

# Charles M. Russell, P.E.

## Vice President - Civil Engineering

Years with Baker: 21  
Years with Other Firms: 23

### Education

University of Pittsburgh  
B.S., Civil Engineering, 1959  
M.S., Civil Engineering,  
1970  
M.P.W., Public Works, 1970

### Registrations

Professional Engineer  
Alabama, 1982  
Florida, 1979  
Illinois, 1983  
Indiana, 1983  
New York, 1966  
North Carolina, 1983  
Ohio, 1968  
Oklahoma, 1993  
Pennsylvania, 1964  
Tennessee, 1982  
West Virginia, 1969

### General Qualifications

Mr. Russell has more than 44 years experience in civil engineering, primarily in management positions. Throughout his career, he has served in both the design and construction of civil works projects in the development of America's infrastructure in various locations across the U.S. He has also lead similar efforts on projects around the globe, including Mexico, and Latin America. He is experienced in the design of new facilities, as well as for the modernization and expansion of existing facilities. As vice president in charge of the General Civil Engineering Department in Beaver, Pennsylvania, he assumes responsibility for overall administration of major contracts, including marketing, finance, engineering and construction, estimating, cost control, planning, and scheduling with the ability to consistently meet tight budgets and schedules. A principal in the Engineering Group, he oversees the design of projects including pipelines, linear utilities, mining and industrial projects, airports, site development, geotechnical engineering, and municipal/sanitary projects.

### Experience

#### Pipelines

Principal-in-charge responsible for overall design quality control, budgets, and schedules for various pipeline projects including the following:

- **Conoco, Inc. - The C&L Processors DOT Pipeline** - Engineering and construction services responsible for bringing approximately 410 miles of two DOT regulated natural gas gathering and transmission pipelines into compliance with the Code of Federal Regulations (CFR), Title 49, Parts 191 and 192 as administered by the Oklahoma Corporation Commission. The project is located in the Oklahoma City area. Project responsibilities include: evaluation of existing records, preparation of design and construction procedures, permitting with applicable agencies, construction management and inspection, construction material procurement and disbursement, and preparation of final documentation records.
- **Conoco, Inc. - Cardinal States Gathering Line** - This pipeline consists of 54 miles of 12 and 16 inch diameter steel pipeline running from Buchanan County, Virginia, through Pike County, Kentucky, to Mingo County, West Virginia. The project involves gathering coalbed methane from various sources along the route, and delivering it to a major distribution network. Project responsibilities include: conceptual design, route selection, alignment survey, right-of-way research and acquisition, alignment design, environmental permitting, construction inspection, and preparation of record drawings.
- **Conoco, Inc. - Pocahontas Collection System** - This pipeline project consists of approximately 80 miles of a coal bed methane collection pipeline running through the rugged hills of western Virginia. This gathering system

includes 150 CBM wells and 80 miles of 4 to 12 inch diameter steel and polyethylene low and high pressure pipelines. Project responsibilities include: conceptual design, right-of-way acquisition, environmental assessment, permitting, aerial mapping, route selection, alignment surveys, design, and permitting. Construction phase services include right-of-way acquisition, construction inspection, and record drawings.

- **OXY U.S.A., Inc. - Oakwood Gathering System** - This pipeline project located in Buchanan County, Virginia, consists of over 100 miles of a 1 to 12 inch diameter coal bed methane collection pipeline, interconnecting 300 wells, 28 compressor facilities, four electrical substations, and 60 miles of electrical distribution lines. Project responsibilities include: conceptual design, final design, right-of-way services, alignment surveying and route selection, permitting, photogrammetric mapping, environmental assessment, and construction management.
- **Tioga Pipeline Company, Pittsburgh International Airport Aviation Fuel Pipeline** - Design, permitting, and construction inspection of a 12-inch diameter steel pipeline that provides aviation fuel for Pittsburgh's New Midfield Airport. Project responsibilities include: selection of final alignment, preparation on construction drawings, obtaining permits for state highway crossings, supervision of construction inspection and preparation of final record drawings.
- **ARCO Chemical Company** - Design and construction inspection of a 4 inch diameter nitrogen gas pipeline serving an existing major chemical processing plant located in southwestern Pennsylvania. Project responsibilities include: selection of the final alignment, preparation of the construction drawings, supervision of the construction inspection, and preparation of the final record drawings.
- **Buckeye Pipeline** – Managed the remediation and restoration of a jet fuel pipeline rupture in Armstrong County crossing a tributary to the Allegheny River.
- **Columbia Gas** – Civil Engineer responsible for transmission pipeline design, ROW acquisition, surveys and mapping and well location for the Columbia Gas System in PA, NY, WV, MD and OH.

# John N. Zagorski II

## Engineering/Operations Manager

Years with Baker: 19  
Years with Other Firms: 5

### Education

The Pennsylvania State  
University  
A.S., Mechanical Engineering,  
1975

University of Pittsburgh  
Coursework, Civil Engineering

Robert Morris College  
Coursework, Business  
Management

### General Qualifications

Mr. Zagorski serves as engineering/operations manager of the Telecommunications/ Pipelines Department of the Michael Baker Corporation. His responsibilities within the department include, but are not limited to department management; preparing proposals, participating in presentations, developing project budgets and schedules, assigning responsibilities to project members, monitoring project quality assurance and control, providing technical guidance to project members, and maintaining close contact with clients.

Mr. Zagorski's professional experience covers a wide range of general civil engineering projects. Experience includes; pipeline design, long haul lightwave cable design, environmental permitting, digital conversion of existing coaxial cable systems, design and permitting of telecommunication regeneration and central office facility sites, design of water supply systems, waste disposal facilities, dams and impoundments, highway and bridge design, drainage and channel studies, and development and use of Baker's Interactive Graphic Design system.

### Experience

#### Pipelines

**C & L Processors DOT Pipeline, Oklahoma City, Oklahoma.** *Conoco, Inc.* Senior Project Manager. Managed engineering and construction services to bring approximately 410 miles of two U.S. Department of Transportation-regulated natural gas gathering and transmission pipelines into compliance with the Code of Federal Regulations (CFR), Title 49, Parts 191 and 192 as administered by the Oklahoma Corporation Commission. Project responsibilities included: evaluating existing records, preparing design and construction procedures, permitting with applicable agencies, performing construction management and inspection, procuring and disbursing construction material, and preparing final documentation records.

**Cardinal States Gathering Line, Virginia, Kentucky, and West Virginia.** *Conoco, Inc.* Project Manager. Managed engineering evaluation of alternate routes, final alignment selection, preparation of construction and erosion control drawings, field engineering, alignment surveys and geotechnical and environmental studies for a pipeline consisting of 54 miles of 12- and 16-inch-diameter steel pipeline running from Buchanan County, Virginia through Pike County, Kentucky to Mingo County, West Virginia. Also managed state and county highway crossings permitting and right-of-way easements across 200 parcels involving individuals, corporations, and heirships. The project involved gathering coalbed methane from various sources along the route and delivering it to a major distribution network.

**Pocahontas Collection System Design and Engineering, Virginia.** *Conoco, Inc.* Project Manager. Managed selection of final alignment, preparation of construction and erosion control drawings, environmental studies, permitting for state and county highway crossings, and construction surveys for approximately 80 miles of a coal bed methane collection pipeline running through the hills. This gathering system includes 150 CBM wells and 80 miles of 4- to 12-inch diameter steel and polyethylene low and high pressure pipelines.

**Aviation Fuel Pipeline Design and Engineering, Pittsburgh International Airport, Pittsburgh, Pennsylvania.** *Tioga Pipeline Company.* Project Manager. Managed design, permitting and construction inspection of a 12-inch diameter steel pipeline providing aviation fuel for midfield terminal at Pittsburgh International Airport. Also managed selection of final alignment, preparation of construction drawings, permitting for state highway crossings, supervision of construction inspection and preparation of final record drawings.

**Gas Pipeline Design, Pennsylvania.** *ARCO Chemical Company.* Project Manager. Managed design and construction inspection of a 4-inch diameter nitrogen gas pipeline serving an existing major chemical processing plant. Project responsibilities included: selection of final alignment, preparation of construction drawings, supervision of construction inspection and preparation of final record drawings.

**Jet Fuel Pipeline Design, Wilmington, Ohio.** *Airborne Express.* Project Manager. Proposed 25 miles of jet fuel pipeline. Responsible for tax maps; property owner lists; field reviewing of proposed road crossing; and preparing permit applications from State DOT and County Engineers for stream and road crossings. Prepared preliminary design drawings showing the proposed alignment, property lines, streams and wetlands, road crossings and directional bores.

**Natural Gas Pipeline Design, Southwest Virginia.** *Virginia Gas Company.* Project Manager. Proposed network of approximately 150 miles of pipeline to provide natural gas service and storage to several communities between Abingdon and Roanoke, Virginia. Project consisted of the conceptual design of pipeline sizing and mechanical analysis, route alignment studies, environmental assessments, cultural resource identification, geotechnical evaluations, right-of-way easement investigations, highway and railroad permitting assessments, and construction costs estimates and schedules.

**Coalbed Methane Gas Gathering System Feasibility Investigation, West Virginia.** *U.S. Steel Mining Company, Inc.* Project Manager. Investigated the feasibility of constructing a coalbed methane (CBM) gas gathering system that would transport the gas to an existing thermal dryer at the No. 50 Mine operations located in Pineville, West Virginia. The report consisted of the evaluation and summation of the following issues: fuel specifications of the dryer; quality and quantity of available CBM gas; conceptual design of a gathering system; and potential economic benefits available from the development of a gathering system.

**Computer Expertise**

Hardware: PC

Software: Word, Excel, PowerPoint, MS Project, Lotus

**Specialized Experience**

**Seminars**

Leadership Effectiveness and Development Training Program, February, 1998

Conference on Natural Gas Use, The U.S. Department of Energy, February, 1994

North American Coalbed Methane Conference, West Virginia University, 1993, 1994, 1995

International Coalbed Methane Symposium, University of Alabama, May, 1993

Total Quality Management Training Program, September, 1991

The Business of Design Consulting, American Consulting Engineers Council, October, 1989

**Professional Affiliations**

Project Management Institute

Telecommunications Management Association

# Kenneth F. Havasi, R.L.S.

## Project Manager

Years with Baker: 32  
Years with Other Firms: 6

### Education

Michigan Technological  
University

Ferris State University

International Correspondence  
Schools

Robert Morris College

### Registrations

Registered Land Surveyor  
Pennsylvania, 1973, 19341

### General Qualifications

Since joining Baker in 1970, Mr. Havasi has served as a project manager, assistant project manager, project engineer, field engineer, senior designer and supervisor of surveying on projects for transmission lines, pipelines, waterlines, sewerlines, railroads, photogrammetric control, and highway locations, as well as hydrographic and cadastral surveys. He has also served in various levels of expertise in the telecommunications, construction management, and pipeline fields.

### Experience

#### Pipelines

**Oakwood Gathering System, Richlands, Virginia.** *OXY USA, Inc.* Assistant Project Manager. Managed all engineering activities on this 100-plus-mile, one to twelve inch diameter, coalbed methane gas collection pipeline interconnecting more than 300 wells, 28 compressor stations, four electrical substations, and 60 miles of electrical distribution lines. Engineering services included conceptual design, mechanical and electrical design, final design, route selection, alignment surveying, right-of-way services, photogrammetric mapping, permitting, environmental assessment, record drawings, preparation of construction specifications, construction surveys, and construction inspection. Specific project engineering responsibilities included prequalifying contractors, assembling bid packages, permit tracking, advertising for and obtaining bids, negotiating contracts, monitoring and reporting work progress, day-to-day interfacing with contractors, preparing scope changes, providing inspection services of contractors work, managing material yard, and verifying contractor invoices.

**Cardinal States Gathering Line Gas Pipeline Design, Virginia, Kentucky and West Virginia.** *Conoco, Inc.* Senior Designer. Designed a 54-mile, 12- and 16-inch diameter coalbed methane gas collection and distribution pipeline, running from Virginia, through Kentucky, to West Virginia. Engineering services included conceptual design, route selection, alignment survey, right-of-way research and acquisition, alignment design, environmental permitting, preparation of record drawings, and construction inspection.

**Pipeline Rerouting, Pennsylvania.** *Various Pipeline Companies.* Field Engineer. Responsible for route selection, scheduling surveys, construction inspection, and record documentation of pipeline reroutes for various companies, including Buckeye, Getty, Sun Oil, ANR, and Columbia.

**Pipeline Feasibility Studies Design, Virginia and Ohio.** *Virginia Gas and Airborne Express Companies.* Senior Designer. Designer for preparation of feasibility studies for 200 miles of pipeline routes in Virginia and 30 miles in Ohio. Responsibilities included gathering existing tax maps to current

ownership; preparing preliminary route maps with proposed alignments, property lines, existing utility lines, permitting indexes; and preparing preliminary cost estimates.

**Specialized Experience**

**Training**

Civil Engineering courses, Michigan Technical University, 1964-1965  
Civil Engineering courses, Ferris State University, 1966  
Business Administration courses, Robert Morris College, 1990-1993  
Survey and Mapping, International Correspondence Schools, 1972  
Business Administration, International Correspondence Schools, 1995-Present  
All computations for first, second and third order surveys

**Instrument Proficiency**

EDM equipment  
Theodolites  
Levels

**Foreign Experience**

Greenland - Cold Storage Building Site Survey, 1969  
Thailand - x,y,z Coordinates Surveys at Air Bases for Navigation Aids, 1968  
Vietnam - x,y,z Coordinates Surveys at Air Bases for Navigation Aids, 1968, 1969  
Germany - Site Surveys at Various Air Bases

**Professional Affiliations**

American Congress of Surveying and Mapping  
American Society of Photogrammetry

# Roland Belay, P.E.

## Project Manager

Years with Baker: 8  
Years with Other Firms: 18

### Education

M.S., 1986, Transportation  
Engineering, Polytechnic  
Institute of Brooklyn

M.B.A., 1980, Business  
Administration, New York  
University

B.E., 1977, Civil  
Engineering, Cooper Union

### Registration

- Professional Engineer,  
Connecticut, 1981, 14984
- Professional Engineer,  
New Jersey, 1981,  
GE36026
- Professional Engineer,  
New York, 1980, 0594051

### General Qualifications

Mr. Belay is a Professional Engineer whose expertise includes project management and design of major public work projects. He is currently serving as a Manager in Baker's Highway Design Group. As project manager, he has extensive experience in the planning, design and management of highway projects for New York State Department of Transportation, the Port Authority of New York and New Jersey, New York City Department of Environmental Protection, Triborough Bridge and Tunnel Authority, U.S. Army Corps of Engineers, and other agencies.

### Experience

#### Utility Projects

- **Hudson River Bore Project, Manhattan, NY.** *Metro Media Fiber Network.* Deputy Project Manager. Responsible for project coordination, designing MPT schemes, utility coordination, Battery Park City Authority presentation, and roadway design for constructing a 5,600 foot long directional bore housing fiber optics, from Battery Park City under the Hudson River, to Jersey City. 11/99-11/00
- **Gas Pipeline through Westchester County, NY.** *Millennium Pipeline Company, LP.* Manager. Responsible for coordination, site planning, constructibility, MPT schemes, developing preliminary plans for routing a 24inch gas pipeline through Westchester County. Assisted in preparing permits for Federal Energy Regulatory Commission, and coordination with local agencies, government officials and NYSDOT. 6/00-1/01
- **1999/2000 Biennial Inspection & Interim Bridge Inspection in New York County.** *NYSDOT Region 11.* Project Manager. Managed the biennial, special and interim inspections of all 210 bridges in New York County, which encompasses 2,810 spans. Inspection schedules were prepared weekly for 5 teams, including equipment rentals, lane closures and agency coordination.
- **Route 23A Bridge Over Kiskatom Brook, Catskill, New York.** *NYSDOT Region 1.* Project Manager. Baker provided Preliminary and Final Design Services (Phases I-IV) for the construction of the Route 23A bridge over Kiskatom Brook and 650m of roadway rehabilitation. Route 23A, near Route 32 is a rural two lane road, with mostly farmland and some residential development. This project was designed in metric units and includes ground and ROW survey and mapping, preliminary studies of alternatives, development of design alternatives with various horizontal and vertical geometric improvement, accident analysis, capacity analysis, MPT staging alternates, drainage, road widening, addition of shoulders, guiderail and signing, removal and relocation of utility poles and other clear zone improvements, evaluation of cost, social, economic and environmental

factors including archeological and cultural investigations, wetlands, storm water management, ground water analysis, hazardous materials assessment, asbestos assessment, preparation of Design Reports and Environmental Assessment, including access management and public participation activities, PS&E, and construction support services. This project also included the preliminary and final highway and bridge design for the replacement of a box culvert which carries Route 23A over an unnamed stream. 4/97 8/00

- **Triborough Bridge Inspection and Deck Repair, Bronx, New York.** *Triborough Bridge and Tunnel Authority.* Principal Engineer. Developed and designed maintenance and protection of traffic schemes for the repair/replacement of the roadway decks for 3000 feet on this suspension bridge, which carries over 150,000 vehicles daily. Also was responsible for signage, pavement markings and drainage. 2/95 - 1/00
- **Manhattan Bridge Rehabilitation Construction Support Services, Jay and Sand Street, New York, New York.** *New York City Department of Transportation.* Engineer. Responsible for Maintenance and Protection of Traffic. Developed final roadway plans for lowering roadway elevations to accommodate truck traffic traveling under the structure. Plans included utility relocations, signing and striping, barrier design, traffic monitoring and forecasting. 8/97 - 9/00
- **Reconstruction of 12 Catskill System Bridges, Various Locations, New York.** *New York City Department of Environmental Protection.* Principal Engineer. Developed and designed maintenance and protection of traffic schemes for the replacement of 12 bridges over New York City Watershed/Reservoirs. Responsibilities also included traffic analysis, roadway design and drainage. 2/95 - 4/99
- **South Conduit Avenue Bridge Replacement, Queens, New York.** *New York State Department of Transportation (Region 11).* Project Manager. Performed final design and construction support services for the replacement of an existing bridge with a multiple-span, curved-steel girder bridge and improving a major interchange. The roadway configuration associated with the bridge, which carries traffic over the Shore Parkway, interfaced with the Nassau Expressway project. 1985 - 1986

### Highway Engineering

- **Reconstruction of Route 23A, Catskill, New York.** *New York State Department of Transportation (Region 1).* Project Manager. Managed design services (Phases I-IV) for the reconstruction of 1.6 km of Route 23A. Responsible for the project which included the realignment of the intersection of Route 23A with Route 32A, Services included ground survey, development of base mapping survey to develop Digital Terrain Model, right-of-way survey and mapping, preliminary studies of alternatives, development of design alternatives with various horizontal and vertical geometric improvement, MPT staging alternates, signalization, traffic survey, parking alternative study, assess drainage conditions for closed and open systems, evaluation of cost, social, economic, and environmental

factors including air and noise analysis, wetland mitigation, parks, tree inventory, stormwater management, ground water analysis, hazardous materials assessment, asbestos assessment, cultural and a visual impact assessment; Phase I and II archaeological investigation; preparation of Design Reports and Environmental Assessment, including access management and public participation activities, and technical support for informational meeting and public hearing. 4/97 - 8/00

- **Route 9A Reconstruction, Manhattan, New York.** *New York State Department of Transportation (Region 11).* Project Coordinator. Coordinated and administered more than 30 subconsultants in preparation of an Environmental Impact Statement (EIS) for reconstruction of five miles of New York State's arterial West Side Highway. Prepared contracts, supplemental agreements, specifications, estimates, CPM project schedules and budgets on this \$35 million fee project. Project tracked more than 3,000 activities with more than 5,000 dependent variables. Updated items on a continuing basis and issued monthly reports to subconsultants for review and comments. Responsibilities also included technical coordination of studies including traffic accident analysis, air quality, noise, archaeological, (4f), signing, striping, estimates, cost benefit analysis, origin and destination data collection for incoming and outgoing New York City traffic, and roadway design. Developed traffic model for all of Manhattan below 72nd Street. Monitored air quality and noise studies for west side of Manhattan and developed forecast models. Maintained a separate project office with staff of ten. Project included continuous community and public agency presentations to respond to various concerns, and often required development of additional studies. Maintained mailing list of 2,400 names and an EIS distribution list of 400 agencies. EIS distribution included bidding 3,000 pages of reports, coordinating printers, packaging, delivery in accordance with legal requirements and subsequent monitoring of comments and their appropriate responses. This process was typical for each of the 100 additional minor studies performed. 2/88 - 1/95
- **Nassau Expressway Section "A", Queens, New York.** *New York State Department of Transportation (Region 11).* Project Manager. Managed preparation of construction plans and subsequent construction support services for construction of a new three-lane expressway between Cross Bay Boulevard and J.F. Kennedy International Airport; a multispan bridge over Belt Parkway; and rehabilitation of roadways, ramps, and local airport and city streets. Project included development of conceptual design, preliminary and final drawings, and detailed design work for all phases of a highway project including alignment, maintenance and protection of traffic, construction phasing, roadway, structural, signing, pavement markings, drainage, lighting, utilities, traffic signal systems, intersection design, accident analysis and traffic survey. Work also included development of Port Authority signing system that involved developing standard Port Authority and matrix signs. Managed preparation of documents and reports,

scheduling, estimating, and continuous community participation. 8/85 - 10/87

- **Nassau Expressway, Stages I, II and V, Queens, New York.** *New York State Department of Transportation (Region 11).* Principal Engineer. Performed quality assurance and quality control and conceptual and final roadway design. Inspected and designed signing, overhead structures and pavement markings. Prepared plans for construction phasing, and maintenance and protection of traffic; and developed designs for traffic signals and intersections, roadway items, drainage utilities, and lighting design. Performed traffic survey, estimates and a computerized noise level study. Made frequent presentations to the state and city departments of transportation, Port Authority of New York and New Jersey and community boards. 2/83 - 8/86
- **Brooklyn-Queens Expressway Rehabilitation Design, Queens, New York.** *New York State Department of Transportation (Region 11).* Project Manager. Managed civil engineering design and construction support services for rehabilitation of three miles of viaduct including more than 60 spans, approach roadways and related interchanges of the Brooklyn-Queens Expressway at Laurel Hill Boulevard and the Long Island Expressway, between the Kosciuszko Bridge and Queens Boulevard. Work included preparing preliminary and final civil drawings, documents and reports, estimating, detailed design of roadway items, maintenance and protection of traffic, drainage, lighting, utilities, traffic signal and intersection design, signing and pavement markings. 8/86 - 9/89
- **Rehabilitation of Route 81, Greene County, New York.** *New York State Department of Transportation (Region 1).* Manager. Managed preparation of preliminary plans and design report for an Environmental Assessment, final plans specifications and estimate; coordination with NYSDOT, local officials and subconsultants; and scheduling for rehabilitation of 6.3 km of Route 81. Project design involved geometric modifications, traffic studies, pavement, sidewalks, guide rail and signing, drainage, maintenance and protection of traffic, utilities, right-of-way, archaeological and hazardous materials investigation and wetland mitigation. 2/95 - 9/96
- **Reconstruction of Route 55 from Burnett Boulevard to Noxon Road, Dutchess County, New York.** *New York State Department of Transportation (Region 8).* Construction Project Manager. Responsible for \$22.8 million project. Work consisted of railroad bridge demolition; two bridge constructions; roadway widening to six lanes, new and rehabilitated roadway; concrete median, turning lanes, relocating offset intersections, drainage, utilities and sign relocations; landscaping, wetland relocation and extensive maintenance and protection of traffic. 1995 - 1997

**Planning Aid Report, City of Glen Cove, New York.** *U.S. Army Corps of Engineers.* Project Engineer. Involved in developing conceptual plans for providing improved roadway access and restoration of a pond as part of a waterfront development plan. Included were geometric road improvements, bridge construction, traffic engineering, right-of-way taking, bicycle and pedestrian access, visual aesthetics, cultural resources, cost evaluation and

presentations to concerned groups, including mayor Tom Suozzi 10/96 - 7/97

- **Coney Island Pollution Project, Brooklyn, New York.** *New York City Department of Environmental Protection.* Project Manager. Designed the rehabilitation of Voorhies Avenue, adjoining the plant facilities, from Knapp Street to Coyle Street. Construction drawings included maintenance and protection of traffic, roadway items, and pavement markings. 1996
- **Long Island Expressway, Exits 43-46, Nassau County, New York.** *New York State Department of Transportation (Region 10).* Principal Engineer. Designed signage and pavement markings for the widening of the expressway to accommodate HOV lanes, rehabilitation of service roads, crossing roads, interchanges and intersections. 1994
- **JFK International Airport External Roadway Capacity Study, Queens, New York.** *Port Authority of New York and New Jersey.* Project Manager. Managed an extensive traffic survey, data collection and analysis for the Port Authority of all external roadways to JFK Airport. The two week effort encompassed Cross Bay Boulevard, Belt Parkway, Van Wyck Expressway, Nassau Expressway, North and South Conduit Avenues and all interchanges and local cross streets. Responsible for the coordination of three firms, 200 personnel and the development of a network identifying all traffic movements within the area. 1985
- **White Mills Road, White Mills, New York.** *New York State Department of Transportation (Region 1).* Project Manager. Responsible for final design of a single-span, steel bridge, as well as the alignment, grading, drainage, signing, maintenance and protection of traffic, specifications, estimates and design report for this roadway reconstruction project. 1984
- **Rehabilitation of FDR Drive Promenade, New York City, New York.** *New York State Department of Transportation (Region 11).* Technical Advisor/QA/QC. Performed advisory and quality control responsibilities for the preliminary design (Phases I-IV) for rehabilitating the promenade structure from 81st to 90th Streets and the construction of a pedestrian bridge. Project includes inspection, survey + mapping, ROW, drainage improvements, utility relocation, maintenance and protection of traffic, pedestrian survey, tree inventory and community involvement leading to a Design Report and Environmental Assessment. 11/97 - 12/00
- **Reconstruction of Everett Road, Albany County, New York.** *New York State Department of Transportation (Region 1).* Technical Advisor/QA/QC. Performed advisory and quality control responsibilities for the preliminary and final design (Phases I-VI) for the reconstruction of 2.1 km of Everett Road from Exchange Street to Albany Shaker Road. project includes adding turning and travel lanes, realignment of intersections, horizontal and vertical realignments, right-of-way mapping, drainage improvements, wetland mitigation, utility relocation, maintenance and protection of traffic, accident analysis, capacity analysis, signal design, air and noise analysis, preparation of an environmental assessment, and community participation activities. 6/98 - Present

- **Reconstruction of Palisades Interstate Parkway (PIP), Stage I, Orangetown and Clarkstown, Rockland County, New York.** *New York State Department of Transportation (Region 8).* Engineer. Provided technical support and QA/QC for the reconstruction of PIP at the New York State Thruway interchange. Three bridges were replaced, 28 rehabilitated and the clover-leaf interchange realigned. Work included roadway widening, added shoulders, improvement to vertical and horizontal alignments, realigning ramps, acceleration and deceleration lanes, revised grading and drainage, signing, striping and maintenance and protection of traffic. 7/98 - 11/98
- **Upgrade of Five Rail Station, Shore Line East Commuter Railroad, Brandford, Westbrook, Guilford, Madison and Clinton Connecticut.** *Connecticut Department of Transportation.* Technical Manager/QA/QC Responsible for site work design at two new stations and site work improvements a three additional Shore Line East Railroad Stations. Site work design includes grading, drainage, pavement design, curbing, sidewalks and layout of parking spaces, all conforming with ADA Accessibility Guidelines. 7/99-1/02
- **Traffic Demand Management.** *New York State Department of Transportation.* Project Manager for open end agreement. Assignment 1-performed Park & Ride Study for 16 sites in Westchester County 2001. Assignment 2-performed Park & Ride Study for 14 sites in Putnam/Rockland Counties 2001-2002. Assignment 3 - performed Travel Time Speed Runs for 4 major arterial corridors in NYC. 2002

#### **Previous Work Experience**

In a previous association, Mr. Belay managed for a private utility the design of several power plant related structures such as transmission towers, smoke stacks, scrubbers, coal yard materials handling, coal dock facilities, waste management and nuclear waste storage facilities. His assignments included preparing estimates and economic evaluations of structural designs, reviewing design drawings, coordinating fabrication and erection schedules with other phases of work and disciplines, preparing technical specifications and bid documents, evaluating bids and awarding work, preparing contract documents, administering contracts to completion, maintaining interface with other engineering disciplines and construction personnel to solve structural problems, and negotiating claims.

#### **Foreign Experience**

Family in Germany, Austria and Switzerland

#### **Foreign Languages**

German: Speak, Read, Write

#### **Professional Affiliations**

American Society of Civil Engineers  
New York Association of Consulting Engineers

# David W. LaPearle, PLS

Manager of Survey Department

Years with Baker: 13  
Years with Other Firms: 17

## Education

Butler County Community  
College, Associates Degree  
1971 - Engineering Technology

PA Society of Land Surveyors,  
Point Park College and Penn  
State University - Various  
Continuing Education Courses

## Michael Baker Corporation

### Training:

- Total Quality Management  
Facilitator 1991
- Baker Project Management  
Training 1998
- Strategic Project  
Management Program  
2000

## Registration

Professional Land Surveyor:  
Pennsylvania #SU034201E,  
1985

## General Qualifications

Since joining the company in 1988, Mr. LaPearle began in the Surveying Department as a Project Manager/Supervisor and progressed to Manager of Survey Services. Mr. LaPearle has over 30 years of experience in pipeline, utility and telecommunications, highways, bridges, boundary and subdivision surveys, ALTA/ACSM land title surveys, aerial photography and photogrammetric control and mapping, etc. He is directly responsible for successful conduct of conventional field survey and GPS activities. This includes a full range of GPS survey services utilizing Trimble dual frequency receivers, Trimble Pathfinder ProXRS receivers, Leica GS50 receivers, and Leica SR530 RTK receivers. Baker maintains a minimum of 6 - 8 field crews ranging from 2 - 4 people. Responsibilities also include the specific control, design, review and preparation of survey/engineering drawings through a technical office staff of 10 - 12 people. In addition he also manages project proposals, staff and personnel, work scheduling, correspondence, budgets, invoicing, etc. and has been actively involved in the following projects:

## Experience:

- **CNG Transmission Corporation. Project Manager.** Over 200 miles of extensive route survey, construction mapping, erosion control mapping and completed road, stream, river and railroad permitting plats. This included preparation of numerous detailed surveys, R/W condemnation drawings and expert witness appearances for numerous projects throughout Pennsylvania and West Virginia between 1989 - 1992.
- **Columbia Gas Transmission Corporation. Project Manager.** Long term open-end engineering, survey and mapping contract with Baker. In the past five years alone, Baker has performed well over 220 miles of extensive gas pipeline surveys primarily in West Virginia and Pennsylvania, plus additional services throughout Ohio, Maryland, Virginia, New York, New Jersey, and Kentucky. Services include GPS high accuracy mapping control, GPS Sub-meter route surveys, digital orthophotos, pipeline mapping, environmental mapping and permit plats, landowner and public record research, right-of-way condemnations, subdivisions and boundary surveys, aerial photography, miscellaneous route conventional surveys, construction staking, as-builts, forced pipeline relocations, GPS high accuracy well surveys, storage fields and geotechnical support.
- **Columbia Transmission Communications Corporation. Project Manager.**
  - **Appalachia Project (Charleston, WV - Buckhannon, WV)** Baker has performed extensive conventional and GPS surveys plus preparation of alignment sheets, route and railroad crossing permit plats, and telecom design for approximately 130 miles in some very rugged areas of WV. Baker has also done considerable property line recovery and ties for ongoing reroute surveys and construction issues.

- **Chesapeake Project (New York - Washington, D.C.)** Baker has processed over 210 miles of GPS survey data and produced approximately 400 detailed alignment sheets for right-of-way acquisition and for design and construction use. Baker has also prepared numerous permit drawings for major state highways, Delaware River crossing and railroads affected by this project. More recently, Baker continues to be involved with field surveys and office mapping support for numerous reroutes and right-of-way issues during construction. Baker also performed certain as-built surveys for this project.
- **Allegheny Project (Philadelphia, PA - Cleveland, OH)** Baker initially performed detailed tax map and landowner research and helped develop specific route alignment onto maps for use by CTC's ROW and Land Department. Baker has completed considerable GPS field surveys and subsequent preparation of over 800 individual sheets of detailed alignment mapping, road and railroad crossing permits, and numerous regen site surveys, etc. supporting this 500 mile project.
- **Millennium Pipeline. Project Manager.** Baker has provided considerable on-call survey and mapping services for this project. This has included approximately 35 miles of GPS control and conventional surveys collecting field data for a proposed pipeline reroute (Westchester County, New York) requested by FERC. In addition, considerable detail alignment drawings, aerial photography, pipeline engineering and CAD support were supplied as part of ongoing FERC submittals and final design issues.
- **Pennsylvania Department of Transportation. Survey Manager.** Manager of survey related tasks for all work orders on our open-end engineering agreements for Statewide Photogrammetric Mapping with PADOT. Preparing estimates of survey man-hours for work orders and overall scheduling and supervision for all survey crews and office technicians who perform survey or GPS related assignments for both statewide mapping projects plus local engineering projects. This also includes being the responsible licensed surveyor in charge of all activities and QA/QC of all projects. These local support tasks include GPS surveys, topographic surveys, route staking, core borings, cross sections and profiles, horizontal and vertical control, etc. Past projects include:
  - SR 0026 - Centre Co., PA
  - SR 0022 - Mifflin Co., PA
  - SR 0220 - Centre Co., PA
  - SR 1048 - Westmoreland Co., PA
  - SR 0082 - Birdsboro, PA
  - SR 0434 - Pike Co., PA
  - SR 0209 - Monroe Co., PA
  - SR 0015 - Union Co., PA
  - SR 0022 - Juniata Co., PA
- **Greater Pittsburgh International Airport. Survey Task Manager.** Numerous miles of major pipeline utility relocation projects due to the Greater Pittsburgh International Airport - Midfield Terminal and Southern Expressway (S.R. 6060) construction projects.

- **Airport Projects.** *Survey Task Manager.* Managed Baker's Survey Department involvement on a full range of considerable surveys at airport projects including: Pittsburgh International Airport, University Park Airport, Beaver County Airport, Washington County Airport, New Castle Airport, St. Mary's Airport, Harrisburg Airport, Wheeling-Ohio Co. Airport, McConnell Air Force Base and Grand Forks Air Force Base.
- **The Pointe and Robinson Mall Development. Metro Property Development.** *Survey Task Manager.* Managed approximately 600 acres of miscellaneous design, boundary subdivision, ALTA/ACSM and construction staking surveys near Robinson Towne Centre, North Fayette, Pennsylvania.
- **Dixmont State Hospital.** *Survey Task Manager.* Baker performed a detailed boundary retracement survey, aerial photography, photogrammetric mapping plus numerous subdivision plans and other tasks for ongoing development of approximately 400 acres near Emsworth, Pennsylvania.
- **U.S. Army Corps of Engineers.** *Survey Task Manager.* Over 70 miles of land-based control recovery, re-establishment and monumentation plus extensive hydrographic surveys of coastal beach profiles extending as much as a mile seaward into the Atlantic Ocean near Atlantic City and Stone Harbor, New Jersey as part of a project with sponsorship of the New Jersey Department of Environmental Protection and Energy. Other miscellaneous past USACE projects include:
  - Barnegat Inlet to Little Egg Inlet, New Jersey
  - Port Mahon, Delaware
  - Maurice River Cove, New Jersey
  - Beltzville Dam & Reservoir, Pennsylvania
  - Victory Hills Disposal Site, Pennsylvania
  - Weirton Port Study, West Virginia
  - Iowa Army Ammunition Plan, Iowa
  - Monongahela River Dredging, Pennsylvania
- **State Departments of Transportation.** *Survey Task Manager.* Numerous miles of highway and bridge improvement survey projects throughout West Virginia, New Jersey and Pennsylvania. Tasks included detailed roadway surveys and topography, cross-sections, profiles and field stakeout, and photogrammetric mapping control surveys utilizing GPS (Global Positioning System) technology.

**Various Clients.** *Survey Task Manager.*

- Countless miscellaneous survey projects including subdivisions, pond and river soundings, ALTA/ACSM title surveys, environmental support surveys, geotechnical support surveys, landfill support surveys, engineering support surveys, property boundary surveys (as large as 1800 acres), R/W condemnation projects and photogrammetric mapping projects located in Pennsylvania, New York, Ohio and West Virginia.
- **Northern Consolidated Power.** Over 25 miles of route selection, survey, plan/profile, design mapping, individual R/W drawings and substation/plant sites for electrical power transmission lines in Pennsylvania and New York.

# Don Miller

## Pipeline Technical Specialist

Years Experience: 40

### Education:

Master of Arts, Geography,  
University of Colorado, 1972.

Thesis title:

Human Perception and  
Adjustments to the High  
Wind Hazard in Boulder,  
Colorado.

### General Qualifications

Mr. Miller has spent the majority of his nearly four-decade career assisting the oil and gas industry, and to a lesser degree the manufacturing and electric energy industries with major developments, or developing markets. Often he found himself participating in both arenas. He presently assists major oil and gas firms, and international EPC and consulting organizations in developing business planning and market entry strategies and subsequent tactics. He also assists pipeline organizations in formulating environmental, engineering, and construction plans, and participates in their implementation. His professional network is global and current.

### Experience

#### Pipelines

Throughout his professional career he has served as an advisor to many of the major oil and gas companies on environmental matters for large upstream and downstream projects. As a Senior Project Manager and a Principal he managed over 30 major natural gas, carbon dioxide, crude oil and coal slurry pipeline environmental, geotechnical, and contingency planning contracts for large pipeline systems. Clients included most of the multinational oil and gas companies, the major EPC organizations and large regional utilities. While employed by a multinational forensic and risk-engineering firm, he assisted in evaluating pipeline construction issues and operations. Prior to joining the engineering and consulting industry, he was a member of the pipeline construction industry. He achieved the position of General Superintendent of Mainline Construction for F.H. Linneman and Hood Corporation, major domestic and international pipeline constructors.

#### **CONSTRUCTION EXPERIENCE**

His construction experience can be broken down into two major areas: urban distribution systems, and mainline transmission lines. It should be noted he performed all functional construction related tasks excepting welder. This includes competitive cost estimating, routing, and materials purchasing.

**Distribution Systems:** The majority of his experience in this arena was constructing urban natural gas distribution systems. This included mid- and large-diameter low-pressure trunks, in-street distribution lines, and individual building services. Activities included the installation of systems in newly constructed developments, refurbishing systems in older areas, and connecting and piping rural areas and small towns. In addition to welded steel natural gas systems, he supervised the construction of water, sewer, underground electrical conduit and telephone systems. He also installed plastic natural gas and water systems.

**Mainline Transmission Lines:** For a period of years he served as General Superintendent for Mainline Construction...or in the vernacular of the trade, a Spreadman. This experience concentrated on cost estimating, routing, constructing, and testing of mid- to large-diameter butt-welded steel natural gas transmission lines, which ranged in length from a few miles to over one hundred miles. He worked in all types of terrain, having supervised construction of portions of a natural gas pipeline, which traversed 150 miles of the Rocky Mountains in Colorado. This project was the first major pipeline to be considered under the then draft National Environmental Policy Act. He also removed and salvaged systems in the wetlands of east Texas, built lines across western prairies, and installed onshore and offshore terminal facilities in Guam. He recently routed, and developed preliminary construction plans for the 24-in high-pressure Millennium natural gas pipeline from its' Hudson River crossing to its' terminus in Yonkers, New York.

### **REGULATORY EXPERIENCE**

His first exposure to the pipeline regulatory environment was during the planning and construction of the Trans Alaska Pipeline (TAPS), now known as Alyeska Pipeline Service Company, and has continued since then. His regulatory experience covers a wide array of assignments, jurisdictions, and precedents that involve grants of rights-of-way and subsequent design, construction and operation of over 11,000 miles of pipelines and related facilities. He managed the preparation of over 30 significant environmental, engineering and construction reports focused on pipelines. Important precedent setting activities in which he was integral follow:

Negotiated the conditions of and managed the first federal third-party Environmental Impact Statement under the National Environmental Policy Act.

- Served in a management position for the development of over 20 EIA/EIS's on major welded steel pipelines, primarily crude oil pipelines.
- Assisted in the development, and managed the field analysis of the first detailed Oil Spill Contingency Plan for crude oil pipelines.

Oversaw the development of a predictive model that assigned probabilities to archaeological site location and significance, and the development of immediate field mitigation measures for cultural resources sites encountered during construction.

- Oversaw all environmental compliance efforts for an 1100-mile pipeline that was operational within 14 months of project initiation.
- Lead negotiations resulting in FERC acceptance of a State of California selected EIS/EIR contractor being designated as both federal and state contractor thus placing both under the more stringent State time requirements.
- Managed a pipeline route selection study to move southern and central offshore California crude to Los Angeles and San Francisco refineries. This study was the basis for several

- operating and proposed pipelines serving these markets.
- Managed a forensic regulatory review of a products pipeline accident that resulted in the deaths of three individuals in the Pacific Northwest.
- In response to the Federal Energy Regulatory Commission (FERC) environmental concerns recently routed, and developed preliminary construction plans for the 24-in high-pressure Millennium natural gas pipeline from its' Hudson River crossing to its' terminus in Yonkers, New York.

Many of these experiences served as precedents increasing the efficiency by which pipeline projects can be permitted, built, and operated. All are in use in some form today. He was responsible for engagement procurement; and regulatory, technical, and commercial performance for these and many other pipeline projects.

### ***OIL SPILL CONTINGENCY PLANNING***

He participated in the development and implementation of the first large scale pipeline Oil Spill Contingency Plan (OSCP): the Plan was stipulated in the grant of rights-of-way for Alyeska Pipeline Service Company's application to design, construct and operate the 2.0 mmbpd Trans Alaska Pipeline System (TAPS). TAPS was defined as the 790-mile reach of pipeline from Prudhoe Bay, the Valdez Marine Terminal, and the tanker route from the Terminal through the Port Valdez Narrows across Prince Williams Sound to the Hinchinbrook Entrance. There were three plans developed: one covering the pipeline from Prudhoe Bay to the Marine Terminal at Valdez, one covering the terminal itself to include the tanker route through Port Valdez, and the third plan covering tankers routes traversing Prince William Sound.

He was the day-to-day Project Manager for the pipeline OSCP, and participated in the development of the Valdez Marine Terminal Plan. It should be noted that these OSCP's were tested and approved prior to pipeline operation as stipulated in the grant. Brief descriptions of these experiences follow:

- ***Trans Alaska Pipeline:*** He led the technical studies, and subsequent field verification, which provided the basis for the pipeline OSCP. This involved understanding all environmental communities traversed by the pipeline, their drainage patterns, and sensitivity to an event so that appropriate immediate response actions and subsequent diversion and cleanup activities were compatible with the location and size of a spill. Drainage patterns for the entire route were determined, potential spill volumes calculated for every stream crossing (over 500) and traverses of sensitive areas, and subsequent immediate response, and containment and diversion techniques determined for each.
- ***Valdez Marine Terminal:*** His involvement was limited to (1) integrating the pipeline plan into the terminal plan, and to (2) assisting in testing oil-water-sensors, and designing and locating a permanent fence boom that was built into the terminal docking facilities.

He also served as Project Manager for the development of the OSCP for the Sohio (now BP) sponsored PacTex Pipeline. The line as proposed was to carry 1.2 mmbpd of Alaska North Slope Crude from the Port of Long Beach in Southern California to Midland, Texas where it would enter existing pipelines and be forwarded to Gulf Coast refineries. Much like the TAPS, two plans were developed: one for the marine terminal, and one for the pipeline. Although similar in length and volume, the PacTex line varied from TAPS in one significant way: it traversed a densely populated area, the Los Angeles Basin from west to east. This meant that man-made features dominated: drainages were storm sewers; flood control channels, city streets and freeways, and groundwater recharge basins. Like the plan developed for TAPS, he the lead the technical studies and field verification, which provided the basis of the PacTex pipeline plan. In addition to understanding the environment of long sparsely populated reaches of line traversing the desert southwest, the highly urban environment of Los Angeles needed to be understood. The effects of constructed features in influencing spill flow and its effects were determined. Surfaces flows for every thoroughfare traversed, for every storm sewer and flood control channel encountered were determined and appropriate immediate response, and subsequent diversion and containment actions were developed. All of this was done in concert with the concerns and requirements of a myriad of municipalities, water and sewer districts, utilities, fire and police departments, and concerned citizenry.

He also served as Project Manager for two crude oil pipeline OSCP's, one rural and one urban, and a marine terminal OSCP for Pacific Gas and Electric Company all on the California Coast. He was assistant Project Manager for a white oil pipeline OSCP for Shell Pipeline Company in a heavily populated region of the San Francisco Bay area. In 1999 he was Assistant Project Manager for the OSCP for Pacific Pipeline Company. This pipeline traversed both rural and urban areas reaching from Bakersfield to the Los Angeles Basin refineries. In 2001 he assisted in the development of an oil spill response plan framework for the BP Sponsored Baku-Tiblisi-Ceyhan (BTC) Pipeline. The framework was a portion of the IFC and World Bank submittals.

### **Business Planning**

His present practice centers on assisting client organizations in developing new technical skills and market entry strategies. Twenty-five years of business development experience underpins and is the focus of this practice. This practice includes researching and understanding markets, as well as gaining an understanding of client's technical strengths and culture as they affect their ability to successfully compete in a new market. Engagements are international and domestic. Scopes range from national market and competitor assessments to assisting small specialty engineering and environmental consulting firms leverage niche skills into broader markets. Recruiting is integral to this practice. In the course of conducting a competitor analysis for a major oil company, he recruited a senior executive for the same company to head up a new business line in a Southeast Asian country. He also recruited numerous management and technical leaders for engineering and consulting organizations. Recruiting is generally in support of market assessments and subsequent entry strategies he developed.

Most recently he assisted the Arab Center for Engineering Studies in Amman, Jordan in developing strategic business and business development plans, and an investment prospectus. The Jordan -- United States Business Partnership sponsored this engagement.

### **Business Development and Management**

He served as Managing Principal and Director International Business, Vice President of Corporate Business Development, Regional Vice President Business Development and Senior Project Manager for over 18 years with Woodward Clyde Group, a multinational environmental, waste management, and geotechnical engineering consulting company. As Director International Business and Vice President of Business Development, he was responsible for organizing and directing an international marketing, business development and sales organization. He has a solid record in startups, market development and expansion, and strategic alliances and joint ventures in Asia and the Pacific Rim, and other international regions. He subsequently undertook similar responsibilities with Environ International, a human health risk organization expanding their litigation support client base. He also facilitated that firm's entry into the international management consulting marketplace by locating and acquiring experts in international regulatory due diligence, and ISO 9000 and 14001 certifications and audits. He was the Managing Director, Management Systems for Aptech Engineering Services, a leading risk and forensic engineering organization that developed life cycle assessment and extension programs for LNG facilities, pipelines, and a wide variety of pressure vessels. He has extensive domestic and international business and financial contacts.