

# Capabilities of Endeavor's Arctic Advisory Team



*Photo source: U.S.C.G.*

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**Endeavor**

# Capabilities of Endeavor's Arctic Advisory Team

## Background

The arctic environment is high risk/reward. To meet our clients' needs, Endeavor Management has assembled a very experienced team to support arctic assessment, strategy and operational activities. Our Expert Advisory Group includes individuals with substantial experience with arctic operations, regulatory issues, and strategy development.

The purpose of this offer is to introduce the members of Endeavor Management's Arctic Team, and the experience they bring with them to the Team. Experience totals across the team:

- 100 years of experience in high latitude (Arctic) design engineering, and marine logistics and emergency response operations, principally for the US Coast Guard
- 450 years of experience – excluding Arctic – in marine operations, emergency response, regulatory compliance and logistics management, principally for the Coast Guard
- 450 years of experience in engineering, design and delivery of major projects for drilling, engineering and constructions contractors
- 80 years of experience in engineering and managing major projects for oil and gas operators

Endeavor Management considers that this team can provide invaluable advice to companies (be they oil and gas operators, non-operating partners, or key contractors) who are involved in or planning to be involved in the development of oil and gas resources in the Arctic regions.

Whatever your requirement, whether review and critique of company plans or project support for specific tasking, **Endeavor Management's Arctic Team** stands ready to assist.

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## Arctic Team Members

### E. Kurt Allbaugh, P.E.

Kurt Albaugh is a project and operations oriented professional with international and domestic Oil & Gas experience in upstream and midstream areas. Over 15+ years of experience working directly for Operators in various roles as a Manager, Project Manager, Team Lead and Sr. Engineer. Recognized as a Manager who can build teams to provide a Project Management approach to the project in order to help deliver the project on time and under budget. Passionate about developing a strong team with efficient processes that can produce high quality reports and other deliverables that will enable the project to be successful using a collaborative approach. Mr. Albaugh holds a Masters of Civil Engineering from Rice University, Houston Texas and a Bachelor of Civil Engineering from Youngstown State University in Youngstown, Ohio.

### Bruce Crager

Bruce Crager is Executive Vice President of Endeavor Management and leads the firm's group of Expert Advisors which have a focus on Offshore, Subsea and Marine activities. He has 40 years' experience in offshore drilling and production, primarily in management positions. This has included significant experience evaluating and providing all types of field development solutions, particularly those based on floating production systems and subsea production equipment. Bruce joined Endeavor in 2010 and is responsible for the development of an experienced team to support clients in the areas of strategy development, organizational change/development, decision analysis, and in technical areas such as field development planning and operational improvement. Since joining Endeavor, Bruce has consulted for many clients, including Addax Petroleum, Afren, Audubon Engineering, Barra Energia, Cal Dive, Cameron, ENI, Maersk Oil and Gas, Petrobras, Pemex, Ridgewood Energy, Shell and VAALCO Energy.

### Dave Edwards

Dave Edwards is a technical advisor and project manager with diverse global experience delivering major upstream Oil and Gas projects. Dave has extensive experience in deepwater field development and has served as the project manager on a number of \$1-5billion+ CAPEX projects in a variety of international environments, successfully managing key internal and external stakeholders. In his 33 years at Shell, Dave developed new engineering concepts and processes that resulted in significant cost savings from improved efficiency, competition and safety. In addition, Dave successfully managed large and diverse owner teams and improved relationships with government mandated contractors, while meeting project objectives in locations that can be politically and economically challenging. He has a Ph.D. in Mechanical Engineering from Nottingham University (UK).

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### **Rear Admiral Jeff Garrett, USCG Retired**

Jeff Garrett has over 39 years of broad maritime experience, with 31 years as an officer in the U. S. Coast Guard. He has extensive experience in high latitude operations and support, both in the Coast Guard and as an independent maritime consultant. As the commanding officer of polar icebreakers, he was responsible for the conduct of research in the Arctic and Antarctic, logistics missions, and ship escorts through the ice. He held staff positions in vessel traffic control, operations management, planning, programming, and budgeting. Since retirement from active Coast Guard service at the rank of Rear Admiral, he has been involved in studies of Arctic requirements for the National Academy of Sciences, has consulted on Arctic operations and assets, and has served as a shipboard ice advisor in the Antarctic and Northwest Passage. He holds a Master of Science in management from the U.S. Naval Postgraduate School and is a graduate of the Industrial College of the Armed Forces.

### **C. Tracy Harris**

Tracy has over 32 years of experience in the offshore industry and is a registered professional engineer in California, Louisiana and Florida. He joined Shell Offshore in 1983 and worked as a project engineer in New Orleans on a variety of projects including the Boxer platform as site fabrication engineer and as the Bourbon platform remediation lead. He transferred to Alaska in 1989 to lead the oil spill response program in support of exploration efforts in the Chukchi Sea, which received the first CARE award from the MMS. Tracy transferred to Shell's deepwater design group in 1991 and worked on a variety of deepwater projects including Auger Topsides re-analysis, Mars Topsides Structural and Integration design lead, Salsa platform design lead, Spar to Catalog readiness team leader, single concept selection team leader for Bonga and Nakika Construction team leader. In 2002, he became the Engineering Manager Construction – EP Projects and managed project construction teams on a variety of deepwater developments including Bonga, BC-10, Perdido and Gumusut-Kakap in Malaysia. Tracy rejoined the Alaska effort in 2013, as the Engineering & Construction Manager for Arctic projects. He supported a number of efforts enabling Shell's return to the Chukchi Sea in the summer of 2015, and safe demobilization following the 2015 drilling season. He holds a Master of Engineering in Ocean Engineering from University of California, Berkeley and a Bachelor of Science in Mechanical Engineering from the University of New Hampshire.

### **Peter G. Noble**

Peter Noble is naval architect and ocean engineer with a wide range of expertise and experience in the marine and offshore industries. His career has included positions with shipyards; with ship and offshore design consultants; with offshore and marine research and development companies; with major classification societies and, prior to his retirement from full-time employment in 2013, as chief naval architect and chief arctic technologist with the international oil company, ConocoPhillips, prior to his retirement from full-time employment in 2013. Peter's early career gave him insight into the Canadian marine and shipbuilding industries while he served in various roles in Vancouver, Ottawa, Dartmouth, and Calgary, and subsequently he has obtained unique experience in the international arena while employed as Vice President, Engineering with ABS, a leading ship classification society,

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and, as mentioned above, as Chief Naval Architect for a major international oil company. This work included ship design and construction projects in the US, Europe, South Korea, China and Singapore. These projects included involvement with the construction of 5 high specification tankers for the Alaska, North Slope trade in a US shipyard, 10 of the world's largest LNG ships and the construction of 3 high ice class 70,000 ton dwt. icebreaking tankers in Korea plus two icebreaking ships in Singapore, for year round operation in the Russian Arctic. He undertakes consulting and advisory assignments internationally in the fields of offshore, marine and Arctic technology and engages in lecturing and supporting student and young professional activities on global basis. He is an active member of a number of advisory boards at universities teaching naval architecture and ocean engineering. He has received multiple awards and distinguished recognition for his contributions and publications. Peter earned a Bachelor of Science in Naval Architecture from the University of Glasgow in Scotland, United Kingdom.

### **Captain Dan Oliver, USCG Retired**

Daniel Oliver has over 34 years' experience in maritime industries. He retired from the USCG at the rank of Captain with broad experience in naval engineering ashore and afloat. His shipboard tours were aboard a variety of cutters, but predominately polar icebreakers in both Polar Regions where he has extensive experience with operational and logistic planning. His naval engineering tours were in acquisition support for numerous ship construction projects, fleet sustainment planning, and major overhaul projects. Since retiring from the USCG, he has been the Project Manager for the University of Alaska Fairbanks in charge of building an ice-classed oceanographic research ship funded by the National Science Foundation. After delivery of the ship in early 2013, Daniel will manage the ship's operations as part of the United States academic oceanographic research fleet.

### **Commander Bill Reicks, USCG Retired**

Bill Reicks has 31 years' experience in shipboard Naval Engineering & Mechanical Systems Design, Procurement, Maintenance, and Support. Of this, 10+ years' experience is specific to high latitude areas, including icebreaker design. Bill was the US Coast Guard's on site design and construction engineer for Coast Guard icebreaker Healy. Healy is a high-performance Arctic science research vessel and the first US flag vessel with an integrated diesel electric power plant with variable frequency A/C drive. Bill is familiar with the maintenance and repair of high latitude assets, operational support and logistics, and low emissions diesel engines. His broad experience outside of high latitude areas includes Project Management, Reliability Centered Maintenance, FMEA, and design of mechanical and electrical systems for shipboard applications. Bill is a registered P.E. in California and Texas and holds Masters Degrees in Mechanical Engineering, Naval Architecture and Marine Engineering from the University of Michigan.

### **Timothy E. Ritz**

Tim Ritz has over 30 years' maritime experience spanning six of the seven seas, including 15 years at sea, and 20+ years ashore in various leadership positions. From 1987 to 2000, Tim was employed by Alcoa Steamship Company, the marine transportation arm of Alcoa, lastly as Manager of Bulk Trades.

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From 2001 to 2005 Tim was employed by BP Shipping (USA) initially as a Chartering Specialist and in 2003 he was named Regional Marine Superintendent Americas responsible for tanker operations and crisis management in the Western Hemisphere. In 2005, he managed the first Gulf of Mexico shuttle tanker operations. From 2006 to 2010 Tim was employed by BP North America in various operational assurance and commercial marine roles including Marine Operations Manager and Marine Performance Manager for the Gulf of Mexico Exploration and Production business unit and Marine Authority for BP Canada. Additionally, Tim acted as the Vessel Demobilization Program Manager for the Macondo Incident response fleet on behalf of BP in 2010. Since 2011 Tim has been actively representing Oil Majors managing offshore contractor HSSE for marine seismic exploration worldwide. Tim has extensive upstream and downstream experience in marine operations, chartering and risk management, both foreign and domestic. He holds a Bachelor of Science in Marine Transportation Management from the State University of New York, is a graduate of the George Washington School of Business (Project Management) and maintains multiple USCG Licenses including Master and First Class Pilot Any Gross Tons.

### **George Rodenbusch**

George Rodenbusch is a multifunctional professional with more than 35 years of experience in offshore oil and gas activities, including basic research in the analysis and design of floating systems and extensive experience evaluating, selecting, and delivering field development solutions for deepwater basins around the world. George's industry experience includes over 30 years with Shell. As Global Discipline Head for Offshore Engineering he was responsible for developing and maintaining the worldwide health of the offshore engineering disciplines in Shell including offshore structures, subsea systems, pipelines, metocean criteria, and coastal and onshore civil. He developed a benchmarking system for use in making deepwater production subsystem costs visible with the aim of driving down costs. He holds a PhD in Oceanographic Engineering from MIT and a Bachelor of Science and Masters in Mechanical Engineering from Rice University.

### **David Tuturea**

David Tuturea has 41 years engineering and management experience related to global oil and gas developments. This includes lead and management positions on major offshore and onshore projects in the North Sea, Asia, US and Canada with Brown and Root (now KBR) and ConocoPhillips. He has been involved in all phases of oil and gas developments from concept selection to start-up and hand-over to operations. David's experience includes frontier development concepts such as tension leg platforms, subsea storage systems, offshore Arctic production and transportation infrastructure, floating production systems and in-situ tar sands production.

### **Joseph White**

Joseph White has over 40 years of hands on technical support and engineering design experience of which 25 years has been Arctic related obtained while serving on the technical staff of vessel owners and operators. This has included modifying and upgrading existing vessels for ever-increasing water depths and challenging environments in order to maintain their ability to continue Offshore Oil and

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Gas Drilling and Production Operations. Joe also participated in new Design and Construction Programs, modifying vessels for utilization in Production Operations, and maintaining Regulatory Compliance Approval for a fleet of vessels. As a Naval Architect serving on the staff of Contract Drilling Companies in his years of serving in the offshore oil and gas industry Joe has over 25 years of design, engineering, Regulatory Compliance, and operational support for Arctic Capable and classed drilling vessels including new design as well as upgrades to drillships and self-propelled semisubmersible vessels. His Arctic experiences began with his performing an independent in-house evaluation of the Ocean Ranger tragedy for Odeco, and continued throughout its new design and new build programs, one of which was the Ocean Odyssey which drilled in the Bering Sea incident free. Joe has a degree in Naval Architecture from Mississippi State University.

## Additional Arctic Capabilities

Endeavor has assembled a team of individuals experienced in a variety of Arctic OCS operations, logistics, equipment technology and regulatory affairs. The team includes experienced personnel from the US Coast Guard as well as international Operators and service companies.

The team's complementary expertise is available to support Arctic OCS oil and gas activities, including:

- Oil spill response planning
- High Latitude Service
- Ice Management
- Icebreaker design review and selection
- Regulatory compliance and standards review
- Stakeholder relations with native near coastal communities
- Regulatory compliance, approval and oversight
- Vessel and equipment design and operation
- Operations and logistics
- Emergency response, policy, and procedures

The team's background is particularly suited for providing independent 3rd Party Guidance, Oversight, and Overview Services including:

- Review, critique and recommended improvements
- Evaluations for effectiveness of internal oversight and monitoring of Arctic OCS projects and programs
- Support in engagement with regulators

## Capabilities of Endeavor's Arctic Advisory Team

### Professional Fees and Expenses

Endeavor Management uses a number of contract models for its consulting services, of which the following may be the most appropriate for the Arctic Team:

- Reimbursable consulting services at hourly or daily rates.
- Retainer based consulting services, with a monthly fee for services based on an estimated number of hours per month.
- Retainer (monthly fee) to assure availability of Arctic Team when needed, with hourly rates for consulting services called off by client.

These models by no means exclude others proposed by prospective clients.

### Contact

Should you have any questions or need additional information regarding the Arctic Team, please contact me at 713-459-1215.

We look forward to working with you in the future.

Bruce Crager  
Executive Vice President  
Expert Advisory Group  
Endeavor Management

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