6 Deposit Type (Item 10)

These introductory two paragraphs of Section 6 are extracted from Powertech's Technical Report titled "Updated Technical Report on the Centennial Uranium Project, Weld County, Colorado", dated February 25, 2010. Changes to standardizations, sub-titles, and organization have been made to suit the format of this Technical Report. SRK has provided a description of the Geological Model in Section 6.1.

Uranium deposits in the Centennial Project are sandstone, roll front type typical of those in Wyoming, South Dakota and Texas. These type deposits are usually "C" shaped in cross section, a few tens of feet-to-100 or more-feet wide and often thousands of feet long. Uranium minerals are usually deposited at the interface of oxidizing solutions and reducing solutions or redox boundaries. Typical alteration associated with this redox boundary consists of limonitic and hematitic staining of the sandstones.

As the uranium minerals precipitate, they coat sand grains and fill the interstices between grains. As long as oxidizing groundwater movement is constant, minerals will be solubilized in the interior portion of the "C" shape, and precipitated in the exterior portion of the "C" shape, increasing the tenor of the ore body by multiple migration and accretion. The thickness of the ore body is generally a factor of the thickness of the sandstone host unit. Mineralization may be 10 to 15ft thick within the roll front while being inches to feet thick in the tail portions.

6.1 Geological Model

The uranium deposits in the Cheyenne Basin are characteristic of the Rocky Mountain and Intermontane Basin uranium province, United States (Finch, 1996). The uranium province is essentially defined by the extent of the Laramide uplifts and basins.

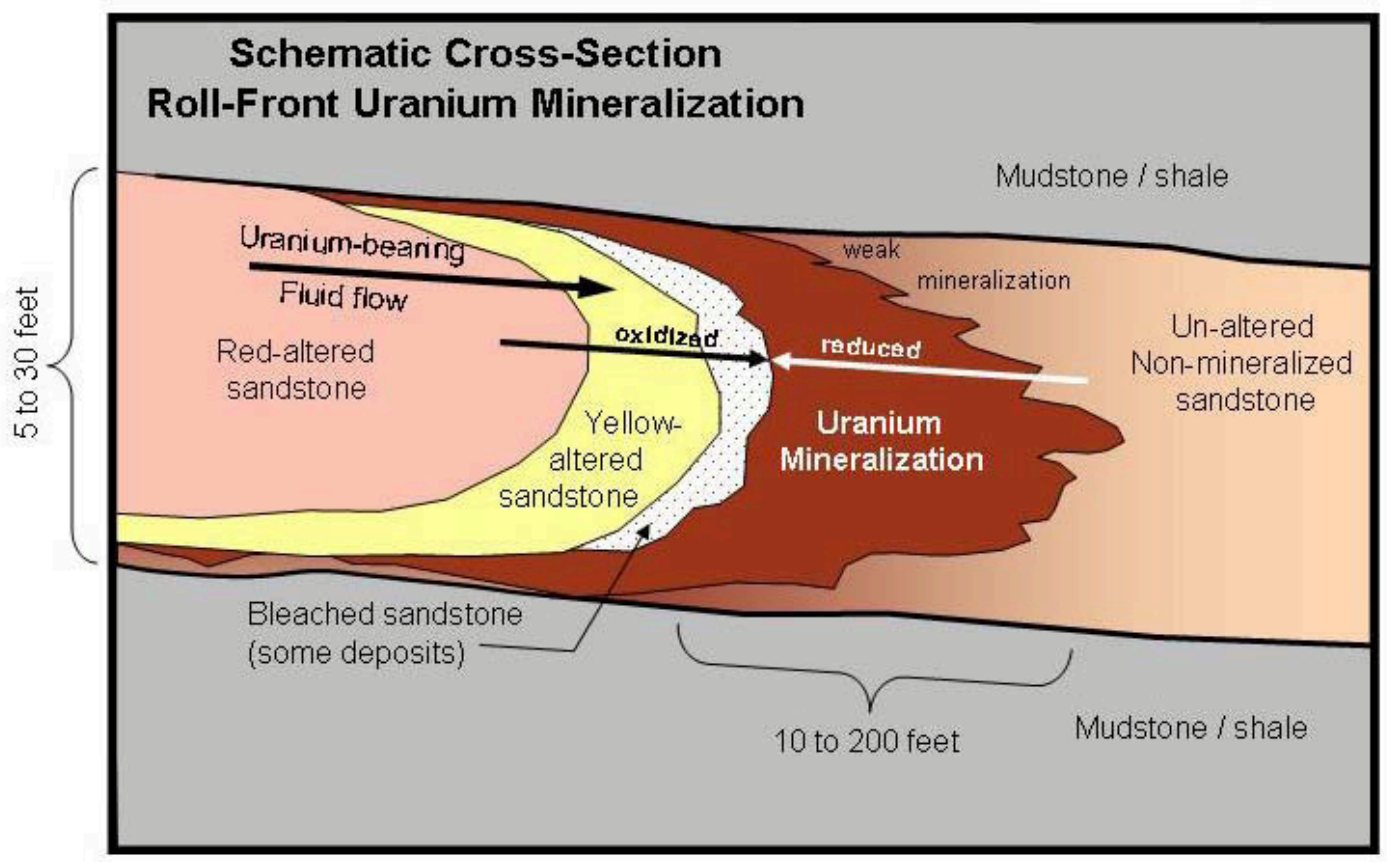
Roll-front sandstone uranium deposits formed in the continental fluvial basins developed between uplifts. These uranium deposits were formed by oxidizing uranium-bearing groundwaters that entered the host sandstone from the edges of the basins. Two possible sources of the uranium were (1) uraniferous Precambrian granite that provided sediment for the host sandstone and (2) overlying Tertiary age (Oligocene) volcanic ash sediments. Major uranium deposits occur as sandstone deposits in Cretaceous and Tertiary age basin sediments. Cluster size and grades for the sandstone deposits range from 500 to 20,000t U_3O_8, at typical grades of 0.04 to 0.23% eU_3O_8.

The tectono-stratigraphic setting for roll-front uranium ores is in arkosic and fluvial sandstone formations deposited in small basins. Host rocks are continental fluvial and nearshore sandstone. The principal ages of the host rocks are Early Cretaceous (144–97Ma), Eocene (52–36Ma), and Oligocene (36–24Ma), with epochs of mineralization at 70 Ma, 35–26Ma, and 3Ma.

Ore mineralogy consists of uraninite, pitchblende, coffinite, and carnotite, with associated vanadium in some deposits. Typical alteration in the roll-front sandstone deposit includes oxidation of iron minerals up-dip from the front and reduction of iron minerals down-dip along advancing redox interface boundaries (Figure 6-1).

Probable sources of uranium in the sandstone deposits are Oligocene volcanic ash and/or Precambrian granite (2,900–2,600Ma). Mineralizing solutions in the sandstone are oxygen-bearing groundwater. Uranium mineralization of the sandstone deposits began with inception of Laramide uplift (approximately 70Ma) and peaked in Oligocene.

Size and shape of individual deposits can vary from small pod-like replacement bodies to elongate lobes of mineralization along the regional redox boundary.



SRK Consulting Engineers and Scientists	**Centennial Project, Weld County, Colorado**	**Schematic Cross-Section – Roll Front Uranium Mineralization**
SRK Job No.: 194300.020	**Source: SRK 2007, modified from several sources**	
File Name: Figure_6-1.docx		Date: 20100503 Approved: AM **Figure: 6-1**