

International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues - IAEA CN-216

Contribution ID: 150

Type: Poster

A new edition global map - uranium deposits of the world

Wednesday 25 June 2014 17:40 (15 minutes)

In 1995 The International Atomic Energy Agency published a hard copy map entitled “World Distribution of Uranium Deposits” at a scale of 1:30 000 000. The map displayed data from agency information that was to become UDEPO database of uranium deposits, overlaid on a generalised geological map supplied by the Geological Survey of Canada. At that time, the database contained 582 deposits with a cut-off of 500tU at an average grade of 0.03%, and was generated over a period of half a decade by a small group of 6 external experts. The experts developed a revised deposit classification scheme displayed on the map and in the accompanying guidebook in 1996. A revised and expanded UDEPO database was made widely available on the internet from 2004, and contained additional deposit information and a constantly increasing number of deposits (874 by the end of 2008 coinciding with a new UDEPO guidebook in 2009). Enhanced efforts by the IAEA and consultants of the UDEPO Working Group have now generated a database that has 1526 deposits with a more detailed classification subdivision utilised in a forthcoming IAEA UDEPO publication. The establishment of this classification scheme and the completion of a major phase of updating UDEPO has created an opportunity for creating a completely new edition of the Uranium Deposits Of The World Map using modern GIS techniques. Cartographic tools within GIS software have become very sophisticated, allowing better display of variably dense data through real-time manipulation of layers and symbology with the GIS dataset. Moreover, some of the results of this functionality can then be transferred to the data display aspects the online version of UDEPO as well as distributed as scale-independent digital version of the map.

In parallel, a planned IAEA publication regarding global uranium provinces allows a more rigorous clustering of deposits for the purposes of showing particular metallogenic aspects in more detail. This also has an important secondary purpose of spatially defining population subsets in the UDEPO database for subsequent province or country uranium endowments. The aspatial deposit-type attributes permit further refining of the spatial analysis. In this way powerful GIS querying capabilities can extract greater “derived” information from the UNDEPO data, such as deposit density relationship with other geological features, more meaningful province-specific spatial information and global mineral potential information. The latter will prove a useful complementary tool to provide insight into relatively unexplored parts of a known province, or extrapolation to completely greenfield (but similar) areas.

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Session Classification: Poster Session

Track Classification: Uranium geology