

## Innovation, Competition and Costs in Uranium Mining

*Patrick Plummer<sup>1</sup>, Adam Christopher<sup>2</sup>*

1. Mining Geologist, TradeTech, Denver Tech Centre, Colorado 80111, USA.  
[patrick@tradetech.com](mailto:patrick@tradetech.com)

2. Senior Analyst, TradeTech, Denver Tech Centre, Colorado 80111, USA.  
[adam@tradetech.com](mailto:adam@tradetech.com)

Keywords: Uranium Geology, Innovation, Production Economics, Business Strategy

### ABSTRACT

The geographical distribution and geological settings that support uranium resource genesis are often overlooked factors that underpin the nuclear fuel marketplace. The quirks associated with uranium production are precisely what make this industry one of the most challenging sectors to understand and succeed within. Looking ahead, the way in which uranium is both mined and deployed as a strategic asset could be poised for change.

The inception of large-scale, low-cost ISR production in Kazakhstan in the early 2000s, and its potential impact on prices ahead, is a significant factor driving innovation among today's future producers.

However, technological innovation is not an easy process in the mining sector. Mining is an industry contingent on investment; and with investment comes an inherent element of risk. So, in the uranium business, innovative propositions can be difficult to rationalize against proven technologies.

Nonetheless, given the chill on uranium prices, companies have been compelled to improve the productivity of their assets whilst reducing their operational risk. Importantly, innovation has not solely focused on the way in which uranium is produced; it also applies to a producer's operating structure, team management, business strategy, and shareholder engagement.

The presentation examines innovations that have defined the uranium production industry in the past, including their impact on uranium market prices, and looks to the future to see what companies are doing to compete in an increasingly complex production space.

Underpinning the analysis is one simple fact; the world needs new uranium mines.

The analysis concludes by evaluating the impact innovation could have in a rapidly evolving supply and demand dynamic, including its influence on future uranium market prices.