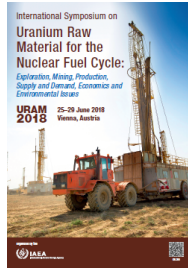


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Long term trends for global uranium exploration

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The global search for uranium started in earnest at the end of World War 2 and continues through to today. Over the intervening seven decades, a total of 72 billion (in constant 2017 USD Dollars) has been spent exploring for uranium. This has cost approximately 156 or 252/kg U (equal to 61 to 99 per lb of U₃O₈) per Kg U.

The paper looks at when, where and who found these deposits. It also assesses the trend over time in the location of these discoveries, unit discovery cost, metres drilled per discovery, deposit style and the average size.

Data has also been compiled on how many of these deposits that have successfully been developed into mines, and the associated time delay between discovery and development. It is noted that, in recent decades, the conversion rate has been getting progressively slower and lower. This, combined with the current low uranium prices, has adversely affected the amount of exploration carried out. This is also of serious concern to end-users – as it raises the issue of whether (or not) the industry is able to find and deliver sufficient metal to meet its requirements in the longer term.

In practice, the uranium market will balance itself through the pricing mechanism. Higher prices will stimulate higher levels of exploration activity (and the amount of metal found). Higher prices will also enable existing projects to be economically developed.

Given the above, and assuming that the historical discovery and conversion performance trends continue into the future, estimates were made of the likely amount of uranium that could be found and developed over the next 20 years under a range of different demand and price scenarios. Depending on the scenario chosen, the author estimates that the uranium price needs to rise to 156 or 252/kg U (equal to 61 to 99 per lb of U₃O₈) for the industry to be in-balance in the longer term.

Country or International Organization

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