how executives in the roles of geoscience and engineering work together for success in large offshore projects. The course concludes with additional Q&A and discussion of some of the case studies. Brief exercises are
incorporated through the course to illustrate concepts and prompt deeper discussion between instructors and participants.

Following the instruction part of the course, a book signing session will be held for “Deepwater Sedimentary Systems: Science, Discovery and Applications” and “The Explorer’s Mindset.”

Instructor Biographies

**Lori Fremin** is the President and General Manager for HC Manvel, Inc and Haltermann Carless. In her current role, she is accountable for delivering the strategic value and manufacturing results in the US. She is also the Chairman Emeritus for the Board of Directors of the Energy Education Foundation. This is a nonprofit that promotes energy awareness, provides energy-based STEM education to schools, teachers, and students across the US, recognizes “Hall of Fame” technology and seeks out to honor the pioneers of the energy industry.

Prior to her current roles, she was the General Manager of Disruptive Thinking for Global Deep Water (DW). Her remit was to research to understand how DW, Shell, will thrive through the energy transition. In her previous role, Ms. Fremin was the General Manager of Surface Engineering in the Gulf of Mexico. She was responsible for safely and sustainably delivering the surface technical and operational engineering needs for all of Shell’s DW Gulf of Mexico Assets.

Throughout her over 29 years in Shell, she has held technical, commercial, and operational leadership roles, worked short-term assignments in Aberdeen, Rijswijk, Perth, and a long-term one in Calgary, and held roles that covered Brazil, Venezuela, Argentina, Nigeria, and Malaysia. She worked in the DW, shale gas and unconventional oil businesses for over 25 years after spending her first 4+ years in Shell Chemicals. She is married and proud of their two engineering college students and their oldest, who is now working as an engineer.

**Lisa R. Goggin** is currently with Chevron Corporation in Houston, Texas. She joined the company 25 years ago after completing her Ph.D. in geology at Indiana University. Her technical responsibilities have included the planning and completion of exploration and development wells in both deepwater and deltaic environments, lease sale evaluations in the Gulf of Mexico and Africa, instructing deep and shallow water field and digital technology schools, and patenting new research and development concepts. She is currently part of a digital team on assignment as a digital product owner managing the transition of Chevron’s geologic interpretation tools into cloud-based systems. She is an advocate of volumetric interpretation and 3D visualization and her most recent research focuses on the application of artificial intelligence to seismic shale analysis and the use of clastic computational stratigraphy to enhance exploration and development outcomes in clastic fields. She is actively serving on AAPG convention organizing committees, is a former AAPG Distinguished Lecturer (2019-2020) and a former Board Member of the National Cave and Karst Research Institute.

**Jon R. Rotzien** is President of Basin Dynamics and Adjunct Professor at University of Houston. He specializes in reservoir presence and quality forecasting in conventional and unconventional drilling programs. Prior to his present posts, he served BP and other supermajor and
independent operators in a variety of basins and petroleum reservoir technical training programs. As a business owner and scientist, Rotzien has participated in oil and gas exploration to development drilling, mapping expeditions, technical competency training and consulting and has served as lead geologist in about one-third of those ventures. He is currently serving as Chair of the Houston Explorers Club. Rotzien received a Ph.D. in Geological Sciences from Stanford University and a B.A. degree in Geology from Colorado College.

Richard A. Sears is an independent consultant and Gamechanger at Leading Energy Now. Formerly he was adjunct professor in the Department of Energy Science & Engineering at Stanford University, where he developed and taught courses in energy systems, economics, and oil and gas exploration technology. He was appointed as a member of the Ocean Energy Safety Advisory Committee for the U.S. Department of the Interior in 2011. For the National Academies of Science, Engineering and Medicine, he previously served as the chair for the Committee on the Application of Real-Time Monitoring of Offshore Oil and Gas Operations, chair of the Committee on Advancing Understanding of Offshore Systemic Risk in the U.S. Gulf of Mexico, member of the Committee on Modernizing the Offshore Oil and Gas Inspection Program, and as a member of the Committee on Options for Implementing the Requirement of Best Available and Safest Technologies for Offshore Oil and Gas Operations. He also served as the chief scientist and senior technology adviser to the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling that was established by President Obama in May 2010. Mr. Sears had a 33-year career with Shell Oil Company and Royal Dutch Shell, where he acquired significant domestic and international experience in the upstream oil and gas industry. His technical and managerial positions included exploration geophysicist, technical instructor, economist, strategic planner, and general management. His managerial positions ranged from exploration and research to fully integrated exploration and production business management, and his responsibilities have included business planning and forecasting, financial responsibility, and staff planning, development and recruitment. Between 1999 and 2005, Mr. Sears was a vice president for Royal Dutch Shell, where he was responsible for global deepwater technical services. Between 2006 and 2009, Mr. Sears worked as the external research coordinator for the Shell Group and was appointed a visiting scientist at the Massachusetts Institute of Technology (MIT). In this position, he was responsible for managing Shell’s energy research activities at MIT and other key U.S. universities and for integrating external research objectives with internal technology strategies. While at MIT, he was an active participant in the campus-wide Energy Initiative, carried out applied research in energy systems, taught and contributed to courses in several departments, and served as a liaison between the MIT Energy Initiative and oil companies. Mr. Sears is the author of numerous external and internal publications. He received a B.S. in physics from Stanford University and an M.S. in geophysics from Stanford University.

Ryan Weber is currently the Business Development Manager for North America for Petrostrat. Prior to Petrostrat, Ryan was President of Paleo-Data, Inc.; a biostratigraphic consulting firm serving the Oil & Gas sector for over 50 years. Ryan previously worked for BP as a Gulf of Mexico biostratigrapher. Ryan hails a BS and Education certificate from Minnesota State at Mankato, and an MS from the University of Nebraska at Lincoln. Ryan also served as the Earth Science Section Chair for the Nebraska Academy of Sciences. Ryan’s career has applied
biostratigraphy from onshore to deepwater Gulf of Mexico, the interior USA, Egypt Nile Delta, Northwest Australian shelf, offshore Mozambique, Colombia, Alaska, and the Spanish Pyrenees. Ryan’s passions include Miocene and Wilcox stratigraphy, Mesozoic paleooceanography, the Minnesota Twins, nostalgic comedies, and fermentation.

Cindy A. Yeilding joined the Board at Denbury in March 2021, bringing more than 35 years of experience as a technical expert and leader in the oil and gas industry. Ms. Yeilding is also an expert in sustainability, climate risk, and energy transition. She was the chair of a working team that delivered the 2019 National Petroleum Council study and report on Carbon Capture, Use, and Storage, creating a roadmap for its application at scale in the U.S. She is a board member and Vice Chair of The Center for Houston’s Future, where she focuses on energy transition, healthcare, and immigration. Ms. Yeilding is also an instructor and co-developer of the University of Houston’s Carbon Capture, Use, and Storage executive education course.

In terms of operational and technical expertise, Ms. Yeilding was a key leader in delivering BP’s deepwater Gulf of Mexico upstream portfolio, resulting in over 2 billion barrels of oil equivalent discovered and the creation of one of BP’s core businesses. She also transformed BP’s geoscience technology and research program by developing cutting-edge geophysics and a digital high-performance computing center, leading to significant additions to BP’s resource portfolio.

Ms. Yeilding has extensive board experience, including serving as a Director, Vice President, and Executive Committee member of BPX&P, the multi-billion dollar Gulf of Mexico subsidiary of BP. She was also a Director (at-large oversight role) of the BP America Board, where she led the development of BP America’s Ethics and Compliance Committee. Additionally, she served as a Director for BP’s onshore production business, BPAPC.

Ms. Yeilding is an accomplished academic and author with more than 100 publications on geoscience, CCUS, and energy transition, including the textbook, Deepwater Sedimentary Systems. She was named the AAPG Distinguished Lecturer on Energy Transition for 2022-2023, the Michel T. Halbouty Lecturer for 2022, and gave the keynote address at the AAPG CCUS Conference in 2021. Ms. Yeilding has also received numerous awards for her leadership in the energy business, including being named one of Hart Energy’s “25 Most Influential Women in Energy.” She holds a Bachelor of Science in Geology from Southern Methodist University and a Master of Science in Geology from the University of North Carolina.