

MERV FLEMING, P.Eng.

EDUCATION

General Management Certificate, University of Calgary (1995)

Bachelor of Science in Mechanical Engineering, University of Calgary (1976)

Courses and Seminars: Natural Gas Processing; Evaluation of Canadian Oil and Gas Properties; Human Behaviour in Organisations; Management Communication; Fundamentals of Accounting; Business Management; Effective Selection Interviews; Powerful Presentations; Financial Planning and Analysis; Creative Negotiating; Advanced Management Leadership; Effective Communication; Customer Service; Microeconomics; Business Finance; Business Law; and Principles of Supervision.

PROFESSIONAL EXPERIENCE

Thirty (30) years of "hands-on" experience in the development, design, construction and operation of natural gas, crude oil, condensate, NGL and specification products pipeline systems and surface facilities. Experience in the detailed design of pipelines, pump stations, compressor stations, processing facilities, LACT facilities, pumping equipment, storage, measurement systems, meter provers, compressors, piping and control systems.

Project Management experience has included design engineering, contract preparation and administration, supervision of field inspection crews and contractors, and long term assignments in field engineering and construction management.

PROFESSIONAL AFFILIATIONS

Association of Professional Engineers, Geologists and Geophysicists of Alberta

WORK EXPERIENCE

UPSIDE ENGINEERING LTD.

2000 to Present

Senior Project Manager

Responsibilities:

- Directed the activities of a team responsible for the detailed design of and procurement for a 40,000 BPD heated bitumen metering, storage and pumping facility;
- Participated in the study of a major bitumen pipeline planned for Fort McMurray to Edmonton, Alberta. Specifically, was responsible for the preliminary design and cost estimates of the pump station and terminal facilities;

- Project manager for the detailed engineering phase of a 180,000 BPD product storage and blending facility;
- Project manager for the design of a 1,000,000 BPD crude oil transfer facility with interconnecting pipelines and
- Directed the activities for the design and preparation of a class 3 cost estimate for a large (7mm bbl) crude oil storage terminal with metering, pumping, blending, and heating equipment

TAY GRA ENGINEERING

1999 to PRESENT

Responsibilities:

As an independent consultant, currently supplies expertise to the oil and gas industry, particularly in the field of pipeline design.

- Assignments included: hydraulic analysis and front end engineering for the proposed expansion of a major pipeline system in Sudan, modifications to a number of liquid pipeline operations in Western Canada, technical assistance for a proposed oilfield development in central Africa, and development and implementation of commissioning procedures for a crude oil and refined products terminal facility in Barbados, including ship transfer facilities, truck loading, and product pipelines.

TECHINT INTERNATIONAL CONSTRUCTION CORP.

Feb 2004 to Sept 2004

Lead Commissioning Engineer

Responsibilities:

- Lead Commissioning Engineer for the preparation and implementation of procedures required for the commissioning and start-up of the Camisea Pipeline Project in Peru. System consists of a 500 km 14" natural gas liquids and a 740 km 32" natural gas pipeline, metering facilities, pumping facilities and pressure reduction stations.

TECHINT INTERNATIONAL CONSTRUCTION CORP.

Jan 2003 to Oct 2003

Lead Commissioning Engineer

Responsibilities:

- Lead Commissioning Engineer in the preparation and implementation of procedures required for the start-up and performance test of a major crude oil pipeline system in Ecuador. System consists of 480 kilometres of pipeline up to 36" with large changes in elevation, four pump stations with 5500 HP crude burning engine drivers, two pressure reduction stations, crude oil fired pipeline heaters, storage facilities up to 750,000 barrels and a VLCC marine terminal.

CIMARRON ENGINEERING

Oct 1999 to Jun 2000

Project Manager

Responsibilities:

- Project Manager responsible for the detailed engineering, material procurement, construction contract preparation, bid and award for 116 km of 16" natural gas pipeline in northern Alberta.

- Coordinating the design and construction of a 40 mmscfd sour gas wellsite dehydration facility in Northern Canada. Specific challenges with the project included the corrosive nature of the gas, a very tight time frame, difficult regulatory process, and the remote location of the site.

QUANTEL VECO ENGINEERING

Feb 1998 to Oct 1999

Project Engineer

Responsibilities:

Project Engineer that directed the activities of the engineering team responsible for the design of a major heavy oil pipeline terminal consisting of five crude oil storage tanks totalling 650,000 bbl, inlet metering facilities, valve manifolds, and 4700 bph crude oil shipping equipment. The project required the design of crude oil/condensate blending facilities with on-line viscosity control as well as vapour recovery and incineration equipment on one of the storage tanks.

STATE PETROLEUM CORPORATION GREATER NILE PETROLEUM OPERATING COMPANY

May 1997 to Sep 1999

Project Coordinator

Responsibilities:

- Project Coordinator acting as a Client representative during the basic engineering, EPC bidding period, and EPC contract award for a major pipeline system in Sudan, Africa.
- Project details included: satellite and processing facilities for 150,000 BPD of crude production, 1550 km of 28" pipeline, pumping facilities for an ultimate capacity of 250,000 BPD, and marine terminal facilities consisting of 2,000,000 barrels of tankage and tanker loading facilities. Specific responsibilities included directing studies of the rheology for the waxy, high viscosity Sudanese crude, the specification and award of pumps and diesel engine drivers packages, approval of line pipe supply specifications, and approval of all basic engineering and EPC packages. Required an assignment in the offices of the Project Management Consultant in Kuala Lumpur, Malaysia, as well engineering reviews of the detailed engineering in China, Sudan, Argentina, and Canada.

QUANTEL VECO ENGINEERING

Jan 1994 to May 1997

Responsibilities:

- Construction Manager for the Express Pipeline project. Responsible for contract preparation, bid, award, and construction administration for the terminal and mainline pumping facilities on a major 24" pipeline system consisting of four 150,000 bbl storage tanks with fire protection system, 500 HP booster pumps, custody transfer metering facilities, valve manifolds, and 4,000 HP VFD mainline pump units;
- Project Engineer that directed the activities of the engineering team responsible for the design of a major crude oil pipeline terminal and nine mainline pump stations on a 1250 km long 24" pipeline:

- Developed the preliminary design and cost estimate for an 18,000 HP turbine driven gas compressor station in the lower mainland of British Columbia.
- Directed the on-site line filling and commissioning of a major products pipeline system in South Korea. The assignment included the development of commissioning and operations procedures as well as start-up of over 600 km. of pipeline up to 24" in diameter, and five pump stations with drivers up to 7000 HP.
- In Quito, Ecuador, directed the development of station layouts and piping drawings required for the bid submission to expand a major crude oil pipeline crossing the Andes Mountains. The assignment also included the technical evaluation of bid submission for all equipment.
- Performed the technical evaluation of construction tenders for a 12" acid gas pipeline in Abu Dhabi, U.A.E.
- Performed expansion studies on several pipeline systems in Western Canada

PEACE PIPELINE LTD., PEMBINA CORPORATION

Jun 1979 to Jan 1994

Responsibilities:

- Business Development Co-ordinator- Identified and evaluated business opportunities available to two of the largest liquid pipeline systems in Alberta; Co-ordinated preparation of engineering studies and financial analyses; Negotiated transportation and operating agreements; Provided technical expertise to the development of long range plans; Advised Senior and Executive Management on the trends and developments within the industry; and Ensured that potential customers were aware of the company's capabilities and strengths.
- Supervisor of Pipeline Engineering - Directed the construction of new pipeline facilities by co-ordinating activities of technical and professional staff; Developed and implemented a corporate pipeline maintenance program; and Provided technical input to the operation of the pipeline system.
- Senior Pipeline Engineer - Directed civil and mechanical activities during a time of rapid pipeline expansion; Stationed in Grande Prairie, Alberta, in 1985, with field engineering responsibilities during a period of intense construction activity; and Assigned the position of construction manager in 1986, responsible for the construction of several new pump stations as well as extensive modifications to existing facilities.

HUDSON BAY OIL AND GAS RANGELAND PIPELINE DIVISION

Jun 1976 to Jun 1979

Responsibilities:

- Pipeline Engineer - Obtained experience in all aspects of pipeline design, construction and operation, and Stationed in Olds, Alberta in 1979 as the Field Engineer for a medium sized pipeline company handling crude oil, condensate, propane and butane.