



James R. (Jim) Beck, P.Eng.

Civil/Structural Engineer

Education

High School Matriculation – Athol Murray College of Notre Dame, Wilcox, SK
B.E. (Civil Engineering) 1970 University of Saskatchewan, Saskatoon, SK

Affiliations

Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)
Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)
Association of Professional Engineers & Geoscientists of Saskatchewan (APEGS)
Professional Engineers of Ontario (PEO)
Canadian Society for Civil Engineering (CSCE)

Experience (1976 – Present)

BECK ENGINEERING (1992) LTD.

Mr. Beck has worked on a variety of civil and structural engineering assignments in the oil & gas industry as well as projects in light industrial and commercial fields since the initiation of BEL. He has over 40 years of experience in the EPCM consulting environments. Some recent projects he has been involved in have included:

- Structural and civil designs in the heavy industrial field including reciprocating compressor foundations and related equipment to 9500 hp and turbine compressors to 40,000 hp. Projects include gas plants, pipelines, oil refineries and batteries, heavy oil plants, coal mines, fertilizer plants, etc.
- Engineering design for guyed steel stacks.
- Design of shoring systems and grouted anchors in excavations, retaining walls.
- Review of failures in guyed steel stacks, compressor foundations and shoring systems.
- Rigging studies for heavy lifts to 825 tons using cranes and other systems. Supervision and inspection of heavy lifts.
- Instructor for courses on rigging offered through The Petroleum Industry Training Service.

PROJECTS OF INTEREST

Bow Valley Resources

Algar & Twedie Compressor Stations. Investigation into a vibration problem with a 1200 hp compressor. Site inspection by Mr. Beck resulted in recommendations that solved the vibration problem.

Canadian Hunter

Border Gas Plant. Complete structural design for installation of two 2100 hp compressors, related dehydration and liquids removal, office, maintenance shop, MCC, etc. Drafting and procurement was done by the Client. (Structural design includes foundations and site grading).

Cimarron Engineering Ltd.

Lead civil engineer for the installation of several 30MW compressors for TransCanada Pipeline (TCPL).

Enerflex Manufacturing Ltd.

Design of skids for several package compressors to 10,000 hp.

Gas Liquids Engineering Ltd.

Complete structural design for numerous projects, including compressor stations and related facilities for Anderson Exploration, Suncor, Sherritt Power, Wascana, among others.

Gemini Engineering Inc.

Complete structural design for numerous projects, including compressor stations and related facilities for SaskOil, Suncor, PanCanadian, AEC, and many others.

Genesis Engineering Ltd.

Complete structural design for several compressor stations.

Gulf Canada Resources Ltd.

Installation of Diverter system on Drill unit Kulluk (23,000 ton drill barge – Beaufort Sea).

Home Oil Ltd.

Crane certification at their Carstairs Gas Plant.

KM Industrial

Complete structural design for the de-bottlenecking of the Amoco West Pembina Gas Plant. Equipment included 2 compressors, inlet slug catcher, process towers, sulphur train, and sulphur pit related facilities. Complete structural design for small compressor stations for Amoco Berrymore, Amoco Peco, and Chevron Fort Saskatchewan.

Ledcor Industries

Site supervision for the erection of 40 pieces of equipment using cranes up to 250 tons for the Westcoast Energy expansion in 1990 in Taylor, BC.

Mactronic Ltd.

Structural design of numerous flare stacks, including the 415 ft. high stack at Alberta Envirofuels in Edmonton.

MRS Ltd.

Complete structural design for the 190 ft. teepee erected in 1991 in Medicine Hat, AB.

PetroCanada

Assisting in field installation for the upgrading of the LPG facilities at Regina, SK and Winnipeg, MB.

Petrotech Lavalin

Inspection of the installation of 85 pieces of equipment (including 3 – 250' flare stacks) at the Shell Caroline Compressor Sites using cranes up to 250 tons and 'Jack & Roll' systems.

Propak Systems Ltd.

Complete structural design for the installation of skid plants (skids not included) at various locations across Canada and the United States as well as locations in Argentina.

Pro West Engineering Ltd.

Complete structural design for the Texaco Bonnie Glen Gas Plant expansion. Facilities included 168 pieces of equipment including compressors up to 9500 hp, process towers, and related equipment.

Complete structural design for the Esso Bonnie Glen Gas Plant flare system upgrades including verification of stack designs and design of anchors, pipe racks, and related facilities.

Complete structural design for the Alberta Natural Gas Cochrane Plant 1991 expansion including cold boxes, pipe racks, and all other related equipment.

Complete structural design for the Solex Plant expansion in Taylor, BC.

Rainbow Riggers Ltd.

Numerous projects including rigging studies for stacks to 410 ft using helicopters for lifting, design of a system of tensioning cables, design and certification of man-baskets and rigging.

Rangeland Engineering Ltd.

Complete structural design for several facilities including rail offloading, storage and pump installation at Redwater, AB

Complete structural design truck loading, storage and pump installation at Midale, SK.

A number of installations where the entire installation was underground because the facilities are located on the military training range at Suffield, AB; and had to be designed to carry main battle tanks.

A number of compressor stations, pumping stations, and related work in Alberta.

Repairs to a 3500 hp vibrating compressor installed by others.

Sterling Division of Procrane

Complete design of the RMS heavy lift system with a capacity of 2600 tonnes to a height of 150 meters, as well as related rigging studies. Rigging studies were completed for various projects throughout Western Canada.

Shell Resources Canada Ltd.

Miscellaneous civil and structural designs for the Jumping Pound Gas Plant, Hamburg Gas Plant, Burnt Timber Gas Plant, Caroline Gas Plant, and other facilities. The Jumping Pound Gas Plant included site inspection and certification of 85 monorails, davits, jib cranes, and other lifting devices.

Triad Engineers Ltd.

Complete design of several projects including a heavy oil plant at Ft. McMurray, AB.

Westcoast Energy Ltd.

Site supervision for rigging services for the erection of 40 pieces of equipment using cranes up to 250 tons for the 1992 plant expansion at the Pine River Gas Plant new Chetwynd, BC. Foundation designs for sulphuric acid storage tanks were also undertaken.

1973-1976

DELTA PROJECTS LTD.

Chief Structural Engineer

1972-1973

MINISTRY OF TRANSPORT – CALGARY

Resident Engineer – Airport Construction

1970-1972

GOVERNMENT OF YUKON TERRITORY – WHITEHORSE, YUKON

Municipal Engineer