

Terry Thomas, P.E.

| 970-318-0428 | tthomas@vpeinc.com |

Expertise Mr. Thomas is a pipeline engineer responsible for facility project development, design, and construction support for client pipeline transmission and gathering systems. He has experience in pipeline, petrochemical and infrastructure design engineering. He has experience in difficult topography with horizontal directional drilling and full project execution. Mr. Thomas has more than 30 years of pipeline design, construction and operations experience.

Education **Bachelor of Science – Mechanical Engineering, Texas Tech University, Lubbock, Texas** 1971

Professional Experience

- Pipeline Engineer, Vanderpool Pipeline Engineers Inc.** 2013 - Present
 - Pipeline and pipeline facility project development, design, and construction support for client pipeline transmission and gathering systems.
- Contract Pipeline Engineer, Saddle Butte Pipeline, Colorado, North Dakota** 2011 – 2012
 - Responsibilities included project development and execution, pipeline engineering and design, and commercial support for multiple crude and gas gathering pipeline systems in Bakken region of North Dakota.
- Owner, Double T Square, LLC.** 2009 – 2010
 - Pipeline engineering and consulting.
 - Specialized pipeline design and operations solutions.
- Contract Pipeline Project Manager, Freeport LNG Development, Texas** 2005 – 2008
 - Responsible for successful execution of a 9.6 mile 42 inch natural gas pipeline project, including meter station and related pipeline projects. Pipeline installations included overland, marsh, and open water topography and horizontal directional pipeline drills up to 5,000 feet.
 - Executed client’s objectives, instructions, and programs, including FERC resource reports, regulatory interface, project procurement, cost estimating and control, design, and construction contract bid, award, and administration. Obtained and managed project resources including consultants and inspection.
- Pipeline Sector Project Manager, Mustang Engineering, Texas** 2002 – 2005
 - Pipeline Sector Project Manger, Mustang Engineering, responsible for interfacing with client organizations, determining pipeline systems and facilities to meet client’s business objectives, and preparation of project proposals.
 - Directed the preparation of Project Plans, including: pipeline right-of-way and route selection, permitting, environmental compliance, FEED, project schedule, cost estimates, cash flow, and procurement plans.
 - Determined and managed resources required for project execution, including: regulatory resource plans, survey, right-of-way, permitting, specialized consultants, material procurement and shop inspection, engineering studies, construction specifications and contracts, construction administration and inspection.
 - Responsible for business development with Dow Chemical, Enbridge, and Freeport LNG.
 - Projects included:
 - Multiple pipeline and storage projects for light hydrocarbon plants Freeport and Stratton Ridge, Texas
 - GulfTerra Cameron Highway Pipeline crude oil meter stations, Texas City, Texas
 - Enbridge 107 mile, 36-inch natural gas Double D Pipeline, East Texas
 - ExxonMobil gas gathering and conditioning pipeline facilities, Katy and Conroe, Texas

Terry Thomas

- Cheniere Energy 36-inch and Freeport LNG Development 42-inch natural gas pipeline and plant site development for LNG Marine Import and Storage Terminal, Quintana and Freeport, Texas

Unit Manager, Vice President, President, River Water Operations and Gulf Coast Pipeline, Dow Chemical, Louisiana and Texas 1992 – 2001

- Management of River Water Operations and Gulf Coast Pipeline in support of Dow Chemical's Louisiana Division and Texas Operations and Hydrocarbon and Energy commercial ventures.
- Systems include approximately 3000 miles of pipelines, pump and meter stations, and river water reservoirs and canals.
- Implemented company Strategic Blueprint objectives in Pipeline including delayering, work consolidation, and cost performance improvements. Reduced structural costs by 25% and staff by 30%.
- After Dow acquired Union Carbide, directed integration of Seadrift, UCAR, and Dow Gulf Coast Pipeline into one pipeline business. Achieved organization and facility synergies, realizing several million dollars in cost savings, including the sale of some assets, while adding business flexibility and system capability. Combined facilities included 5,500 miles of chemical, gas, and petroleum liquids pipelines, numerous pump and meter stations, salt dome storage, and business, operations, and maintenance centers.
- Retired from Dow December 31, 2001

Plant Manager, Utility Systems and Infrastructure Texas Operations, Dow Chemical, Texas 1989 – 1992

- Management of organization and utility production and distribution systems, pipeways, and infrastructure providing services to over 80 production plants, power plants, and research units in Dow Chemical's Freeport petrochemical complex.
- Implemented new Operating Discipline, improving productivity, cost performance and safety performance of managed units. Successfully implemented capital and maintenance improvements in instrument air, potable water, seawater, natural gas, nitrogen, plant utility water, firewater, sewer, and storm water distribution and production systems.

Pipeline District Manager, Dow Gulf Coast Pipeline, Texas 1985 – 1989

- Management of operations and maintenance of Dow's pipeline and river water systems and operating units in support of Dow's Texas Operations. Implemented new Operating Discipline and improved cost performance of Gulf Coast Pipeline.

Department Head, Capital Projects Coordinator and Principal Pipeline Engineer, Dow Pipeline and Pipeline Technology Center, Texas 1979 – 1985

- Supervised ROW/Land Department
- Capital Projects Coordinator for Dow USA. Partial list of executed projects:
 - Project Management for gas pipeline systems constructed in Magnolia, Arkansas and Pittsburg, California.
 - Development and design of Propane Marine Import and Export Terminal for Freeport.
 - Design of LPG, olefin, and gas pipelines, pump, and compressor stations in Texas, California, and Louisiana. Transmission Pipelines from 4 to 36 inch with MAOP to 2160 psi and up to 160 miles in overland, marsh, bay/ship channel, and urban locations.
 - Conceptual design, development, and cost estimates for several pipeline projects, including two major projects: a \$400MM lignite gas or slurry pipeline system in Texas and an \$800-\$1,200MM gas-liquids pipeline system in Alaska, Prudhoe Bay to Anchorage or Valdez.
 - Created design standards and trained engineers in pipeline design and technology.

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- Project Engineer, Dow International and Dow Canada, Alberta** 1976 – 1979
- Supervised development, design, procurement, and construction for Infrastructure and Offsite Facilities for Dow Chemical Western Canada Division expansion and Site Project Engineer for VCM/EDC, Glycol, Chlorine, and Power Plants. Contracted for design work with Alberta consulting firms.
- Project Engineer, Dow Engineering and Construction Services, Texas** 1973 – 1975
- Pipeline, Salt Dome, Site Infrastructure, and Petrochemical Plant capital projects, including process design, development, facility engineering, pipeline engineering, and project engineering.
- Construction Supervisor, Dow Engineering and Construction Services, Texas** 1971 – 1972
- Dow Chemical Oyster Creek and Texas Division general mechanical, infrastructure, marine, and civil construction projects. Chlorine Plant operator during 3 month union strike.
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Licensing, Certifications and Specialized Training

- Registered Professional Engineer, Colorado # 36335, Louisiana # 29955, New Mexico # 15539, Texas # 81391
 - Dow Chemical Superintendent College
 - Management, Facilitator, Trainer, Leadership, Organization Design
 - Goal Setting, People Development, and Performance Assessment
 - Pipeline Safety Seminars, OSHA Safety Regulations
 - Project Scheduling and Management
 - Plant and Pipeline Technology and Design
 - SQC and Quality Performance, Six Sigma
 - Cost Estimating and Economics
 - Computing – Word, Excel, Project, PowerPoint
 - Pipeline DOT Regulations, Permits, and Practices
 - Texas State Water Law
 - Environmental Regulations, Permits, and Practices
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Professional Affiliations

- Board of Directors, Member and Chair Industrial Panel, Texas Water Conservation Association
- Member and Chair of Water Rights Committee, Texas Chemical Council
- Board of Directors, Treasurer/Secretary, Chair Finance Committee, Chair Architectural Review Committee, Fairway Pines Estates Owners Association.
- Finance and Building Chairman, Constructed new Methodist Church Sanctuary and Education Buildings, Houston