

## **SITE CHARACTERIZATION IN BEISHAN, GANSU, NW CHINA -- THE POTENTIAL AREA FOR CHINA'S HIGH LEVEL RADIOACTIVE WASTE REPOSITORY**

Ju Wang, Beijing Research Institute of Uranium Geology, P O Box 9818, Beijing 100029, China

Site characterization in Beishan, Gansu, NW China--the potential area for China's high level radioactive waste repository. Ju Wang, Beijing Research Institute of Uranium Geology, P O Box 9818, Beijing 100029, China. Beishan, located in the Gobi desert area of northwest China's Gansu province, is the most potential area for China's high level radioactive waste repository. With rare inhabitants, barren lower hills, little precipitation (70mm/a) and large evaporation (3000mm/a), the Beishan area is of no economic prospect. The candidate host rock is granite in which a geological repository will be built at a depth about 500-1000 meter. Site characterization studies such as crust stability study, surface geological, hydrogeological and geophysical investigation, remote sensing investigation have been conducted. Results indicate that the crust is of block structure with crust thickness of 47 through 50km, the seismic intensity is less than 6, and no earthquake larger than  $M_s=4$  have been happened. The uplifting velocity is 0.6 -- 0.8mm/a. The main lithology include K-feldspar granite, plagioclase granite and granodiorite of Hercynian age, with zircon lead isotopic age ranging between 219 -- 302Ma. The directions of the principal joints are 5, 35, 85 and 315 degrees. The ground water include 3 types: base rock fissure water, valley and depression pore-fissure water and basin pore-fissure water. The ground water is of low permeability and low flow rate. Computer modeling shows that ground water velocity is 2m/a. Magnetotelluric measurement, high resolution magnetic survey and VLF measurement were also conducted. Results show the location of large faults and the depth of the bottom of granite body is larger than 5518m. Detailed site evaluation by drill holes and in situ tests will be conducted in the year of 2000.