MARK A. STEVENSON, P.E.

SUMMARY OF EXPERIENCE

Over 35 years of offshore oil industry engineering experience including 27 years of subsea specialization. Project experience includes project engineering, design engineering, feasibility studies, cost estimates, field development planning, early production/marginal field production, commissioning and decommissioning of subsea production equipment, subsea control systems and umbilicals, flexible flowline/risers, and subsea pipeline and flowline installation and repair equipment, development of installation procedures and schedules, offshore supervision, and field engineering in domestic and foreign locations.

EDUCATION

Bachelor of Science, Mechanical Engineering, New Mexico State University, 1971

PROFESSIONAL REGISTRATION

Registered Professional Engineer, Texas – No. 42321

DETAILED PROFESSIONAL EXPERIENCE

Consultant

Working as an independent contractor to Chevron on a fulltime basis on the Blind Faith Project. This HPHT project is Chevron's deepest development (6,900 FSW) to date. Responsibilities began with acting as Chevron's subsea representative for the initial development concept screening studies and continued through FEED and project execution. I directed the engineering contractor's work which included developing the subsea architecture and functional requirements for the subsea control system and umbilicals so that development cost estimates could be prepared for use in concept selection. I was responsible for the umbilical supply contract from bid preparation through delivery, load out, and pre-commissioning.

Marathon Oil Co., Senior Staff Facilities Engineer

Staff engineering position providing subsea production, control system, umbilicals (including both metal tube and thermoplastic hose umbilicals), and floating production system expertise to Marathon's operating divisions worldwide. Responsibilities include providing cost estimates, conceptual designs, project engineering services, equipment specifications, supervision of third party consultants, and consultation regarding state-of-the-art in subsea trees, controls systems, umbilicals, flowlines, and pipeline repair systems. Experience ranges from conceptual design studies to field development for Marathon's subsea completion projects; including the Gulf of Mexico, Western Australia, the U.K., North Sea, and Ireland. Projects have included subsea completions on both subsea and mudline suspension wellhead systems. Duties included extensive assignments in Marathon's field offices, manufacturer's facilities, and offshore.

Lead Subsea Engineer for a Joint Study Team formed with BHP Billiton to perform conceptual development studies for the deepwater Neptune field in the Gulf of Mexico.
The subsea scope included developing the subsea architecture for long distance tiebacks to remote facilities and local production host scenarios. I directed the engineering contractor's work which included developing the functional requirements for the subsea trees, control system, umbilicals, and flowline tie-in equipment so that development cost estimates could be prepared for use in concept selection.

Project Engineer responsible for the subsea control umbilicals during the bid evaluation and manufacturer recommendation phase for the Corrib Project offshore Ireland. During the project

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implementation phase I was responsible for development of the quality and inspection test plans for the super duplex tubes and electrical cables for the umbilicals along with the contractors and the umbilical supplier.

Project Engineer responsible for the subsea control system and umbilicals for the preliminary engineering phase of the Canyon Express project. The project ties three fields into one pipeline and umbilical system. Marathon Oil Company operates the deepest, which lies in 7,200 feet of water. Responsible for directing the third party consultant for preparation of the umbilical specifications, bid review, and manufacturer recommendation. The 47-1/2 mile long umbilical includes super duplex steel tubes, electrical cables, and fiber optic cables.

Project Engineer responsible for the hydraulic/chemical and electrical umbilicals on the Troika project (operated by BP Exploration) in 2,700 feet of water in the Gulf of Mexico. Work included investigation of the failure of the super duplex umbilical tubes.

Subsea Engineer for the Talisman Field floating production development offshore Western Australia (Marathon's first subsea completion). Responsible for the two subsea trees, control system, and umbilicals beginning with the preparation of detailed technical specifications, through offshore supervision, commissioning, and decommissioning.

Gulf Oil Exploration and Production Co., Senior Project Engineer
Served as Project Manager for a Gulf Oil sponsored joint industry project (with three other major oil companies) to design a remotely operated, ROV-based work system for repairing pipelines and performing other deepwater production support tasks in water depths to 8,000 feet.

Acted as engineering liaison between Gulf Canada and equipment suppliers for the assembly and testing of two subsea drilling BOP stacks and control systems for use on Gulf Canada's floating arctic drilling rig. Work on this project included full responsibility for systems testing.

Vetco Offshore Inc., Design Engineer
Designed hydraulic and Electro-hydraulic subsea control systems. Offshore assignments included commissioning and troubleshooting subsea control system equipment.

Brown & Root Inc., Senior Engineer
Designed remotely operated, subsea pipeline repair tools and handling equipment for use in water depths to 2,000 feet. Developed cost estimates and schedules for various methods of submarine pipeline installation methods for a North Sea project. Designed and supervised fabrication and field installation of proprietary S-lay pipelining equipment. Designed pipe-straightening equipment for a reel barge.

PROFESSIONAL AFFLILATION
American Society of Engineers – Member
American Petroleum Institute – Past member of Committee 17 on Standardization of Subsea Production Systems, Member of Task Group TG 17E on Subsea Production Control Umbilicals.

PUBLICATIONS
Co-authored OTC Paper OTC 8885, Troika Experience with Super Duplex Tubing for Hydraulic/Chemical Umbilical.

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