



## INTRODUCTION OF KEY STAFF

### COMPANY OVERVIEW:

Zentech, Inc. is a Houston based marine engineering, naval architecture and design software consulting firm specializing in the offshore oil & gas and the renewable energy industries. The company owns proprietary designs for new build drilling rigs, as well as its patented ZAIMS™ (Zentech's Asset Integrity Management Solution). In addition, Zentech has a track record of performing over a hundred rig and vessel conversions, repairs and upgrades. The company has a thirty-five year history of providing innovative engineering solutions, and employs a professional staff of over 160 in seven international locations.

Zentech's expertise encompasses dynamically positioned semi-submersibles, drillships, jackup drilling units, barges, fixed offshore platforms, fabrication yards, floating production systems, risers, pipelines and offshore wind farm monopile and tower designs. The company's primary disciplines include structural engineering, naval architecture/marine engineering, mechanical and electrical engineering, as well as a wide range of proprietary engineering software. Zentech owns five state-of-the-art jackup drilling and wind farm support vessel designs. The company also owns two existing vessels, a semi-SWATH and a marine crane barge that are ideally suited for support duties in the oil and gas or offshore wind farm sectors.

### SENIOR MANAGEMENT:

Mr. Ramesh Maini has served as the president since Zentech's inception more than 35 years ago, and is one of the founding partners. He has substantial experience in the design, construction supervision and rig moves of jackup drilling rigs. Mr. Maini was the principal architect in the design and construction of the jackups "Dyvi Beta" and "Dyvi Gamma" for Norwegian drilling contractor Dyvi A/S, which in 1977 were the largest jackups capable of operating in the North Sea. He was also responsible for the engineering and construction of two new mat supported jackup drilling rigs, which are presently operating in the Gulf of Mexico and offshore Angola. As president of Zentech, Mr. Maini has been involved with major design modifications and enhancements of over 100 jackup drilling rigs, MOPUs and MSVs.

Dr. S. Rao Guntur is the executive vice president and one of the founding partners of Zentech. He has vast experience in the design, analysis and software development for offshore and onshore oil & gas vessels/structures. In addition, he has extensive experience in the design of mooring systems, riser analysis and on-board load and stability tools for offshore vessels. Dr. Guntur has been actively involved in the design of offshore drilling rigs, platforms and support vessels using sophisticated analytical tools. He has worked on ships, jack-up, and semi-submersible drilling rigs, on piping flexibility analysis and marine pipe laying analysis and design. Dr. Guntur is responsible for the creation of the patented ZAIMS™ (Zentech's Asset Integrity Management Solution). He directs Zentech's proprietary tools to enhance the life of existing offshore platforms using risk-based analysis and inspection (RBI) techniques. He also has management responsibility for the India and Mexico offices. Dr. Guntur holds a Ph.D. in civil engineering.

Dr. Partha Chakrabarti serves as the vice president of engineering at Zentech, and brings over 45 years of professional experience, 40 of which are in the offshore oil and gas industry. His responsibilities include leading a team for design, engineering and technology development in floating and fixed offshore structures, preparation of proposals, project direction and a client liaison. Dr. Partha's expertise encompasses performing analysis and design of jackup rigs, semi-submersibles, barges, drillships, and other floating structures such as TLPs, deep-draft floaters and FPS units. He also directs the team performing fatigue, seismic, pushover and finite element analysis, dynamic analysis of flexible and rigid risers, motion and mooring analysis of floating structures. He is a member of ASCE, ASME and holds a P.E. certification in Texas, and serves as sessions chair & co-chair for the annual OMAE conferences. He holds a Ph.D. in Structural Dynamics.

Mr. Sundaram "Sundy" Srinivasan is the vice president of Zentech. While his role extends across a variety of business requirements, his main focus is strategic company growth, marketing and sales. He has over 30 years of management and leadership experience in the oil and gas industry, with strong customer orientation skills and ability to harness value from diversity developed by working around the world as drilling contractor, project manager, downhole services provider and consultant with most of the major oil companies. He has an excellent understanding of the integrated oil and gas value chain acquired through experience in a senior leadership role in an oil and gas operating company. He has created, led and managed large teams in high-pressure situations and high visibility profit centers. He started business for a drilling contractor in two countries, Vietnam and Denmark. He has lived and worked in over 12 countries and is fluent in various languages. Mr. Srinivasan holds a degree in engineering from the Indian Institute of Technology (IIT), Delhi, and an MBA from the Sloan School of Management, Massachusetts Institute of Technology (MIT), Cambridge.

## **ENGINEERING MANAGEMENT:**

Mr. Bill Stone has been the principal engineer at Zentech since his arrival in 1996, and has over 30 years of experience in the offshore drilling industry. He was previously area manager for the Gulf of Mexico with Zapata Offshore Drilling Company, where he supervised their entire fleet of rigs, including jackups, semi-submersibles, submersibles and platform drilling rigs. Mr. Stone is highly sought after for his extensive knowledge of drillings, particularly electrical designs.

Mr. Don Ladd has served as Zentech's director of CAD services for the past 22 years, and brings over 30 years of hands-on experience in the drilling industry. He supervises a team of designers who implement the detail design of rigs. Mr. Ladd has been actively involved in the design, detailing and construction support of numerous drilling rigs during his time with Zentech which includes Zapata Offshore and Reading & Bates Drilling Company (now Transocean).

Mr. Paul Barker serves as a project and construction manager and brings over 40 years of both in house and hands-on experience in material procurement, estimating, budget/cost control, field surveys, and checking/review/editing of construction drawings. Mr. Barker has strong familiarity with several software packages and is adept at preparing shipyard estimates, and budgets. He is also skilled in field surveying and analysis of existing conditions of jackups, semi-submersibles, drillships, barges, platform rigs and construction vessels, in order to determine the feasibility of redesigning.

Mr. Sharma Mukkamala is senior structural engineer with project management responsibilities. He has intimate knowledge of jackup drilling rigs, semi-submersibles, deep-draft floaters, barges, platform rigs and jacket structures, and has also worked on several arctic class land rigs. Mr. Mukkamala has extensively used finite element software for linear and nonlinear static, dynamic and stability analysis. He holds an M.S. in civil structural mechanics and civil engineering.

Mr. David Reynolds is the company's lead piping designer, with over 31 years of experience in this field. In addition to his own expertise in PDMSA, Solid Works and AutoCAD, Mr. Reynolds supervises a staff of piping related designers for the production of piping arrangements, isometrics and pipe support drawings for client related projects.

## **PROJECT MANAGEMENT:**

Mr. SriKrishna (Krishna) Muralidharan is currently vice president of projects, with a proven record of successfully guiding the company through diverse projects in the U.S. and internationally. Mr. Muralidharan brings a broad background of experience in senior project management with Zentech. He has led major projects with our client, Kiewit, during the construction of a bridge in Washington state, and the detail design and construction of three ultra-deep semi-submersibles with our client Noble Drilling in Southeast Asia. Mr. Muralidharan holds an M.S. in naval architecture, and has worked at Zentech for his entire career since graduating from Texas A&M in the 1990s.

Mr. Satyajit (Saty) Mukherjee is a senior naval architect with 29 years of experience at several shipyards and offshore construction companies around the world. Mr. Mukherjee has performed detailed engineering for ships and jackup rigs, dry-docking and upgrades of ships and other offshore construction vessels. His area of expertise involves the practical aspects of shipbuilding and the implementation of current maritime codes and regulations, including acting as a liaison with classification societies. In his present role as project manager for major engineering projects, he is responsible for jackup rig conversions, cantilever upgrades, upgrades/modifications of offshore derrick and pipe lay vessels and others.

Dr. S. Bharath has served as the principal structural and pipeline engineer since joining Zentech in 2006. He has more than 20 years of professional experience in the areas of offshore structural design and offshore pipeline design for the oil and gas, petrochemical and chemical industries. He recently led the team performing semi-submersible global strength redundancy and motion analysis, detailed structural design of upper and lower hull structures and components for a major vessel upgrading. Prior to joining Zentech, Dr. Bharath had extensive experience in engineering and project management, including the posts of lead engineer and head of engineering. He brings a vast range of professional and academic experience and credentials to his present duties with Zentech.

## **CONSTRUCTION SERVICES MANAGEMENT:**

Mr. Dale Payne is Zentech's manager of construction, and has more than 40 years experience in the construction of drilling rigs, both jackups and semi-submersibles. Mr. Payne was the lead person for the construction of jackups built by Marathon LeTourneau. He has complete experience in creating jigs for leg construction, leg assembly and modular construction of jackup rigs. He is skilled at estimating and pricing complete new build jackups. Mr. Payne lead a project as the construction manager for the conversion and upgrade of a ship to a FPO (Floating Production & Offloading) in a local shipyard. He is fluent in English and Spanish.

Dr. Crane E. Zumwalt brings more than 40 years of engineering and construction management experience to Zentech. He is a principal engineer with current responsibilities for mobile offshore drilling engineering and project management. Mr. Zumwalt has engineered and managed many projects for jackup drilling rigs, semi-submersibles and drillships. He has performed personal, hands-on oversight of dry-docking many rigs and has extensive experience in construction management for new build as well as upgrading existing rigs. He holds a Ph.D. in operations management from MIT, an M.S. in mechanical engineering and a B.S. in mechanical and ocean engineering. He is a registered professional (mechanical engineer) in Texas and a member of the ABS special committee on mobile offshore drilling units.

Mr. Benigno (Ben) Ramirez, Jr. has over 40 years of professional supervision in all aspects of the construction process for jackups, semi-submersibles and submersible drilling rigs. Mr. Ramirez has served as a Zentech construction manager since 2008, and brings a strong background that includes work at Marathon LeTourneau, AmFels, First Wave, Maersk Drilling and Zachry Construction. He has spent the past 15 years acting as construction superintendent for the new building of a jackup rig at a prominent Mexican shipyard. He is fluent in English and Spanish.

## **UNIQUE ATTRIBUTES OF ZENTECH:**

Zentech is one of the few engineering companies in the world that has worked on almost all classes of jackup drilling rigs. Many of those rigs have been enhanced through engineering provided by Zentech. A majority of the jackup rigs owned by ENSCO, Global Marine, Pride International and Noble Drilling have been upgraded by Zentech. The company designed “Rigmar 301,” as a special purpose jackup for service as a 240-person accommodations unit for the Norwegian drilling contractor Ocean Rig. This unit is today operating in the North Sea.

Zentech jackup units are designed with state-of-the-art engineering. The company has its own patented locking device, ZENLOCK™, which is designed to operate better than other existing designs. Zentech is one of the few engineering companies that will work with our clients through the construction phase of projects.

The company is currently supporting a new build construction contract for an order of two plus two of its patented R-550D jackup drilling rigs, rated for 400 Ft. (121.9m) water depth.

Zentech has also used the extensive experience and engineering knowledge of its professionals to conceive superior designs that are construction friendly and can be built at reduced costs for Zentech clients.

In addition to its superior rig designs, Zentech is unique in its range of services provided. This includes drilling rig upgrades, MOPU and FPSO conversions, MARPOL surveys, risk analysis, electrical surveys, sub-sea pipeline engineering, and deep-water

riser analysis, to name a few. The company's stability software is currently installed on over 250 vessels, and every SPAR in the world uses Zentech's mooring advisory system, ZenMAS™.

The reputation of Zentech and its capabilities can be confirmed by the company's large client base, which includes drilling contractors, oil companies and shipyards. Classification societies such as ABS and DNV can readily attest to the quality of design work performed by Zentech.