FACT SHEET: The Life Cycle of a Typical Uranium Mine in Northern Arizona

The following facts and figures summarize the exploration, mining, production and reclamation of the Pigeon Mine, a breccia pipe uranium mine, located on the Arizona Strip, and mined by Energy Fuels Nuclear (EFN).

Pigeon Mine during production, November, 1989. The mine was located on the north side of Snake Gulch. (Photo courtesy of Pam Hill.)

The Pigeon Mine after reclamation, October 5, 1993. (Photo courtesy of Pam Hill.)

As shown in the above photos, when mining was completed, the entire site was reclaimed – the mine shaft was filled in, all surface disturbance was recontoured to original topography and the site was revegetated. Once the vegetation matured to pre-mining status (which took about 3 years), the reclamation bond money was returned to the mining company.

The timeline and stages of mine development include:

Discovery of Orebody:	1981
Planning/Permitting:	1982
Mine Development & Site Construction:	1983
Mining:	1984-1988
Reclamation:	1989
Reclamation Bond returned to EFN:	1992

The average life of a breccia pipe uranium mine is 5 to 7 years.

The uranium orebodies in the Arizona Strip have the highest grade ore in the U.S. averaging 0.65% uranium -- generally about 5 times higher than any uranium deposits elsewhere in the country.

According to the U.S. Geological Survey, the Arizona Strip has a resource endowment of 375 million lbs, the energy equivalent of 13.3 billion barrels of oil.

Breccia pipe mines are small “designer” mines with an average surface footprint of only 20 acres (smaller than a Wal-Mart parking lot). There are no tailings ponds and no ore is processed on site. All ore from the district is trucked 300 miles to an existing mill in Utah.

The Pigeon Mine produced 5.7 million lbs of uranium, which is enough to provide electricity for a city the size of Phoenix for 20 years.

During production, the Pigeon Mine had 50 employees, mostly locally based. The miners’ pay scale was $20-30/hour. Additionally, the mine budget included approximately $50 million for development (mine site construction & shaft sinking) and $50 million for mining ($10m/year for 5 years). This represents a significant addition to Arizona’s tax base.

The total waste from all the energy used by an average American during his lifetime, if produced by nuclear energy, would weigh 2 pounds and fit into a volume equal to the size of a 12-ounce Coke™ can.

Underground facilities at the WIPP (Waste Isolation Pilot Plant) in New Mexico have proven that secure long term storage of nuclear waste is both technically feasible and efficient.

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