Uranium exploration (2004-2014): New discoveries, new resources

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The last decade has demonstrated the dynamic of the mining industry to respond of the need of the market to explore and discover new deposits. For the first time in the uranium industry, the effort was conducted not only by the majors but by numerous junior mining companies, more than 800 companies where involved.

Junior miners introduced new methodologies, innovations and fresh approach. Working mainly on former prospects of the 70's and 80's they discovered new deposits, transformed historical resources into compliant resources and reserves and developed new large resources in Africa, North America and Australia.

In Australia, the Four Mile, Mt Gee, Samphire (SA), Mount Isa (Qld), Mulga Rock, Wiluna-Lake Maitland, Carley Bore-Yanrey-Manyingee (WA) projects were all advanced to compliant resources or reserves by junior mining companies.

In Canada, activity was mainly focused on Athabasca basin, Newfoundland and Québec, the results are quite amazing. In the Athabasca 2 new deposits were identified, Roughrider and Patterson South Lake, Whilst in Québec the Matouch project and in New Foundland the Michelin project are showing good potential.

In Namibia, alaskite and surficial deposits, extended the model of the Dalmaradian Central belt with the extension of rich alaskite of Z20, Husab, Omahola and large deposits of Etango and Norasa. A new mine commenced production Langer Heinrich and two are well advanced on way to production: Trekkopje and Husab.

The ISL model continues its success in Central Asia with large discoveries in Mongolia and China.

Europe has been revisited by some juniors with an increase of resources in Spain (Salamanca) and Slovakia (Kuriskova). Some countries entered into the uranium club with maiden resources namely Mali (Falea), Mauritania and Peru (Macusani caldeira).

The Karoo formation revitalised interest for exploration within Paraguay, South Africa (Rieskuil), Botswana (Lethlakane), Zambia (Mutanga, Chirundu) and the exploitation started in Malawi (Kayalekera) and planed in Tanzania (Mkuju).

The potential exploitability of uranium as by- or co-product has led to the innovative processes for extraction being aggressively developed around the World:

Known by its potential but with speculative resources, the black shale deposits of Korea, Colombia and especially in Sweden in the Östersund area have started to be quantified. Sweden reportedly has the second biggest uranium resources after BHP's Olympic Dam operation in Australia. Initial resources based on extraction via bioheap leaching have been calculated for Sweden. This technology

for uranium was initially developed on metamorphic blackshales in Finland. The Sotkamo Project in Finland may commence uranium by product production in the near future.

The largest rare earths deposit in the world outside of China, Kvanefjeld in Greenland has the ability to be a uranium co-product.

All these discoveries or new resources must be tempered with the fact that scoping, prefeasibility and feasibility studies will be the true indicator of their economic viability.