**Uranium Deposits in Southwestern North Dakota**

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**Introduction**

There are at least 21 areas in western North Dakota where uranium deposits occur, primarily within lignites, sandstones, and carbonaceous rocks. Prior to the mid-1950s, uranium in western North Dakota was considered a minor resource, with most deposits being small, undeveloped, and located in remote areas. In this region, uranium was discovered during the 1950s and 1960s, leading to the development of significant mining operations. Since then, uranium mining has been ongoing, and the region continues to be a significant producer.

**Exploration and Mining in the 1950s and 1960s**

The scientists exploring for uranium in southwestern North Dakota in the 1950s and 1960s came to several important conclusions. One of these was that uranium was always found within 200 feet of the White River unconformity. This theory, known as the White River theory, was validated by observations made at the Belpfield and Griffin sites. The majority of these gamma logs were delineated primarily by plotting the locations of gamma logs that contain spikes (high gamma counts). The development of this theory was significant because it helped guide the exploration and mining efforts in the region.

**Discovery of Uraniferous Lignite Deposits in Western North Dakota**

Uraniferous lignite deposits were discovered in western North Dakota in the 1950s. These deposits are characterized by their high uranium content and are found within the lignite seams. The uranium content in these deposits is often associated with the presence of pyrite, an iron sulfide mineral. The discovery of these deposits led to significant mining operations, with production peaking in the 1960s. However, the industry declined sharply in the 1970s, coinciding with the release of the movie *The China Syndrome*.

**Current Market for Uranium**

The current market for uranium is driven by the needs of the nuclear power industry. In recent years, there has been a resurgence of interest in uranium mining, driven by the need for more nuclear power plants and the desire to reduce carbon emissions. However, the market is highly volatile, with prices fluctuating significantly. As a result, uranium mining has been largely driven by government incentives and subsidies.

**References**

- Knell, Mark, 2004, Uraniferous mine reclamation, ND Public Service Commission website, AML Division, one page.