

**ROGER E. LEWIS, P.E.**  
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## **PROFESSIONAL QUALIFICATIONS**

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### **SUMMARY OF EXPERIENCE**

Mr. Lewis has over 40 years of experience in the execution and management of numerous offshore engineering projects worldwide with construction values ranging to well over a billion dollars. He has had both direct and managerial responsibility for the design, analysis and review of fixed and compliant offshore structures, floating vessels, piers and waterfront facilities, bridges, foundations, and steel and timber buildings and structures. He has also directed a great number of preliminary design programs, feasibility studies, design evaluations, manpower and cost estimates and design proposals for a wide variety of projects. Much of his work has involved the design of structures for deep water, severe environments or remote locations such as Alaska's Cook Inlet, the North Sea, Australia, New Zealand, China, and Africa, as well as the USA. He is the author of two patents and several publications.

He was with Earl and Wright Consulting Engineers in San Francisco from 1964 to 1986. He rejoined the company, later to become Kvaerner Earl and Wright, in Houston in 1991, and remained with KEW until 1995 when he joined Petro-Marine. From 1986 to 1991 he was Vice President and Principal in the firm of Bay Phoenix Consulting Engineers, San Francisco, with technical responsibility for design and quality control of projects. In August 2001 he left Petro-Marine to form Online-Projects.Net where he is currently developing and marketing an integrated web-based application to facilitate the management of engineering projects.

#### **Education**

MS Structural Engineering, University of California

BS Civil Engineering, University of California

#### **Registration**

Registered Civil Engineer, California and Texas

#### **Professional Affiliations**

Member, American Petroleum Institute

Member, American Society of Civil Engineers

### **DETAILED EXPERIENCE**

At Petro-Marine he acted in a consulting capacity with responsibility for the review of jacket structures. Additionally, he had project management responsibility for various Petro-Marine projects. He was instrumental in the design and development of Petro-Marine's Online Project Management System, enabling the company and its clients and associates to have secure Internet access to all project documents.

While at Kvaerner Earl and Wright (KEW), he was Manager of Structural Engineering. He coordinated the technical performance of personnel assigned to Project Managers and Technology Centers for specific projects and had responsibility for technical and professional growth of those personnel. His

duties at KEW also included the management of offshore projects.

His offshore design experience covers a variety of projects worldwide. Besides Alaska, the North Sea, and the Atlantic Coast of the United States, he has designed structures for California, the Gulf of Mexico, Canada, Mexico, South America, New Zealand, Australia, South East Asia, and West Africa. From this broad based experience he has developed a very thorough understanding of offshore structures.



#### **Fixed Platforms**

In his last assignment at Petro-Marine he was project manager on a study to define the new offshore facilities for Texaco's Angola LNG project. These facilities, with an estimated construction value of \$400 million, include a 5-platform, 800 mmscfd, central gathering hub, and five satellite wellhead platforms.

Before that, he was project manager of a comprehensive study of minimum platforms, undertaken for Amoco. The objective of the project was to establish a rapid and reliable selection process that could be used to determine the optimum minimal platform concept for a specified marginal field development. The outcome of the study was an electronic database and interactive guideline for the evaluation, selection, and cost estimating of marginal field platforms, worldwide.

Previously, he was Project Manager for the design of the upgrades on ANR Pipeline Company's Gulf of Mexico gas gathering platform, HI-573A. The platform was modified to support a 20" gas line coming from Exxon's Diana Field.

Also previously, he was Project Manager for the detailed engineering of six oil platforms, a flare structure, and the connecting pipelines and bridges for Texaco's Anyala/Madu Field Development Project, offshore Nigeria. Before that, he was KEW's Engineering Manager for two 3,500 ton jackets designed for ACT-OG for installation in 375 ft. waters in the South China Sea. An innovative, lift-installed installation differentiates this design from others.

Earlier, he managed KEW engineering and interfacing activities during design and construction of Enserch's Mississippi Canyon 441 Project. The facility includes three deep water (1500 ft) subsea templates with multiple satellite wells producing to a shallow water (371 ft) processing platform 5 to 7 miles from the templates.

He was Project Manager for the design of Conoco's Murchison drilling and production platform for the North Sea. The project scope included structural, mechanical and naval architectural design of the 26,000 ton, barge-launched jacket, structural design of the 3,500 ton module support frame, design of the corrosion protection system, metallurgical consulting, planning and cost control, requisitioning and control of materials, and assistance during fabrication and offshore installation.

He had responsible charge of the design of deck modules for the Maui "A" gas production platform, offshore New Zealand. During the fabrication phase of the project he was assigned overseas in the client's New Zealand offices to develop an extensive offshore construction program with the client and the installation contractor.

### **Arctic Structures**

His arctic experience includes several years of involvement in the design of fixed as well as floating structures for Alaska and the Arctic. Since 1965 he has been involved in or managed various aspects of the design, fabrication, installation and/or modifications of eleven of the fourteen platforms in Cook Inlet.

He has experience in the fabrication yards and at the offshore sites in Cook Inlet as well as in the design office. In addition to the above design work, he has directed several feasibility and preliminary design studies for field developments in Cook Inlet and in the Bering Sea.

He was Engineering Manager for the design of the substructures for ARCO's Sunfish Field in Cook Inlet, Alaska. The work was done as part of a comprehensive conceptual study of field development options. Included were conventional as well as non-conventional steel and gravity structures.

As Project Manager for conceptual development and evaluation of structures in the North Aleutian Basin, he generated technical and cost data for overall offshore field development planning for ARCO Alaska. For Chevron he managed the studies of design, construction and installation of offshore drilling and production platforms for the technically challenging mudflats area of Alaska's Cook Inlet.

As project engineer, he was in charge of design of the deck structures for three Cook Inlet platforms: Shell Middle Ground Shoal Platform C, ARCO King Salmon, and ARCO Spark. In addition, he supervised structural modifications to several existing platforms in Cook Inlet to accommodate a wide variety of drilling and production equipment changes.

### **Floating Structures**

As Project Manager for Gulf Oil's three-year study of tension-leg platforms he directed a comprehensive comparison of the preliminary designs of a number of TLP systems. Each system included the vessel, tendons, risers, moorings, subsea equipment, soils and piles, production facilities and flare structure. The project involved preparation of operating procedures and cost estimates, and a number of special studies including investigation of construction methods as well as deck floatover and mating operations.

He has also supervised the structural design of several floating vessels, including derrick barges, semisubmersible drilling rigs and semisubmersible pipe lay barges.

### **Coastal Engineering**

He was responsible for the structural efforts involved with upgrading Texaco Refineria Panama's South Tanker Dock to accommodate a set of six high capacity loading arms to replace an antiquated hose rack system.

Previously, he lead a study team to develop the concept and estimated cost for a 100,000 DWT, tanker loading terminal in 100 ft of water in Equatorial Guinea.

In the aftermath of Hurricane Luis, he led an inspection team to Antigua, West Indies to assess the condition of an offshore loading terminal that was damaged by the hurricane.

He was Project Manager for conceptual and detailed design of an 800 ft by 86 ft ordinance container handling wharf for the U.S. Navy at Subic Bay, Philippines. His responsibilities included supervision and coordination of subconsultants for geotechnical, civil and utilities engineering. The scope of work included construction of the wharf and a concrete container holding yard with ancillary systems, relocation of a helicopter landing pad, and removal of pile dolphins in the vicinity of the wharf site. Plans, specifications, cost estimates, design calculations and basis of design were provided.

He was Project Manager for the renovation of the 1000 ft South Pier at Hunters Point, San Francisco. Done for the Western Division of the Naval Facilities Engineering Command, U.S. Navy, the project included complete civil, structural, mechanical, and electrical renovation and pier expansion to accommodate a U.S. Navy battleship group.

He was also Project Manager for the renovation of a submarine refueling complex at Mare Island Naval Shipyard, Vallejo, CA. Also done for the Western Division of the Naval Facilities Engineering Command, U.S. Navy, this project consisted of the civil, mechanical and electrical upgrades necessary for the installation of a nuclear refueling station at the Mare Island dry docks.

### MAJOR PROJECTS

- Texaco, Angola LNG, New Offshore Facilities Definition, 2000 - 2001
- Development of Online Project Management System, 1999 - 2000
- Texaco, Refineria Panama, South Tanker Dock Upgrade, 1999
- AMPCO, Equatorial Guinea, Loading Terminal Concept Study, 1998-1999
- ANR Pipeline, Gulf of Mexico, HI-573A Gas Riser Addition, 1998-1999
- Amoco, Minimum Platform and Cost Estimating Guideline, 1997 - 1998
- Texaco, Nigeria, Anyala/Madu, Platform and Pipeline Design, 1995-1997
- ACT-OG, South China Sea, HZ-32 Jacket Designs, 1993-1995
- ARCO, Cook Inlet, Alaska, Sunfish Field Development Study, 1993-1994
- Enserch, Gulf of Mexico, MC441 Project, 1991-1992
- Lomma Prieta Earthquake, San Francisco, Damage Assessments and Repairs, 1990
- UNOCAL, Rodeo, CA Refinery, Vapor Recover Facilities, 1990
- U.S. Navy, Submarine Refueling Complex, Vallejo, Renovation, 1989
- U.S. Navy, Transit Shed, Guam, Modifications to Fire Protection System, 1989
- U.S. Navy, Battleship Pier, Hunter's Point, San Francisco, Renovation, 1986-1988
- U.S. Navy, Container Wharf, Subic Bay, PI, Conceptual/Detailed Design, 1985
- Shell-Amoco, Exploration Unit Deck Design, 1985
- U.S. Navy, Charleston TACTS Ocean Structures, Design Q. A., 1984-1985
- ARCO, N. Aleutian Basin, Alaska, Platform Design Study, 1984
- Chevron, Gulf of Mexico, TLP Study, 1984
- Exxon, TLP Study, 1984
- JIP, Navarin Basin, Alaska, Logistics Study, 1983
- Gulf Oil, TLP Design Study, 1980-1983
- Conoco, North Sea, Murchison Platform Design and Construction, 1976-1979
- Shell BP Todd, New Zealand, Maui A Platform Construction, 1974-1976
- Woodside Petroleum, Australia, North Rankin Platform Study, 1974
- Shell BP Todd, New Zealand, Maui A Deck Design, 1973
- Houston Contractors, BOS I Semisubmersible Derrick Barge Design, 1973
- Rowan, Semisubmersible Drill Rig Structural Design, 1972
- Esso Australia, Tuna & Mackerel Platform Designs, 1972
- Shell U.K., North Sea, Platform Auk Deck Structures, 1972
- Shell Canada, Eastern Canada, Platform Deck Design, 1970
- ARCO, Cook Inlet Alaska, King Salmon & Spark Deck Structures, 1968
- Shell, Cook Inlet Alaska, Platform C Deck Structures, 1966

### PUBLICATIONS

"An Improved Lightweight Bottom-Founded Offshore Platform", R.E. Lewis, Offshore Technology Conference, OTC #7163, Houston, Texas, May 1993

"Design Quality Assurance for the Charleston Tactical Aircrew Combat Training System", R.E. Lewis, Marine Technology Society and the Institute of Electrical and Electronics Engineers, Oceans 1986 Conference, Washington, D.C., September, 1986

"A Technical Evaluation of Deepwater Drilling and Production Platforms", R.E. Lewis, State Committee for Science & Technology, Technical Symposium, Moscow, USSR, Aug., 1986

"Fixed Platform Design and Installation", R.E. Lewis and M.J. Teer, State Committee for Science and Technology, Technology Symposium, Moscow, USSR, August, 1986

"An Overview of Deepwater Compliant Structures", R.E. Lewis, American Petroleum Institute, Production Department Annual Meeting, San Antonio, Texas, April 1982

### PATENTS

Retractable Closure for Roof Opening, U.S. Patent No. 4,587,775

Offshore Base-Supported Column Structure and Method of Installation, U.S. Patent No. 5,332,336