

**Preliminary Findings**

**Assessment of the  
Economic Impact of  
Coal Development on  
the Crow Reservation,  
Big Horn County,  
and Montana**

*Report Prepared for  
The Crow Nation*

*by*

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The Harvard Project on  
American Indian*

*Economic Development*

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**The Economic Impact of Coal Development on the  
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by

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The Crow Nation, centered in Big Horn County, Montana, presents a striking mosaic of economic contrasts. Although the region is blessed with abundant natural resources, particularly in the form of huge reserves of commercial quality and accessible coal, economic underdevelopment, family poverty, and social stress make the region one of the most distressed in the United States. Few social conditions are more oppressing than grinding poverty. In its struggle to improve the well-being of its citizens, the Crow Nation now seeks to be self-sufficient and sees expansion of coal development as key to achieving that goal.

This study analyzes the economic stakes at issue for continuing and expanding coal development on the Crow Reservation and in Big Horn County. I present preliminary results for the economies of the Crow Nation, Big Horn County, and the State of Montana. Employing the tools of regional economic modeling, I assess the direct, indirect and induced impacts of the continued development and expansion of Crow coal production on employment, incomes, Crow and other regional governmental revenues and expenditures, and the gross domestic products of the Big Horn County and the State of Montana.

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Current and planned mine developments are discouraged by an uneven “playing field”. In the case at hand, disproportionate layers of regulatory oversight, deficiencies in transportation infrastructure, and higher-than-elsewhere permitting hurdles demonstrably disadvantage minerals extraction on Indian reservations. Recently, a federal Indian coal tax credit – the Indian Coal Production Tax Credit, or “ICPTC” – provided to private developers of Indian coal has helped to level the playing field for tribes. This policy, however, expired on December 31, 2013 and its renewal depends on informed understanding and support in Congress. The substantial economic benefits of coal mining on tribal lands are formally addressed in detail in my forthcoming study and are summarized preliminarily here.

Specifically, the research I report measures the regional economic impacts of continued development and expansion of Crow coal – development and expansion that are at risk if the playing field is permitted to tilt against Indian coal. The stakes are high, not only for the Crow Tribe, but for Big Horn County and the entire State of Montana, as well. I find that avoiding the closing of existing mining of Crow coal at the Absaloka Mine and expanding production under recent leases by the Tribe at Spring Creek will contribute:

- More than \$380 million additional dollars annually to the Gross State Product (GSP) of Montana, with more than \$230 million of this value arising directly from the coal mining sector and another \$150 million arising in the other sectors of the State’s economy that expand as the coal sector grows, it buys more supplies, and its workers spend their incomes.
- More than \$280 million additional dollars annually to the Gross Regional Product of Big Horn County, amounting to a fully 60% increase in the size of the County’s economy.
- An increase of more than 1600 jobs Statewide and 1200 jobs in Big Horn County.
- Additional compensation for Montana workers of more than \$95 million per year, two-thirds of which – \$65 million – accrue to workers in Big Horn County.
- Increased annual tax revenues for Montana and the Federal Government of \$24 million and \$22 million, respectively.
- Increased annual royalty (as the mineral owner) and tax (as a government) revenue for the Crow Tribe of more than \$120 million, thereby enabling the Tribe to move to overwhelming reliance on *non-federal* funding for its operations.

## Background

The Crow Reservation extends from the northern slopes of the Big Horn and Pryor Mountains onto the plains of south central Montana. The Reservation spans approximately 2.3 million acres, or 3,600 square miles. Over 1.9 million of its acres are in Big Horn County. There are approximately 13,000 citizens of the Crow Nation, with about 9,000 of those living on the Reservation.

Like other American Indians living on-reservation, the Crow Nation and its citizens struggle with poverty. The U.S. Census estimates that in 2006-2010 the annual per-capita income of American Indians on the Crow Reservation (\$11,793) was less than half that of the U.S. as a whole (\$26,893). The median household income for Crows (\$38,560) was markedly lower than that reported for U.S. households (\$51,076), and the Crow family poverty rate (24%) was more than double that of the U.S. population as a whole (10%). Official unemployment at Crow (32%) was more than five times that observed in the U.S. economy as a whole (6%). Recognizing that official unemployment only counts a would-be worker as unemployed if the worker is looking for work but cannot find it, actual unemployment – including workers who have given up looking for work in a setting of such economic distress – is much higher than officially reported.

The dire socio-economic conditions found on the Crow Reservation would be even worse without the Tribe's abundant natural resources. In a 2002 report, the federal Bureau of Land Management estimated that the Crow Nation controlled mineral rights to 17 billion short tons of coal (accounting for coal deposits found both on reservation and under ceded lands). Since 1974, the Absaloka Mine, owned and operated by Westmoreland Resources, Inc. ("Westmoreland"), has provided much needed royalty and tax revenues to the Crow Nation. These revenues fund everything from Crow government salaries to operational expenses, while also supplementing federal and community services programs such as Head Start, Boys & Girls Club, Tribal Elders, and Family Preservation. In fact, coal royalties and taxes from the Absaloka Mine alone have represented about 50% of the Crow Nation's non-federal budget each year over the past five years.<sup>2</sup>

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<sup>2</sup> *Approval of the Annual Budget for the Operation of the Crow Tribal Government and the Expenditure of Tribal Revenue for Fiscal Year 2009*, CLB 08-05 (2008); CLB 09-08 (2009); CLB 10-06 (2010); CLB 11-04 (2011); CLB 12-05 (2012).

The Absaloka Mine is the largest private employer on the Crow Reservation. Approximately 70% of its workforce is American Indian and the average annual salary is over \$66,000.<sup>3</sup> Given a reservation unemployment rate of 32%, these jobs, combined with the tribal government staffing positions which are paid for with funds from coal royalties and taxes, are critically important to the tribal citizenry and demonstrate how important the Absaloka Mine is to the Crow Nation. With that in mind, the Crow Nation has entered into an agreement with Westmoreland to expand the Absaloka mining operation with a lease of approximately 145 million tons of Rosebud McKay coal.<sup>4</sup> This expansion will increase royalty and tax collections, add more jobs, and sustain operations past 2020.

The influence this one mine has on the Tribe also demonstrates a weakness in the economies of the Crow Nation and Big Horn County. Any unforeseen circumstance that could halt production or sale of coal from the mine would decrease the royalty and tax collections available to the Crow Nation and would immediately and powerfully impact the finances of the Tribe (and, likewise, of the County). Recognizing this, the Crow Nation has pursued a strategy of reducing its dependence on the Absaloka Mine. This has led to a recent coal lease agreement between the Crow Nation and Cloud Peak Energy (“CPE”) so as to potentially expand operations of CPE’s off-reservation coal mine, which is known as “Spring Creek”.<sup>5</sup> This long-term project represents an important opportunity to reduce the Crow Nation’s dependence on a single company (i.e., Westmoreland) while also bringing in much needed revenues and increasing employment opportunities. The project also promises major positive contributions to Big Horn County and the State of Montana. Let us examine the magnitude of the stakes.

### **Measuring the Economic Contributions of Crow Coal Development**

Using economic modeling software and data from IMPLAN—tools widely used by government agencies and the academic community for regional impact analysis—I am able to quantify the direct, indirect, and induced effects of coal mining operations at

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<sup>3</sup> *Mining in America: Powder River Basin Coal Mining the Benefits and Challenges, Before the House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources, 113<sup>th</sup> Cong. (2013)* (statement of Darrin Old Coyote, Chairman of the Crow Nation).

<sup>4</sup> “Westmoreland Partners with Crow Tribe for Additional Reserves,” Westmoreland Coal Co. press release, March 27, 2013, at <http://www.westmoreland.com/9-news/news-releases>, accessed January 9, 2014.

<sup>5</sup> “U.S. Bureau of Indian Affairs Approves Option to Lease and Exploration Agreements between Cloud Peak Energy Subsidiary and the Crow Tribe of Indians,” Cloud Peak Energy Inc. press release, June 20, 2013, at <http://cloudpeakenergy.com/news/>, accessed January 9, 2013.

Crow for Big Horn County and the Crow Nation. Table 1 presents a single-year snapshot of the contribution of the Absaloka Mine and the potential contribution of the Spring Creek expansion to Big Horn County. This allows results to be scaled to the sizes of the State of Montana and Big Horn County economies as they stood in 2013. Actual impacts would arise in subsequent years, depending on the timing of the development or expansion of new mining operations.<sup>6</sup>

	Total County	Net Impact of Avoided Closing of Absaloka Mine	Net Impact of Expanding Spring Creek Mine
<b>Impact in the County</b>			
Gross Regional Product (\$ millions)	\$470.9	\$61.4	\$223.0
Total Employee Compensation (\$ millions)	\$267.3	\$14.1	\$51.4
Employment (persons)	6,489	221	802
<b>Impact on the Industry</b>			
Coal Mining Output (\$ millions)	\$185.2	\$51.0	\$185.6
Coal Mining Labor Income (\$ millions)	\$41.5	\$11.6	\$42.3
Coal Mining Employment (persons)	564	153	556
<b>Impact on Government Revenue</b>			
Crow Tax and Royalty Collections (\$ millions)	\$20.4	\$20.4	\$101.8
Big Horn County Budget (\$ millions)	\$16.2	\$0.7	\$2.4
State and Local Tax Collections (\$ millions)	\$33.0	\$4.2	\$15.3
Federal Tax Collections (\$ millions)	\$23.5	\$3.2	\$11.6

As described above, current coal mining operations on Crow lands are extremely important to the Tribe and its citizens. Unfortunately, the Absaloka Mine struggles financially to compete with other regional operations located off-reservation. My analysis indicates that bureaucratic obstacles, additional regulatory requirements, and higher financial costs associated with mining on Indian lands make it difficult to compete with off-reservation operations. For example, Westmoreland has estimated that it has typically taken twice as long and cost twice as much to re-permit the mine

<sup>6</sup> An extrapolation of these single year benefits over the 25+ years of mining operations indicates that Crow coal revenues at stake exceed \$500 million for continued operations of the Absaloka Mine and \$2.5 billion for the Spring Creek expansion (undiscounted).

when activity moved over the reservation boundary.<sup>7</sup> However, the Indian Coal Production Tax Credit has played an important role in offsetting the additional burdens that must be overcome to undertake new production or expansion for companies such as Westmoreland and CPE. For the Absaloka Mine, the ICPTC has helped keep the mine open and competitive since 2006. Without the ICPTC, Westmoreland would experience negative effects on earnings and cash flow and it would have to seriously consider shuttering the mine.<sup>8</sup>

Shuttering the Absaloka Mine would financially devastate the Crow Nation; coal revenues make up about half of the Tribe's non-federal budget. A loss of this magnitude (approximately \$20.4 million per year) could only throw the Tribe into deeper poverty and drastically decrease the likelihood of the Crow Nation becoming economically self-sufficient. However, keeping the Absaloka Mine in operation and expanding the Spring Creek Mine present substantial opportunities for improvement in the economies of the Tribe and the County, and even the State. Cloud Peak's Spring Creek expansion alone provides an opportunity for the Crow Nation to see its annual coal revenues increase by approximately \$102 million each year. This would dramatically increase its self-sufficiency and allow the Tribe to better meet the needs of its citizens.

While critical to the economic self-sufficiency, if not the survival, of the Crow Tribe, Crow coal is also extremely important to Big Horn County. In 2013, the County Gross Regional Product ("GRP") was nearly \$471 million, and it is estimated that shuttering of the current mining operations would reduce that number by more than \$60 million in a single year (representing about a 13% decline. With respect to Spring Creek, because coal mining is a primary industry and incremental production from the proposed Spring Creek expansion is destined for export, impacts at the County level are multiplied through the indirect and induced economic impacts of mining operations, particularly transportation. They pass through almost every other sector of the economy.<sup>9</sup> The modeling here finds that the Spring Creek expansion would contribute fully \$223 million to Big Horn County's annual Gross Regional Product. Together, the continued operation of the Absaloka Mine and the Spring Creek expansion are worth

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<sup>7</sup> Douglas P. Kathol, Executive Vice President Westmoreland Coal Co., letter to the Honorable Max Baucus, July 22, 2013.

<sup>8</sup> The Crow Tribe, Westmoreland Coal Company, Westmoreland Resources, Inc., "Leveling the Playing Field", August 4, 2011.

<sup>9</sup> Barkey, Patrick M., "The Economic Impact of Increased Production at the Spring Creek Mine," Bureau of Business and Economic Research, The University of Montana, October 2012, <http://www.bber.umt.edu/MBQ/default.asp>, accessed January 9, 2014.

more than \$280 million per year in GRP, \$65 million per year in worker compensation, and \$3 million in taxes to Big Horn County. They create employment in the County for more than 1000 workers.

Table 2 below reports the impacts of Crow coal on the State of Montana as a whole. Combined, avoiding the closing of the Absaloka Mine and implementing the expansion of Crow coal production at Spring Creek would contribute more than \$380 million to the annual Gross Montana State Product. Yearly compensation of workers in Montana would be increased by more than \$95 million. The increased economic activity and payrolls, in turn, would result in increases in State of Montana and federal tax collections, totaling almost \$24 million and \$more than \$22 million, respectively. Over the life of the mining operations, additional tax collections (undiscounted) would total to approximately \$250 million for Montana and \$900 million for the federal government, These tax collections would substantially, if not completely offset, reductions in revenues associated with continuation of ICPTC. Indeed, such revenues are already uncertain: If the ICTPC is not renewed and the consequence is to cause Indian coal to go unmined, non-existent operations will generate nothing in State or federal tax revenues.

	Total State	Net Impact of Avoided Closing of Absaloka Mine	Net Impact of Expanding Spring Creek Mine
<b>Impact in the State</b>			
Gross State Product (\$ millions)	\$42,260.0	\$82.6	\$300.0
Total Employee Compensation (\$ millions)	\$22,309.0	\$20.8	\$75.5
Employment (persons)	639,733	356	1,297
<b>Impact on the Industry</b>			
Coal Mining Output (\$ millions)	\$448.0	\$50.7	\$184.2
Coal Mining Labor Income (\$ millions)	\$102.1	\$12.1	\$43.8
Coal Mining Employment (persons)	1,346	150	545
<b>Impact on Government Revenue</b>			
Crow Tax and Royalty Collections (\$ millions)	\$20.4	\$20.4	\$101.8
Big Horn County Budget (\$ millions)	n/a	n/a	n/a
State and Local Tax Collections (\$ millions)	\$2,197.5	\$5.1	\$18.5
Federal Tax Collections (\$ millions)	\$1,859.4	\$4.8	\$17.4

Tables 3 and 4 translate the foregoing absolute impacts into the *relative* importance of Crow coal to the Crow Tribe, Big Horn County, and the State of Montana.

Given its heavy dependence today on coal royalties and taxes, shuttering the Absaloka mine would have tremendous negative consequences for the Tribe: The Crow Nation would immediately face a 100% loss in coal revenues. This would translate into a 50% decrease in its non-federal budget. For the Spring Creek expansion, in the economic environment of uncertain and soft markets overall for coal, the continuation of the ICPTC necessarily increases the viability of the project. The expansion of Spring Creek would bring about a 500% increase in coal revenues for the Crow Nation. While no precise count is available, the increase in employment and associated worker compensation would accrue directly to Crow citizens hired into the mining sector.

For Big Horn County, the stakes are similarly large. As we see in Table 3, continued operations at the Absaloka Mine annually contribute approximately 13% of the County's Gross Regional Product, 5% of worker compensation, and 4% of tax collections. Expansion at Spring Creek promise would increase the annual GRP of the County by almost 50%. The expansion of the Spring Creek Mine would increase jobs in Big Horn County by 12%, worker compensation by 19%, and annual County tax revenues by 15%.

	<b>% Change from Avoided Closing of Absaloka Mine</b>	<b>% Change from Expanding Spring Creek Mine</b>
<b>Impact in the County</b>		
Gross Regional Product (\$ millions)	13%	47%
Total Employee Compensation (\$ millions)	5%	19%
Employment (persons)	3%	12%
<b>Impact on the Industry</b>		
Coal Mining Output (\$ millions)	28%	100%
Coal Mining Labor Income (\$ millions)	28%	102%
Coal Mining Employment (persons)	27%	99%
<b>Impact on Government Revenue</b>		
Crow Tax and Royalty Collections (\$ millions)	100%	499%
Big Horn County Budget (\$ millions)	4%	15%
State and Local Tax Collections (\$ millions)	13%	46%
Federal Tax Collections (\$ millions)	14%	49%

Finally, in Table 4 we can see the economic importance of Crow coal and the ICPTC to the State of Montana as a whole. Not surprisingly, the largest impacts are in the mining sector: The continued operation of the Absaloka Mine adds approximately 11%-12% to the sector's output, employment and worker compensation, while the comparable figures for the Spring Creek expansion are 40% and higher. Combined, the two mines add approximately a percentage point to the overall Montana Gross State Product and to the State and federal tax collections in the Montana.

**Table 4**  
**Percent Change of Scenarios on Economic Impacts**  
**Coal Industry in Montana (2013)**  
**All Values are Annual and Include Direct, Indirect, and Induced Effects**

	% Change from Avoided Closing of Absaloka Mine	% Change from Expanding Spring Creek Mine
<b>Impact in the State</b>		
Gross State Product (\$ millions)	0.2%	0.7%
Total Employee Compensation (\$ millions)	0.1%	0.3%
Employment (persons)	0.1%	0.2%
<b>Impact on the Industry</b>		
Coal Mining Output (\$ millions)	11%	41%
Coal Mining Labor Income (\$ millions)	12%	43%
Coal Mining Employment (persons)	11%	40%
<b>Impact on Government Revenue</b>		
Crow Tax and Royalty Collections (\$ millions)	100%	499%
Big Horn County Budget (\$ millions)	n/a	n/a
State and Local Tax Collections (\$ millions)	0.2%	0.8%
Federal Tax Collections (\$ millions)	0.3%	0.9%



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