In the following article, Peter Cooperman of Triple Point Technology discusses how hydraulic fracturing has set the stage for US coal to enter international markets and create historic levels of volatility for market participants. Leaders in the coal industry, including Rio Tinto, Vale and Anglo American rely on Triple Point Technology software to navigate this volatility, manage risk and optimize their end-to-end supply chain operations.

**INTRODUCTION**

Market sentiment suggests that the coal industry must prepare for a volatile year in 2014. Many companies will find themselves in an unfamiliar role as the flow of energy-related exports and imports change course. New technology in the form of specialized equipment and techniques used to recover natural gas and oil, combined with regulation to limit emissions is due to have a lasting impact in world markets. Among those in the energy industry, coal producers and traders are most likely to experience dramatic effects that will reduce regional selling opportunities and force them into international markets. A larger footprint brings on new levels of complexity alongside a disappearance of long-term contracts and a growing number of spot transactions.

The impact of these changes increases the level of risk present in today’s market that can only be addressed using enterprise commodity management and supply chain optimization software. Triple Point’s Commodity XL for Coal™, Commodity XL Pit to Port®, and Commodity XL PortVu enterprise software solutions are relied on by world leaders in the coal industry to guide decisions that mitigate commodity risk, maximize blending and processing efficiency and optimize end-to-end coal supply chains.

**THE NATURAL GAS EFFECT**

North America has become a world leader in hydraulic fracturing and the natural gas recovered has had a major impact on all competing energy commodities, but none as much as coal. While still the leading source of power generation in the United States, it appears to be only a matter of time before natural gas takes over. Miners and traders in North American markets are feeling the constraints of lower margins and displaced demand, as investments are made to bring natural gas to more parts of the country through investments in pipelines, processing plants, refineries, and other infrastructure. Meanwhile, environmental regulations and low relative prices have already motivated many power plants to replace coal-fired plants with new gas-burning facilities. Even the plants that continue to rely on coal are relying less heavily on long-term futures contracts and are instead demanding spot market transactions. Regional coal mining operations are finding themselves in a business ending sea of risk and the only way to escape is through expansion into international markets.

**GROWING A GEOGRAPHIC FOOTPRINT SUCCESSFULLY**

Geographic growth is a major but necessary change for survival in today’s trading environment. Demand for coal is greatest in...
growing countries that need a cheap source of energy and feedstock for building materials to support their growth. Regions faced with relatively high natural gas prices and phase outs of nuclear power plants have also been clamouring for a cheaper source of power generation. This creates an excellent opportunity to profit; however, regional players must be prepared to manage a much more complex supply chain before they can enter international markets.

Historically, one could argue that little more than a handshake solidified a deal between a coal mine and a local power generator. A short supply chain between a coal mine and a local power generator was easy to manage and quality concerns could be addressed quickly when they arose. International contracts tend to take quality extremely seriously. A mine owner must remain diligent in properly assessing the quality and location of a given stockpile.

Similarly, a trader must know what stockpiles they can pull from, and when making deals each risks losing potential profit or facing severe penalties of the stock piles are not blended properly. In fact, the biggest penalties are issued when the wrong quality of coal is put on a vessel. Suddenly, a small regional operation will find itself with a new series of challenges that must be overcome before a contract is struck or a coal shipment begins its journey to the buyer.

Logistics is probably the most complex challenge; however, it also represents the largest profit opportunity. International market success requires upstream and midstream coal participants to have better visibility into their end-to-end supply chain from pit to port and from port to end user. As the number of contracts and parties involved increase, the risk that a shipment will be delayed, arrive early or be otherwise unacceptable increases exponentially. A manual process to properly manage the risk associated with participation in today’s coal markets is beyond the capabilities of most organizations. Technology has become a key component and is needed to succeed.

**Turn to technology**

Triple Point Technology’s Commodity XL for Coal, Commodity XL Pit to Port, and Commodity XL PortVu help its clients mitigate commodity risk and optimize end-to-end supply chains. Rio Tinto, Anglo American and Vale rely on Triple Point Technology software to analyse data and distribute relevant information to the correct people so they can make profitable decisions. The following features are just some of the capabilities that organizations gain when they select Triple Point Technology as their commodity management and supply chain software provider.

**Commodity XL for Coal**
- manage contracts of increasing complexity;
- combine physical and financial reporting;
- apply ‘what-if’ analyses to make better trades;
- gather business operations information into a central data repository; and
- increase visibility across an organization granting the ability to react quickly and ensure efficient operations.

**Commodity XL Pit to Port and Commodity XL PortVu**
- manage physical supply chain from pit to customer;
- perform quality assurance/blending in field, nearly eliminating the risk of an out-of-spec product being put on a vessel;
- determine ideal blend ratios to maximize profitability and meet all contract commitments by minimizing deviation from spec;
- optimize logistics with an integrated view of terminal operations and an ability to forecast and view actual movements;
- maintain business continuity in the wake of an unexpected event or circumstance with near real-time stock and quality data for coal supplies located all over the world; and
- gain further insight with 2D and 3D modelling of stockpile qualities and locations.

Triple Point Technology® is a major global provider of on-premise and in-cloud Commodity Management software that delivers advanced analytics for optimizing end-to-end commodity and energy value chains. The company provides innovative solutions for managing all aspects of volatile commodity supply chains: trading, procurement, enterprise risk, logistics, scheduling, storage/inventory, processing, settlement, and accounting. Triple Point has customers in 35+ countries across industries including energy, metals, minerals, chemicals, agriculture, shipping, consumer products, food and beverage, retail, and manufacturing. The company employs staff in 15 offices and support centres worldwide.