One of Baker & O’Brien’s principal functions is to provide technical and economic consulting services to clients involved in the downstream energy sector. The clients we advise are typically producing, transporting, processing and/or marketing energy raw materials or finished products or those that support the industry. They include crude oil and natural gas producers, pipeline transportation companies, petroleum refiners, natural gas processors, petrochemical manufacturers, and petroleum products marketers, lenders, and investors. Some of the largest energy companies in the world rely on our advice to assess the attractiveness of new investments, provide support for the financing of expansions or upgrades, or establish the fair value of assets in mergers or acquisitions.

Our industry advisory services can encompass a wide range of activities, but their primary purpose is always to add value to our clients’ operations. For example, we are often called upon to conduct competitive analyses; prepare feasibility studies; audit and optimize plant operations; optimize supply chain practices; conduct market analyses; recommend best practices for maintenance, safety and management; investigate accidents or other operational incidents; or recommend future business strategies. Our clients receive the benefit of our consultants’ diverse and extensive experience in all phases of the downstream energy industry, as well as the firm’s more than 20 years of providing these kinds of services on a world-wide basis.

The stature attained by Baker & O’Brien in providing advisory services to the downstream energy industry and the respect we hold in today’s industry are due primarily to the efforts of our team of highly qualified, experienced, and capable consultants and analysts. Their diverse experience and backgrounds bring a wide range of disciplines to bear on our clients’ projects or problems.
PRIMARY CONTACTS

Daniel R. Finelt
Consultant
Houston

Amy L. Kalt
Consultant, Manager of Analytical Services
Houston

Charles G. Kemp
Vice President, Business Development Manager
Dallas

Kevin G. Waguespack
Executive Vice President
Houston
RELATED EXPERIENCE

- Crude Oil Marketing and Trading Reorganization
  Recommended organizational structure and operating practice changes to increase effectiveness, efficiency, and profitability in the European crude oil marketing and trading arm of a major international oil company.

- Joint-Operating Agreements
  Responsible for joint venture management with a mandate to ensure operator compliance within operating agreements (JOAs).
  Responsible for overseeing non-operator audits with a goal to bring about greater operator accountability and transparency.

- Process Plant Fire Protection Review
  Advised client regarding API and NFPA process industry fire protection standards.

- LNG Liquefaction Capital and Operating Costs
  On behalf of a confidential client with a proposed world-scale LNG liquefaction plant, prepared high-level cost estimates for two phases of the project: 1) the engineering, procurement, and construction (EPC) phase and, 2) the operating phase. Provided cost data for client’s financial model to help assess the risks and viability of the project.

- Refinery Operating and Emissions Data
  Provided detailed PRISM refinery operating and emissions data on individual refineries to a government agency.

- Crude Oil Storage Project Analysis
  Evaluated current and future crude oil storage capacity on the U.S. Gulf Coast, and developed a near-term crude oil storage cost forecast as input to client's greenfield crude oil terminal project due-diligence.

- Refining Company Financial Analysis
  Prepared a financial analysis of an independent U.S. Refiner and Marketer in support of a valuation for a prospective buyer.

- Gas Plant Due Diligence
  On behalf of a developer's due diligence process, provided an independent review of a gas plant project in the U.S. Reviewed documents and consulted with the developer regarding the process design, engineering, major systems and equipment, procurement, construction, schedule and CAPEX.

- LNG Capital Cost Review
  On behalf of potential offtakers and equity investors of one train, Baker & O'Brien performed a follow-up review of the updated Open Book Estimate (OBE) of a two-train liquefaction project, including common use of certain existing regasification facilities.

- Refinery Feasibility Study
  Prepared a feasibility study for a client considering a greenfield refinery investment. Developed a price forecast and expected product netback prices and crude oil costs. Calculated the cash flow, NPV, and IRR for the project. Evaluated a crude oil railcar loading facility option for the refinery.

- Refinery Due Diligence
  In support of a potential acquisition and start-up of a topping refinery that had been shut down for an extended period, addressed any "fatal flaws" and provided support for evaluating order-of-magnitude costs required to inspect, repair, staff, and start-up the facility.

- Lender's Engineer - GTL Plant
  Served as Independent Engineer on behalf of a major Australian bank for the construction of a GTL plant. Prepared a technology assessment, analyzed feedstock supply, and reviewed contracts. Inspected equipment and confirmed permits were in place prior to authorizing draw-down certificates. Monitored construction progress, confirmed expenditures, and compared these expenditures against budget.
Cogeneration Project Feasibility Analysis
Assessed the feasibility of developing a steam-power cogeneration complex using feedstock from a new refinery. Study considered local market supply/demand issues for petroleum products and anticipated power requirements for the region.

Ammonia Plant Project Finance
Served as independent engineer on behalf of the financial advisor for the construction of a new small-scale biomass to nitrogen fertilizers complex. Prepared a technology assessment, analyzed feedstock supply, reviewed contracts, reviewed site and infrastructure considerations, and advised with negotiation of contracts.

Crude Oil Rail Terminal Study
Provided an overview of the Chicago market in terms of crude oil pipeline logistics, refinery crude oil slates, and refinery profitability. Provided supporting information for client considering an investment in a crude oil rail terminal. Supporting information included a Canadian crude oil takeaway outlook and Chicago area refineries crude oil slate outlook.

Shale Crude Processing Evaluation
Provided economics and expected operating costs of a grassroots light crude oil distillation facility. Facilitated meetings with future customers of intermediate products.

Petroleum Terminals Contract Valuation
Provide estimated values of existing storage/throughput contracts for petroleum terminals in North America, Europe, Japan, and Hawaii.

Light Product Supply and Demand Study
For a large metropolitan area, provided incremental cost of supplies from competing refining centers. Calculated annual demand and seasonal differences. Provided economics for seasonal gasoline storage.

Condensate Splitter Investment Analysis
Analyzed a proposed condensate splitter investment for a large midstream company. The study included feed and product supply/demand, economics, staffing, operating costs, and export ban lift scenarios.

Condensate Splitter Operating Plan
Assisted a large midstream company with preparation of a condensate splitter operating plan, including staffing, maintenance, quality assurance, planning, and related items.

Analysis of U.S. Gasoline Prices and Crude Oil Prices
Analyzed the correlation between U.S. and global crude oil prices and regional prices of U.S. gasoline during periods of steep crude oil price discounts (2011-2013). The study analyzed the portion of the West Texas Intermediate price differential that was captured by refiners and the amount passed on via lower spot gasoline prices. The study, which was made public, concluded that a portion of the crude oil price discount was passed through in gasoline pricing, and this effect was most pronounced in U.S. PADDs 2 and 3.

Permian Basin Market Study
Analyzed Permian Basin production and disposition of crude oil by county, pipeline, and refinery takeaway capacity, and logistic infrastructure expansions in the area.

Louisiana Crude Oil Supply Study
Analyzed crude oil supply and distribution for a potential pipeline acquisition. Evaluated refinery crude slate preferences and capabilities, along with access to domestic and foreign crude oils. Reviewed production trends, crude oil flows, new pipeline construction, and changes of service to estimate future utilization and profitability.

Pipeline Due Diligence - Operation and Expansion
Performed a technical due diligence (operations, integrity management and maintenance of pipeline, terminal, and marine loading assets).

- **Refinery Strategic Review**
  Provided 10-year market outlook for a U.S. East Coast refinery. Evaluated scenarios related to regional supply, shifting commodity flows, demand adjustments, and alternative tax regimes to estimate the profitability impact to refinery. Analysis culminated in evaluation of strategic options for refinery.

- **Refinery Company Acquisition**
  Developed and presented a multi-refinery acquisition package to the CEO of a large refining company. Using PRISM models, developed a 10-year cash flow of heavy crude refining economics. Presented economics of extensive marketing supply chain through numerous company terminals. Provided economics of company owned pipelines and lubes business. Discussed organization structure, company culture, and pros/cons of each refinery.

- **IMO 2020 Oil Refinery Study**
  Performed a study on the benefits of IMO 2020 to the U.S. economy. Leveraged general refinery industry expertise and our PRISM™ refining and marketing supply chain modeling system to provide in-depth analysis of the oil refinery sector.

- **Refinery Acquisition Study**
  Developed cash flow models for regional refineries in conjunction with a potential acquisition target. Utilized PRISM yields and operating costs to evaluate the potential profitability of the target refinery. Also developed a price forecast for input into the cash flow model.

- **Refinery Due Diligence - Rocky Mountains**
  Assisted a prospective buyer and commercial bank advisor in a technical and market due diligence study for a refinery. Prepared a pricing outlook, reviewed technical inputs to a financial model, and visited the site. Prepared a summary report of findings including, among other factors, maintenance program status, tank inspection schedule conformance, reliability, utilization, and fixed costs.

- **Crude Oil Valuation Study**
  In support of an investment decision, analyzed how a specific crude oil would be valued at various refineries. After identifying the top prospects based upon the crude oil valuation, provided guidance on potential logistical and processing limitations.

- **Re-Refining Technology Assessment**
  Conducted a technical “fatal flaw” analysis on a used motor oil re-refining technology for the purpose of informing a debt investment decision by investors. Reviewed design basis information, including, but not limited to, a heat and material balance (H&amp;MB); pilot plant operating data, and laboratory results. Opined on the ability of the technology to meet required specifications for lube base oils.

- **Regional Fuel Study**
  Evaluated the fuel balance for a region, including production and imports. Analyzed the competitiveness of each of the regional fuel suppliers.
Catalyst Financial Projection Review
Evaluated catalyst sales and financial forecasts for select business lines for various industry applications. Evaluated market sizes and competitors.

Natural Gas Due Diligence
Provided a due diligence report regarding the physical condition, purchase and sale contracts and supply/demand outlook for a potential investment in a natural gas gathering, processing, and marketing company.

Natural Gas Royalty Audit
Audited royalty payments related to several natural gas gathering contracts.

Gas Processing Plant Due Diligence
Prepared a due diligence report describing the physical condition and maintenance practices of the gas processing plant, staffing and organizational issues, and other operational issues.

Natural Gas Company Valuation
Appraised the fair market value of a company involved in natural gas gathering, processing and marketing.

Gas Transmission Company Due Diligence
Performed due diligence for a natural gas transmission company acquisition including physically inspecting the pipeline and compression facilities, reviewing maintenance records, and interviewing company management. Provided client with written report.

Gas Gathering System Due Diligence
Performed due diligence for a natural gas gathering system acquisition including physically inspecting the pipeline and compression facilities, reviewing maintenance records, and interviewing company management. Provided client with written report documenting our findings.

Gas Pipeline Due Diligence
Performed due diligence for a natural gas pipeline acquisition including a physical inspection and review of maintenance and corrosion protection records. A report was delivered to the client.

Gas Processing Plant Design
Assisted client with the design and development of a cryogenic natural gas processing plant.

Power Plant Due Diligence
Prepared a due diligence report describing the physical condition and maintenance practices of the gas fired steam and electric power co-generation facility, staffing and organizational issues, and other operational issues.