



**Turner, Mason & Company**

energy consulting & advisory

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## **Statement of Qualifications**

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Michael W. Leger, P.E.

President & CEO

# Overview

Turner, Mason & Company (TM&C) provides technical, commercial and strategic consulting services to clients globally in the crude oil, midstream, refining, refined products, and biofuels industries. We offer a broad range of engineering, management, and other professional services related to the downstream and midstream segments of the petroleum industry. We undertake single and multi-client consulting engagements along with research products covering crude oil, feedstocks, refining, and refined products outlooks. Core competences include individual refinery, company and refining industry studies, technical and commercial support in mergers and acquisitions, transaction due diligence, economic, feasibility and market analyses, expert witness as well as attestations and fuels regulatory support.

The company was founded in 1971 by Malcolm Turner, Harry Mason, and Lee Solomon – three prominent, licensed, professional engineers. Their vision was to build a top-tier consultancy known for delivering high quality, timely, and value-added solutions to meet clients' needs, while observing the highest standards of integrity and confidentiality. The fundamental principles on which the company was founded have continued to guide – TM&C through the years and are applied to every client engagement we undertake.

We are professionals with deep industry knowledge, skills, and experience, providing our clients with trusted advice that adds value to their business. Our staff is made up of highly qualified, licensed chemical engineers, economists and analysts with significant industry operating and commercial experience prior to joining the consulting practice. Our consultants maintain close contact with clients, and the responsibility for each engagement is clearly assigned to coordinate analysis, presentation of results, and follow-up that best meets the needs of each engagement. Staff members are skilled in working with corporate, legal, financial, and entrepreneurial clients at all levels in their respective organizations.

# Firm Principals

**Michael W. Leger, P.E.**  
**President & CEO**

Mike is President & CEO of TM&C and experienced in petroleum downstream economics, strategic planning studies, crude oil/marketing studies, joint venture analyses, supply/demand projections, refining center studies and business plan development. He has over 40 years' experience in the petroleum industry, including careers with Texaco and CITGO, and many years as an international consultant with TM&C. He was President/CEO of a small U.S. refining company, holds a B.S. in Chemical Engineering from Louisiana State University and is a licensed Professional Engineer (Texas).



**John R. Auers, P.E.**  
**Executive Vice President**

John is team leader for TM&C's market outlook publications and assignments. He provides senior leadership to TM&C's ongoing analyses of the worldwide refining industry and leads industry studies for the firm's clients. He has specific expertise in the areas of refining economics and planning, LP modeling, downstream asset valuation, crude oil valuation and capital investment/strategic planning. John joined the firm in 1987 after a career with Exxon Corp., where he held various positions at its Baytown, Texas refinery. He holds a BS (1980) in Chemical Engineering from the University of Nebraska and an MBA (1984) from the University of Houston-Clear Lake. He is a licensed professional engineer in Texas and Nebraska and is also a member of TSPE and AIChE.



**Thomas R. Hogan, P.E.  
Executive Vice President**

Graduated in 1971 from Michigan State University with BSChE degree. Formerly associated with Mobil and Husky. Experienced in planning and economics, linear programs, petroleum transportation and trading, environmental assessment and environmental fuels compliance, litigation evaluation, and wastewater treating.

Licensed Professional Engineer (Texas)

**Shanda B. Thomas  
Corporate Secretary & Business Manager**

Graduate of Texas A&M University with a BA (2005) and Texas State University with a MA (2007). Came to TM&C in 2007. Experienced in EPA Moderated Transaction System (EMTS) to provide RIN management services, technical assistance for attestation services and fuels regulations reporting. IT support, data management, infrastructure management, web development and communications, accounts receivable and payable. Responsible for company financial accounting, billings, and benefits.



**Samuel H. Davis  
Vice President, Strategy & Business  
Development**

Sam leads the strategic and business development efforts of the firm. He has 20 years' experience across oil markets, refining and petrochemicals with a diverse background of technical, operating and commercial responsibilities at Sunoco and most recently Wood Mackenzie where he held positions of Head of Americas Refining & Oil Markets; Director, Global Downstream; and Senior Manager, North America Refining. Sam holds a Bachelor of Science degree in Chemical Engineering from Drexel University (2001), and an MBA from the University of Houston (2007).

**John M. Mayes**  
**Vice President, Industry**  
**Analysis & Special Studies**

John is a senior member of TM&C's Outlook Team and spends much of his time contributing to our ongoing analyses of the worldwide petroleum industry. His expertise and experience include refining economics and planning, downstream asset valuation, crude oil valuation and capital investment and strategic planning. He has also been a lead consultant in several engagements associated with assessing global crude quality supply/demand balances. A graduate of Texas A&M University (1976) with a B.S. in Chemical Engineering, John spent 25 years with major international oil corporations with a strong emphasis in refining, trading, marketing, economic analysis and strategic planning. He joined TM&C in 2006.



**Elizabeth C. Hilbourn, P.E.**  
**Vice President, Fuels Regulatory Practice**

Graduated from the University of Minnesota with BSChE degree (1989) and from the Illinois Institute of Technology with MBA (1996) and is a Member Society of Women Engineers and American Institute of Chemical Engineers. With over 30 years of experience, she has a comprehensive knowledge of the transportation fuel regulations throughout the U.S. Experienced with EPA reporting, renewable fuel producer registration, fuels registration, 3rd party engineering reviews, RIN due diligence, and EPA compliance audits including performance based testing. Has assisted with foreign EPA registrations in the Netherlands, Denmark, Italy, France, Belgium and Argentina. Is also experienced in process engineering, process design, linear programming, short-term planning and strategic planning in the refining industry as well as R&D experience in catalysis. Licensed Professional Engineer (Texas and Minnesota).

**Cinda J. Lohmann, P.E.**  
**Director Fuels Regulatory Practice**

Graduate from the University of Arkansas with a BSChE degree (1997). With over 20 years of experience in the petroleum industry, she has a comprehensive knowledge of the transportation fuel regulations throughout the U.S., Mexico, and Canada. Experienced with Federal EPA Fuel and Vehicle Regulations (including those governing the Biofuel Industry), CA and OR LCFS programs (including the upcoming verification requirements), Mexico Petroleum Fuel Regulations, and CAN Clean Fuel Standard. Active member of ASTM Committee D02 on Petroleum Products and Lubricants and multiple industry organizations (CRC, Fuels Institute, and AFPM). Is also experienced in laboratory methods and quality assurance practices, as well as an extensive background in refining commercial and process engineering. Focused on serving our clients on regulatory programs throughout North and South America. Licensed Professional Engineer (Minnesota).



**Robert Auers**  
**Senior Consultant**

Graduated from the University of Texas at Austin in 2013 with a B.S. in Chemical Engineering. Formerly with Western Refining. Experience is in petroleum refining economics, process engineering, process design, and HazOp review. He is a current member of Turner, Mason & Company's Outlook team. He has also passed all three levels of the CFA Program and may be awarded the charter upon completion of the required work experience.

## Market Analysis Studies

- Provide independent assessments and forecasts of regional, national and international crude oil, product balances and key prices/margins.
- Detailed assessments of supply and demand dynamics for use in developing refining and marketing strategies.
- Evaluation of market dynamics for use in facility and company strategy studies.
- Develop forecasts of product balances for gasoline, distillates and fuel oil in specific major markets.
- Assess regional crude and refined products supply/demand trends driving movements and infrastructure project developments.
- Assessments of the key trends and drivers affecting crude oil, natural gas liquids and refined products trade flows to and from major refining centers.
- Develop independent assessments of the long-term value of condensate streams produced in tight oil and conventional plays.
- Assess the impact of regulatory initiatives on markets for specific crudes and products.



## Exemplary Engagements

- Prepared global supply/demand balances for heavy and extra-heavy crude oils and forecasts of key light-heavy prices/differentials for a major Asian refiner and a large United States Gulf Coast (USGC) refiner.
- Developed an independent assessment of the value of light (43 to 50 API) crude streams produced out of the Permian Basin. The engagement included a market assessment for each crude grade, including an analysis of key market drivers, refining capabilities/limitations and other factors impacting price and demand.
- Engagements with several major crude oil producers in Alberta, the Bakken, Permian, Eagle Ford and Unita Basin to evaluate the capacities of refiners to process their streams and relative yield values and transport issues affecting market prices.
- Multi-Client study of long-term (10-15 years), worldwide developments for the supply and demand of crude grades ranging from light, sweet to heavy, sour.
- Market assessment of all product streams from a proposed Williston Basin refinery designed to run Bakken crude on behalf of project sponsors/investors.
- Market assessments of products from Condensate Splitter projects in the U.S.
- U.S. PADD II study of product demand for gasoline, diesel and jet fuel. This included five-year forecasts of the main drivers of demand change, projections of volumes from indigenous (refinery) production, inter-PADD movements and imports.
- Forecasts of Canadian crude movements to Chicago area refineries for a client evaluating a rail terminal acquisition.
- Multi-Client study and forecast of worldwide petcoke supply and demand

dynamics.

- Subscription study of North American crude and condensates production forecasts and refining industry capacity to run specific grades.
- Multi-Client global crude supply and demand study.
- Supply/demand assessment and forecast of Uinta Basin waxy crude for a producer.

### **Refinery Strategic Studies**

- Independent assessments of Client Company strategic mid- to long-term capital spending, crude acquisition and/or marketing plans.
- Assessments of future competitive positioning of individual refineries or refining companies; including non- or marginally performing assets.
- Development of independent opinions of value of physical assets and fair market value assessments of refineries and refining systems.
- Studies to retrofit or reconfigure existing refineries or refinery units.



### **Exemplary Engagements**

- Prepared independent views and analyses of domestic and international crude supply/demand, logistics and competitive developments and how these might drive crude supply or marketing strategies for several U.S. and international refining companies.
- Identified strategic initiatives to deal with impending IMO regulations on bunker fuel sulfur spec in 2020, including crude slate changes, capital projects, processing ventures and/or development of asphalt markets for a USGC refiner.
- Provided an independent assessment of the cost to safely restart a shuttered refinery in the Caribbean for sustained, reliable operations for an integrated NOC.
- Identified long-term strategic initiatives to enhance a USGC refinery's competitiveness.
- Market Assessments and engineering design reviews for several Condensate Splitter projects in the U.S.
- Developed the process conceptual design for, prepared an independent economic evaluation of, and served as project manager for a U.S. independent refinery expansion project.
- Asset and fair market value assessments of large refining systems in the U.S. and Europe for several clients.
- Evaluated the feasibility and economics of expanding a U.S. refinery's crude capacity by over 25% and to enable it to process 50% to 100% of light, high sulfur crude instead of 100% of light, low sulfur crude. In Phase II, we evaluated and selected processes and finalized design specifications and criteria. TM&C then obtained and evaluated contractor bids and



- o recommended contractor selection.
- o Developed a processing scheme and evaluated the technical and economic feasibility of retrofitting a large Caribbean refinery to upgrade extra-heavy crude/bitumen to synthetic crude oil utilizing the existing delayed cokers, hydrotreaters and other support units and infrastructure.
- o Evaluate a US\$400+ million project to add a catalytic cracking unit, delayed coker and debottleneck or upgrade several existing units at a large USGC refinery. This project also evaluated the economic feasibility of adding a UOP CCR Unit.

### **Transaction Due Diligence**

- Screening studies to identify acquisition candidates based on specific acquisition objectives.
- Technical and operational consultation to lenders or investment bankers in acquisitions or financial restructuring activities.
- Refinery and terminal appraisals, including assessment of prospective buyers.
- Participation in all phases of venture development, including project conception, market appraisals, business plan development, due diligence, and support or coordination of financing plans to ensure success of the venture.



### **Exemplary Engagements**

- o Due diligence review of a prospective transaction involving tankage, terminal and other logistical assets associated with a major USGC refinery. Our review included the operational, technical and economic features of the refinery and associated logistics assets (to be spun off) with the objective of assessing their competitiveness and likelihood of reliable, sustained operations sufficient to perform against a contemplated take-or-pay agreement.
- o Prepared due diligence assessments of LA Basin refiners' long-term viability in connection with a prospective buyer/investor in Plains LA Basin crude gathering system assets.
- o Conducted an independent review and commercial assessment of an existing Midwest barge and rail terminal operation in view of a prospective acquisition.
- o Technical, operational and economic due diligence for the prospective buyer/JV partner in a specialty terminal and processing facility in Rotterdam.
- o Due diligence review on behalf of a prospective buyer of a Canadian refinery.
- o Due diligence review on behalf of a prospective buyer of a large, state-of-the-art crude unit train rail-unloading facility in PADD I.
- o Due diligence assessments of demand side fundamentals related to the buyer of certain Bakken field assets.

## **Mergers and Acquisitions Support**

- Advisors to buyers or sellers of refining, marketing and transportation assets in stock or asset sales or corporate restructuring.
- Screening studies to identify acquisition candidates based on specific acquisition objectives.
- Technical and operational consultation to lenders or investment bankers in acquisitions or financial restructuring activities.
- Refinery and terminal appraisals, including assessment of prospective buyers.



## **Exemplary Engagements**

- Advised a large national oil company in successful joint ventures with two international integrated oil company complex refineries in the U.S. Our involvement included technical and economic assessments and assisting outside counsel in drafting several JV Agreements.
- Advised a U.S. Rocky Mountain refiner on a coker joint venture arrangement.
- Advised a prospective buyer in a preliminary assessment of Petrobras' Pasadena, Texas refinery.
- Advised a USGC refiner in a prospective JV arrangement in a delayed coker.
- Advised in the acquisition of a large USGC refinery and evaluated the technical and economic feasibility of a \$400+ million project to add a 75 MBPD catalytic cracking unit, a 60 MBPD delayed coker and debottleneck or upgrade several existing units. The acquisition was consummated and the project completed successfully.
- Advised the seller in the successful sale of a small Rocky Mountain coking refinery.
- Prepared a detailed data book for the virtual data room and advised the seller and its investment banker in the sale of a refinery in the Pacific Northwest.
- Prepared a detailed data book and advised the owner and its investment banker in evaluating prospects for the sale of a refining system.
- Advised the successful buyers in the purchase of several U.S. refineries on the USGC, Midcontinent, Rocky Mountains and Pacific Northwest, Caribbean and Europe.

## Crude and Feedstock Valuation

- Independent assessments and valuations of competing crude oil and refinery feedstock streams for producers, refiners and traders.
- Review, critique and recommendations regarding Client Company methodologies for evaluating and optimizing refinery crude slates against industry best practices.
- Valuation of worldwide crude oils against industry benchmarks such as WTI, LLS, Brent, Maya, WCS, etc.
- Screening studies of specific crude types/assays for specific refinery configurations and/or refined product yields.



## Exemplary Engagements

- Developed yield and cost vectors for international crude streams actively traded in the four major refining centers of the U.S., Caribbean, Rotterdam, Italy and Singapore for Platts' worldwide publications.
- On-going engagement to prepare parity value comparisons for a NOC for major heavy and medium crude oil streams produced vis-a-vis competitive crudes for different refinery configurations in several markets.
- Prepared global supply/demand balances for heavy and extra-heavy crude oils and forecasts of key light-heavy prices/differentials for a major Asian refiner and a large USGC refiner.
- Prepare on-going (quarterly) refinery value determinations for several crude streams at refineries in four U.S. regions, the Caribbean, Italy, ARA and Singapore for an international crude producer.
- Conducted a major study for an entity of the Alberta (Canada) government to estimate the market value of a range of partially upgraded bitumens (PUBs) as a function of variable prices for reference crude oils.
- Prepared an independent assessment of a technology to minimize the capital investment required to upgrade Western Canadian bitumen to a point that makes it transportable by pipeline and commercially competitive with Dilbit and WCS.
- Provided independent assessments of the value of crude streams of varying qualities produced in the Permian, Bakken and Eagle Ford areas to a major crude oil producer.
- Provided an independent assessment of the outlook for certain crude oil benchmarks as well as prospective feedstocks and products that are key drivers of the economics for a Canadian company's upgrading process.
- Provided a projection of crude oil production rates for the U.S. and the major fields, which would include the Permian Basin, Eagle Ford, and the Bakken and the variables impacting the continued export of these crudes along with a forecast of crude export levels.
- Prepared market value assessments for several West African crudes for producer companies.
- Developed a large number of refinery model yield vectors for OPEC crude

and for the major competitors to those crudes in multiple refinery configurations and in several major refining centers.

### **Asset and Fair Market Value Assessments**

- Fair market value opinions of petroleum refineries, terminals, pipelines and other downstream assets.
- Assessments of prospective midstream assets and projects.
- Feasibility studies and value opinions of idled and nonperforming assets including potential repurposing plans.



### **Exemplary Engagements**

- Conducted independent reviews and fair market value assessments of the downstream refining, marketing and transportation system of an international, integrated major that included over 750 MBPD of refining capacity, a large terminal network, several wholly owned and joint interest pipelines and a wholesale marketing and specialty products business. This involved analyses of historical operating and financial performance, forecast capital and operating expenditures and projections of future income and cash flows.
- Technical, operational and economic value assessments on behalf of the prospective buyer/JV partner in a specialty terminal and processing facility in Rotterdam.
- Provided fair market value analysis of petroleum terminal assets in support of an acquisition.
- Prepared assessment of the capex and variable operating costs of constructing and operating a commercial sized Condensate Splitter.
- Provided screening of crude processing options which could generate attractive economic investment returns at storage terminals in the Caribbean.

### **Fuels Compliance**

- Industry specialists for gasoline attestations required by the EPA gasoline, sulfur, benzene and renewable fuels regulations.
- Assistance with fuel compliance registration and reporting.
- Compliance reviews of company-staffing and procedures, including refining, importing, blending, and terminal operations.
- Research fuels compliance issues.
- Provide laboratory compliance reviews.



### **Exemplary Engagements**

- Consulted for Eastern Seaboard importer on a dispute with EPA regarding the compliance status of a gasoline import.

- Advised a natural gasoline blender in a dispute with the EPA on terminal-blending compliance.
- Advised a small USGC refiner on solutions for an anti-dumping emission exceedance.
- Handle reporting for RFG, anti-dumping and RFS regulations for refiners, blenders and butane blenders.
- Serve as industry specialists and agent for EPA required gasoline attestations for several large multiple refinery systems and individual small to medium-size refiners, terminal blenders and butane blenders.
- Provide annual oversight of federally mandated quality assurance program including laboratory audits and sampling audits.

### **Regulatory Support**

- Independent evaluations/audits of the fuels regulatory compliance status of refining and marketing facilities.
- Assessments of future expenditures required for remediation or closure activities.
- Representation regarding the assignment of environmental cleanup, remediation and future liabilities during mergers, acquisitions and divestitures.
- Negotiations with federal, state and local authorities regarding compliance issues.
- Staff training in compliance regulations for gasoline, diesel and renewable fuels.



### **Exemplary Engagements**

- Assisted a biodiesel trade association in identifying a range of processing schemes a refiner is likely to use for co-processing process units, feedstock injection points and feedstock-handling, along with capex and opex required for co-processing.
- Audited laboratories at each refinery of a multi-refinery system to satisfy court requirement.
- Audited refineries in the Midwest, USGC and Rocky Mountains to evaluate compliance with fuels regulations.
- Assisted biodiesel producers in France, Netherlands, and Argentina on registering for, complying with, and reporting for, the U.S. federal renewable fuel program.
- Provided an industry association with a study on the economics of renewable diesel production.
- Performed several due diligence reviews, for refiners, of various renewable fuel suppliers, primarily biodiesel producers.
- Presentations to AFPM and individual companies on fuel regulations and implications for refiners.
- Performed an evaluation of a USGC renewable diesel producer on behalf of a prospective buyer.

## Industry Studies

- Development and application of refining industry simulation and linear programming (LP) models for domestic and international industry-wide studies.
- Evaluation of downstream regional (PADD) and/or market specific capabilities or advantages/disadvantages in responding to various upstream and midstream developments.
- Independent assessments of the cost-effectiveness (costs vs. benefits) of proposed or promulgated regulations and policy changes affecting petroleum feedstocks, products and markets.
- Monitoring and evaluating worldwide refinery construction projects.



## Exemplary Engagements

- **American Petroleum Institute (API)** studies to assess the:
  - Economic and Supply Impacts of a Reduced Cap on Gasoline Sulfur Content;
  - Economic and Supply Implications of Lower Aromatics and Higher Octane Tier 3 Gasoline Specifications; and
  - Costs and Impacts of Distributing Ultra Low Sulfur Diesel (ULSD).
- Studies for the American Fuel & Petrochemical Manufacturers (AFPM), the Western States Petroleum Association (WSPA), the National Petroleum Council (NPC) and the Reformulated Gasoline Survey Association (RFGSA) including:
  - Gasoline Octane Screening Studies;
  - Meeting Requirements for Cleaner Fuels in U.S. Refineries;
  - WSPA/CARB/GM – RVP/Drivability Index Emissions Testing Program;
  - CARB 3 RFG Potential Regulations and MTBE Ban;
  - Cost Impacts of Potential CARB Phase 2 Gasoline Regulations; and
  - QA/QC Oversight of a National Program for Sampling and Analyses at Retail Gasoline Stations & Labs.
- **U.S. Energy Information Administration (EIA)** study: Implications of increasing U.S. light tight oil production.
- Assessment of the impact of the Jones Act policy on flexibility of product supply distribution, cost, and product flows.
- Analysis of the implications of increasing domestic light tight oil production on the U.S. refining sector under two crude production and a series of crude export scenarios for an integrated oil company.
- Analysis of the U.S. downstream industry's investment requirements and costs to process increasing volumes of domestic light tight oil for several light crude oil producers.
- Subscription Offerings:

- **CRUDE & REFINED PRODUCTS OUTLOOK** covering regional U.S., Europe & Asia for a full range of crudes actively traded in each market and the full range of refined products; published biannually.
- **WORLDWIDE REFINERY CONSTRUCTION OUTLOOK**, which evaluates and handicaps worldwide refinery construction projects.
- Market research offerings including: the **North American Crude Oil Outlook, World Crude Oil Outlook, and Assessment of Mexico Downstream Reform under AMLO.**

## ***Economic and Feasibility Analysis***

- Feasibility studies for Condensate Splitter and other specialty processing projects.
- Feasibility studies and value opinions of idled and nonperforming assets including potential repurposing plans.
- Feasibility studies for major refinery capital investment projects involving process technology selection.



## **Exemplary Engagements**

- Prepared a feasibility study and independent engineer report in a US\$450+ million refinery upgrade project involving the construction of new processing units and related facilities, plus several modifications to existing units at an integrated major's USGC refinery. Our Independent Engineer (IE) report included technology assessment, construction plan review, and design of performance and completion tests for the lenders and reviews of the major agreements and contracts with Engineering, Procurement and Construction (EPC) contractors. During the engineering, procurement and construction period, TM&C monitored progress and provided quarterly reports to the lenders.
- Prepared an extensive feasibility study and IE report for a US\$600+ million refinery upgrade project involving the construction of new processing units and related facilities, plus revamps to existing units at a world-scale U.S. refinery. The centerpiece of the expansion was a delayed coker unit and associated modifications to the refinery's hydroprocessing and other support units. After funding was achieved, we served as IE for the sources of financing during the EPC phases of the project. In this role, we monitored the progress of the major contractors and provided quarterly reports to the lenders. We also designed the lender performance tests and following startup, TM&C verified the completion of these tests.
- Feasibility study of crude processing options at an idled Caribbean facility on behalf of the owner of the facility.
- Feasibility studies of several Condensate Splitter projects running Eagle Ford streams.
- Prepared feasibility assessments of the commercial, competitive and macro issues related to a large Eagle Ford Condensate Splitter and terminal project on behalf of prospective investors.

- Feasibility study for a crude storage project in southeast Louisiana.
- Engaged as the Independent Engineer/Owner's Representative to monitor progress and approve disbursements to the EPC contractor on a US\$400+ million project to add a catalytic cracking unit, delayed coker and debottleneck or upgrade several existing units at a large USGC refinery. This project also evaluated the economic feasibility of adding a UOP CCR Unit.

### ***Litigation Support***

- Testimony in state and federal courts regarding refining, marketing, and transportation issues and values.
- Testimony and preparation of reports and affidavits in governmental hearings and international arbitrations.
- Analysis and testimony for both creditors and debtors in bankruptcy proceedings.
- Expert analysis and testimony in patent litigation.
- Consultation and/or expert witness services for industrial clients, as well as various U.S. government agencies such as the Department of Energy/EIA, Department of Justice, Internal Revenue Service, Federal Trade Commission, Federal Energy Regulatory Commission (FERC), Environmental Protection Agency and other federal and state government agencies.
- Consultation, preparation of expert reports/affidavits and testimony in property tax disputes involving refineries and other downstream assets.
- Serve as expert consultants and witnesses in business interruption and property damage disputes involving petroleum processing and midstream assets.
- Consultation and expert reports and testimony regarding various petroleum industry technical, commercial, operational, environmental, safety and other practices.



### **Exemplary Engagements**

- Expert testimony before the U.S. Department of Energy (DOE) in a hearing involving a crude-pricing dispute on behalf of a domestic crude oil producer.
- Served as expert witnesses for a consortium of California refiners in the Unocal gasoline patent dispute.
- Preparation of an expert report to the U.S. Internal Revenue Service (IRS) regarding a tax issue concerning unit and line fill volumes at several petroleum refineries.
- Engaged as expert witnesses for refiners and taxing authorities in numerous property tax disputes in several states.
- Evaluated the design of a Condensate Splitter plant and prepared an expert report on behalf of the owner/operator in a dispute with an engineering contractor over alleged design flaws.
- Engaged by outside counsel to prepare an independent estimate of damages in the default of a crude supply agreement.
- Retained by counsel to perform an audit of completion of the provisions of an



EPA Consent Decree.

- Prepared an affidavit for a U.S. refiner client regarding the role of a delayed coker in the refining process for use in response to an IRS audit.
- Engaged by outside counsel for a large U.S. refiner to evaluate the market impact of a shutdown of its system.
- Engaged by one of the parties in an arbitration claim related to the status of an asset involved in a refinery transaction.
- Prepared an expert opinion for one of the parties in a licensing dispute between two hydrotreater technology companies.

### ***Project Management and Independent Engineer Services***

- Provide project management services on refinery or other downstream projects.
- Advise clients on EPC contractor selections and evaluate contract options for each phase.
- Conduct post-audits on capital projects and turnarounds.
- Evaluate and make recommendations on technology choices for large capital projects and Greenfield projects.
- Provide Independent Engineer (IE) services to sources of debt or equity in large refinery and other midstream and downstream projects.



### **Exemplary Engagements**

- Provided project management services working closely with an EPC on a U.S. refinery expansion project providing overall project oversight and coordination on cost, schedule and scope issues and assisting the owner with commissioning, start-up and test-run activities necessary to achieve the project's stated goals.
- Conducted a post-audit on a major turnaround for a Chicago area refinery client to determine the cause and preventive measures to avoid a recurrence of extensive overruns in schedule and cost.
- Evaluated competing technologies and contractors for a U.S. refiner client adding FCC gasoline and diesel hydrotreater capacity.
- Served as Independent Engineer (IE) in a US\$450+ million refinery upgrade project involving the construction of new processing units and related facilities, plus several modifications to existing units at an integrated major's USGC refinery. Our IE report included technology assessment, construction plan review, and design of performance and completion tests for the lenders and reviews of the major agreements and contracts with EPC contractors. During the engineering, procurement and construction period, we monitored progress and provided quarterly reports to the lenders.
- Served as IE for a US\$600+ million refinery upgrade project involving the construction of new processing units and related facilities, plus revamps to existing units at a world-scale U.S. refinery. The centerpiece of the expansion was a delayed coker unit and associated modifications to the refinery's

- hydroprocessing and other support units. After funding was achieved, TM&C served as IE for the sources of financing during the Engineering, Procurement and Construction (EPC) phases of the project. In this role, we monitored the progress of the major contractors and provided quarterly reports to the lenders. We also designed the lender performance tests; and following startup, verified the completion of these tests.
- Served as the Independent Engineer/Owner's Representative to monitor progress and approve disbursements to the EPC contractor on a US\$400+ million project to add a catalytic cracking unit, delayed coker and debottleneck or upgrade several existing units at a large USGC refinery. This project also evaluated the economic feasibility of adding a UOP CCR Unit.

## PARTIAL CLIENT LIST

### Integrated Oil Companies

Exxon  
Lukoil  
Shell  
Total  
Chevron  
BP



### Upstream Companies

Canadian Natural Resources  
Cenovus Energy  
ConocoPhillips  
Continental Resources  
EP Energy  
Field Upgrading Ltd.  
Hess Corporation  
Husky Energy  
Laredo Petroleum  
Murphy Oil  
Newfield Exploration  
Nexen Energy  
OPTI Canada  
Pioneer  
Suncor Energy

### Investment Banks

Bank of America Merrill Lynch  
Barclays  
Deutsche Bank  
Evercore  
Goldman Sachs  
JP Morgan  
Lazard  
Macquarie  
Royal Bank of Scotland  
Tudor Pickering Holt





### Downstream Refiners/Processors

- Calumet
- CITGO Petroleum Corporation
- Coffeyville Resources
- CVR Energy
- Delek Refining
- Flint Hills Resources
- HollyFrontier
- Irving Oil
- Lyondell Refining
- Marathon Petroleum Corporation
- Merey Sweeny LP
- Motvia Enterprises
- NorthWest Refining
- PBF Energy
- Pennzoil-Quaker State Company
- Phillips 66
- Placid Refining
- Reliance Industries
- San Joaquin Refining
- SASREF
- Silver Eagle Refining
- Sinclair Oil
- Sprague Energy
- United Refining
- Valero Energy

## Financial Institutions

Bank of America  
 Bank of Tokyo  
 Blackstone Group  
 BNP Paribas  
 Citicorp  
 Credit Suisse  
 Dai-ichi Kango Bank, Ltd.  
 DZ Bank  
 GE Credit Corporation  
 John Hancock Insurance Co.  
 Leucadia National Corp.  
 Mellon Bank  
 Morgan Stanley  
 Santander Investments  
 Soroban Capital  
 Trust Company of the West  
 Union Bank  
 Wells Fargo  
 Westdeutsche Landesbank Girozentrale  
 World Bank (IFC)



## Private Equity & Venture Capital Firms



ArcLight Capital  
 Bernhard Capital Partners  
 Blue Ridge Capital  
 Brownstone Asset Management  
 Energy Capital Partners III, LLC  
 Finepoint Capital LP  
 Hellman & Friedman LLC  
 Kelso & Company  
 Mill Road Capital  
 Riverstone Holdings  
 Soroban Capital Partners LP  
 Sterling Group  
 York Capital Management

### Energy Trading Companies/Marketers

Gunvor  
Castleton Commodities  
PMI Holdings  
Trafigura  
Vitol  
Trailstone  
Love's Travel Shops



### Natural Gas, NGL & LNG Companies

Cheniere Energy  
EnLink/Crosstex Energy  
Williams Energy

### National Oil Companies

Qatar Petroleum  
Saudi Aramco  
PetroPeru  
Petroleos de Venezuela (PdVSA)  
Nigerian National Oil



DAVIS  
GRAHAM &  
STUBBS

Akin Gump  
STF



mcmillan

CLEARY  
GOTTLIEB

mccarthy  
tetrault



DYKEMA

GT GreenbergTraurig

### Law Firms

Akin Gump Strauss Hauer & Field LLP  
Cleary Gottlieb Steen & Hamilton  
Collier Shannon Scott  
Davis Graham & Stubbs LLP  
Dickstein Shapiro LLP  
Dykema Gossett PLLC  
Elmer Stahl  
Fulbright & Jaworski  
Greenberg Traurig LLP  
Harry Haushalter, Attorney-at-Law  
Haynes & Boone  
Hopkins & Sutter  
Law Office of Scott Link  
McCarthy Tetrault LLP  
McMillan LLP  
Morgan & Finnegan  
O'Quinn Kerensky McAninch & Laminack  
Porter Hedges LLP  
Skadden Arps Slate Meagher & Flom  
Thompson & Knight  
U. S. Department of Justice

### Biofuels Producers & Marketers

Best Petroleum  
Biodiesel Amsterdam B.V.  
Direct Fuels  
Eco Fox Srl  
Golden Gate Petroleum  
KeyStone Biofuels  
Pro Petroleum  
T6 Industrial





**Industry Trade Associations**

Alberta Innovates  
 American Fuels & Petrochemical  
 Manufacturers  
 American Petroleum Institute  
 National Biodiesel Board  
 National Petroleum Council  
 North Dakota Petroleum Council  
 OPEC  
 RFG Survey Association Inc.  
 Western States Petroleum Assoc.

**Government Agencies**

Alberta Department of Energy  
 Energy Information Agency  
 NY State Energy Research and  
 Development Authority  
 U. S. Department of Energy  
 U. S. Department of Justice  
 U. S. Environmental Protection Agency  
 U. S. Trade and Development Agency

