Transactions, Project Finance, Turnarounds

Banks and multilateral lenders rely on Baker & O'Brien's extensive industry experience and project management expertise to support their investment banking and loan portfolios. Our consultants have performed due diligence for mergers, acquisitions, divestitures, and project finance; prepared valuations of assets and businesses, and have served as lender's engineer to oversee engineering and construction of large projects. Baker & O'Brien has assisted financial institutions in providing due diligence and serving as independent engineer for a variety of projects, including refineries, petrochemical plants, pulp and paper plants, fertilizer plants, natural gas projects, and toll roads.

RELATED EXPERIENCE

- **Acquisition of Crude Oil Gathering System**
  Conducted technical and economic due diligence on behalf of commercial bank in conjunction with the financed acquisition of a crude oil gathering system from a major oil company.

- **Business/Technology Valuation**
  Conducted a due diligence assessment and preliminary economic valuation of an existing business with proprietary technology designed to significantly reduce crude oil exploration and finding costs.

- **Company Reorganization Study**
  Following the bankruptcy of a major Singapore-based shipyard, with significant oil interests throughout Southeast Asia, worked with the company's lenders to restructure and reorganize the company's asset base. Made visits to all major company sites and prepared report outlining current status. Recommended the disposition of non-core assets and the reorganization of core assets into a smaller and less highly leveraged entity. Following acceptance of most of recommendations by creditors' committee, company was able to successfully emerge from bankruptcy protection.

- **Refinery Evaluation**
  Retained by a financial institution to conduct an independent assessment of an asphalt refinery. In addition to an analysis of the market environment, the assessment included a review of the general condition of machinery and equipment and projected operating performance of the refinery.

- **Refinery Valuation and Due Diligence**
  Prepared an analysis of refining and marketing assets for a company that was considering acquisition of shares of a refining and marketing business located in South Korea. The analysis included refining and marketing economics, and due diligence of the facilities.

- **Process Plant Leasehold Settlements**
  Assessed the market value of residual operating interests held by a major financial entity in several leased chemical processing facilities. Each engagement included an ongoing advisory role pursuant to successful negotiations for sale of the institution's ownership interests.

- **World Scale Alumina Refinery - Independent Engineer**
  Teamed with a mining consulting firm to provide independent engineering support to lenders of a world-scale, multi-billion dollar grassroots alumina refinery to be located in Guinea, West Africa. Reviewed project execution plan and entire design package for the proposed facility, including alumina refinery, power plant, import/export facilities, and all associated infrastructure. Prepared several interim reports during the initial engineering phase before project was abandoned due to political unrest within the country.
- **Terminal Facility Due Diligence**
  Conducted financial and operational due diligence on behalf of lenders for a large regional petroleum terminal facility with associated transmix processing and commercial waste treatment operations. Tasks included inspection of facilities, assessment of competitive market position, evaluation of financial performance, and estimation of potential market value for the facilities.

- **Refinery Economic Analysis**
  Prepared due diligence analysis of refinery technical and economic performance to support a potential working capital loan.

- **Refinery Gasification Study**
  Identified and ranked refineries as potential candidates for residue gasification projects. Screened refineries in terms of their crude capacity, crude slate, bottoms products, hydrogen users, and location to neighboring plants. Also, provided a macro level review of European countries that would potentially have a synergistic benefit from a gasification project.

- **Refinery Feasibility**
  On behalf of a major Indian industrial organization, prepared a feasibility assessment for a world-scale "grassroots" refinery on the western coast of India. The refinery started up in 1999.

- **Chemical Plant Evaluation**
  Provided an independent assessment at a chemical plant of recent maintenance and sustaining capital projects.

- **Due Diligence of Gas Gathering and Processing Assets**
  Conducted due diligence on gas gathering and processing assets within the Permian Basin in Southeast New Mexico and West Texas on behalf of lending group and prospective purchaser. Conducted physical inspection of the facilities, reviewed operation and maintenance records, assessed gas supply and competitive position, and reviewed financial assumptions and projections to ensure consistency with current gas supply contracts and asset performance.

- **Evaluate Biodiesel Production Facility**
  Provided due diligence review of a biodiesel facility in support of project financing. Reviewed capital costs, operating costs, process technology, and maintenance requirements.

- **Ammonia Plant Project Finance**
  Served as independent engineer on behalf of a major European bank for the construction of a new world-scale ammonia plant. Prepared a technology assessment, analyzed feedstock supply, reviewed contracts, and advised with negotiation of contracts. Monitored construction progress and mechanical completion, and witnessed the plant performance test.

- **Substitute Natural Gas Market Study**
  Developed comprehensive market profile of SNG industry and market in North America, including operating and planned facilities, feedstock outlook, project incentives, and environmental issues.

- **Project Feasibility and Start-Up Assistance**
  Retained by a financial institution to conduct an independent assessment of a refinery project to restart and expand idle equipment to produce transportation fuels and lube base oils. The feasibility analysis included review of project costs, a product price forecast and margin outlook, as well as an assessment of the competitive market environment. Provided assistance to the lender in structuring terms for loan agreement and establishing project milestones for the funding. Monitored construction and revamp progress for the lender and certified mechanical completion of the project. Following start-up of the units, attended performance test runs and provided certifications to the lender that the units met design throughput capacities and products met required quality specifications.

- **Asphalt Market Study**
  Provided a financial institution with an assessment of the market for paving asphalt in California. Study focused on current and
short-term future markets and included the results of interviews with California paving grade asphalt producers, contractors, and buyers.

- **Refinery Acquisition Study**
  Provided client with five years of operating and financial data from the *PRISM* refinery database for use in evaluating a potential acquisition.

- **Ion-Exchange Resin Plant**
  Performed market study and competitive analysis of an ion-exchange resin plant on behalf of a major government agency bank. Study evaluated the financing of an ion-exchange resin manufacturer in the context of possible sale of the plant.

- **Refinery Finance Litigation**
  Economic damages were claimed by the sponsors of a refinery project in Russia due to a failure to obtain funding from a financial institution. Examined claim basis, economic assumptions relied on for the project feasibility study, and actual financial results that would have been realized if the refinery had been built. Provided testimony concerning the relationship between industry margins and the losses incurred by the project sponsors.

- **Valuation of Refineries**
  Performed valuation of three Russian mini refineries located in Western Siberia. Work involved market analysis for crude oil and products, logistics infrastructure, refinery configuration and yield, and construction costs.

- **Petroleum Terminal Valuation**
  Updated valuation of petroleum terminal and trans-mix processing facility completed previously in order to reflect changes in the business environment, and to reflect specific transaction scenarios designated by the client.

- **Refinery Venture Development**
  Performed economic evaluation and developed comprehensive financial models for a West Coast refinery restart and upgrade program. The engagement included market analysis, evaluation of investment options, and support of project financing efforts.

- **Refinery Reactivation and Upgrading**
  Worked on behalf of a major investment banking group to evaluate the plans of an independent refiner to upgrade and reactivate its 200,000 barrels per day refinery. Conducted "due diligence" on the company's plans and specifications, evaluated likely economics, and assessed competitive forces in the marketplace. Upon closing of the financial transaction, monitored the construction progress, schedule, and budget over a period of four years. Reviewed all invoices for labor and materials and approved draw down of construction funds in accordance with the contractual agreements.

- **Refinery Feasibility Study**
  On behalf of a financial institution considering the financing of a "grassroots" refinery project, prepared a detailed feasibility study for the refinery. The proposed facility was to be based outside of Phoenix, Arizona, where it was to serve the fast growing Phoenix/Tucson area with new "clean burning" fuels. Analyzed regional product markets, existing and potential competition, alternate crude oil sources and availability, optimum refinery configuration, and by-product disposition. Attended meetings with potential crude suppliers and product customers. Feasibility study was also used in negotiations with equity participants.

- **Gasoline and Diesel Terminal Due Diligence**
  Performed technical due diligence for terminal assets on behalf of financial firm. Visited the facilities and reviewed relevant documentation to advise the client on issues concerning the operability, safety, and physical conditions of the facilities and potential future maintenance and capital costs.

- **Refinery Operations Snapshot**
  Provided client with an estimate of actual crude runs by grade, product yields, and operating costs for a European refinery in 2007.
based on our proprietary PRISM refinery database and simulator.

- **Biodiesel Plant Due Diligence**
  Performed a site inspection and advised a potential investor on the commercial and technical risks associated with converting a chemical plant to biodiesel production.

- **Gas Gathering and Treating Due Diligence**
  Performed due diligence of West Texas natural gas gathering and treating system. Reviewed contracts and facilities, assessed competition, developed economic model, and estimated market value of assets.

- **Petroleum Refinery Due Diligence**
  Prepared a due diligence report on a full conversion refinery, including a review of regional crude oil supply and regional products markets. Reviewed refinery operations, including high level assessments of refinery safety and environmental performance. Developed economic model of refinery and estimated market value.

- **Financial Model**
  Developed a financial model for a large private equity firm to enable estimates of the future financial performance for the major business segments of a large international refining and petrochemical company.

- **Paper Coating Plant Project Finance**
  Served as independent engineer on behalf of a major financial institution for the construction of a new $100 million paper coating plant. Prepared due diligence, assessed technology, evaluated project scope of work and schedule, reviewed engineering, procurement, and construction contracts, and advised bank with respect to mitigation of project risks.

- **Offshore Pipeline Project**
  Served as Independent Engineer on behalf of a major financial institution for a $200 million project to build a deepwater gas and oil-gathering system. Prepared a valuation of offshore pipelines and an onshore gas processing plant for gathering and processing of deepwater Gulf of Mexico oil and gas production in support of structured finance. Certified completion of the project for financial purposes.

- **Power Project**
  Supported lenders in mezzanine financing for construction of a cogeneration plant in Western Siberia. Advised as to the collateral value of certain equipment ordered for the project and evaluated the technical capabilities of the company to manage the project under long-term project financing.

- **Valuation of Pipelines and Gas Plant**
  Served as independent engineer on behalf of a major bank to value and certify completion of a project to build offshore pipelines and an onshore gas processing plant for gathering and processing of deepwater Gulf of Mexico oil and gas production. The valuation was prepared for the lender in support of $200 million of structured finance.

- **Refinery Construction Dispute**
  Assisted law firm representing Russian refiner in dispute with U.S. engineering firm that provided a refinery for a location in Russia. Ascertained construction status of units and reviewed issues in dispute regarding design basis, scope of work, and costs for a modular refinery constructed in the U.S.

- **Technical Review**
  Performed technical review of chlor-alkali and calcium chloride processes and project plan on behalf of prospective lender. Reviewed the process design packages for the chlor-alkali and calcium chloride production facilities and provided opinions regarding the selected processes and their technical compatibility. Reviewed the project schedule and cost estimate for the facilities and provided input to the prospective lender regarding the appropriate level of contingency. Evaluated the contracting
strategy and project execution plan and provided opinions.

- **Terminal Facility Valuation**
  Reviewed the operating results and management projections for a terminal and transmix processing facility to develop an income-based valuation for the business enterprise. This engagement was one of a series of valuations prepared by Baker & O’Brien to support the financing requirements for this business since its inception.

- **Product Terminal and Transmix Processing Valuation**
  Physical asset appraisal and business valuation of a refined product terminal and transmix processing facility. Estimated the replacement cost and deferred replacement value of the physical assets to provide a depreciation basis for taxes. Valued the business enterprise using a discounted cash flow approach based on an analysis and projection of transmix processing and product terminal activities.

- **Crude Oil Pipeline System Due Diligence**
  On behalf of an investment group, provided technical and operational due diligence of an interstate (FERC regulated) crude oil pipeline system. Our focus included the review of asset integrity, design, system capacity, and operating costs of an existing asset and the design, project execution plan, schedule, cost estimate, and projected operating costs of a proposed pipeline.

- **Oil Sands Technology Review**
  Examined a new oil sands technology for bitumen extraction to identify potential flaws and areas of risk prior to commercialization. Observed performance of and assessed sufficiency of development unit to demonstrate viability and reliability of commercial operations.

- **Independent Engineer for New Refinery in Egypt**
  Technical due diligence for financing of a 200,000 B/D merchant export refinery in Egypt. Our review included opinions on site selection, owner's development plan, supply agreements, offtake agreements, EPC Contracts, refinery unit technologies including sulfur recovery, 'over-the-fence' utility interface, crude oil supply and product export terminal facilities. Our review also included opinions on environmental compliance, licenses and permits, CAPEX, construction schedule, completion risk, OPEX and technical comment to the financial model.

- **Used Refinery Relocation**
  Conducted an initial review to identify the status of a proposed refinery project (North Africa) and comment on the potential to utilize the surplus process equipment from a U.S. refinery that had been shut down.

- **Wyoming Refinery Appraisal**
  Fair market appraisal of a refinery including connecting crude and products pipelines and storage assets to support debt financing. Project included income valuation with forecast prices, discounted cash flows, and replacement cost estimates for the refinery as well as the pipeline and storage assets.

- **Product Pipeline Terminal Valuation**
  Prepared a terminal valuation based on a discounted cash flow analysis of transmix and terminal businesses and an appraisal of the physical assets.

- **Refinery Due Diligence**
  Assisted financial client with a due diligence study of a European Refinery. Visited the site and received briefing from refinery management. Developed cash flow model of historic and projected operations. Tuned cash flow model to match past four year's of operations and cash flow results. Developed five year price forecasts for crude oil and refined products in Europe. Reviewed operating and maintenance expenses.

- **Refinery Equipment Valuation**

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Determined the estimated market value of idle refinery equipment that was designated as loan collateral. Prepared a report valuing the equipment under different sales scenarios including as an entire refinery, by individual process units, by individual equipment item and as scrap value.

**Asphalt Refinery Due Diligence**
Performed due diligence on behalf of a financial institution for funding the startup of an idle asphalt refinery. Advised client on technical issues related to running black/yellow (Uinta) wax crude in the asphalt refinery. Work included evaluation of the condition of the process units and infrastructure, assays of feedstocks, analysis of yields, and evaluation of process bottlenecks.

**Bankruptcy Reorganization**
Developed, in conjunction with senior management, reorganization plans for various operating segments of a major trading and transport company. The resulting business plan formed the foundation of the company's successful reorganization and emergence from bankruptcy.

**LPG Terminal**
Lenders' Engineer review for development of an LPG terminal consisting of LPG tankage, gasoil tankage, loading facilities, and associated pipelines and equipment. The facilities were planned to accommodate annual throughput volumes of 1,150,000 tons of LPG and 940,000 tons of gasoil, with minimum guaranteed volumes of 700,000 tons of LPG and 600,000 tons of gasoil with planned future facilities for increased throughput volumes, bunkering operations, and third-party storage.

**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.

**GTL Facility Due Diligence**
Performed due diligence for a company evaluating an equity investment in a GTL facility under construction. Reviewed project budget and schedule for completion. Evaluated the amount of contingency included in the budget, confirmed the status of payments to contractors and other service providers; interviewed project representatives regarding mechanical completion and commissioning plans.

**Gas Recovery Unit Valuation**
Prepared a fair market valuation assessment of a leased refinery gas recovery process unit located within a refinery. Visited the site and assessed the overall condition of the asset. Applied a cost approach to value the asset. The valuation was used by the client to negotiate a buy-out of the leased process unit.

**Transmix Facility Due Diligence**
Completed technical, financial, and operational due diligence analysis on behalf of lenders for an existing transmix processing facility and associated terminal. Tasks included inspection of facilities, assessment of competitive market position, and an evaluation of a new hydrotreater project for ULSD production.

**Terminal Due Diligence**
Performed a technical due diligence of a Gulf Coast refinery tank farm and associated transfer pipelines for a prospective investor. Reviewed inspection and maintenance records of the assets during a site visit. Reviewed numerous operating performance documents from a data room. Prepared a technical due diligence report outlining our findings.

**Marine Terminal Development**
Reviewed design requirements and monitored construction, start-up, and operation of a project to develop a bulk liquids terminal.
Work included review of dredging requirement, schedule, and interfaces between this project and a project to export ammonia from the terminal.

**GTL Facility Due Diligence**
Performed due diligence for a company evaluating an equity investment in a GTL facility under construction. Reviewed project budget and schedule for completion. Evaluated the amount of contingency included in the budget, confirmed the status of payments to contractors and other service providers, and interviewed project representatives regarding mechanical completion and commissioning plans.

**Independent Engineer**
Retained as the Independent Engineer for the "grassroots" Tangguh LNG Liquefaction Project in Indonesia. Prepared the technical due diligence for the US$3 billion facility on behalf of a financial consortium.

**CTL/GTL Question-Answer Session**
Presented background information to groups of stock research analysts in New York and Boston on the technologies utilized in gas-to-liquids and coal-to-liquids processes. In addition, the economics of gasification projects in the U.S. and the role of publicly traded companies in GTL and CTL was discussed.

**LNG Due Diligence**
Provided technical support to the sponsor of a multi-train liquefaction project. The scope of work included: preparation of a technical due diligence report; in-depth review of the Open Book Estimate (OBE), schedule, and project execution plan; assessment of the EPC contractor’s capabilities and experience; high-level review of geotechnical issues; assistance in the development of an Operating and Maintenance (O&M) plan; input into the formation of sponsor’s project management team; and input into the development of owner’s costs, including appropriate levels of cost and schedule contingency. Provided support to the sponsor with EPC contract negotiations.

**Ammonia Plant Project Finance**
Served as independent engineer on behalf of a major European bank for the relocation of a 750 TPD ammonia plant. Work included an assessment of existing and new technology that was to be incorporated in the project. The due diligence investigation analyzed feedstock supply, reviewed contracts, and inspected progress prior to close of financing. Monitored construction progress, certified mechanical completion, and witnessed the plant performance test.

**Petroleum Terminals Contract Valuation**
Provide estim

**Oil Refinery Valuation**
Conducted a v

**Pipeline Due Diligence - Operation and Expansion**
Performed a t