

ENERGY EXPERT: ISSUES IN FOCUS

A quarterly review of disputes and complex issues in the hydrocarbon production and processing industries

Baker & O'Brien, Inc.

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Ambiguity in Crude Oil Supply Agreement Leads to Pricing Dispute

International Arbitration

By Daniel Finelt

Petroleum refiners often enter into long-term supply agreements with crude oil producers to ensure future availability of feedstock at a competitive price. Such agreements commonly employ formulas that price the specific crude oil relative to the prices of so-called “benchmark” crude oils that are widely traded in the world market. The objective is to try to ensure that the refiner purchases—and the producer sells—at a price that closely reflects fair market value.

A refiner entered into a long-term supply agreement with a supplier of crude oil. Under the contract, the refiner agreed to upgrade and expand the refinery to accommodate the agreed crude oil volumes. In order to ensure that the refiner paid—and the seller received—a competitive price for the crude oil, a complex formula was established and made part of the agreement. The formula, through the use of a linear program computer model, compared the margin that the refinery actually earned versus the margin it *could have earned* had it processed a slate of comparable alternative crude oils during a specified period. If the latter proved to be more attractive, the refiner was entitled to claim a rebate on the price it had actually paid for that period. During the course of the contract, however, a dispute arose regarding the

computer model calculations. This was largely because the calculation was highly dependent on the determination of the alternative crude oils that were potentially available to the refinery, and the agreement was somewhat ambiguous on this issue. The parties went to arbitration over the matter.



In preparation for the arbitration, Baker & O'Brien was engaged to perform the appropriate computer calculations for each of a number of specified periods. In performing these calculations for each period, our consultants: (1) determined which

alternative crude oils would potentially have been available to the refiner for that period; (2) the available production volumes and prices of those crude oils; (3) the optimal mixture of such crude oils in the refinery for that period; and (4) the difference in refinery margin, if any, between the actual case and the alternative case. We issued a report which detailed all of our calculations, inputs, and assumptions. An expert for the opposing party issued a similar report, which our consultants were asked to critique. One of our consultants testified before the arbitration panel regarding our findings and conclusions.

Pipeline Rupture – Who was to Blame?

Dispute, North America

By Peter Halliday

Oil and gas pipelines usually operate in a so-called “right-of-way” (ROW) that is owned by other parties but made available for the public benefit. However, it is not uncommon for a pipeline to share the same ROW with a public utility that uses it for the power transmission lines that are part of its transmission system. Because pipelines are typically buried underground, aerial monitoring and surveillance often requires periodic clearance of brush or other vegetation that might obstruct the identification of any leaks or spills. Pipeline owners commonly contract such ROW clearing activities to specialist companies that employ heavy-duty mechanical equipment.

The presence of crude oil in a nearby waterway was traced to a previously undetected leak in a crude oil pipeline. Initial indications suggested that a downed electrical power line that ran through the ROW had caused a hole in the pipeline. The pipeline was shut down until a thorough investigation could be performed. The investigation revealed that a contractor had performed an ROW clearing operation some time prior to the discovery of crude oil in the waterway. It was alleged that the cause of the downed power line—and the consequent leak—was the direct result of the contractor’s activity during the ROW clearing. After the pipeline investigation was complete, the pipeline operator sued the contractor for liability related to

the incident. In its defense, the contractor claimed it was simply acting under the operator’s own guidance.

Baker & O’Brien was engaged to review the activities of both the pipeline operator and the contractor to determine whether each followed applicable pipeline industry standards and best practices. Issues addressed included: (1) an analysis of the contemporaneous events related to the contractor’s ROW clearing activity that was alleged to have caused the downed power line and the pipeline failure; (2) whether there was proper communication between the pipeline control center, the utility, and the contractor during the ROW clearing activity; (3) procedures that were in place for identifying and responding to specific emergencies in the ROW; (4) training procedures concerning the subject of a downed electrical power line being able to cause a leak in an underground pipeline; and (5) procedures that were in place for notifying and coordinating with emergency services and appropriate public officials in the event of a hazardous liquid pipeline emergency.



Highly Specialized Steel Alloys Inflate Repair Costs

Insurance Claim, Middle East and Africa

By Bill Jackson



A large petrochemical complex suffered an explosion and fire that caused extensive damage to a chemical processing unit. In addition to the process equipment itself, facilities affected included piping and support structures, as well as electrical and control circuits. A stainless steel distillation tower was so badly damaged that, had it not been for the surrounding steel structures, it might have suffered a complete collapse.

Following the incident, the owner conducted a “root cause” analysis. Extensive metallurgical and laboratory testing of damaged components led to the conclusion that a valve casting had suddenly and catastrophically failed due to a metallurgical fault. Severe process conditions were also determined to have been a contributing factor in the failure mechanism. After initiating mitigation measures to avoid a reoccurrence, the owner filed an insurance claim and

proceeded to execute the repairs. However, because the facility’s process equipment was constructed of stainless steel and other special alloys, the repair costs significantly exceeded those of a more conventional processing plant.

Baker & O’Brien was engaged to: (1) review the owner’s causation investigation and conclusions; (2) review the proposed scope of repairs, estimated costs, and schedule compared to what should be expected for a unit of this type; and (3) monitor the repairs on site while they were being conducted. One of the key decisions was whether to repair the distillation tower standing in place—which presented several difficult engineering problems—or remove it and repair it on the ground. Once the option was chosen, our consultants reviewed the proposed repair procedures, with emphasis on the tower support and alloy welding issues. Cost escalations due to special metallurgical considerations were compared to industry metrics. Our efforts assisted the parties in reaching a mutually satisfactory settlement for the claim.

Consulting Support for Complex Commercial Disputes

When faced with complex commercial disputes in the energy-related industries, clients often turn to Baker & O'Brien for its independent and objective support. For over 20 years, the firm's consultants have employed their engineering knowledge, industry experiences, and commercial acumen to provide assistance on a wide range of matters. Our project experience includes disputes involving operational incidents, standards of care, asset valuation, commercial supply terms, product quality, large engineering and construction projects, and intellectual property.

Our clients include many of the world's largest law firms, insurance providers, and operating companies. Law firms rely upon Baker & O'Brien to evaluate

technical and commercial aspects of a case and provide expert testimony. Our analyses, conclusions, and expert testimony have been heard by judges, juries, and arbitration panels around the world. On insurance matters, clients rely upon Baker & O'Brien's assistance for investigation of industrial accidents, and quantification of resultant property damage and business interruption losses. We are also called upon to assist insurers in subrogation actions by evaluating causation theories and claims for damages.

We would welcome the opportunity to discuss our qualifications in more detail as they relate to your specific area of interest.

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Baker & O'Brien, Inc. is an independent, professional consulting firm specializing in technology, economics, and management practice for the international oil, gas, chemical, and related industries.

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