

5 Geologic Setting (Item 9)

Section 5 is extracted in-part 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 comments and opinions, where present, contain "SRK" in the pertinent sentences and paragraphs.

5.1 Regional Geology

The Centennial Project is located within the Cheyenne Basin, a sub-basin of the greater Denver-Julesburg Basin, which is bordered on the northwest by the Hartville Uplift in Wyoming and on the east and northeast by the Chadron Arch in Nebraska Figure 5-1. To the south, the Cheyenne Basin is separated from the Denver Basin by the Greeley Arch and the western edge is bordered by the Colorado Front Range. Sediments within the basin dip inward from 0.5° to 10.0°, with the basin axis trending generally north-south.

As a result of uplift of the ancestral Rocky Mountains to the west, the slowly subsiding Cheyenne Basin accumulated sediments that range in age from Pennsylvanian to Quaternary. The Late Cretaceous age Pierre Shale represents offshore marine sedimentation and has a gradational contact with the overlying Fox Hills Sandstone. Sandstones of the Fox Hills represent nearshore sedimentation. Overlying the Fox Hills Sandstone is the Laramie Formation which consists of terrestrial fluvial deposits. These three formations represent the last regression of the Late Cretaceous Sea.

Unconformably overlying the Laramie Formation is the tuffaceous White River Formation. This Oligocene formation is rich in volcanic fragments and is thought to be a source of uranium in the Centennial Project and the remainder of the Cheyenne Basin. In the Centennial Project area, the White River Formation has been deeply eroded with only isolated remnants remaining. Quaternary arkosic gravel and sand deposits cover a large portion of the present surface and form large wide southeast-trending channels. The source for these channels is thought to be the White River Formation as well as the granitic highlands to the west.

5.2 Local and Property Geology

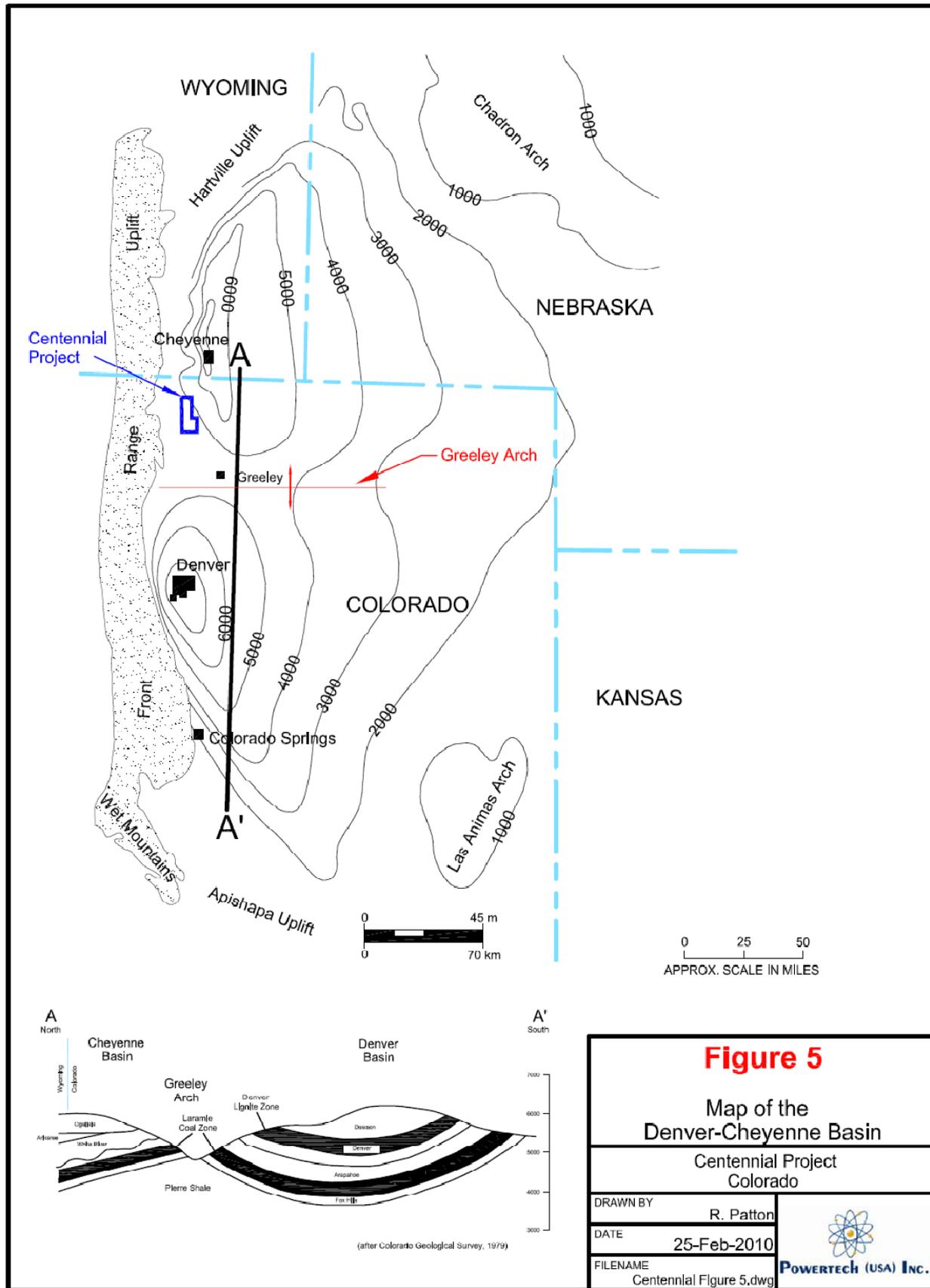
The depositional environment interpretation, as reported by RME, is based on resistivity E-logs, sedimentary structures from 3-inch core and limited outcrops, isopach maps, and the lateral and vertical relationships between different facies. Figure 5-2 shows the generalized stratigraphic section for the Fox Hills Sandstone. In general terms, this regressive sequence of sandstones was deposited by longshore currents from major distributary channels depositing sediments along a wave-dominated coastline.

The Fox Hills Sandstone on the western flank of the Cheyenne Basin can be separated into an upper and a lower member based on the depositional environment. The upper member termed the "A-WE" which includes the "A₁, A₂, A₃, A₄, and WE" sands, is interpreted to be deposited in a barrier-island tidal-inlet complex. The lower member termed "B, C, and D" is interpreted by RME to be deposited in a wave-dominated delta complex. No economic concentrations of uranium mineralization were observed in the drillhole logs within these lower member sands.

The lithologic units of the Fox Hills Sandstone now dip gently eastward, off the western flank of the basin. Groundwater flow through permeable sands is down this regional gradient. Since the

uranium roll front ore bodies below the water table are dynamic, their deposition and tenor are factored by groundwater migration slowly moving the mineralization further down dip by multiple migration and accretion and in the process creating an oxidation/reduction roll front uranium deposit. In the southern portion of the project, recent oxidation from surface exposure has invaded the previously formed uranium roll fronts and has partially remobilized the mineralization. For this reason, RME used chemical uranium values obtained from cores and interpreted uranium values from PGT logging to calculate uranium resources for these shallow deposits. In this manner, it was not necessary to apply disequilibrium factors (DEF) to radiometric logs for the purpose of resource calculation.

On outcrop, most of the sandstones of the Fox Hills Sandstone exhibit trace to pervasive limonite staining of various shades of yellow and orange. Red hematite staining is less common and occurs as scattered streaks in most outcrops. Generally, the more porous and thicker the sandstone, the more pronounced the alteration. Alteration within the host sands has been mapped by RME for distances of over 30mi within outcrops of Fox Hills Sandstone in the Centennial Project area. Other workers have mapped redox boundaries for similar distances in other parts of the Cheyenne Basin.



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**Centennial Project,
 Weld County, Colorado**

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Regional Sedimentary Basins

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Figure: 5-1

GENERALIZED STRATIGRAPHIC SECTION
FOX HILLS SANDSTONE, WESTERN FLANK OF CHEYENNE BASIN

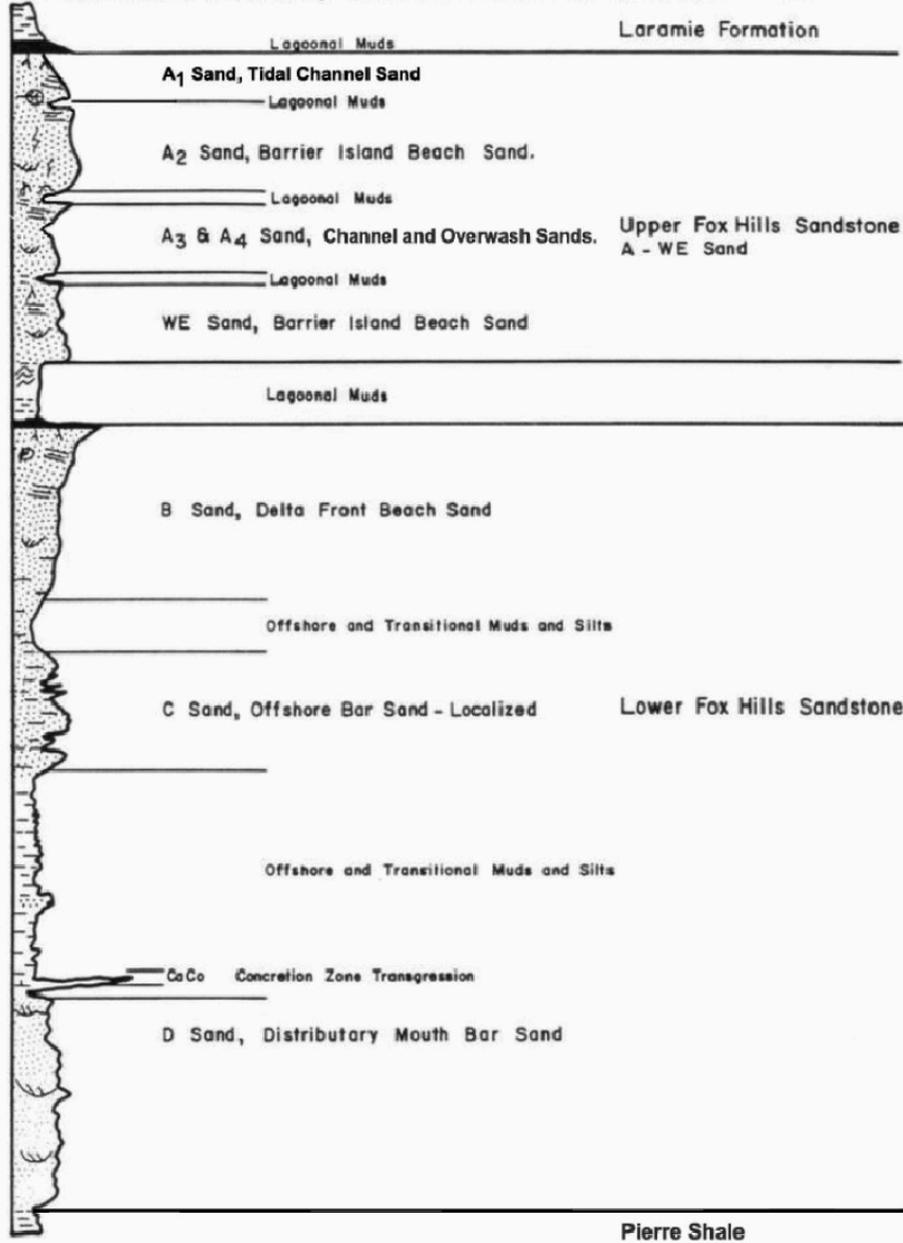


Figure 6

Stratigraphic Column of
Fox Hills Sandstone

Centennial Project
Colorado

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POWERTECH (USA) INC.



SRK Project No.: 194300.020

File Name: Figure_5-2.docx

Centennial Project,
Weld County, Colorado

Source: Powertech (USA) Inc.

Centennial Project Stratigraphic
Column

Date: 20100503

Approved: AM

Figure: 5-2