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MEMORANDUM

TO:

FROM:

RE: History of Natural Resources and Development within the Grand-Staircase Escalante National Monument

INTRODUCTION

The debate over the Grand Staircase Escalante area as a potential national monument goes back nearly 90 years. During the 1930s, the Roosevelt administration considered the creation of a monument in virtually the same area as Grand Staircase, as part of a recommendation to withdraw 4.4 million acres of Utah's red rock country, creating Escalante National Monument.¹ The Roosevelt administration rejected the idea, in large part because of local opposition.²

When the monument was designated, in 1996, President Clinton stood at the rim of the Grand Canyon in Arizona famously said that he was “concerned about a large coal mine proposed for the area,” and believed that “we shouldn't have mines that threaten our national treasures.”³ These statements led many to believe that a major driving force behind the effort to create the Grand Staircase-Escalante National Monument was to prevent development in the Kaiparowits plateau, in particular the proposed Andalex Smoky Hollow coal mine.

DISCUSSION

There are believed to be both coal and oil and gas resources present within the boundaries of the Grand-Staircase Escalante National Monument, however, only the coal resource has been proven to date.

Coal Resources

The coal resources within the Grand Staircase-Escalante National Monument are located within

¹ See James R. Rasband, *Utah's Grand Staircase: The Right Path to Wilderness Preservation?*, 70 U. Colo. L. Rev. 483, 488 (1999).

² *Id.*

³ Remarks Announcing the Establishment of the Grand Staircase-Escalante National Monument, 32 Weekly Comp. Pres. Doc. 1785 (Sept. 23, 1996).

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the Kaiparowits Plateau, which encompasses approximately 600,000 acres in the middle of the monument. Prior to designation of the national monument, the Utah Geological Survey estimated that the area contained approximately 62 billion tons of high BTU low-sulfur coal, of which more than 11 billion tons are considered recoverable, as well as two trillion cubic feet of natural gas.⁴

At the time of the monument designation Andalex Resources and PacifiCorps held large leaseholds within the plateau, but only Andalex had begun the Environmental Impact Statement process to move forward with development of the Warm Springs Project, of which the Smoky Hollow Mine was a part. As part of that EIS, the BLM estimated that at full production over the life of the project, the combined direct and indirect jobs would be approximately 832 and annual revenues would include “\$1.75 million annually from the retained share of mineral royalties, \$2.15 million in payments into the Federal Black Lung Program, and \$375,000 for the Abandoned Mine Land Reclamation Fund.”⁵

At the time of the monument designation, the Andalex and PacifiCorps leases were treated as valid existing rights and the EIS process could have continued; however, PacifiCorps opted for a voluntary exchange of leases for lands outside of the monument boundary.⁶ Andalex later agreed to relinquish approximately 36,500 acres of leases related to the Smoky Hollow Mine

Oil Resources

The monument has an estimated 447 million barrels of oil in the west flank of the Circle Cliffs tar sands deposit.⁷ At the time of designation, Conoco held a portion of 59 leases covering approximately 108,000 acres inside the monument. In 1997, Conoco drilled two exploratory

⁴ See John F. Shepherd, Up the Grand Staircase: Executive Withdrawals and the Future of the Antiquities Act, 43 Rocky Mt. Min. L. Inst. 4-1 (1997); Cf. Bureau of Land Management, U.S. Department of the Interior, *Kaiparowits Plateau Coal Supply and Demand* S-6, 1-5 (1997) (the BLM study found only 4-6 billion tons potentially recoverable, and concluded that the uncertainty of the export market and distance to domestic market suggest that it would be uneconomic to develop in the foreseeable future).

⁵ Bureau of Land Management, U.S. Department of the Interior, *Warm Springs Project Preliminary Draft Environmental Impact Statement*, 4-61, 4-74 (1995).

⁶ Ann E. Halden, *The Grand Staircase Escalante National Monument and the Antiquities Act*, 8 Fordham Envtl. L. J. 713, 731 (1997).

⁷ Terry Lee Anderson, Alexander James, *The Politics and Economics of Park Management*, Rowman & Littlefield, 153 (2001); See also M. Lee Allison, *A Preliminary Assessment of Energy and Mineral Resources within the Grand Staircase Escalante National Monument*, Utah Geological Survey, available at <http://files.geology.utah.gov/online/c/c-93/gsenmcir.htm#table4> (The Utah Geologic Survey estimated as much as 550 million barrels of oil might be contained within the Circle Cliffs tar sands).

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wells within the monument boundary, however, after hitting dry holes, Conoco let its oil and gas leases lapse when they came up for renewal.⁸

Additionally, a 1997 Utah Geological Survey noted in a review of mineral resources within the monument completed in the aftermath of the monument designation, that the monument “contains all the elements necessary for major oil and gas accumulations,” and while the “exploration risk is high, the monument could contain major accumulations of oil based on the production history of Upper Valley field and geologic evidence.”⁹

Other Potential Resources

According to the 1997 Utah Geologic Survey report, the Kaiparowits Plateau coal field has potential for between 2.6 and 10.5 trillion cubic feet of coal-bed methane gas, although the report states that no definitive studies had been done and they were extrapolating using geologic data from other parts of the state.

The same report noted that Metallic mineral occurrences in the monument include gold, copper, manganese, titanium, zirconium, uranium, and vanadium. Most occurrences are small, low-grade, and have little development potential. Minerals such as titanium, zirconium, and vanadium, however, are considered "strategic and critical" and may have development potential within the monument. Uranium with associated copper plus trace amounts of cobalt occurs in the Shinarump Member of the Triassic Chinle Formation in the Circle Cliffs area of the northeastern section of the monument. About 75,000 pounds of U308 was reportedly produced from these deposits during the 1950s and 1960s. Vanadium associated with the uranium was produced as a byproduct. Anomalous radioactive outcrops of the Jurassic Morrison Formation have been noted on the east side of Fiftymile Mountain, suggesting the possibility that uranium minerals extend beneath the Kaiparowits Plateau.

Fossil, placer titanium-zirconium deposits occur in the Cretaceous Straight Cliffs Formation in a 40 to 50 mile-long-belt along the east side of the Kaiparowits Plateau. The deposits were never developed commercially because they are remote and because of problems associated with mining and beneficiation. However, the deposits are reportedly rich in rutile (titanium) and

⁸ Robert B. Keiter, *Controversy to Catalyst: The Monument, the Plan, and Beyond*, 21 Land Resources & Envtl. L. 521, 527 (2001).

⁹ M. Lee Allison, *A Preliminary Assessment of Energy and Mineral Resources within the Grand Staircase-Escalante National Monument*, Utah Geological Survey, available at <http://files.geology.utah.gov/online/c/c-93/gsenmcir.htm#table4>.

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zircon (zirconium). Dow and Batty (1961) estimate that the aggregate size of 14 individual deposits is from 1 to 3 million tons of raw material.

Records obtained from the Utah Division of Oil, Gas and Mining indicate that five small mining operations are currently under permit in the monument. About 300 tons of alabaster, a fine-grained form of gypsum used for ornamental carvings, is quarried annually in four of these operations. The fifth is a suspended operation that mined petrified wood.