

# The Economic Contributions of U.S. Mining in 2008

October 2010

A report prepared by PricewaterhouseCoopers for the National Mining Association



## Economic Contribution of U.S. Mining

#### **Table of Contents**

EXECUTIVE SUMMARY	E-1
I. Overview of U.S. Mining	1
II. Economic Contribution of U.S. Mining	3
A. National Results	3
B. Contribution by Mining Segment	4
C. Tax Payments of U.S. Mining	6
D. Contribution of U.S. Mining by State	7
III. Overview of U.S. Coal Mining	13
IV. Overview of U.S. Metal Ore Mining	18
V. Overview of U.S. Non-Metallic Mining	23
VI. Methodology	28
A. Derivation of Direct Impacts	28
B. Adjustments to IMPLAN Model	28
Appendix A. NAICS Definition of U.S. Mining	30
Appendix B: The IMPLAN Model	31
Appendix C. Additional Detail by State	32

This document has been prepared pursuant to an engagement between PricewaterhouseCoopers LLP and its Client. As to all other parties, it is for general information purposes only, and should not be used as a substitute for consultation with professional advisors.

#### **EXECUTIVE SUMMARY**

There are more than 15,000 operations that mine for raw materials in the United States, excluding oil and gas, based on information from the Mine Safety and Health Administration. U.S. mining has a broad impact on the national economy. Mining provides jobs, pays salaries and generates value in all 50 states. The economic contribution of mining is greater than these direct effects. Mining operators purchase inputs from other parts of the economy, and these suppliers in turn purchase goods from other companies. Employees spend wages at local businesses, whose owners in turn spend the proceeds on new supplies and other goods. Governments at the federal, state and local levels collect taxes on this activity. From a broader perspective, the products produced by U.S. mines provide the raw materials required by the rest of the economy. The ability of the U.S. economy to compete internationally depends on the availability of such inputs.

The National Mining Association engaged PricewaterhouseCoopers ("PwC") to quantify the economic contributions of domestic mining to the U.S. economy. This report defines U.S. mining to include activities associated with the mining of coal, metal ores and non-metallic minerals.

PwC estimates that U.S. mining in 2008 directly and indirectly generated nearly 1.8 million U.S. jobs, \$107 billion in U.S. labor income, \$189 billion in contribution to U.S. gross domestic product (GDP, or "value added") and \$45 billion in federal, state and local taxes (see **Table E-1**).

Table E-1. Economic Contribution of U.S. Mining, 2008

Item	Direct <sup>c</sup>	Indirect and Induced	Total
Employment <sup>a</sup>	564,400	1,234,410	1,798,810
Labor Income (billions of dollars) b	\$42.1	\$65.4	\$107.4
Contribution to GDP (billions of dollars)	\$79.7	\$109.2	\$188.9
Taxes Paid (billions of dollars)	\$18.7	\$26.0	\$44.7

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010. Detail may not add due to rounding.

The direct effects include the U.S. economic activity of mine operators, companies providing support to mine operators, and transportation companies that carry mine output to purchasers. Indirect effects include the U.S. economic activity of suppliers, including suppliers of capital goods for mining operations. Induced effects measure the U.S. economic impact of spending of payrolls resulting from direct and indirect activity.

This analysis does not include the economic or employee benefits of coal and uranium-based electricity generation or the manufacturing and other end-users of metal and non-metal minerals.

Table E-2 provides the economic contribution by state. The five states in which mining accounts for the largest share of total state economic activity are Wyoming (14 percent), West Virginia (11.6 percent), Montana (7.0 percent), Nevada (5.6 percent) and Kentucky (4.6 percent). The states with the largest overall employment attributable to mining are Texas (112,260), California (103,090), Pennsylvania (96,060), Kentucky (69,280) and Arizona (67,920).

<sup>&</sup>lt;sup>a</sup> Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees.

<sup>&</sup>lt;sup>b</sup> Labor income is defined as wages and salaries and benefits as well as proprietors' income.

<sup>&</sup>lt;sup>c</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to customers.

Table E-2. Total Direct<sup>c</sup>, Indirect & Induced Contributions of U.S. Mining by State, 2008

Table E-2.		yment <sup>a</sup>	Labor I		Contribution		Taxes
State							Paid
State	Number	Percent of State Total	(Millions of dollars)	Percent of State Total	(Millions of dollars)	Percent of State Total	(Millions of dollars)
Alabama	39,810	1.6%	\$2,405	2.1%	\$4,302	2.5%	\$1,058
Alaska	11,640	2.6%	Ψ2, <del>1</del> 03	3.2%	1,745	4.6%	466
Arizona	67,920	2.0%	3,865	2.5%	8,054	3.2%	1,938
Arkansas	15,580	1.0%	746	1.2%	1,239	1.3%	280
California	103,090	0.5%	6,571	0.5%	10,805	0.6%	2,916
Colorado	48,210	1.5%	3,217	1.9%	6,046	2.2%	1,486
Connecticut	12,040	0.6%	953	0.7%	1,478	0.7%	411
Delaware	1,940	0.4%	126	0.4%	202	0.5%	53
District of Columbia	2,370	0.3%	242	0.3%	344	0.3%	106
Florida	67,220	0.7%	3,307	0.7%	5,607	0.8%	1,292
Georgia	51,090	0.9%	2,682	1.0%	4,391	1.1%	1,040
Hawaii	5,430	0.6%	294	0.7%	478	0.8%	116
Idaho	15,270	1.7%	732	2.1%	1,420	2.6%	325
Illinois	58,900	0.8%	3,834	0.9%	6,512	1.0%	1,646
Indiana	45,490	1.3%	2,729	1.7%	4,765	1.8%	1,158
Iowa	17,700	0.9%	859	1.1%	1,439	1.1%	320
Kansas	13,440	0.7%	722	0.9%	1,234	0.9%	277
Kentucky	69,280	2.9%	4,061	3.9%	7,403	4.6%	2,046
Louisiana	16,000	0.6%	907	0.8%	1,639	0.9%	369
Maine	3,440	0.4%	156	0.5%	254	0.5%	62
Maryland	17,670	0.5%	1,077	0.6%	1,773	0.6%	468
Massachusetts	19,710	0.5%	1,408	0.5%	2,176	0.6%	588
Michigan	40,930	0.8%	2,367	0.9%	4,062	1.0%	998
Minnesota	45,070	1.3%	2,704	1.6%	5,064	1.9%	1,275
Mississippi	9,160	0.6%	418	0.7%	688	0.8%	156
Missouri	35,340	1.0%	1,966	1.2%	3,438	1.3%	821
Montana	23,970	3.8%	1,305	5.6%	2,720	7.0%	646
Nebraska	13,120	1.1%	773	1.5%	1,315	1.6%	281
Nevada	50,750	3.2%	3,170	4.1%	7,032	5.6%	1,557
New Hampshire	5,710	0.7%	317	0.8%	503	0.8%	124
New Jersey	26,580	0.5%	1,934	0.6%	3,145	0.6%	834
New Mexico	23,920	2.2%	1,299	2.8%	2,562	3.6%	620
New York	62,220	0.6%	4,984	0.7%	7,830	0.7%	2,217
North Carolina	39,340	0.7%	1,983	0.8%	3,283	0.9%	794
North Dakota	7,540	1.6%	448	2.3%	801	2.5%	200
Ohio	51,950	0.8%	2,827	0.9%	4,770	1.0%	1,205
Oklahoma	20,060	0.9%	1,079	1.1%	1,929	1.2%	430
Oregon	20,100	0.9%	1,039	1.0%	1,671	1.1%	430
Pennsylvania	96,060	1.3%	6,071	1.7%	10,547	1.8%	2,671
Rhode Island	3,180	0.5%	174	0.6%	272	0.6%	68
South Carolina	14,500	0.6%	674	0.7%	1,113	0.7%	261
South Dakota	5,860	1.1%	280	1.3%	488	1.4%	106
Tennessee	29,980	0.8%	1,658	1.0%	2,814	1.1%	620
Texas	112,260	0.8%	7,184	0.9%	13,024	1.0%	2,943
Utah	32,630	2.0%	1,748	2.5%	3,261	3.0%	806
Vermont	4,970	1.2%	246	1.4%	390	1.5%	91
Virginia	57,430	1.2%	3,910	1.5%	6,860	1.7%	1,768
Washington	27,200	0.7%	1,618	0.8%	2,745	0.8%	623
West Virginia	58,820	6.6%	3,799	9.9%	7,119	11.6%	2,034
Wisconsin	26,540	0.8%	1,366	0.9%	2,188	0.9%	542
Wyoming	33,330	8.6%	2,332	13.2%	4,400	14.0%	1,118
Total Operations	1,681,760	1.0%	\$101,344	1.1%	\$179,341	1.2%	\$44,662
Capital Investment <sup>d</sup>	117,050	0.1%	6,098	0.1%	9,568	0.1%	NA
Grand Total	1,798,810	1.0%	107,442	1.2%	188,909	1.3%	\$44,662
Source: Pricewaterhouse							

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010. Detail may not add due to rounding.

<sup>&</sup>lt;sup>a</sup> Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees.

b Labor income is defined as wages and salaries and benefits as well as proprietors' income.

<sup>&</sup>lt;sup>c</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to their customers.

d Capital Investment reflects the economic activity attributable to the purchases of capital equipment and structures by mine operators.

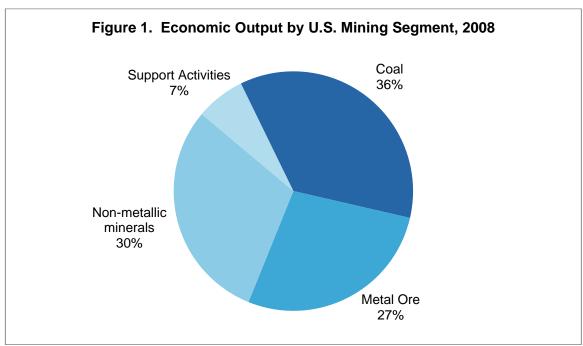
#### I. Overview of U.S. Mining

U.S. mining provides raw materials that are used throughout the economy. Coal provides a key source of energy to utilities. Metal ores from mines in the Western U.S. provide manufacturers with key inputs. Sand, stone and gravel pulled from quarries across the country provide the foundation for new construction. Industrial minerals are important components of a variety of products, from pharmaceuticals to automobiles.

The National Mining Association engaged PricewaterhouseCoopers to quantify the economic contribution of domestic mining to the U.S. economy. For purposes of this report, U.S. mining is defined to include activities associated with the mining of coal, metal ores, and non-metallic minerals. Oil and gas extraction is not included as part of U.S. mining.

For the purposes of this study, we have divided U.S. mining into four primary segments: (1) coal, (2) metal ore, (3) non-metallic minerals, and (4) support activities for mining activities.<sup>1</sup> Overall, these segments contributed more than \$50 billion in 2008 to U.S. gross domestic product (GDP), or the total value of output in the U.S. economy.<sup>2</sup>

In terms of the direct contribution of the different segments, coal mining represents the largest, accounting for 36 percent of the total value of U.S. mining output in 2008. Non-metallic mineral mining, metal ore mining, and support activities comprised, respectively, 30 percent, 27 percent, and 7 percent of mining output (see **Figure 1**).



Source: PricewaterhouseCoopers calculations using IMPLAN modeling system (2008 database).

Note: Only includes direct economic output of mining sector (e.g., does not include transportation of mining output to purchasers).

<sup>2</sup> The direct impact of the industry presented in the next section also includes support activities and the transportation of mining output to purchasers.

1

<sup>&</sup>lt;sup>1</sup> The industry for the purposes of this report excludes oil and gas extraction.

The federal government generally relies on the North American Industry Classification System (NAICS) to classify industries. **Appendix A** shows the classification of U.S. mining in terms of NAICS codes.

The primary metals industry is the largest "downstream" purchaser of mining output, spending almost \$15 billion in 2008 on mining production (see **Table 1**). For certain sectors, mining products are one of the primary input costs faced by industries. For the utility sector, for example, mining inputs represent 17 percent of total input costs, primarily the cost of coal to generate electricity.

Table 1. Largest Industries Purchasing Mining Output, 2008 (in billions of dollars)

Rank	Purchasing Industry	Value of Mining Output
1	Primary Metals Manufacturing	\$14.842
2	Construction	9.822
3	Utilities	7.893
4	Non-metallic Mineral Products Manufacturin	g 7.880
5	Motor Vehicles, Bodies, Trailers, and Parts	6.812

Source: BEA, Industry Economic Accounts, Annual I-O Table, <a href="http://www.bea.gov/industry/io-annual.htm">http://www.bea.gov/industry/io-annual.htm</a> accessed May 2010.

The utilities industry is the largest "upstream" supplier to U.S. mining operations, which paid \$6.3 billion for utilities in 2008 (see **Table 2**).

Table 2. Largest Industries Supplying Mining Inputs, 2008 (in billions of dollars)

	(iii biiiioiio oi donaio)	
Rank	Supplying Industry	Value of Mining Inputs
1	Utilities	\$6.318
2	Management of Companies and Enterprises	2.666
3	Truck Transportation	2.663
4	Misc. Professional Scientific, and Technical Services	2.546
5	Rail Transportation	2.525

Source: BEA, Industry Economic Accounts, Annual I-O Table, <a href="http://www.bea.gov/industry/io\_annual.htm">http://www.bea.gov/industry/io\_annual.htm</a>, accessed May 2010.

Utilities are both downstream purchasers of mining output (coal) to produce electricity and upstream suppliers of electricity to mines.

#### II. Economic Contribution of U.S. Mining

The economic contribution of U.S. mining to the domestic economy includes its direct impact plus the economic activity in other industries that supply the mining industry. To quantify these linkages, we rely on the IMPLAN model, an input-output (I-O) model based on federal government data.<sup>3</sup> The overall contribution of U.S. mining can be separated into three components:

- <u>Direct effects:</u> activities directly attributable to mining, such as the employees and output of mining companies. These effects include the transportation of mine output from the mine to the purchaser.
- <u>Indirect effects:</u> activities of upstream suppliers to mining, including contractors and other companies providing inputs to mining companies. Indirect effects also include the activity of suppliers to these companies.
- <u>Induced effects:</u> spending by mining and supplier employees. Employees throughout the supply chain receive incomes associated with the direct and indirect activities, a portion of which is consumed. This consumption causes additional economic activity attributable to U.S. mining.

We have made two adjustments to the output of the IMPLAN model to provide a more complete and accurate description of the overall impact of U.S. mining. First, because the IMPLAN model excludes capital expenditures (such as spending on trucks), we have separately calculated the activity attributable to capital spending by the mining sector. This detail is only available on a national basis. Second, we have also included the economic activity attributable to the transportation of mining output to the industry's customers in addition to upstream impacts.

See **Section VI** for a more detailed description of our methodology.

#### A. National Results

PwC estimates that U.S. mining directly and indirectly generated almost 1.8 million full-time and part-time jobs in 2008, or 1.0 percent of total U.S. employment. These include both employees and the self-employed.

- U.S. mining directly accounted for more than 564,000 jobs.
- Employees in other industries indirectly attributable to or induced by activity in the mining industry were more than 1.2 million.

Total U.S. labor income associated with U.S. mining amounted to \$107 billion in 2008, which includes wages and salaries, other employee benefits, and proprietors' income.

The contribution to GDP attributable to U.S. mining from direct, indirect and induced activity was \$189 billion. U.S. mining directly and indirectly generated \$45 billion in tax payments to federal, state and local governments.

<sup>&</sup>lt;sup>3</sup> The IMPLAN model is based on input-output (I-O) tables that map the flow of value along the supply chain for the different industries in the economy. For example, for the mining industry these tables provide the value of inputs purchased from other industries in producing mine output. The supplying industries also purchase inputs from other industries to deliver their products to the mining industry. See **Appendix B** for a description of the model.

#### B. Contribution by Mining Segment

U.S. mining can be divided into three primary segments: coal, metal ores, and non-metallic minerals. The direct impacts include the operations of the mine, support activities and transportation of output from the mine.

The coal segment of U.S. mining accounted for 555,270 jobs, \$36.3 billion in labor income and \$65.7 billion in contribution to GDP (see **Table 3**). Average wages and salaries in coal mine operations (excluding support activities and transportation) were approximately \$72,200 in 2008.<sup>4</sup> Overall, coal mining, including transportation of coal products and mining support activities allocated to coal mining, were responsible for approximately 31 percent of U.S. mining's total employment contribution, 34 percent of total labor income and 35 percent of total contribution to GDP.<sup>5</sup>

The metal ore mining segment of U.S. mining directly accounted for 289,360 jobs, \$18.1 billion in labor compensation and \$37.2 billion in contribution to GDP. Average wages and salaries in the metal ore mining sector were \$75,900. Total contribution attributable to metal ore mining represented 16 percent, 17 percent, and 20 percent, respectively, of total employment, labor income and contribution to GDP of the mining industry.

The non-metallic mineral mining segment of U.S. mining directly accounted for 837,130 jobs, \$46.9 billion in labor compensation and \$76.4 billion in contribution to GDP. Average wages and salaries in the metal ore mining sector were \$51,100. Non-metallic mineral mining represented 47 percent, 44 percent and 40 percent, respectively, of U.S. mining's employment, labor income and contribution to GDP.<sup>6</sup>

Capital investment by U.S. mining companies accounts for the remaining 7 percent of employment, 6 percent of labor income, and 5 percent of contribution to GDP.

\_

<sup>&</sup>lt;sup>4</sup> Average wage and salary data from Bureau of Labor Statistics, Quarterly Census of Employment and Wages, 2008. Labor Income as presented in Table 3 results reflects total employee compensation (including benefits) and self-employment income for mining, support activities, and transportation attributable to mining output.

<sup>&</sup>lt;sup>5</sup> Data derived from IMPLAN model, which is based on data from the U.S. Bureau of Economic Analysis. <sup>6</sup> The transport of mining products, included in the figures above, represent a significant portion of these impacts. Transportation of mining output is responsible for 311,810 direct transportation jobs, \$17.8 billion in labor income, and \$28.9 billion in contribution to GDP. These amounts have been distributed to coal, metal ore, and non-metallic mineral mining in Table 3.

Table 3. Economic Contribution of U.S. Mining Operations by Segment

Sector	Coal Mining	Metal Ore Mining	Non-metallic Mineral Mining	Capital Investment	Total
Employment					
Direct <sup>a</sup>	154,020	88,090	322,290		564,400
Indirect & Induced	401,250	•	•	117.050	1,234,410
	•	201,270	514,840	117,050	
Total	555,270	289,360	837,130	117,050	1,798,810
Labor Income (\$ billio	ons)				
Direct <sup>a</sup>	\$14.6	\$7.3	\$20.1		\$42.1
Indirect & Induced	\$21.7	\$10.8	\$26.8	\$6.1	\$65.4
Total	\$36.3	\$18.1	\$46.9	\$6.1	\$107.4
Contribution to GDP (	\$ billions)				
Direct <sup>a</sup>	\$29.5	\$19.1	\$31.2		\$79.7
Indirect & Induced	\$36.3	\$18.1	\$45.2	\$9.6	\$109.2
Total	\$65.7	\$37.2	\$76.4	\$9.6	\$188.9

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Detail may not add to total due to rounding. Employment figures have been rounded to the nearest 10 employees.

a Direct includes mining operation and transportation of minerals from mines to their customers.

## C. Tax Payments of U.S. Mining

The economic activity attributable to U.S. mining is subject to taxation at the federal, state and local levels. These taxes take a variety of forms, including income taxes on company profits and employee wages, property taxes on equipment and structures and excise taxes on output. **Table 4** provides detail on the type of taxes collected in economic activity attributable to U.S. mining. Mining activity generated \$25.6 billion in federal taxes and another \$19.1 billion in state and local taxes, for a total of \$44.7 billion in 2008.

Table 4. Tax Payments Attributable to U.S Mining Economic Activity, 2008 (Dollar amounts in millions)

	Tax Category	Direct	Indirect and Induced	Total
	Corporate Income Taxes	\$1,564	\$1,642	\$3,206
	Personal Income Taxes	\$3,851	\$5,562	\$9,413
	Excise Taxes	\$338	\$482	\$820
Federal	Customs Duties	\$158	\$224	\$382
	Social Insurance Contributions	\$4,473	\$6,648	\$11,121
	Other	<u>\$260</u>	<u>\$370</u>	<u>\$630</u>
	Federal Total	\$10,643	\$14,929	\$25,573
	Corporate Income Taxes	\$376	\$395	\$770
	Personal Income Taxes	\$1,056	\$1,526	\$2,582
	Property Taxes	\$2,216	\$3,154	\$5,370
State & Local	Sales Taxes	\$2,396	\$3,410	\$5,806
	Social Insurance Contributions	\$100	\$154	\$255
	Other	<u>\$1,893</u>	<u>\$2,415</u>	<u>\$4,308</u>
	State & Local Total	\$8,037	\$11,053	\$19,090
Fede	eral, State & Local Total	\$18,681	\$25,982	\$44,662

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). These figures are consistent with tax payments as presented in the national income accounts.

#### D. Contribution of U.S. Mining by State

U.S. mining generates economic activity in all 50 states and the District of Columbia. The five states in which mining accounts for the largest share of total state employment are Wyoming (8.6 percent), West Virginia (6.6 percent), Montana (3.8 percent), Nevada (3.2 percent) and Kentucky (2.9 percent).

The states with the largest employment attributable to mining are Texas (112,260), California (103,090), Pennsylvania (96,060), Kentucky (69,280) and Arizona (67,920) (see **Figure 2**).

Detail on the overall contribution of U.S. mining in each of the 50 states and District of Columbia is show in **Table 5** (overall), **Table 6** (employment detail), **Table 7** (contribution to GDP detail), **Table 8** (labor income detail), and **Table 9** (taxes detail). Overall results for the coal, metal, and non-metallic mining sectors alone follow, and **Appendix C** has additional detail.

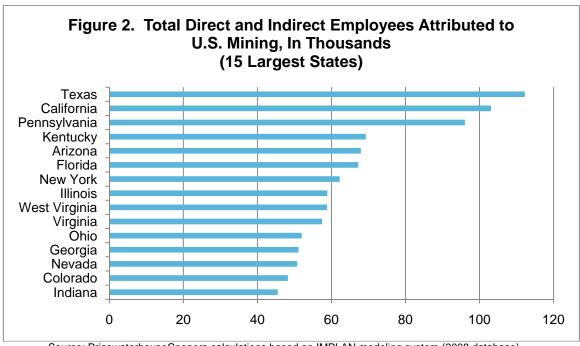


Table 5. Total Economic Contribution of U.S. Mining, by State, 2008

Tubi	Employ	ment <sup>a</sup>	Labor In	come <sup>b</sup>	Contributio		
State	Number	Percent of State Total	(Millions of dollars)	Percent of State Total	(Millions of dollars)	Percent of State Total	- Taxes Paid (millions of dollars)
			A				
Alabama	39,810	1.6%	\$2,405	2.1%	\$4,302	2.5%	\$1,058
Alaska	11,640	2.6%	781	3.2%	1,745	4.6%	466
Arizona	67,920	2.0%	3,865	2.5%	8,054	3.2%	1,938
Arkansas California	15,580 103,090	1.0% 0.5%	746 6,571	1.2% 0.5%	1,239 10,805	1.3% 0.6%	280 2,916
Colorado	48,210	1.5%	3,217	1.9%	6,046	2.2%	1,486
Connecticut	12,040	0.6%	953	0.7%	1,478	0.7%	411
Delaware	1,940	0.4%	126	0.4%	202	0.5%	53
District of Columbia	2,370	0.3%	242	0.3%	344	0.3%	106
Florida	67,220	0.7%	3,307	0.7%	5,607	0.8%	1,292
Georgia	51,090	0.9%	2,682	1.0%	4,391	1.1%	1,040
Hawaii	5,430	0.6%	294	0.7%	478	0.8%	116
Idaho	15,270	1.7%	732	2.1%	1,420	2.6%	325
Illinois	58,900	0.8%	3,834	0.9%	6,512	1.0%	1,646
Indiana	45,490	1.3%	2,729	1.7%	4,765	1.8%	1,158
lowa	17,700	0.9%	859	1.1%	1,439	1.1%	320
Kansas	13,440	0.7%	722	0.9%	1,234	0.9%	277
Kentucky	69,280	2.9%	4,061	3.9%	7,403	4.6%	2,046
Louisiana	16,000	0.6%	907	0.8%	1,639	0.9%	369
Maine	3,440	0.4%	156	0.5%	254	0.5%	62
Maryland Massachusetts	17,670 19,710	0.5% 0.5%	1,077 1,408	0.6% 0.5%	1,773 2,176	0.6% 0.6%	468 588
Michigan	40,930	0.5%	2,367	0.5%	4,062	1.0%	998
Minnesota	45,070	1.3%	2,704	1.6%	5,064	1.9%	1,275
Mississippi	9,160	0.6%	418	0.7%	688	0.8%	156
Missouri	35,340	1.0%	1,966	1.2%	3,438	1.3%	821
Montana	23,970	3.8%	1,305	5.6%	2,720	7.0%	646
Nebraska	13,120	1.1%	773	1.5%	1,315	1.6%	281
Nevada	50,750	3.2%	3,170	4.1%	7,032	5.6%	1,557
New Hampshire	5,710	0.7%	317	0.8%	503	0.8%	124
New Jersey	26,580	0.5%	1,934	0.6%	3,145	0.6%	834
New Mexico	23,920	2.2%	1,299	2.8%	2,562	3.6%	620
New York	62,220	0.6%	4,984	0.7%	7,830	0.7%	2,217
North Carolina	39,340	0.7%	1,983	0.8%	3,283	0.9%	794
North Dakota Ohio	7,540	1.6%	448	2.3%	801	2.5% 1.0%	200
Oklahoma	51,950 20,060	0.8% 0.9%	2,827 1,079	0.9% 1.1%	4,770 1,929	1.0%	1,205 430
Oregon	20,100	0.9%	1,039	1.0%	1,671	1.1%	430
Pennsylvania	96,060	1.3%	6,071	1.7%	10,547	1.8%	2,671
Rhode Island	3,180	0.5%	174	0.6%	272	0.6%	68
South Carolina	14,500	0.6%	674	0.7%	1,113	0.7%	261
South Dakota	5,860	1.1%	280	1.3%	488	1.4%	106
Tennessee	29,980	0.8%	1,658	1.0%	2,814	1.1%	620
Texas	112,260	0.8%	7,184	0.9%	13,024	1.0%	2,943
Utah	32,630	2.0%	1,748	2.5%	3,261	3.0%	806
Vermont	4,970	1.2%	246	1.4%	390	1.5%	91
Virginia	57,430	1.2%	3,910	1.5%	6,860	1.7%	1,768
Washington	27,200	0.7%	1,618	0.8%	2,745	0.8%	623
West Virginia Wisconsin	58,820 26,540	6.6% 0.8%	3,799 1,366	9.9% 0.9%	7,119 2,188	11.6% 0.9%	2,034
Wyoming	33,330	8.6%	2,332	13.2%	2,188 4,400	14.0%	542 1,118
Total Operations	1,681,760	1.0%	\$101,344	1.1%	\$179,341	1.2%	\$44,662
Capital Investment	117,050	0.1%	6,098	0.1%	9,568	0.1%	NA
Grand Total	1,798,810	1.0%	\$107,442	1.2%	\$188,909	1.3%	\$44,662

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010. Detail may not add to total due to rounding.

<sup>a</sup> Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the

nearest 10 employees.

b Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 6. Contribution of U.S. Mining to Employment by State, 2008

Table 0	. Contribut	Direc	Mining to Empl t Effects <sup>b</sup>	oyment by	Indirect	
State	Mine Workers	Support Activities	Transportation	Total Direct	and Induced	Total Contribution
Alahama	6.440	60	0.670	15 140	24.670	20.840
Alabama	6,410	60	8,670	15,140	24,670	39,810
Alaska	2,660	120	2,680	5,460	6,180	11,640
Arizona	11,160 2,410	160 20	14,250 3,640	25,570 6,070	42,350 9,510	67,920 15,580
Arkansas California	7,090	100	12,640	19,830	83,260	103,090
Colorado	5,930	350	9,340	15,620	32,590	48,210
Connecticut	900	60	1,950	2,910	9,130	12,040
Delaware	50	0	130	180	1,760	1,940
District of Columbia	0	0	130	130	2,240	2,370
Florida	4,230	80	12,840	17,150	50,070	67,220
Georgia	5,670	1,150	10,720	17,540	33,550	51,090
Hawaii	380	0	1,090	1,470	3,960	5,430
Idaho	2,720	190	3,450	6,360	8,910	15,270
Illinois	6,840	340	9,260	16,440	42,460	58,900
Indiana	6,110	80	9,550	15,740	29,750	45,490
lowa	2,310	10	4,300	6,620	11,080	17,700
Kansas	1,520	10	2,820	4,350	9,090	13,440
Kentucky	18,590	1,390	11,200	31,180	38,100	69,280
Louisiana	1,440	80	2,980	4,500	11,500	16,000
Maine <sup>a</sup>	620	240	340	1,200	2,240	3,440
Maryland	1,380	260	2,560	4,200	13,470	17,670
Massachusetts	1,420	120	2,290	3,820	15,890	19,710
Michigan	4,230	50	7,140	11,420	29,510	40,930
Minnesota	5,750	270	8,530	14,550	30,520	45,070
Mississippi	910	10	1,670	2,590	6,570	9,160
Missouri	4,360	160	7,470	11,990	23,350	35,340
Montana	4,590	270	5,390	10,250	13,720	23,970
Nebraska	820	20	3,950	4,790	8,330	13,120
Nevada	10,380	1,160	11,890	23,430	27,320	50,750
New Hampshire	750	*	1,040	1,790	3,920	5,710
New Jersey	1,630	20	4,040	5,680	20,900	26,580
New Mexico	4,620	240	5,860	10,720	13,200	23,920
New York	5,350	40	10,670	16,060	46,160	62,220
North Carolina	3,990	230	7,870	12,090	27,250	39,340
North Dakota	1,560	10	1,580	3,150	4,390	7,540
Ohio	6,100	560	7,790	14,450	37,500	51,950
Oklahoma	2,790	110	4,340	7,240	12,820	20,060
Oregon	2,510	30	4,140	6,670	13,430	20,100
Pennsylvania	15,580	830	16,640	33,050	63,010	96,060
Rhode Island	370 1.510	0	420	790	2,390	3,180
South Carolina	1,510	40	2,450	3,960	10,540	14,500
South Dakota Tennessee	930 3,600	10 340	1,340 5,560	2,280 9,490	3,580	5,860 29,980
Texas		340 280			20,490	29,980 112,260
Utah	12,210 5,330	530	20,300 5,450	32,790 11,300	79,470 21,330	32,630
Vermont	5,330 880	0	1,200	2,080	2,890	4,970
Virginia	7,010	670	1,200	19,080	38,350	57,430
Washington	3,060	260	4,790	8,110	19,090	27,200
West Virginia <sup>a</sup>	24,230	4,300	8,590	37,120	21,700	58,820
Wisconsin	2,940	120	4,780	7,840	18,700	26,540
Wyoming	9,080	360	8,720	18,160	15,170	33,330
Total Operations	236,910	15,700	311,840	564,400	1,117,360	1,681,760
Capital Investment					117,050	117,050
Grand Total	236,910	15,700	311,840			1,798,810

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees. Detail may not round to totals due to rounding. An asterisk (\*) denotes fewer than 5 employees.

<sup>&</sup>lt;sup>a</sup> Direct employment figures for Maine and West Virginia have been adjusted to be consistent with MSHA employment data. <sup>b</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to customers.

Table 7. Contribution of U.S. Mining to GDP by State, 2008 (Dollar amounts in millions)

		amounts in mi	1110110)	
State	Direct Contribution to GDP	Indirect and Induced	Total Contribution	Total Contribution as a % of State GDP
Alahama	<b>#</b> 0 500	Φ 4 77C	£ 4.200	0.50/
Alabama	\$ 2,526	\$ 1,776	\$ 4,302	2.5%
Alaska	1,170	574	1,745	4.6%
Arizona	4,729	3,325	8,054	3.2%
Arkansas	593	645	1,239	1.3%
California	2,107	8,698	10,805	0.6%
Colorado	3,063	2,983	6,046	2.2%
Connecticut	355	1,123	1,478	0.7%
Delaware	23	180	202	0.5%
District of Columbia	30	314	344	0.3%
Florida	1,666	3,941	5,607	0.8%
Georgia	1,546	2,845	4,391	1.1%
Hawaii	171	307	478	0.8%
Idaho	857	563	1,420	2.6%
Illinois	2,242	4,270	6,512	1.0%
Indiana	2,539	2,226	4,765	1.8%
lowa	638	801	1,439	1.1%
Kansas	487	746	1,234	0.9%
Kentucky	4,735	2,668	7,403	4.6%
Louisiana	596	1,043	1,639	0.9%
Maine	49	205	254	0.5%
Maryland	480	1,293	1,773	0.6%
Massachusetts	413	1,763	2,176	0.6%
Michigan	1,460	2,603	4,062	1.0%
Minnesota	2,373	2,691	5,064	1.9%
Mississippi	246	442	688	0.8%
Missouri	1,612	1,826	3,438	1.3%
Montana	1,787	934	2,720	7.0%
Nebraska	699	616	1,315	1.6%
Nevada	4,755	2,277	7,032	5.6%
New Hampshire	160	342	503	0.8%
New Jersey	719	2,426	3,145	0.6%
New Mexico	1,657	904	2,562	3.6%
New York	1,818	6,012	7,830	0.7%
North Carolina	1,169	2,114	3,283	0.9%
North Dakota	495	306	801	2.5%
Ohio	1,794	2,976	4,770	1.0%
Oklahoma	750	1,180	1,929	1.2%
Oregon	653	1,018	1,671	1.1%
Pennsylvania	4,960	5,587	10,547	1.8%
Rhode Island	4,900	208	272	0.6%
South Carolina	355	758	1,113	0.7%
South Dakota	247	241	488	1.4%
Tennessee	1,178	1,636	2,814	1.1%
Texas	4,046	8,978	13,024	1.0%
Utah	4,046 1,803	6,976 1,459	3,261	3.0%
Vermont	1,803	201	3,261	3.0% 1.5%
Virginia Washington	3,453	3,408	6,860	1.7%
	954	1,791	2,745	0.8%
West Virginia	5,204	1,915	7,119	11.6%
Wisconsin	789	1,399	2,188	0.9%
Wyoming	3,275	1,125	4,400	14.0%
Total Operations	\$ 79,678	\$ 99,663	\$ 179,341	1.2%
Capital Investment	· <b></b>	9,568	9,568	0.1%
Grand Total	\$79,678	\$109,231	\$188,909	1.3%
Source: Pricewaterhouse(				

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Detail may not add to total due to rounding.

Table 8. Contribution of U.S. Mining to Labor Income by State, 2008 (Dollar amounts in millions)

	(Dollar	amounts in m	illions)	
State	Direct Labor Income	Indirect and Induced	Total Contribution	Total Contribution as a % of State Total Labor Income
Alabama	\$1,356	\$1,050	\$ 2,405	2.1%
Alaska	φ1,336 458	\$1,050 324	\$ 2,405 781	3.2%
Arizona	1,911	1,954	3,865	2.5%
Arkansas	358	388	746	1.2%
California	1,300	5,271	6,571	0.5%
Colorado	1,454	1,763	3,217	1.9%
Connecticut	253	700	953	0.7%
Delaware	13	113	126	0.4%
District of Columbia	13	229	242	0.3%
Florida	989	2,317	3,307	0.7%
Georgia	1,004	1,678	2,682	1.0%
Hawaii	111	183	294	0.7%
Idaho	392	340	732	2.1%
Illinois	1,248	2,586	3,834	0.9%
Indiana	1,420	1,309	2,729	1.7%
lowa	399	460	859	1.1%
Kansas	294	428	722	0.9%
Kentucky Louisiana	2,467 317	1,594 590	4,061 907	3.9% 0.8%
Maine	32	123	156	0.5%
Maryland	290	787	1,077	0.6%
Massachusetts	267	1,141	1,408	0.5%
Michigan	796	1,571	2,367	0.9%
Minnesota	1,105	1,598	2,704	1.6%
Mississippi	158	260	418	0.7%
Missouri .	868	1,098	1,966	1.2%
Montana	785	521	1,305	5.6%
Nebraska	413	359	773	1.5%
Nevada	1,840	1,330	3,170	4.1%
New Hampshire	108	209	317	0.8%
New Jersey	471	1,463	1,934	0.6%
New Mexico New York	758	541	1,299	2.8%
North Carolina	1,121 727	3,862 1,256	4,984 1,983	0.7% 0.8%
North Dakota	272	1,230	448	2.3%
Ohio	1,007	1,820	2,827	0.9%
Oklahoma	442	637	1,079	1.1%
Oregon	424	614	1,039	1.0%
Pennsylvania	2,690	3,381	6,071	1.7%
Rhode Island	45	129	174	0.6%
South Carolina	222	452	674	0.7%
South Dakota	142	138	280	1.3%
Tennessee	655	1,002	1,658	1.0%
Texas	2,359	4,825	7,184	0.9%
Utah Vermont	865 126	883 120	1,748 246	2.5% 1.4%
Vermont Virginia	1,847	2,063	246 3,910	1.5%
Washington	1,647 544	2,003 1,075	1,618	0.8%
West Virginia	2,680	1,118	3,799	9.9%
Wisconsin	514	852	1,366	0.9%
Wyoming	1,731	601	2,332	13.2%
Total Operations	\$42,061	\$59,283	\$101,344	1.1%
Capital Investment	,-,-	6,098	6,098	0.1%
Grand Total	\$42,061	\$65,381	\$107,442	1.2%
Course Driesweterhouse		hand an IMDI AN		1.2/0

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Labor income includes wages and salaries and benefits as well as proprietors' income. Detail may not add to total due to rounding.

Table 9. Tax Contribution of U.S. Mining by State, 2008 (in millions of dollars)

	\$615 303 1,072 121 496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10	\$443 162 866 160 2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	\$1,058 466 1,938 280 2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	Total State and Local Taxes Only  482 261 890 111 1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27 195 219
Alaska Arizona Arkansas California Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	303 1,072 121 496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10	162 866 160 2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	466 1,938 280 2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	261 890 111 1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27 195
Alaska Arizona Arkansas California Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	303 1,072 121 496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10	162 866 160 2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	466 1,938 280 2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	261 890 111 1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27 195
Arizona Arkansas California Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	1,072 121 496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10	866 160 2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	1,938 280 2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	890 111 1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27
Arkansas California Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	121 496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10 108 96	160 2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	280 2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	111 1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27
California Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	496 703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10 108 96	2,420 783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	2,916 1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	1,244 632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27
Colorado Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	703 88 5 7 315 320 36 181 545 604 126 97 1,336 122 10 108	783 323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	1,486 411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	632 141 21 32 474 400 50 143 658 512 119 107 1,042 164 27
Connecticut Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	88 5 7 315 320 36 181 545 604 126 97 1,336 122 10 108 96	323 48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	411 53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	141 21 32 474 400 50 143 658 512 119 107 1,042 164 27
Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	5 7 315 320 36 181 545 604 126 97 1,336 122 10 108 96	48 100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	53 106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	21 32 474 400 50 143 658 512 119 107 1,042 164 27
District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	7 315 320 36 181 545 604 126 97 1,336 122 10 108 96	100 977 720 80 144 1,101 554 194 180 710 247 52 360 492	106 1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	32 474 400 50 143 658 512 119 107 1,042 164 27
Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	315 320 36 181 545 604 126 97 1,336 122 10 108 96	977 720 80 144 1,101 554 194 180 710 247 52 360 492	1,292 1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	474 400 50 143 658 512 119 107 1,042 164 27
Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	320 36 181 545 604 126 97 1,336 122 10 108 96	720 80 144 1,101 554 194 180 710 247 52 360 492	1,040 116 325 1,646 1,158 320 277 2,046 369 62 468 588	400 50 143 658 512 119 107 1,042 164 27
Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	36 181 545 604 126 97 1,336 122 10 108 96	80 144 1,101 554 194 180 710 247 52 360 492	116 325 1,646 1,158 320 277 2,046 369 62 468 588	50 143 658 512 119 107 1,042 164 27
Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	181 545 604 126 97 1,336 122 10 108 96	144 1,101 554 194 180 710 247 52 360 492	325 1,646 1,158 320 277 2,046 369 62 468 588	143 658 512 119 107 1,042 164 27
Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	545 604 126 97 1,336 122 10 108 96	1,101 554 194 180 710 247 52 360 492	1,646 1,158 320 277 2,046 369 62 468 588	658 512 119 107 1,042 164 27 195
Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	604 126 97 1,336 122 10 108 96	554 194 180 710 247 52 360 492	1,158 320 277 2,046 369 62 468 588	512 119 107 1,042 164 27 195
lowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	126 97 1,336 122 10 108 96	194 180 710 247 52 360 492	320 277 2,046 369 62 468 588	119 107 1,042 164 27 195
Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	97 1,336 122 10 108 96	180 710 247 52 360 492	277 2,046 369 62 468 588	107 1,042 164 27 195
Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	1,336 122 10 108 96	710 247 52 360 492	2,046 369 62 468 588	1,042 164 27 195
Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	122 10 108 96	247 52 360 492	369 62 468 588	164 27 195
Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	10 108 96	52 360 492	62 468 588	27 195
Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	108 96	360 492	468 588	195
Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	96	492	588	
Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina				
Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	325	672	998	427
Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	551	724	1,275	559
Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	49	107	156	69
Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	347	473	821	332
Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	400	246	646	297
New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	131	150	281	103
New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	971	586	1,557	643
New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	34	90	124	42
New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	164	670	834	302
North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	386	234	620	314
North Dakota Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	450	1,767	2,217	952
Ohio Oklahoma Oregon Pennsylvania Rhode Island South Carolina	242	552	794	315
Oklahoma Oregon Pennsylvania Rhode Island South Carolina	124	76	200	88
Oregon Pennsylvania Rhode Island South Carolina	428	777	1,205	542
Oregon Pennsylvania Rhode Island South Carolina	149	282	430	175
Pennsylvania Rhode Island South Carolina	149	282	430	178
South Carolina	1,225	1,446	2,671	1,150
	14	54	68	27
South Dakota	71	190	261	105
	48	57	106	39
Tennessee	233	387	620	219
Texas	836	2,106	2,943	1,135
Utah	425	381	806	352
Vermont		52	91	35
Virginia	39	910	1,768	768
Washington	39 859	433	623	209
West Virginia		501	2,034	1,067
Wisconsin	859		542	221
Wyoming	859 190	368		502
U.S. Total	859 190 1,533		1,118	

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Excludes activity associated with capital expenditures undertaken by mining companies. Detail may not add to total due to rounding.

## III. Overview of U.S. Coal Mining

U.S. coal mining accounted for more than 555,000 total and 154,000 direct jobs in 2008. Based on Bureau of Labor Statistics data, average coal mining wages and salaries were \$72,200, 59 percent higher than the combined average of all private sector jobs (\$45,371). Coal mining activity generated \$29.5 billion in direct GDP and \$65.7 billion in total contribution to GDP, as well as \$14.6 billion in direct labor income and \$36.3 billion in total labor income.

Coal generated nearly 50 percent of the electricity generated in 2008, and coal consumed for generating electricity accounted for more than 90 percent of domestic coal production.<sup>7</sup>

The states with the largest direct employment from coal in 2008 were West Virginia, Kentucky, Pennsylvania, Wyoming, and Virginia.

States with the largest direct contribution to GDP from coal were West Virginia, Kentucky, Pennsylvania, Virginia, and Wyoming.

States with the largest direct contribution to labor income were West Virginia, Kentucky, Pennsylvania, Virginia and Wyoming.

<sup>&</sup>lt;sup>7</sup> Energy Information Administration, *Annual Energy Review 2009*.

Table 10. Total Economic Contribution of U.S. Coal Mining, by State, 2008<sup>a</sup>

	Emplo	yment <sup>b</sup>	Labor I	ncome <sup>c</sup>	Contribution	on to GDP
State	Number	Percent of State Total	(Millions of dollars)	Percent of State Total	(Millions of dollars)	Percent of State Total
		2 222/	<b>*</b>			
Alabama	22,470	0.88%	\$1,527	1.36%	\$2,866	1.65%
Alaska	760	0.17%	48	0.20%	_86	0.23%
Arizona	5,550	0.16%	303	0.19%	541	0.22%
Arkansas	2,460	0.16%	122	0.20%	218	0.23%
California	27,670	0.13%	1,806	0.15%	3,015	0.16%
Colorado	17,620	0.56%	1,241	0.74%	2,263	0.84%
Connecticut	2,830	0.13%	233	0.16%	367	0.16%
Delaware	770	0.14%	51	0.17%	85	0.19%
District of Columbia	1,050	0.12%	105	0.13%	155	0.15%
Florida	13,520	0.13%	673	0.15%	1,167	0.16%
Georgia	7,570	0.14%	413	0.16%	723	0.17%
Hawaii	1,010	0.12%	48	0.12%	78	0.12%
Idaho	1,640	0.18%	80	0.23%	151	0.28%
Illinois	25,730	0.35%	1,757	0.42%	3,146	0.48%
Indiana	20,920	0.58%	1,428	0.87%	2,657	1.03%
lowa	2,830	0.14%	138	0.17%	255	0.19%
Kansas	3,040	0.17%	176	0.22%	330	0.25%
Kentucky	56,420	2.37%	3,463	3.37%	6,426	4.01%
Louisiana	4,100	0.17%	247	0.21%	455	0.24%
Maine	1,020	0.13%	45	0.14%	76	0.15%
Maryland	5,870	0.17%	353	0.19%	610	0.21%
Massachusetts	5,480	0.13%	410	0.16%	636	0.16%
Michigan	7,080	0.14%	410	0.15%	679	0.16%
Minnesota	5,200	0.15%	303	0.18%	524	0.19%
Mississippi	2,330	0.15%	109	0.19%	193	0.21%
Missouri	7,760	0.22%	477	0.30%	862	0.34%
Montana	4,790	0.75%	273	1.16%	530	1.36%
Nebraska	2,310	0.19%	157	0.30%	321	0.38%
Nevada	2,520	0.16%	144	0.19%	270	0.22%
New Hampshire	1,050	0.13%	59	0.14%	95	0.15%
New Jersey	6,630	0.13%	483	0.15%	798	0.16%
New Mexico	5,950	0.55%	356	0.78%	670	0.95%
New York	14,600	0.13%	1,340	0.18%	2,040	0.18%
North Carolina	7,130	0.13%	355	0.15%	610	0.16%
North Dakota	4,280	0.90%	283	1.46%	543	1.69%
Ohio	21,220	0.32%	1,221	0.40%	2,187	0.46%
Oklahoma	3,890	0.18%	225	0.24%	428	0.26%
Oregon	3,080	0.14%	155	0.15%	262	0.17%
Pennsylvania	52,000	0.73%	3,519	0.96%	6,400	1.12%
Rhode Island	760	0.13%	43	0.14%	69	0.15%
South Carolina	3,140	0.13%	144	0.14%	245	0.15%
South Dakota	780	0.14%	34	0.17%	63	0.19%
Tennessee	6,480	0.18%	348	0.21%	604	0.23%
Texas	34,020	0.24%	2,421	0.32%	4,579	0.35%
Utah	12,000	0.73%	687	0.99%	1,273	1.19%
Vermont	530	0.13%	23	0.14%	39	0.15%
Virginia	32,120	0.66%	2,455	0.93%	4,472	1.10%
Washington	5,360	0.14%	332	0.16%	573	0.17%
West Virginia	51,510	5.76%	3,428	8.92%	6,499	10.60%
Wisconsin	4,900	0.14%	246	0.16%	411	0.17%
Wyoming	21,560	5.61%	1,644	9.28%	3,191	10.13%
Total Operations	555,270	0.31%	\$36,345	0.40%	\$65,738	0.46%

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010.

Detail may not add to total due to rounding.

a Totals include Support Activities for Mining allocated to Coal Mining based on Quarterly Census of Employment

and Wages data.

<sup>b</sup> Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Employment has been rounded to the nearest 10 employees.
<sup>c</sup> Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 10a. Contribution of U.S. Coal Mining to Employment by State, 2008

Table 10a.	Contribution		t Effects b	Inploymen	Indirect	
State	Mine	Support		Total	and	Total
Otate	Workers	Activities	Transportation	Direct	Induced	Contribution
Alabama	4,150	20	4,250	8,420	14,050	22,470
Alaska <sup>a</sup>	80	20	0	100	660	760
Arizona	200	30	300	530	5,020	5,550
Arkansas	50	10	230	290	2,170	2,460
California <sup>a</sup>	*	60	740	800	26,860	27,670
Colorado Connecticut	2,490	240	2,350	5,080	12,540	17,620
Delaware	0	0	40 60	40 60	2,790 710	2,830 770
District of Columbia	0	0	120	120	930	1,050
Florida a	*	40	380	420	13,090	13,520
Georgia	0	0	390	390	7,180	7,570
Hawaii	0	0	0	0	1,010	1,010
Idaho	0	90	70	160	1,480	1,640
Illinois	3,380	340	2,980	6,700	19,030	25,730
Indiana	3,020	50	3,600	6,670	14,250	20,920
lowa	0	0	200	200	2,630	2,830
Kansas	90	0	380	470	2,570	3,040
Kentucky Louisiana	16,240 160	1,390 0	7,430 370	25,060 530	31,360 3,570	56,420 4,100
Maine <sup>a</sup>	0	0	30	30	990	1,020
Maryland	170	260	230	660	5,210	5,870
Massachusetts	0	0	170	170	5,310	5,480
Michigan	Ö	20	190	210	6,870	7,080
Minnesota	0	90	240	330	4,870	5,200
Mississippi	90	0	160	250	2,080	2,330
Missouri	470	10	900	1,380	6,380	7,760
Montana	910	90	730	1,730	3,060	4,790
Nebraska	0	0	650	650	1,660	2,310
Nevada	0	0	50	50	2,470	2,520
New Hampshire	0	0 10	10 80	10 90	1,040 6,540	1,050 6,630
New Jersey New Mexico	1,180	80	870	2,130	3,820	5,950
New York	30	10	370	410	14,190	14,600
North Carolina	10	80	160	250	6,880	7,130
North Dakota	980	10	810	1,800	2,480	4,280
Ohio	2,440	560	2,040	5,040	16,180	21,220
Oklahoma	160	90	230	480	3,410	3,890
Oregon	0	0	150	150	2,930	3,080
Pennsylvania	9,000	830	7,200	17,030	34,970	52,000
Rhode Island	0	0	20 100	20	740	760 3 140
South Carolina South Dakota	0	0	50	100 50	3,040 730	3,140 780
Tennessee	300	120	400	820	5,660	6,480
Texas	2,900	100	3,400	6,400	27,620	34,020
Utah	2,250	60	1,500	3,810	8,190	12,000
Vermont	0	0	10	10	520	530
Virginia	4,290	670	5,040	10,000	22,120	32,120
Washington	60	0	280	340	5,020	5,360
West Virginia a	23,370	1,860	7,140	32,370	19,140	51,510
Wyoming	0 6,570	0 330	180 4,160	180 11,060	4,720 10,500	4,900 21,560
Wyoming	0,570	330	4,100	11,000	10,500	21,560
Total Operations	85,040	7,570	61,410	154,020	401,250	555,270

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees. Detail may not round to totals due to rounding. An asterisk (\*) denotes fewer than 5

employees.

<sup>&</sup>lt;sup>a</sup> Direct employment figures for Alaska, Florida, California, Maine and West Virginia have been adjusted to be consistent with MSHA employment data.

<sup>&</sup>lt;sup>b</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to customers.

Table 10b. Contribution of U.S. Coal Mining to GDP by State, 2008 (Dollar amounts in millions)

Ctoto	Direct		_ , , , , , , , , , , , , , , , , , , ,	
State	Contribution to GDP	Indirect and Induced	Total Contribution	Total Contribution as a % of State GDP
Alahama	¢1 066	¢1 000	\$2.066	1 650/
Alabama	\$1,866	\$1,000	\$2,866	1.65%
Alaska Arizona	22 112	64 429	86 541	0.23%
		-	218	0.22%
Arkansas	60 185	158		0.23%
California		2,830	3,015	0.16%
Colorado	1,101	1,161	2,263	0.84%
Connecticut Delaware	8	358	367	0.16%
District of Columbia	12 26	73 129	85 155	0.19% 0.15%
Florida	103	1,064	155 1,167	0.16%
	93	630	723	0.17%
Georgia Hawaii		78	723 78	
Idaho	0 33	76 118	76 151	0.12%
Illinois	33 1,244	1,902	3,146	0.28% 0.48%
Indiana	1,597	1,902	3,146 2,657	0.48% 1.03%
lowa		·	·	
iowa Kansas	46 110	209 221	255 330	0.19% 0.25%
	4,150	2,276	6,426	0.25% 4.01%
Kentucky Louisiana	4,150 125	·	455	
Maine	6	330 70	455 76	0.24% 0.15%
	107	503	610	0.15%
Maryland Massachusetts	39	503 597	636	0.21%
	49	630	679	0.16%
Michigan Minnesota	69	455	524	0.16%
Mississippi	52	141	193	0.19%
Missouri	340	522	862	0.21%
Montana	309	221	530	1.36%
Nebraska	174	147	321	0.38%
Nevada	11	259	270	0.22%
New Hampshire	2	93	95	0.15%
New Jersey	19	779	798	0.16%
New Mexico	398	272	670	0.95%
New York	86	1,955	2,040	0.18%
North Carolina	46	565	610	0.16%
North Dakota	373	171	543	1.69%
Ohio	867	1,320	2,187	0.46%
Oklahoma	93	335	428	0.26%
Oregon	32	230	262	0.17%
Pennsylvania	3,298	3,102	6,400	1.12%
Rhode Island	4	65	69	0.15%
South Carolina	22	224	245	0.15%
South Dakota	11	52	63	0.19%
Tennessee	131	473	604	0.23%
Texas	1,509	3,070	4,579	0.35%
Utah	676	597	1,273	1.19%
Vermont	2	37	39	0.15%
Virginia	2,441	2,030	4,472	1.10%
Washington	82	492	573	0.17%
West Virginia	4,896	1,603	6,499	10.60%
Wisconsin	42	369	411	0.17%
Wyoming	2,378	813	3,191	10.13%
Total Operations	\$29,457	\$36,281	\$65,738	0.46%

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Includes Support Activities attributable to coal mining. Detail may not add to total due to rounding.

Table 10c. Contribution of U.S. Coal Mining to Labor Income by State, 2008 (Dollar amounts in millions)

	(=	amounts in mi	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
State	Direct Labor Income	Indirect and Induced	Total Contribution	Total Contribution as a % of State Total Labor Income
Alahama	<u></u> የሰጋር	<b>¢</b> E04	\$1.527	1.36%
Alabama	\$936	\$591	+ /-	
Alaska Arizona	11 52	37 251	48 303	0.20% 0.19%
Arkansas	27	251 95	122	0.19%
California	79	1,727	1,806	0.20%
Colorado	548	693	1,241	0.74%
Connecticut	4	230	233	0.16%
Delaware	5	47	51	0.17%
District of Columbia	11	93	105	0.13%
Florida	45	628	673	0.15%
Georgia	40	373	413	0.16%
Hawaii	0	47	48	0.12%
Idaho	13	67	80	0.23%
Illinois	600	1,157	1,757	0.42%
Indiana	802	626	1,428	0.42 %
lowa	20	118	138	0.17%
Kansas	50	126	176	0.22%
Kentucky	2,107	1,355	3,463	3.37%
Louisiana	60	187	247	0.21%
Maine	3	43	45	0.14%
Maryland	49	305	353	0.19%
Massachusetts	17	393	410	0.16%
Michigan	21	389	410	0.15%
Minnesota	29	274	303	0.18%
Mississippi	25	84	109	0.19%
Missouri	163	314	477	0.30%
Montana	150	123	273	1.16%
Nebraska	75	83	157	0.30%
Nevada	5	139	144	0.19%
New Hampshire	1	58	59	0.14%
New Jersey	8	475	483	0.15%
New Mexico	195	162	356	0.78%
New York	37	1,303	1,340	0.18%
North Carolina	19	336	355	0.15%
North Dakota	184	99	283	1.46%
Ohio	419	802	1,221	0.40%
Oklahoma	44	181	225	0.24%
Oregon	14	141	155	0.15%
Pennsylvania	1,643	1,876	3,519	0.96%
Rhode Island	2	41	43	0.14%
South Carolina	9	135	144	0.14%
South Dakota	5	30	34	0.17%
Tennessee	60	288	348	0.21%
Texas	741	1,680	2,421	0.32%
Utah	334	354	687	0.99%
Vermont	1	22	23	0.14%
Virginia	1,228	1,227	2,455	0.93%
Washington	37	296	332	0.16%
West Virginia	2,509	919	3,428	8.92%
Wisconsin	18	228	246	0.16%
Wyoming	1,195	449	1,644	9.28%
Total Operations	\$14,645	\$21,699	\$36,345	0.40%

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Labor income includes wages and salaries and benefits as well as proprietors' income. Includes Support Activities attributable to coal mining. Detail may not add to total due to rounding.

## IV. Overview of U.S. Metal Ore Mining

U.S. metal mining accounted for 289,360 total and 88,090 direct jobs in 2008. Based on Bureau of Labor Statistics data, the average wages and salaries in metal mining in 2008 were \$75,900, 67 percent higher than the combined average of all private sector jobs (\$45,371).

U.S. metal mines directly contributed \$19.1 billion to U.S. GDP during 2008. That contribution generated a total of \$36.8 billion in economic output in the United States in 2008. Metal ore mining generated \$14.6 billion in direct labor income and \$36.3 in total.

The states with the largest direct employment from metal ore mining in 2008 were Nevada, Arizona, Minnesota, Montana and Alaska.

States with the largest direct contribution to GDP from metal ore mining were Nevada, Arizona, Minnesota, Colorado and Montana.

States with the largest direct contribution to labor income were Nevada, Arizona, Minnesota, Colorado and Alaska.

Table 11. Total Economic Contribution of U.S. Metal Mining, by State, 2008<sup>a</sup>

Table 11. To		yment <sup>b</sup>		ncome <sup>c</sup>	Contributi	
State	Number	Percent of	(Millions	Percent of	(Millions	Percent of
		State Total	of dollars)	State Total	of dollars)	State Total
Alabama	1,670	0.07%	87	0.08%	154	0.09%
Alaska	9,290	2.10%	646	2.68%	1,501	3.94%
Arizona	43,260	1.28%	2,584	1.64%	5,886	2.35%
Arkansas	1,600	0.10%	83	0.13%	166	0.17%
California	12,500	0.06%	836	0.07%	1,442	0.08%
Colorado	14,570	0.46%	1,053	0.63%	2,263	0.84%
Connecticut	1,110	0.05%	92	0.06%	147	0.07%
Delaware	280	0.05%	18	0.06%	29	0.06%
District of Columbia	390	0.05%	39	0.05%	54	0.05%
Florida	6,900	0.07%	361	0.08%	664	0.09%
Georgia	2,970 410	0.06%	157	0.06%	269	0.06%
Hawaii Idaho		0.05% 0.69%	20 348	0.05% 1.00%	33 787	0.05%
Illinois	6,380 4,140	0.69% 0.06%	348 274	0.07%	787 457	1.46% 0.07%
Indiana	2,060	0.06%	108	0.07%	184	0.07%
lowa	1,120	0.06%	50	0.07%	90	0.07%
Kansas	1,000	0.06%	51	0.06%	92	0.07%
Kentucky	1,540	0.06%	79	0.08%	141	0.09%
Louisiana	3,030	0.12%	191	0.17%	393	0.21%
Maine	410	0.05%	18	0.06%	30	0.06%
Maryland	1,680	0.05%	106	0.06%	178	0.06%
Massachusetts	2,130	0.05%	159	0.06%	244	0.06%
Michigan	10,650	0.20%	673	0.25%	1,322	0.32%
Minnesota	27,000	0.78%	1,681	0.97%	3,374	1.24%
Mississippi	800	0.05%	34	0.06%	57	0.06%
Missouri	5,250	0.15%	329	0.20%	688	0.27%
Montana	12,840	2.02%	743	3.17%	1,692	4.34%
Nebraska	980	0.08%	56	0.11%	111	0.13%
Nevada	41,640	2.63%	2,679	3.46%	6,047	4.83%
New Hampshire New Jersey	420 2,610	0.05% 0.05%	24 195	0.06% 0.06%	39 324	0.06% 0.06%
New Mexico	8,550	0.78%	492	1.07%	1,133	1.61%
New York	6,800	0.06%	604	0.08%	1,003	0.09%
North Carolina	2,800	0.05%	139	0.06%	237	0.06%
North Dakota	270	0.06%	12	0.06%	22	0.07%
Ohio	3,740	0.06%	201	0.07%	332	0.07%
Oklahoma	2,010	0.09%	124	0.13%	262	0.16%
Oregon	1,460	0.06%	76	0.08%	134	0.09%
Pennsylvania	4,420	0.06%	273	0.07%	469	0.08%
Rhode Island	300	0.05%	17	0.06%	27	0.06%
South Carolina	1,320	0.05%	62	0.06%	105	0.07%
South Dakota	1,000	0.18%	54	0.26%	120	0.35%
Tennessee	5,330	0.15%	301	0.18%	608	0.23%
Texas	10,140	0.07%	723 455	0.10%	1,452	0.11%
Utah Vermont	7,850 210	0.48% 0.05%	455 10	0.66% 0.06%	968 16	0.90% 0.06%
Virginia	3,630	0.03%	238	0.09%	432	0.00%
Washington	4,550	0.12%	299	0.14%	585	0.11%
West Virginia	1,460	0.16%	79	0.21%	136	0.22%
Wisconsin	1,980	0.06%	97	0.06%	158	0.07%
Wyoming	910	0.24%	63	0.36%	147	0.47%
Total Operations	289,360	0.16%	18,094	0.20%	37,205	0.26%

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010.

<sup>a</sup> Totals include Support Activities for Mining allocated to Metal Mining based on Quarterly Census of Employment and Wages data.

b Employment is defined as the number of payroll and self-employed jobs, including part-time jobs.
c Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 11a. Contribution of U.S. Metal Mining to Employment by State, 2008

Tubic Tiu.	Contributio	Direc	etai Mining to E t Effects <sup>b</sup>	шрюуше	Indirect	
State	Mine Workers	Support Activities	Transportation	Total Direct	and Induced	Total Contribution
Alabama	70	0	90	160	1,510	1,670
Alaska	2,350	70	2,250	4,670	4,620	9,290
Arizona	2,330 8,710	100	9,630	18,440	24,820	43,260
Arkansas	140	0	210	350	1,250	1,600
California	340	0	460	800	11,700	12,500
Colorado	1,430	50	3,390	4,870	9,700	14,570
Connecticut	1,430	0	3,390	4,870	1,110	1,110
Delaware	0	0	0	0	280	280
District of Columbia	0	0	10	10	380	390
	-	_	500			
Florida	160	0		660	6,240	6,900
Georgia	0	0	30	30	2,940	2,970
Hawaii	0	0	0	0	410	410
Idaho	1,280	50	1,440	2,770	3,610	6,380
Illinois	0	0	50	50	4,090	4,140
Indiana	0	0	20	20	2,040	2,060
lowa	0	0	10	10	1,110	1,120
Kansas	0	0	20	20	980	1,000
Kentucky	0	0	10	10	1,530	1,540
Louisiana	220	10	530	760	2,270	3,030
Maine <sup>a</sup>	0	0	0	0	410	410
Maryland	0	0	20	20	1,660	1,680
Massachusetts	0	0	10	10	2,120	2,130
Michigan	1,200	10	1,880	3,090	7,560	10,650
Minnesota	4,200	130	5,720	10,050	16,950	27,000
Mississippi	0	0	10	10	790	800
Missouri	430	20	900	1,350	3,900	5,250
Montana	2,540	120	2,980	5,640	7,200	12,840
Nebraska	10	0	120	130	850	980
Nevada	9,030	1,010	10,560	20,600	21,040	41,640
New Hampshire	0	0	0	0	420	420
New Jersey	0	0	10	10	2,600	2,610
New Mexico	1,950	90	2,020	4,060	4,490	8,550
New York	220	0	400	620	6,180	6,800
North Carolina	20	0	20	40	2,760	2,800
North Dakota	0	0	10	10	260	270
Ohio	0	0	30	30	3,710	3,740
Oklahoma	130	0	240	370	1,640	2,010
Oregon	30	0	80	110	1,350	1,460
Pennsylvania	60	0	130	190	4,230	4,420
Rhode Island	0	0	0	0	300	300
South Carolina	10	0	30	40	1,280	1,320
South Dakota	150	0	190	340	660	1,000
Tennessee	840	60	730	1,630	3,700	5,330
Texas	380	10	750	1,140	9,000	10,140
Utah	1,220	190	1,380	2,790	5,060	7,850
Vermont	0	0	0	2,700	210	210
Virginia	140	Ő	340	480	3,150	3,630
Washington	410	40	650	1,100	3,450	4,550
West Virginia <sup>a</sup>	50	140	50	240	1,220	1,460
Wisconsin	0	0	10	10	1,970	1,980
Wyoming	150	0	200	350	560	910
Total Operations	37,870	2,100	48,120	88,090	201,270	289,360
Course: Driesweterhouse						_00,000

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees. Detail may not round to totals due to rounding. An asterisk (\*) denotes fewer than 5 employees.

<sup>&</sup>lt;sup>a</sup> Direct employment figures for Maine and West Virginia have been adjusted to be consistent with MSHA employment data.

<sup>&</sup>lt;sup>b</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to customers.

Table 11b. Contribution of U.S. Metal Mining to GDP by State, 2008 (Dollar amounts in millions)

	(Dollar amounts in millions)								
State	Direct Contribution to GDP	Indirect and Induced	Total Contribution	Total Contribution as a % of State GDP					
Alabama	<b>#</b> 00	<b>\$405</b>	<b>*</b>	0.40/					
Alabama	\$29	\$125	\$154	0.1%					
Alaska	1,074	427	1,501	3.9%					
Arizona	3,965	1,921	5,886	2.4%					
Arkansas	78	88	166	0.2%					
California	179	1,264	1,442	0.1%					
Colorado	1,384	878	2,263	0.8%					
Connecticut	1	147	147	0.1%					
Delaware	1	28	29	0.1%					
District of Columbia	1	52	54	0.1%					
Florida	157	507	664	0.1%					
Georgia	5	264	269	0.1%					
Hawaii	1	32	_33	0.1%					
Idaho	556	231	787	1.5%					
Illinois	10	446	457	0.1%					
Indiana	4	180	184	0.1%					
lowa	2	88	90	0.1%					
Kansas	3	88	92	0.1%					
Kentucky	3	139	141	0.1%					
Louisiana	185	207	393	0.2%					
Maine	0	29	30	0.1%					
Maryland	5	173	178	0.1%					
Massachusetts	2	242	244	0.1%					
Michigan	649	672	1,322	0.3%					
Minnesota	1,931	1,443	3,374	1.2%					
Mississippi	1	56	57	0.1%					
Missouri	373	315	688	0.3%					
Montana	1,186	506	1,692	4.3%					
Nebraska	41	70	111	0.1%					
Nevada	4,320	1,727	6,047	4.8%					
New Hampshire	0	39	39	0.1%					
New Jersey	2	322	324	0.1%					
New Mexico	822	310	1,133	1.6%					
New York	163	840	1,003	0.1%					
North Carolina	6	231	237	0.1%					
North Dakota	1	21	22	0.1%					
Ohio	5	328	332	0.1%					
Oklahoma	93	169	262	0.2%					
Oregon	28	106	134	0.1%					
Pennsylvania	45	424	469	0.1%					
Rhode Island	0	27	27	0.1%					
South Carolina	7	98	105	0.1%					
South Dakota	75	45	120	0.4%					
Tennessee	311	297	608	0.4%					
Texas	269		1,452	0.2%					
Utah	595	1,183 373	968	0.1%					
Vermont	0	16	16	0.9%					
	118	314		0.1%					
Virginia Washington			432						
Washington	259	326	585	0.2%					
West Virginia	22 2	115	136	0.2%					
Wisconsin		156	158	0.1%					
Wyoming	88	58	147	0.5%					
Total Operations	\$19,060	\$18,145	\$37,205	0.3%					
Source: Pricowaterhouse									

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Includes Support Activities attributable to metal mining. Detail may not add to totals due to rounding.

Table 11c. Contribution of U.S. Metal Mining to Labor Income by State, 2008 (Dollar amounts in millions)

(Dollar amounts in millions)									
State	Direct Labor Income	Indirect and Induced	Total Contribution	Total Contribution as a % of State Total Labor Income					
Alabama	\$12	\$75	\$87	0.1%					
Alaska	402	244	646	2.7%					
Arizona	1,451	1,133	2,584	1.6%					
Arkansas	29	53	83	0.1%					
California	69	768	836	0.1%					
Colorado	531	522	1,053	0.6%					
Connecticut	0	92	92	0.1%					
Delaware	0	18	18	0.1%					
District of Columbia	1	39	39	0.0%					
Florida	62	299	361	0.1%					
Georgia	2	155	157	0.1%					
Hawaii	0	20	20	0.0%					
Idaho	208	141	348	1.0%					
Illinois	4	270	274	0.1%					
Indiana	2	106	108	0.1%					
lowa	1	49	50	0.1%					
Kansas	1	50	51	0.1%					
Kentucky	1	78	79	0.1%					
Louisiana	74	118	191	0.2%					
Maine	0	18	18	0.1%					
Maryland	2	104	106	0.1%					
Massachusetts	1	158	159	0.1%					
Michigan	272	400	673	0.3%					
Minnesota	821	860	1,681	1.0%					
Mississippi	1	33	34	0.1%					
Missouri	140	189	329	0.2%					
Montana	455	288	743	3.2%					
Nebraska	16	40	56	0.1%					
Nevada	1,619	1,060	2,679	3.5%					
New Hampshire	0	24	24	0.1%					
New Jersey	1	195	195	0.1%					
New Mexico	303	189	492	1.1%					
New York	63	542	604	0.1%					
North Carolina	3	136	139	0.1%					
North Dakota	0	12	12	0.1%					
Ohio	2	199	201	0.1%					
Oklahoma	35	89	124	0.1%					
Oregon	11	65	76	0.1%					
Pennsylvania	18	255	273	0.1%					
Rhode Island	0	17	17	0.1%					
South Carolina	3	59	62	0.1%					
South Dakota	28	26	54	0.3%					
Tennessee	117	184	301	0.2%					
Texas	105	618	723	0.1%					
Utah	225	231	455	0.7%					
Vermont	0	9	10	0.1%					
Virginia	49	189	238	0.1%					
Washington	101	199	299	0.1%					
West Virginia	12	67	79	0.2%					
Wisconsin	1	96	97	0.1%					
Wyoming	34	29	63	0.4%					
Grand Total	\$7,287	\$10,807	\$18,094	0.2%					
Source: Pricewaterhouse		I I INADI ANI	1.11 / /0.0	\00   (   )					

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Labor income includes wages and salaries and benefits as well as proprietors' income. Includes Support Activities attributable to metal mining. Detail may not add to totals due to rounding.

## V. Overview of U.S. Non-Metallic Mining

U.S. non-metallic mining accounted for more than 837,130 total and 322,290 direct jobs in 2008. Based on information from the Bureau of Labor Statistics, average wages and salaries were \$51,100 in 2008, 13 percent higher than the combined average of all private sector jobs (\$45,371).

U.S. mines directly contributed \$31.2 billion to U.S. GDP during 2008. That contribution generated a total of \$76.4 billion in economic output in the United States in 2008. Non-metallic mining generated \$20.1 billion in direct labor income and \$46.9 in total labor income.

The states with the largest direct employment from non-metallic mining in 2008 were Texas, California, Georgia, Florida, and Pennsylvania.

States with the largest direct contribution to GDP from non-metallic mining were Texas, California, Pennsylvania, New York and Georgia.

States with the largest direct contribution to labor income were Texas, California, Pennsylvania, New York and Georgia.

Table 12. Total Economic Contribution of U.S. Non-Metallic Mining. by State. 2008a

Table 12. Total E	Emplo	yment <sup>b</sup>	Labor I	ncome <sup>c</sup>	Contribution	
State	Number	Percent of State Total	(Millions of dollars)	Percent of State Total	(Millions of dollars)	Percent of State Total
Alabama	15,670	0.61%	\$791	0.70%	\$1,282	0.74%
Alaska	1,590	0.36%	87	0.36%	158	0.41%
Arizona	19,110	0.57%	977	0.62%	1,627	0.65%
			541		854	
Arkansas California	11,520	0.74% 0.30%	3,929	0.88% 0.33%	6,348	0.89% 0.34%
	62,920					
Colorado	16,020	0.51%	923	0.55%	1,521	0.56%
Connecticut Delaware	8,100	0.37%	628	0.43%	964	0.43% 0.20%
Delaware District of Columbia	890	0.17%	56	0.19%	88	
	930	0.11%	98	0.12%	135	0.13%
Florida	46,800	0.46%	2,273	0.51%	3,776	0.52%
Georgia 	40,550	0.75%	2,113	0.82%	3,399	0.82%
Hawaii	4,010	0.47%	227	0.55%	367	0.58%
ldaho	7,250	0.79%	303	0.87%	482	0.89%
Illinois	29,030	0.39%	1,802	0.43%	2,909	0.44%
Indiana	22,510	0.62%	1,193	0.73%	1,923	0.74%
lowa	13,750	0.69%	670	0.82%	1,094	0.82%
Kansas	9,400	0.52%	494	0.61%	812	0.62%
Kentucky	11,320	0.48%	519	0.50%	836	0.52%
Louisiana	8,870	0.36%	469	0.41%	792	0.42%
Maine	2,010	0.25%	93	0.29%	148	0.30%
Maryland	10,120	0.30%	618	0.32%	985	0.34%
Massachusetts	12,110	0.30%	839	0.33%	1,296	0.33%
Michigan	23,200	0.44%	1,284	0.48%	2,061	0.50%
Minnesota	12,870	0.37%	720	0.42%	1,165	0.43%
Mississippi	6,030	0.40%	276	0.48%	438	0.48%
Missouri	22,330	0.62%	1,160	0.72%	1,888	0.74%
Montana	6,340	1.00%	289	1.23%	499	1.28%
Nebraska	9,830	0.80%	559	1.08%	883	1.06%
Nevada	6,590	0.42%	347	0.45%	715	0.57%
New Hampshire	4,240	0.51%	234	0.57%	369	0.58%
New Jersey	17,350	0.35%	1,256	0.40%	2,023	0.41%
New Mexico	9,420	0.86%	450	0.98%	759	1.08%
New York	40,820	0.38%	3,039	0.40%	4,787	0.42%
North Carolina	29,410	0.55%	1,489	0.62%	2,436	0.64%
North Dakota	2,990	0.63%	1,469	0.62%	2,436	0.73%
North Dakota Ohio	26,990 26,990	0.63%	1,405	0.78%	2,251	0.73%
Onio Oklahoma	26,990 14,160	0.41%	729	0.46% 0.76%	2,251 1,239	0.48% 0.76%
	15,570			0.76%		
Oregon Ponnsylvania		0.69%	808		1,275	0.82%
Pennsylvania	39,640	0.56%	2,279	0.62%	3,678	0.64%
Rhode Island	2,120	0.35%	114	0.38%	176	0.39%
South Carolina	10,040	0.41%	468	0.46%	763	0.48%
South Dakota	4,080	0.73%	192	0.92%	304	0.89%
Tennessee -	18,180	0.50%	1,009	0.60%	1,603	0.62%
Texas	68,100	0.49%	4,040	0.53%	6,993	0.54%
Utah	12,790	0.78%	605	0.87%	1,020	0.95%
Vermont	4,230	1.03%	213	1.24%	335	1.28%
Virginia	21,680	0.45%	1,217	0.46%	1,956	0.48%
Washington	17,290	0.45%	987	0.47%	1,587	0.48%
West Virginia	5,850	0.65%	292	0.76%	484	0.79%
Wisconsin	19,660	0.56%	1,023	0.66%	1,619	0.67%
Wyoming	10,860	2.82%	625	3.52%	1,062	3.37%
Total Operations	837,130	0.47%	\$46,903	0.51%	\$76,398	0.53%

Source: PricewaterhouseCoopers calculations using the IMPLAN modeling system (2008 database), June 2010. Detail may not add to totals due to rounding.

<sup>&</sup>lt;sup>a</sup> Totals include Support Activities for Mining allocated to Non-Metallic Mining based on Quarterly Census of Employment and Wages data. Table 4 separately reports the total for Support Activities.
<sup>b</sup> Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have

been rounded to the nearest 10 employees.

<sup>&</sup>lt;sup>c</sup> Labor income is defined as wages and salaries and benefits as well as proprietors' income.

Table 12a. Contribution of U.S. Non-Metallic Mining to Employment by State, 2008

Table 12a. Con			t Effects <sup>b</sup>	to Employ	Indirect	
State	Mine	Support		Total	and	Total
	Workers	Activities	Transportation	Direct	Induced	Contribution
Alabama	2,190	40	4,330	6,560	9,110	15,670
Alaska	230	30	430	690	900	1,590
Arizona	2,250	30	4,320	6,600	12,510	19,110
Arkansas California	2,220 6,750	10 40	3,200	5,430 18,220	6,090	11,520 62,920
Colorado	2,010	60	11,440 3,600	5,670	44,700 10,350	16,020
Connecticut	900	60	1,910	2,870	5,230	8,100
Delaware	50	0	70	120	770	890
District of Columbia	0	Ö	0	0	930	930
Florida	4,070	30	11,960	16,060	30,740	46,800
Georgia	5,670	1,150	10,300	17,120	23,430	40,550
Hawaii	380	0	1,090	1,470	2,540	4,010
Idaho	1,440	50	1,940	3,430	3,820	7,250
Illinois	3,460	0	6,230	9,690	19,340	29,030
Indiana	3,090	30	5,930	9,050	13,460	22,510
lowa	2,310	10 10	4,090	6,410	7,340	13,750
Kansas Kentucky	1,430 2,350	10	2,420 3,760	3,860 6,110	5,540 5,210	9,400 11,320
Louisiana	1,060	70	2,080	3,210	5,660	8,870
Maine <sup>a</sup>	620	240	310	1,170	840	2,010
Maryland	1,210	*	2,310	3,520	6,600	10,120
Massachusetts	1,420	120	2,110	3,650	8,460	12,110
Michigan	3,030	20	5,070	8,120	15,080	23,200
Minnesota	1,550	50	2,570	4,170	8,700	12,870
Mississippi	820	10	1,500	2,330	3,700	6,030
Missouri	3,460	130	5,670	9,260	13,070	22,330
Montana	1,140	60	1,680	2,880	3,460	6,340
Nebraska Nevada	810	20 150	3,180	4,010	5,820	9,830
New Hampshire	1,350 750	0	1,280 1,030	2,780 1,780	3,810 2,460	6,590 4,240
New Jersey	1,630	10	3,950	5,590	11,760	17,350
New Mexico	1,490	70	2,970	4,530	4,890	9,420
New York	5,100	30	9,900	15,030	25,790	40,820
North Carolina	3,960	150	7,690	11,800	17,610	29,410
North Dakota	580	0	760	1,340	1,650	2,990
Ohio	3,660	*	5,720	9,380	17,610	26,990
Oklahoma	2,500	20	3,870	6,390	7,770	14,160
Oregon	2,480	30	3,910	6,420	9,150	15,570
Pennsylvania Rhode Island	6,520 370	0	9,310 400	15,830 770	23,810 1,350	39,640 2,120
South Carolina	1,500	0	2,320	3,820	6,220	10,040
South Dakota	780	10	1,100	1,890	2,190	4,080
Tennessee	2,460	160	4,430	7,050	11,130	18,180
Texas	8,930	170	16,150	25,250	42,850	68,100
Utah	1,860	280	2,570	4,710	8,080	12,790
Vermont	880	0	1,190	2,070	2,160	4,230
Virginia	2,580	*	6,020	8,600	13,080	21,680
Washington	2,590	220	3,860	6,670	10,620	17,290
West Virginia <sup>a</sup>	810	2,300	1,400	4,510	1,340	5,850
Wisconsin Wyoming	2,940 2,360	120 30	4,590 4,360	7,650 6,750	12,010 4,110	19,660 10,860
**yoning	2,300	30	4,300	0,730	4,110	10,000
Total Operations	114,000	6,030	202,310	322,290	514,840	837,130

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Employment is defined as the number of payroll and self-employed jobs, including part-time jobs. Figures have been rounded to the nearest 10 employees. Detail may not round to totals due to rounding. An asterisk (\*) denotes fewer than 5 employees.

<sup>&</sup>lt;sup>a</sup> Direct employment figures for Alaska, California, Florida, Maine and West Virginia have been adjusted to be consistent with MSHA employment data.

<sup>&</sup>lt;sup>b</sup> Direct includes mining, support activities for mining, and transportation of minerals from mines to customers.

Table 12b. Contribution of U.S. Non-Metallic Mining to GDP by State, 2008 (Dollar amounts in millions)

	(2011011	amounts in iii		
State	Direct Contribution to GDP	Indirect and Induced	Total Contribution	Total Contribution as a % of State GDP
		<b>.</b>		
Alabama	\$631	\$651	\$1,282	0.7%
Alaska	74	84	158	0.4%
Arizona	652	975	1,627	0.7%
Arkansas	455	399	854	0.9%
California	1,744	4,604	6,348	0.3%
Colorado	577	944	1,521	0.6%
Connecticut	346	618	964	0.4%
Delaware	11	78	88	0.2%
District of Columbia	2	133	135	0.1%
Florida	1,406	2,370	3,776	0.5%
Georgia	1,448	1,951	3,399	0.8%
Hawaii	170	196	367	0.6%
Idaho	268	214	482	0.9%
Illinois	988	1,922	2,909	0.4%
Indiana	937	986	1,923	0.4%
lowa	590	505	1,094	0.7%
			·	
Kansas	374	437	812	0.6%
Kentucky	583	253	836	0.5%
Louisiana	286	506	792	0.4%
Maine	43	105	148	0.3%
Maryland	368	617	985	0.3%
Massachusetts	372	924	1,296	0.3%
Michigan	762	1,300	2,061	0.5%
Minnesota	373	792	1,165	0.4%
Mississippi	192	245	438	0.5%
Missouri	899	989	1,888	0.7%
Montana	292	208	499	1.3%
Nebraska	484	399	883	1.1%
Nevada	424	291	715	0.6%
New Hampshire	158	210	369	0.6%
New Jersey	698	1,324	2,023	0.4%
New Mexico	436	322	759	1.1%
New York	1,569	3,217	4,787	0.4%
North Carolina	1,117	1,319	2,436	0.6%
North Dakota	121	114	2,430	0.7%
Ohio	922	1,328	2,251	0.7%
Oklahoma	922 564	676	1,239	0.8%
		682		
Oregon	592 1 617		1,275	0.8%
Pennsylvania	1,617	2,061	3,678	0.6%
Rhode Island	60	116	176	0.4%
South Carolina	327	437	763	0.5%
South Dakota	161	144	304	0.9%
Tennessee	736	867	1,603	0.6%
Texas	2,268	4,725	6,993	0.5%
Utah	532	489	1,020	1.0%
Vermont	187	149	335	1.3%
Virginia	894	1,064	1,956	0.5%
Washington	613	973	1,587	0.5%
West Virginia	286	198	484	0.8%
Wisconsin	745	875	1,619	0.7%
Wyoming	809	254	1,062	3.4%
Total Operations	\$31,162	\$45,237	\$76,398	0.5%

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database). Includes Support Activities attributable to non-metallic mining. Detail may not add to totals due to rounding.

Table 12c. Contribution of U.S. Non-Metallic Mining to Labor Income by State, 2008 (Dollar amounts in millions)

	(Donai	amounts in m	1110113)	
State	Direct Labor Income	Indirect and Induced	Total Contribution	Total Contribution as a % of State Total Labor Income
	<b>#</b> 400	0004	Φ <b>7</b> 0.4	0.70/
Alabama	\$408	\$384	\$791	0.7%
Alaska	45	43	87	0.4%
Arizona	408	570	977	0.6%
Arkansas California	302 1,152	240 2,777	541 3,929	0.9% 0.3%
Colorado	375	2,777 548	923	0.6%
Connecticut	375 249	379	628	0.6%
Delaware	8	49	56	0.4%
District of Columbia	1	97	98	0.1%
Florida	881	1,390	2,273	0.5%
Georgia	962	1,150	2,113	0.8%
Hawaii	111	116	227	0.6%
Idaho	171	132	303	0.9%
Illinois	643	1,159	1,802	0.4%
Indiana	616	577	1,193	0.7%
lowa	378	292	670	0.8%
Kansas	243	252	494	0.6%
Kentucky	358	161	519	0.5%
Louisiana	184	285	469	0.4%
Maine	29	63	93	0.3%
Maryland	240	378	618	0.3%
Massachusetts	250	590	839	0.3%
Michigan	503	781	1,284	0.5%
Minnesota	255	463	720	0.4%
Mississippi	133	143	276	0.5%
Missouri	566	594	1,160	0.7%
Montana	181	110	289	1.2%
Nebraska	322	236	559	1.1%
Nevada	217	131	347	0.4%
New Hampshire	107	127	234	0.6%
New Jersey	462	793	1,256	0.4%
New Mexico	260	190	450	1.0%
New York	1,021	2,017	3,039	0.4%
North Carolina	706	783	1,489	0.6%
North Dakota	88	64	153	0.8%
Ohio	586	819	1,405	0.5%
Oklahoma	363	367	729	0.8%
Oregon Pennsylvania	399 1,029	408 1,250	808 2,279	0.8% 0.6%
Rhode Island	1,029	1,250 71	2,279	
South Carolina	210	258	468	0.4% 0.5%
South Dakota	109	83	192	0.5%
Tennessee	479	530	1,009	0.6%
Texas	1,513	2,527	4,040	0.5%
Utah	307	298	605	0.9%
Vermont	125	88	213	1.2%
Virginia	571	647	1,217	0.5%
Washington	407	581	987	0.5%
West Virginia	159	132	292	0.8%
Wisconsin	495	528	1,023	0.7%
Wyoming	502	123	625	3.5%
Total Operations	\$20,128	\$26,774	\$46,903	0.5%

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Labor income includes wages and salaries and benefits as well as proprietors' income. Includes Support Activities attributable to non-metallic mining. Detail may not add to totals due to rounding.

#### VI. Methodology

To evaluate the overall economic contribution of U.S. mining, we followed two general steps: first, derive the direct impacts of mining; and second, adjust the IMPLAN model to capture a more complete estimate of the overall impact.

#### A. Derivation of Direct Impacts

As described in the report, the IMPLAN model produces economic multipliers to calculate the overall economic contribution of U.S. mining in terms of the direct, indirect and induced impacts. For U.S. mining, the codes in the IMPLAN model align with the NAICS codes presented in the report for the definition of the U.S. mining industry (see Appendix D). Therefore, we relied on the direct impacts as estimated by the model for the relevant industry codes.

The IMPLAN model relies on employment data from the U.S. Bureau of Economic Analysis (BEA), which are derived from employer filings under the government's Unemployment Insurance program and from tax filings by the self-employed. These figures are estimated to be consistent across all industries and consistent with the Bureau of Economic Analysis' National Income and Product Accounts (NIPAs).

The Mine Safety and Health Administration (MSHA) also collects information on mine industry employment. In many cases, the MSHA figures differ from the totals provided by the BEA. A portion of this difference is attributable to different definitions used by the two agencies. In cases where the overall direct mining employment in the IMPLAN model is less than the overall total reported by MSHA, we have reclassified "indirect and induced" workers to be "direct" workers to more closely align the data. This adjustment, which only affected Alaska, California, Florida, Maine and West Virginia, did not affect the total employment attributable to the industry. To reflect the lack of agreement in the government data sources, we have rounded employment to the nearest 10 employees.

The BEA classifies contractor activity closely related to mining, such as contract blasting and drilling, in the "Support Activities for Mining" sector (NAICS 213113, 213114, and 213115). These codes also include some activity completed by the mine operator on a fee or contract basis. More generalized services that could be offered to a variety of industries are classified in the industry code associated with the activity, such as Construction (NAICS 23). The IMPLAN model does not break the Support Activities for Mining sector into the coal, metal, and non-metallic minerals segments. We allocated the overall activity to the segments based on national estimates from the Bureau of Labor Statistics and the direct employment of mine workers in each segment.

Other federal sources of information offer different estimates of certain measures.

Data on the contribution to GDP, labor income, and taxes paid by state are derived from the IMPLAN model, which is based on BEA data.

#### B. Adjustments to IMPLAN Model

Economic multipliers are designed to measure the overall change in production that would result from a marginal increase in a particular industry. For example, an output multiplier converts a \$1 million increase in output of the mining sector into the total change in output throughout the supply chain. Because some suppliers of U.S. mining might rely on mining for inputs, a marginal change in the mining sector could lead to an additional change in mining activity attributable to the goods it provides its suppliers throughout the economy. While this impact is appropriate to include when modeling a marginal change, when evaluating the overall impact of the industry, these indirect, own-industry impacts should be excluded to prevent double-counting. Therefore, we have adjusted the IMPLAN model results to exclude any indirect or induced effects taking place in the mining industry.

As with other I-O models, the IMPLAN model does not provide a full description of the impact of the mining sector. I-O models only capture the linkages associated with current expenditures and exclude capital expenditures. Any investments in long-lived capital assets (essentially goods with use lives over a year), such as a truck or a drill, are not reflected in the IMPLAN multipliers.

To estimate the contribution of capital expenditures, we relied on Census Bureau data from the Annual Capital Expenditure Survey for the mining industry for 2008 (the most recent year available). This survey provides information on the total amount of capital spending by U.S. mining. We allocate this spending to the industry producing the capital goods based on the capital flow matrix (the "B-matrix") developed by the BEA. We then estimate the indirect and induced effects of the capital spending in those industries based on the IMPLAN multipliers. Because the allocation of capital spending to the supplying industries is only available on a national basis, we have not provided a state breakdown of these expenditures.

I-O models capture the upstream relationships, but certain downstream impacts are not reflected in economic multipliers. Some of these effects, such as the transportation of mine output to the purchaser, could be attributable to U.S. mining. To capture the economic activity associated with the transportation of mining output, we have relied on sector-specific transportation margins in the IMPLAN model. Based on these margins, we have estimated the direct, indirect, and induced economic activity associated with this activity at a state level.

Because IMPLAN state models capture only the indirect and induced effects within each state, the indirect and induced effects crossing state borders ("cross-state spillover effects") are not captured by the IMPLAN state models. As such, if not adjusted, the state-level indirect and induced impacts calculated by the IMPLAN state models would not add up to the overall impact captured by the national model, which includes the cross-state effects. We allocated the cross-state indirect and induced employment, labor income, and contribution to GDP effects across the 50 states and the District of Columbia in proportion to each state's share of the total national employment, labor income, and contribution to GDP by industry. The state indirect and induced effects reported throughout this study include such allocation of the cross-state spillover effects.

# Appendix A. NAICS Definition of U.S. Mining

Mining Division	Detail	NAICS Code	Description
Coal	Bituminous Coal and Lignite Surface Mining Bituminous Coal Underground Mining Anthracite Mining	212111 212112 212113	This segment includes establishments engaged in: (1) mining bituminous coal, anthracite, and lignite by underground mining, auger mining, strip mining, culm bank mining, and other surface mining; (2) developing coal mine sites; and (3) beneficiating (i.e., preparing) coal.
Metal Ore Mining	Iron Ore Mining Gold Ore Mining Silver Ore Mining Lead Ore and Zinc Ore Mining Copper Ore and Nickel Ore Mining Uranium-Radium-Vanadium Ore Mining All Other Metal Ore Mining	212210 212221 212222 212231 212234 212291 212299	This segment includes establishments primarily engaged in developing mine sites or mining metallic minerals, and establishments primarily engaged in ore dressing and beneficiating operations, such as crushing, grinding, washing, etc. Beneficiating may be performed at mills operated in conjunction with the mines served or at mills operated separately.
Non-metallic Mineral Mining and Quarrying	Dimension Stone Mining/Quarrying Crushed/Broken Limestone Mining/Quarrying Crushed/Broken Granite Mining/Quarrying Other Crushed, Broken Stone Mining/Quarry Construction Sand and Gravel Mining Industrial Sand Mining Kaolin and Ball Clay Mining Clay, Ceramic, Refractory Minerals Mining Potash, Soda, and Borate Mineral Mining Phosphate Rock Mining Other Chemical and Fertilizer Mineral Mining All Other Non-metallic Mineral Mining	212311 212312 212313 212319 212321 212322 212324 212325 212392 212392 212393 212399	This segment includes establishments primarily engaged in developing mine sites, or in mining or quarrying non-metallic minerals (except fuels). Also included are certain well and brine operations, and preparation plants primarily engaged in beneficiating non-metallic minerals.
Support Activities for Coal, Metal, and Non-metallic Mining	Support Activities for Coal Mining Support Activities for Metal Mining Support Activities for Non-metallic Minerals Mining	213113 213114 213115	This segment includes establishments primarily engaged in providing support activities for coal, metal, and non-metallic mining (except site preparation and related construction activities) on a contract or fee basis.  Exploration for coal is included in this industry. Contract activities can be performed in-house by mining operators.

Source: Census Bureau, North American Industry Classification System.

#### Appendix B: The IMPLAN Model

IMPLAN is a well known modeling system developed by the Minnesota IMPLAN Group for estimating economic impacts and is similar to the Regional Input-Output Modeling System developed by the U.S. Department of Commerce. The model is primarily based on government data sources. It can address a wide range of impact topics in a given region (county, state, or the country as a whole).

IMPLAN is built around an "input-output" table that relates the purchases that each industry has made from other industries to the value of the output of each industry. To meet the demand for goods and services from an industry, purchases are made in other industries according to the patterns recorded in the input-output table. These purchases in turn spark still more purchases by the industry's suppliers, and so on. Meanwhile, employees and business owners make personal purchases out of the additional income that is generated by this process, further increasing demand that ripples through the economy. Multipliers describe these iterations. The Type I multiplier measures the direct and indirect effects of a change in economic activity. It captures the inter-industry effects only, i.e. industries buying from local industries. The SAM (Social Accounting Matrix) multiplier captures the direct and indirect effects. In addition, it also reflects induced effects (i.e., changes in spending from households as income increases or decreases due to the changes in production).

# Appendix C. Additional Detail by State

Table A-1. Total Tax Contribution of U.S. Mining by State and Segment, 2008

(Dollar amounts in millions)

(Dollar amounts in m		Overall Tax Contribution		State and	Local Tax Con	tribution
<b>-</b>			Non-Metallic			Non-Metallic
State	<b>Coal Mining</b>	Metal Mining	Mining	Coal Mining	<b>Metal Mining</b>	Mining
Alabama	\$701	\$34	\$323	\$341	\$15	\$127
Alaska	23	376	67	12	215	33
Arizona	127	1,331	479	54	646	189
Arkansas	47	35	198	20	16	75
California	771	367	1,779	335	164	744
Colorado	568	485	433	253	213	166
Connecticut	97	39	274	34	14	92
Delaware	20	7	25	8	3	10
District of Columbia	44	16	47	13	5	14
Florida	263	146	882	103	61	310
Georgia	162	62	817	66	26	308
Hawaii	19	8	89	9	4	38
Idaho	32	167	126	13	80	49
Illinois	776	107	764	334	42	282
Indiana	646	40	472	313	16	182
Iowa	53	19	248	21	8	90
Kansas	70	20	187	28	8	70
Kentucky	1,742	33	271	908	15	119
Louisiana	99	82	187	46	40	78
Maine	18	7	37	8	3	16
Maryland	155	46	268	68	20	107
Massachusetts	163	63	362	61	24	133
Michigan	158	307	532	66	147	215
Minnesota	123	792	359	49	367	144
Mississippi Misservi	43	13 154	101 462	20 89	6 71	42 172
Missouri Montana	205 131	365	462 150	62	175	61
Mebraska	60	23	198	21	173	72
Nevada	58	1,213	286	21	520	102
New Hampshire	23	9	91	9	4	30
New Jersev	204	82	548	77	31	193
New Mexico	168	251	201	89	136	89
New York	553	270	1,395	235	123	594
North Carolina	144	57	593	61	25	230
North Dakota	134	5	61	63	2	22
Ohio	545	78	582	263	34	245
Oklahoma	94	56	281	42	26	107
Oregon	65	33	333	28	15	135
Pennsylvania	1,605	107	959	744	44	363
Rhode Island	16	7	45	7	3	18
South Carolina	55	24	182	24	10	71
South Dakota	13	25	68	5	11	22
Tennessee	128	127	365	47	55	117
Texas	1,012		1,626	421	127	588
Utah	318	207	280	147	97	107
Vermont	9	4	78	4	2	29
Virginia	1,134	100	534	524	42	201
Washington	124	122	377	43	49	118
West Virginia	1,823	25	186	970	11	86
Wisconsin	97	38	408	41	16	164
Wyoming	816	30	271	395	13	93
Total Operations	\$16,456	\$8,318	\$19,888	\$7,614	\$3,812	\$7,663

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Alabama, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$1,866	\$29	\$631	\$2,526
Indirect and Induced	\$1,000	\$125	\$651	\$1,776
Total	\$2,866	\$154	\$1,282	\$4,302
Employment				
Direct				
Mine Workers	4,150	70	2,190	6,410
Support Activities	20	0	40	60
Transportation	4,250	90	4,330	8,670
Total Direct	8,420	160	6,560	15,140
Indirect and Induced	14,050	1,510	9,110	24,670
Total	22,470	1,670	15,670	39,810
Labor Income (\$millions)				
Direct	\$936	\$12	\$408	\$1,356
Indirect and Induced	\$591	\$75	\$384	\$1,050
Total	\$1,527	\$87	\$791	\$2,405
Average State Labor Income				
Mining Direct	\$111,204	\$72,749	\$62,198	\$89,542
State Average, All Industries	\$44,040	\$44,040	\$44,040	\$44,040
Tax Contribution (\$millions)				
Overall	\$701	\$34	\$323	\$1,058
State and Local Only	\$341	\$15	\$127	\$482

Mining in Alaska, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Measure	Coar mining	Metal Milling	Milling	All lilling
Contribution to GDP (\$millions)				
Direct	\$22	\$1,074	\$74	\$1,170
Indirect and Induced	\$64	\$427	\$84	\$574
Total	\$86	\$1,501	\$158	\$1,745
Employment				
Direct				
Mine Workers	80	2,350	230	2,660
Support Activities	20	70	30	120
Transportation	0	2,250	430	2,680
Total Direct	100	4,670	690	5,460
Indirect and Induced	660	4,620	900	6,180
Total	760	9,290	1,590	11,640
Labor Income (\$millions)				
Direct	\$11	\$402	\$45	\$458
Indirect and Induced	\$37	\$244	\$43	\$324
Total	\$48	\$646	\$87	\$781
Average State Labor Income				
Mining Direct	\$108,729	\$86,039	\$65,003	\$83,796
State Average, All Industries	\$54,640	\$54,640	\$54,640	\$54,640
Tax Contribution (\$millions)				
Overall	\$23	\$376	\$67	\$466
State and Local Only	\$12	\$215	\$33	\$261

Mining in Arizona, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$112	\$3,965	\$652	\$4,729
Indirect and Induced	\$429	\$1,921	\$975	\$3,325
Total	\$541	\$5,886	\$1,627	\$8,054
Employment				
Direct				
Mine Workers	200	8,710	2,250	11,160
Support Activities	30	100	30	160
Transportation	300	9,630	4,320	14,250
Total Direct	530	18,440	6,600	25,570
Indirect and Induced	5,020	24,820	12,510	42,350
Total	5,550	43,260	19,110	67,920
Labor Income (\$millions)				
Direct	\$52	\$1,451	\$408	\$1,911
Indirect and Induced	\$251	\$1,133	\$570	\$1,954
Total	\$303	\$2,584	\$977	\$3,865
Average State Labor Income				
Mining Direct	\$99,005	\$78,678	\$61,774	\$74,719
State Average, All Industries	\$46,590	\$46,590	\$46,590	\$46,590
Tax Contribution (\$millions)				
Overall	\$127	\$1,331	\$479	\$1,938
State and Local Only	\$54	\$646	\$189	\$890

Mining in Arkansas, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$60	\$78	\$455	\$593
Indirect and Induced	\$158	\$88	\$399	\$645
Total	\$218	\$166	\$854	\$1,239
Employment				
Direct				
Mine Workers	50	140	2,220	2,410
Support Activities	10	0	10	20
Transportation	230	210	3,200	3,640
Total Direct	290	350	5,430	6,070
Indirect and Induced	2,170	1,250	6,090	9,510
Total	2,460	1,600	11,520	15,580
Labor Income (\$millions)				
Direct	\$27	\$29	\$302	\$358
Indirect and Induced	\$95	\$53	\$240	\$388
Total	\$122	\$83	\$541	\$746
Average State Labor Income				
Mining Direct	\$92,481	\$84,207	\$55,563	\$58,924
State Average, All Industries	\$39,310	\$39,310	\$39,310	\$39,310
Tax Contribution (\$millions)				
Overall	\$47	\$35	\$198	\$280
State and Local Only	\$20	\$16	\$75	\$111

Mining in California, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$185	\$179	\$1,744	\$2,107
Indirect and Induced	\$2,830	\$1,264	\$4,604	\$8,698
Total	\$3,015	\$1,442	\$6,348	\$10,805
Employment				
Direct				
Mine Workers	*	340	6,750	7,090
Support Activities	60	0	40	100
Transportation	740	460	11,440	12,640
Total Direct	800	800	18,220	19,830
Indirect and Induced	26,860	11,700	44,700	83,260
Total	27,670	12,500	62,920	103,090
Labor Income (\$millions)				
Direct	\$79	\$69	\$1,152	\$1,300
Indirect and Induced	\$1,727	\$768	\$2,777	\$5,271
Total	\$1,806	\$836	\$3,929	\$6,571
Average State Labor Income				
Mining Direct	\$99,326	\$85,879	\$63,218	\$65,574
State Average, All Industries	\$58,190	\$58,190	\$58,190	\$58,190
Tax Contribution (\$millions)				
Overall	\$771	\$367	\$1,779	\$2,916
State and Local Only	\$335	\$164	\$744	\$1,244

# Mining in Colorado, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$1,101	\$1,384	\$577	\$3,063
Indirect and Induced	\$1,161	\$878	\$944	\$2,983
Total	\$2,263	\$2,263	\$1,521	\$6,046
Employment				
Direct				
Mine Workers	2,490	1,430	2,010	5,930
Support Activities	240	50	60	350
Transportation	2,350	3,390	3,600	9,340
Total Direct	5,080	4,870	5,670	15,620
Indirect and Induced	12,540	9,700	10,350	32,590
Total	17,620	14,570	16,020	48,210
Labor Income (\$millions)				
Direct	\$548	\$531	\$375	\$1,454
Indirect and Induced	\$693	\$522	\$548	\$1,763
Total	\$1,241	\$1,053	\$923	\$3,217
Average State Labor Income				
Mining Direct	\$107,829	\$109,092	\$66,129	\$93,072
State Average, All Industries	\$53,080	\$53,080	\$53,080	\$53,080
Tax Contribution (\$millions)				
Overall	\$568	\$485	\$433	\$1,486
State and Local Only	\$253	\$213	\$166	\$632

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Connecticut, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$8	\$1	\$346	\$355
Indirect and Induced	\$358	\$147	\$618	\$1,123
Total	\$367	\$147	\$964	\$1,478
Employment				
Direct				
Mine Workers	0	0	900	900
Support Activities	0	0	60	60
Transportation	40	0	1,910	1,950
Total Direct	40	0	2,870	2,910
Indirect and Induced	2,790	1,110	5,230	9,130
Total	2,830	1,110	8,100	12,040
Labor Income (\$millions)				
Direct	\$4	\$0	\$249	\$253
Indirect and Induced	\$230	\$92	\$379	\$700
Total	\$233	\$92	\$628	\$953
Average State Labor Income				
Mining Direct	\$89,551	NA	\$86,767	\$86,895
State Average, All Industries	\$66,540	\$66,540	\$66,540	\$66,540
Tax Contribution (\$millions)				
Overall	\$97	\$39	\$274	\$411
State and Local Only	\$34	\$14	\$92	\$141

Mining in Delaware, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$12	\$1	\$11	\$23
Indirect and Induced	\$73	\$28	\$78	\$180
Total	\$85	\$29	\$88	\$202
Employment				
Direct				
Mine Workers	0	0	50	50
Support Activities	0	0	0	0
Transportation	60	0	70	130
Total Direct	60	0	120	180
Indirect and Induced	710	280	770	1,760
Total	770	280	890	1,940
Labor Income (\$millions)				
Direct	\$5	\$0	\$8	\$13
Indirect and Induced	\$47	\$18	\$49	\$113
Total	\$51	\$18	\$56	\$126
Average State Labor Income				
Mining Direct	\$82,507	NA	\$65,077	\$70,630
State Average, All Industries	\$54,510	\$54,510	\$54,510	\$54,510
Tax Contribution (\$millions)				
Overall	\$20	\$7	\$25	\$53
State and Local Only	\$8	\$3	\$10	\$21

Mining in District of Columbia, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$26	\$1	\$2	\$30
Indirect and Induced	\$129	\$52	\$133	\$314
Total	\$155	\$54	\$135	\$344
Employment				
Direct				
Mine Workers	0	0	0	0
Support Activities	0	0	0	0
Transportation	120	10	0	130
Total Direct	120	10	0	130
Indirect and Induced	930	380	930	2,240
Total	1,050	390	930	2,370
Labor Income (\$millions)				
Direct	\$11	\$1	\$1	\$13
Indirect and Induced	\$93	\$39	\$97	\$229
Total	\$105	\$39	\$98	\$242
Average State Labor Income				
Mining Direct	\$94,295	\$55,048	NA	\$98,330
State Average, All Industries	\$96,290	\$96,290	\$96,290	\$96,290
Tax Contribution (\$millions)				
Overall	\$44	\$16	\$47	\$106
State and Local Only	\$13	\$5	\$14	\$32

Mining in Florida, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$103	\$157	\$1,406	\$1,666
Indirect and Induced	\$1,064	\$507	\$2,370	\$3,941
Total	\$1,167	\$664	\$3,776	\$5,607
Employment				
Direct				
Mine Workers	*	160	4,070	4,230
Support Activities	40	0	30	80
Transportation	380	500	11,960	12,840
Total Direct	420	660	16,060	17,150
Indirect and Induced	13,090	6,240	30,740	50,070
Total	13,520	6,900	46,800	67,220
Labor Income (\$millions)				
Direct	\$45	\$62	\$881	\$989
Indirect and Induced	\$628	\$299	\$1,390	\$2,317
Total	\$673	\$361	\$2,273	\$3,307
Average State Labor Income				
Mining Direct	\$107,712	\$94,416	\$54,885	\$57,687
State Average, All Industries	\$44,270	\$44,270	\$44,270	\$44,270
Tax Contribution (\$millions)				
Overall	\$263	\$146	\$882	\$1,292
State and Local Only	\$103	\$61	\$310	\$474

Mining in Georgia, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$93	\$5	\$1,448	\$1,546
Indirect and Induced	\$630	\$264	\$1,951	\$2,845
Total	\$723	\$269	\$3,399	\$4,391
Employment				
Direct				
Mine Workers	0	0	5,670	5,670
Support Activities	0	0	1,150	1,150
Transportation	390	30	10,300	10,720
Total Direct	390	30	17,120	17,540
Indirect and Induced	7,180	2,940	23,430	33,550
Total	7,570	2,970	40,550	51,090
Labor Income (\$millions)				
Direct	\$40	\$2	\$962	\$1,004
Indirect and Induced	\$373	\$155	\$1,150	\$1,678
Total	\$413	\$157	\$2,113	\$2,682
Average State Labor Income				
Mining Direct	\$102,159	\$65,883	\$56,202	\$57,267
State Average, All Industries	\$47,920	\$47,920	\$47,920	\$47,920
Tax Contribution (\$millions)				
Overall	\$162	\$62	\$817	\$1,040
State and Local Only	\$66	\$26	\$308	\$400

## Mining in Hawaii, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$0	\$1	\$170	\$171
Indirect and Induced	\$78	\$32	\$176 \$196	\$307
Total	\$78	\$33	\$367	\$478
Employment				
Direct				
Mine Workers	0	0	380	380
Support Activities	0	0	0	0
Transportation	0	0	1,090	1,090
Total Direct	0	0	1,470	1,470
Indirect and Induced	1,010	410	2,540	3,960
Total	1,010	410	4,010	5,430
Labor Income (\$millions)				
Direct	\$0	\$0	\$111	\$111
Indirect and Induced	\$47	\$20	\$116	\$183
Total	\$48	\$20	\$227	\$294
Average State Labor Income				
Mining Direct	NA	NA	\$75,208	\$75,247
State Average, All Industries	\$48,500	\$48,500	\$48,500	\$48,500
Tax Contribution (\$millions)				
Overall	\$19	\$8	\$89	\$116
State and Local Only	\$9	\$4	\$38	\$50

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Idaho, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$33	\$556	\$268	\$857
Indirect and Induced	\$118	\$231	\$214	\$563
Total	\$151	\$787	\$482	\$1,420
Employment				
Direct				
Mine Workers	0	1,280	1,440	2,720
Support Activities	90	50	50	190
Transportation	70	1,440	1,940	3,450
Total Direct	160	2,770	3,430	6,360
Indirect and Induced	1,480	3,610	3,820	8,910
Total	1,640	6,380	7,250	15,270
Labor Income (\$millions)				
Direct	\$13	\$208	\$171	\$392
Indirect and Induced	\$67	\$141	\$132	\$340
Total	\$80	\$348	\$303	\$732
Average State Labor Income				
Mining Direct	\$81,639	\$74,930	\$49,965	\$61,584
State Average, All Industries	\$37,920	\$37,920	\$37,920	\$37,920
Tax Contribution (\$millions)				
Overall	\$32	\$167	\$126	\$325
State and Local Only	\$13	\$80	\$49	\$143

Mining in Illinois, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Measure	ooai iiiiiiiiig	metal milling	Milling	All lilling
Contribution to GDP (\$millions)				
Direct	\$1,244	\$10	\$988	\$2,242
Indirect and Induced	\$1,902	\$446	\$1,922	\$4,270
Total	\$3,146	\$457	\$2,909	\$6,512
Employment				
Direct				
Mine Workers	3,380	0	3,460	6,840
Support Activities	340	0	0	340
Transportation	2,980	50	6,230	9,260
Total Direct	6,700	50	9,690	16,440
Indirect and Induced	19,030	4,090	19,340	42,460
Total	25,730	4,140	29,030	58,900
Labor Income (\$millions)				
Direct	\$600	\$4	\$643	\$1,248
Indirect and Induced	\$1,157	\$270	\$1,159	\$2,586
Total	\$1,757	\$274	\$1,802	\$3,834
Average State Labor Income				
Mining Direct	\$89,559	\$89,359	\$66,407	\$75,905
State Average, All Industries	\$56,100	\$56,100	\$56,100	\$56,100
Tax Contribution (\$millions)				
Overall	\$776	\$107	\$764	\$1,646
State and Local Only	\$334	\$42	\$282	\$658

Mining in Indiana, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (fmillions)				
Contribution to GDP (\$millions)  Direct	\$1,597	\$4	\$937	\$2,539
Indirect and Induced	\$1,060	\$180	\$986	\$2,539 \$2,226
Total	\$1,000 \$2,657	\$184	\$1,923	\$4,765
Total	Ψ2,037	Ψ104	Ψ1,923	ψ4,703
Employment				
Direct				
Mine Workers	3,020	0	3,090	6,110
Support Activities	50	0	30	80
Transportation	3,600	20	5,930	9,550
Total Direct	6,670	20	9,050	15,740
Indirect and Induced	14,250	2,040	13,460	29,750
Total	20,920	2,060	22,510	45,490
Labor Income (\$millions)				
Direct	\$802	\$2	\$616	\$1,420
Indirect and Induced	\$626	\$106	\$577	\$1,309
Total	\$1,428	\$108	\$1,193	\$2,729
Average State Labor Income				
Mining Direct	\$120,276	\$93,137	\$68,055	\$90,229
State Average, All Industries	\$45,250	\$45,250	\$45,250	\$45,250
Tax Contribution (\$millions)				
Overall	\$646	\$40	\$472	\$1,158
State and Local Only	\$313	\$16	\$182	\$512

Mining in Iowa, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$46	\$2	\$590	\$638
Indirect and Induced	\$209	\$88	\$505	\$801
Total	\$255	\$90	\$1,094	\$1,439
Employment				
Direct				
Mine Workers	0	0	2,310	2,310
Support Activities	0	0	10	10
Transportation	200	10	4,090	4,300
Total Direct	200	10	6,410	6,620
Indirect and Induced	2,630	1,110	7,340	11,080
Total	2,830	1,120	13,750	17,700
Labor Income (\$millions)				
Direct	\$20	\$1	\$378	\$399
Indirect and Induced	\$118	\$49	\$292	\$460
Total	\$138	\$50	\$670	\$859
Average State Labor Income				
Mining Direct	\$98,864	\$96,905	\$59,011	\$60,269
State Average, All Industries	\$40,780	\$40,780	\$40,780	\$40,780
Tax Contribution (\$millions)				
Overall	\$53	\$19	\$248	\$320
State and Local Only	\$21	\$8	\$90	\$119

## Mining in Kansas, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$110	\$3	\$374	\$487
Indirect and Induced	\$221	\$88	\$437	\$746
Total	\$330	\$92	\$812	\$1,234
Employment				
Direct				
Mine Workers	90	0	1,430	1,520
Support Activities	0	0	10	10
Transportation	380	20	2,420	2,820
Total Direct	470	20	3,860	4,350
Indirect and Induced	2,570	980	5,540	9,090
Total	3,040	1,000	9,400	13,440
Labor Income (\$millions)				
Direct	\$50	\$1	\$243	\$294
Indirect and Induced	\$126	\$50	\$252	\$428
Total	\$176	\$51	\$494	\$722
Average State Labor Income				
Mining Direct	\$106,247	\$74,621	\$62,842	\$67,698
State Average, All Industries	\$44,420	\$44,420	\$44,420	\$44,420
Tax Contribution (\$millions)				
Overall	\$70	\$20	\$187	\$277
State and Local Only	\$28	\$8	\$70	\$107

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Kentucky, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$4,150	\$3	\$583	\$4,735
Indirect and Induced	\$2,276	\$139	\$253	\$2,668
Total	\$6,426	\$141	\$836	\$7,403
Employment				
Direct				
Mine Workers	16,240	0	2,350	18,590
Support Activities	1,390	0	*	1,390
Transportation	7,430	10	3,760	11,200
Total Direct	25,060	10	6,110	31,180
Indirect and Induced	31,360	1,530	5,210	38,100
Total	56,420	1,540	11,320	69,280
Labor Income (\$millions)				
Direct	\$2,107	\$1	\$358	\$2,467
Indirect and Induced	\$1,355	\$78	\$161	\$1,594
Total	\$3,463	\$79	\$519	\$4,061
Average State Labor Income				
Mining Direct	\$84,095	\$119,342	\$58,655	\$79,128
State Average, All Industries	\$43,220	\$43,220	\$43,220	\$43,220
Tax Contribution (\$millions)				
Overall	\$1,742	\$33	\$271	\$2,046
State and Local Only	\$908	\$15	\$119	\$1,042

Mining in Louisiana, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$125	\$185	\$286	\$596
Indirect and Induced	\$330	\$207	\$506	\$1,043
Total	\$455	\$393	\$792	\$1,639
Employment				
Direct				
Mine Workers	160	220	1,060	1,440
Support Activities	0	10	70	80
Transportation	370	530	2,080	2,980
Total Direct	530	760	3,210	4,500
Indirect and Induced	3,570	2,270	5,660	11,500
Total	4,100	3,030	8,870	16,000
Labor Income (\$millions)				
Direct	\$60	\$74	\$184	\$317
Indirect and Induced	\$187	\$118	\$285	\$590
Total	\$247	\$191	\$469	\$907
Average State Labor Income				
Mining Direct	\$112,620	\$96,830	\$57,234	\$70,390
State Average, All Industries	\$46,580	\$46,580	\$46,580	\$46,580
Tax Contribution (\$millions)				
Overall	\$99	\$82	\$187	\$369
State and Local Only	\$46	\$40	\$78	\$164

Mining in Maine, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$6	\$0	\$43	\$49
Indirect and Induced	\$70	\$29	\$105	\$205
Total	\$76	\$30	\$148	\$254
Employment				
Direct				
Mine Workers	0	0	620	620
Support Activities	0	0	240	240
Transportation	30	0	310	340
Total Direct	30	0	1,170	1,200
Indirect and Induced	990	410	840	2,240
Total	1,020	410	2,010	3,440
Labor Income (\$millions)				
Direct	\$3	\$0	\$29	\$32
Indirect and Induced	\$43	\$18	\$63	\$123
Total	\$45	\$18	\$93	\$156
Average State Labor Income				
Mining Direct	\$86,380	NA	\$25,022	\$27,047
State Average, All Industries	\$39,610	\$39,610	\$39,610	\$39,610
Tax Contribution (\$millions)				
Overall	\$18	\$7	\$37	\$62
State and Local Only	\$8	\$3	\$16	\$27

Mining in Maryland, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$107	\$5	\$368	\$480
Indirect and Induced	\$503	\$173	\$617	\$1,293
Total	\$610	\$178	\$985	\$1,773
Employment				
Direct				
Mine Workers	170	0	1,210	1,380
Support Activities	260	0	*	260
Transportation	230	20	2,310	2,560
Total Direct	660	20	3,520	4,200
Indirect and Induced	5,210	1,660	6,600	13,470
Total	5,870	1,680	10,120	17,670
Labor Income (\$millions)				
Direct	\$49	\$2	\$240	\$290
Indirect and Induced	\$305	\$104	\$378	\$787
Total	\$353	\$106	\$618	\$1,077
Average State Labor Income				
Mining Direct	\$73,515	\$98,017	\$68,045	\$69,017
State Average, All Industries	\$56,680	\$56,680	\$56,680	\$56,680
Tax Contribution (\$millions)				
Overall	\$155	\$46	\$268	\$468
State and Local Only	\$68	\$20	\$107	\$195

## Mining in Massachusetts, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$39	\$2	\$372	\$413
Indirect and Induced	\$597	\$242	\$924	\$1,763
Total	\$636	\$244	\$1,296	\$2,176
Employment				
Direct				
Mine Workers	0	0	1,420	1,420
Support Activities	0	0	120	120
Transportation	170	10	2,110	2,290
Total Direct	170	10	3,650	3,820
Indirect and Induced	5,310	2,120	8,460	15,890
Total	5,480	2,130	12,110	19,710
Labor Income (\$millions)				
Direct	\$17	\$1	\$250	\$267
Indirect and Induced	\$393	\$158	\$590	\$1,141
Total	\$410	\$159	\$839	\$1,408
Average State Labor Income				
Mining Direct	\$97,278	\$92,266	\$68,367	\$69,922
State Average, All Industries	\$62,780	\$62,780	\$62,780	\$62,780
Tax Contribution (\$millions)				
Overall	\$163	\$63	\$362	\$588
State and Local Only	\$61	\$24	\$133	\$219

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Michigan, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
0 1 1 1 1 000 (0 111 )				
Contribution to GDP (\$millions)	<b>C40</b>	<b>C</b> 40	<b>Ф700</b>	<b>#4.400</b>
Direct	\$49 \$620	\$649	\$762	\$1,460
Indirect and Induced Total	\$630 \$679	\$672 \$1,322	\$1,300 \$2,061	\$2,603 \$4,062
Total	\$679	\$1,322	\$∠,061	<b>⊅4,∪</b> 0∠
Employment				
Direct				
Mine Workers	0	1,200	3,030	4,230
Support Activities	20	10	20	50
Transportation	190	1,880	5,070	7,140
Total Direct	210	3,090	8,120	11,420
Indirect and Induced	6,870	7,560	15,080	29,510
Total	7,080	10,650	23,200	40,930
Labor Income (\$millions)				
Direct	\$21	\$272	\$503	\$796
Indirect and Induced	\$389	\$400	\$781	\$1,571
Total	\$410	\$673	\$1,284	\$2,367
Average State Labor Income				
Mining Direct	\$98,789	\$88,171	\$61,922	\$69,695
State Average, All Industries	\$50,880	\$50,880	\$50,880	\$50,880
_				
Tax Contribution (\$millions)				
Overall	\$158	\$307	\$532	\$998
State and Local Only	\$66	\$147	\$215	\$427

Mining in Minnesota, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$69	\$1,931	\$373	\$2,373
Indirect and Induced	\$455	\$1,443	\$792	\$2,691
Total	\$524	\$3,374	\$1,165	\$5,064
Employment				
Direct				
Mine Workers	0	4,200	1,550	5,750
Support Activities	90	130	50	270
Transportation	240	5,720	2,570	8,530
Total Direct	330	10,050	4,170	14,550
Indirect and Induced	4,870	16,950	8,700	30,520
Total	5,200	27,000	12,870	45,070
Labor Income (\$millions)				
Direct	\$29	\$821	\$255	\$1,105
Indirect and Induced	\$274	\$860	\$463	\$1,598
Total	\$303	\$1,681	\$720	\$2,704
Average State Labor Income				
Mining Direct	\$86,843	\$81,680	\$61,262	\$75,966
State Average, All Industries	\$49,970	\$49,970	\$49,970	\$49,970
Tax Contribution (\$millions)				
Overall	\$123	\$792	\$359	\$1,275
State and Local Only	\$49	\$367	\$144	\$559

Mining in Mississippi, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (¢millions)				
Contribution to GDP (\$millions)  Direct	\$52	\$1	\$192	\$246
Indirect and Induced	\$141	ът \$56	\$245	\$240 \$442
Total	\$193	\$57	\$438	\$688
Total	φ193	φ57	φ436	φυσο
Employment				
Direct				
Mine Workers	90	0	820	910
Support Activities	0	0	10	10
Transportation	160	10	1,500	1,670
Total Direct	250	10	2,330	2,590
Indirect and Induced	2,080	790	3,700	6,570
Total	2,330	800	6,030	9,160
Labor Income (\$millions)				
Direct	\$25	\$1	\$133	\$158
Indirect and Induced	\$84	\$33	\$143	\$260
Total	\$109	\$34	\$276	\$418
Average State Labor Income				
Mining Direct	\$99,918	\$51,380	\$56,870	\$61,111
State Average, All Industries	\$38,010	\$38,010	\$38,010	\$38,010
, i i i i j	+ ,	+ ,	¥ <b>,</b>	¥ = = /, 5 = 0
Tax Contribution (\$millions)				
Overall	\$43	\$13	\$101	\$156
State and Local Only	\$20	\$6	\$42	\$69

Mining in Missouri, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (fmillions)				
Contribution to GDP (\$millions) Direct	\$340	\$373	\$899	\$1,612
Indirect and Induced	\$522	\$375 \$315	\$989 \$989	\$1,812 \$1,826
Total	\$862	\$688	\$1,888	\$3,438
Total	ΨΟΟΣ	ΨΟΟΟ	Ψ1,000	ψ5,450
Employment				
Direct				
Mine Workers	470	430	3,460	4,360
Support Activities	10	20	130	160
Transportation	900	900	5,670	7,470
Total Direct	1,380	1,350	9,260	11,990
Indirect and Induced	6,380	3,900	13,070	23,350
Total	7,760	5,250	22,330	35,340
Labor Income (\$millions)				
Direct	\$163	\$140	\$566	\$868
Indirect and Induced	\$314	\$189	\$594	\$1,098
Total	\$477	\$329	\$1,160	\$1,966
Average State Labor Income	<b>A. A</b>	<b>*</b>	<b>*</b> 04.000	<b>^-</b> 2 442
Mining Direct	\$117,954	\$103,335	\$61,093	\$72,413
State Average, All Industries	\$45,110	\$45,110	\$45,110	\$45,110
Tax Contribution (\$millions)				
Overall	\$205	\$154	\$462	\$821
State and Local Only	\$89	\$71	\$172	\$332

Mining in Montana, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$309	\$1,186	\$292	\$1,787
Indirect and Induced	\$221	\$506	\$208	\$934
Total	\$530	\$1,692	\$499	\$2,720
Employment				
Direct				
Mine Workers	910	2,540	1,140	4,590
Support Activities	90	120	60	270
Transportation	730	2,980	1,680	5,390
Total Direct	1,730	5,640	2,880	10,250
Indirect and Induced	3,060	7,200	3,460	13,720
Total	4,790	12,840	6,340	23,970
Labor Income (\$millions)				
Direct	\$150	\$455	\$181	\$785
Indirect and Induced	\$123	\$288	\$110	\$521
Total	\$273	\$743	\$289	\$1,305
Average State Labor Income				
Mining Direct	\$86,458	\$80,660	\$62,675	\$76,549
State Average, All Industries	\$36,840	\$36,840	\$36,840	\$36,840
Tax Contribution (\$millions)				
Overall	\$131	\$365	\$150	\$646
State and Local Only	\$62	\$175	\$61	\$297

Mining in Nebraska, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$174	\$41	\$484	\$699
Indirect and Induced	\$147	\$70	\$399	\$616
Total	\$321	\$111	\$883	\$1,315
Employment				
Direct				
Mine Workers	0	10	810	820
Support Activities	0	0	20	20
Transportation	650	120	3,180	3,950
Total Direct	650	130	4,010	4,790
Indirect and Induced	1,660	850	5,820	8,330
Total	2,310	980	9,830	13,120
Labor Income (\$millions)				
Direct	\$75	\$16	\$322	\$413
Indirect and Induced	\$83	\$40	\$236	\$359
Total	\$157	\$56	\$559	\$773
Average State Labor Income				
Mining Direct	\$114,897	\$124,684	\$80,326	\$86,304
State Average, All Industries	\$42,110	\$42,110	\$42,110	\$42,110
Tax Contribution (\$millions)				
Overall	\$60	\$23	\$198	\$281
State and Local Only	\$21	\$10	\$72	\$103

Mining in Nevada, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$11	\$4,320	\$424	\$4,755
Indirect and Induced	\$259	\$1,727	\$291	\$2,277
Total	\$270	\$6,047	\$715	\$7,032
Employment				
Direct				
Mine Workers	0	9,030	1,350	10,380
Support Activities	0	1,010	150	1,160
Transportation	50	10,560	1,280	11,890
Total Direct	50	20,600	2,780	23,430
Indirect and Induced	2,470	21,040	3,810	27,320
Total	2,520	41,640	6,590	50,750
Labor Income (\$millions)				
Direct	\$5	\$1,619	\$217	\$1,840
Indirect and Induced	\$139	\$1,060	\$131	\$1,330
Total	\$144	\$2,679	\$347	\$3,170
Average State Labor Income				
Mining Direct	\$95,067	\$78,579	\$77,888	\$78,549
State Average, All Industries	\$48,840	\$48,840	\$48,840	\$48,840
Tax Contribution (\$millions)				
Overall	\$58	\$1,213	\$286	\$1,557
State and Local Only	\$21	\$520	\$102	\$643

Mining in New Hampshire, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)	•	•-	<b></b>	
Direct	\$2	\$0	\$158	\$160
Indirect and Induced	\$93	\$39	\$210	\$342
Total	\$95	\$39	\$369	\$503
Employment				
Direct				
Mine Workers	0	0	750	750
Support Activities	0	0	0	0
Transportation	10	0	1,030	1,040
Total Direct	10	0	1,780	1,790
Indirect and Induced	1,040	420	2,460	3,920
Total	1,050	420	4,240	5,710
Labor Income (\$millions)				
Direct	\$1	\$0	\$107	\$108
Indirect and Induced	\$58	\$24	\$127	\$209
Total	\$59	\$24	\$234	\$317
Average State Labor Income				
Mining Direct	\$70,131	NA	\$60,261	\$60,550
State Average, All Industries	\$49,540	\$49,540	\$49,540	\$49,540
Tax Contribution (\$millions)				
Overall	\$23	\$9	\$91	\$124
State and Local Only	\$9	\$4	\$30	\$42

Mining in New Jersey, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
0 (1) (1 ( 0) 0)				
Contribution to GDP (\$millions)	<b>C40</b>	¢ο	<b>#</b> 000	<b>Ф74</b> О
Direct	\$19	\$2	\$698	\$719
Indirect and Induced Total	\$779 \$798	\$322 \$324	\$1,324 \$2,023	\$2,426 \$3,145
Total	Φ190	<b>Φ324</b>	φ <b>2,023</b>	φ3, 145
Employment				
Direct				
Mine Workers	0	0	1,630	1,630
Support Activities	10	0	10	20
Transportation	80	10	3,950	4,040
Total Direct	90	10	5,590	5,680
Indirect and Induced	6,540	2,600	11,760	20,900
Total	6,630	2,610	17,350	26,580
Labor Income (\$millions)				
Direct	\$8	\$1	\$462	\$471
Indirect and Induced	\$475	\$195	\$793	\$1,463
Total	\$483	\$195	\$1,256	\$1,934
Average State Labor Income				
Mining Direct	\$89,667	\$72,837	\$82,684	\$82,895
State Average, All Industries	\$62,830	\$62,830	\$62,830	\$62,830
Tax Contribution (\$millions)				
Overall	\$204	\$82	\$548	\$834
State and Local Only	\$77	\$31	\$193	\$302

Mining in New Mexico, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (fmillions)				
Contribution to GDP (\$millions)  Direct	\$398	\$822	\$436	\$1,657
Indirect and Induced	\$272	\$310	\$322	\$1,037 \$904
Total	\$670	\$1,133	\$759	\$2,562
Employment				
Direct				
Mine Workers	1,180	1,950	1,490	4,620
Support Activities	80	90	70	240
Transportation	870	2,020	2,970	5,860
Total Direct	2,130	4,060	4,530	10,720
Indirect and Induced	3,820	4,490	4,890	13,200
Total	5,950	8,550	9,420	23,920
Labor Income (\$millions)				
Direct	\$195	\$303	\$260	\$758
Indirect and Induced	\$162	\$189	\$190	\$541
Total	\$356	\$492	\$450	\$1,299
Average State Labor Income				
Mining Direct	\$91,316	\$74,696	\$57,446	\$70,727
State Average, All Industries	\$42,140	\$42,140	\$42,140	\$42,140
Tax Contribution (\$millions)				
Overall	\$168	\$251	\$201	\$620
State and Local Only	\$89	\$136	\$89	\$314

Mining in New York, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$86	\$163	\$1,569	\$1,818
Indirect and Induced	\$1,955	\$840	\$3,217	\$6,012
Total	\$2,040	\$1,003	\$4,787	\$7,830
Employment				
Direct				
Mine Workers	30	220	5,100	5,350
Support Activities	10	0	30	40
Transportation	370	400	9,900	10,670
Total Direct	410	620	15,030	16,060
Indirect and Induced	14,190	6,180	25,790	46,160
Total	14,600	6,800	40,820	62,220
Labor Income (\$millions)				
Direct	\$37	\$63	\$1,021	\$1,121
Indirect and Induced	\$1,303	\$542	\$2,017	\$3,862
Total	\$1,340	\$604	\$3,039	\$4,984
Average State Labor Income				
Mining Direct	\$91,331	\$100,887	\$67,931	\$69,824
State Average, All Industries	\$69,120	\$69,120	\$69,120	\$69,120
Tax Contribution (\$millions)				
Overall	\$553	\$270	\$1,395	\$2,217
State and Local Only	\$235	\$123	\$594	\$952

Mining in North Carolina, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$46	\$6	\$1,117	\$1,169
Indirect and Induced	\$565	\$231	\$1,319	\$2,114
Total	\$610	\$237	\$2,436	\$3,283
Employment				
Direct				
Mine Workers	10	20	3,960	3,990
Support Activities	80	0	150	230
Transportation	160	20	7,690	7,870
Total Direct	250	40	11,800	12,090
Indirect and Induced	6,880	2,760	17,610	27,250
Total	7,130	2,800	29,410	39,340
Labor Income (\$millions)				
Direct	\$19	\$3	\$706	\$727
Indirect and Induced	\$336	\$136	\$783	\$1,256
Total	\$355	\$139	\$1,489	\$1,983
Average State Labor Income				
Mining Direct	\$75,658	\$64,230	\$59,790	\$60,136
State Average, All Industries	\$44,790	\$44,790	\$44,790	\$44,790
Tax Contribution (\$millions)				
Overall	\$144	\$57	\$593	\$794
State and Local Only	\$61	\$25	\$230	\$315

## Mining in North Dakota, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$373	\$1	\$121	\$495
Indirect and Induced	\$171	\$21	\$114	\$306
Total	\$543	\$22	\$235	\$801
Employment				
Direct				
Mine Workers	980	0	580	1,560
Support Activities	10	0	0	10
Transportation	810	10	760	1,580
Total Direct	1,800	10	1,340	3,150
Indirect and Induced	2,480	260	1,650	4,390
Total	4,280	270	2,990	7,540
Labor Income (\$millions)				
Direct	\$184	\$0	\$88	\$272
Indirect and Induced	\$99	\$12	\$64	\$175
Total	\$283	\$12	\$153	\$448
Average State Labor Income				
Mining Direct	\$102,225	\$43,165	\$65,346	\$86,452
State Average, All Industries	\$40,200	\$40,200	\$40,200	\$40,200
Tax Contribution (\$millions)				
Overall	\$134	\$5	\$61	\$200
State and Local Only	\$63	\$2	\$22	\$88

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Ohio, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)	<b>#</b> 007	Φ.Ε.	<b>#</b> 000	<b>04.704</b>
Direct	\$867	\$5	\$922	\$1,794
Indirect and Induced	\$1,320	\$328	\$1,328	\$2,976
Total	\$2,187	\$332	\$2,251	\$4,770
Employment				
Direct				
Mine Workers	2,440	0	3,660	6,100
Support Activities	560	0	*	560
Transportation	2,040	30	5,720	7,790
Total Direct	5,040	30	9,380	14,450
Indirect and Induced	16,180	3,710	17,610	37,500
Total	21,220	3,740	26,990	51,950
Labor Income (\$millions)				
Direct	\$419	\$2	\$586	\$1,007
Indirect and Induced	\$802	\$199	\$819	\$1,820
Total	\$1,221	\$201	\$1,405	\$2,827
Average State Labor Income				
Mining Direct	\$83,186	\$66,829	\$62,446	\$69,667
State Average, All Industries	\$46,420	\$46,420	\$46,420	\$46,420
Tax Contribution (\$millions)				
Overall	\$545	\$78	\$582	\$1,205
State and Local Only	\$263	\$34	\$245	\$542
State and Loodi Omy	ΨΖΟΟ	ΨΟΨ	ΨΔΤΟ	ΨΟΉΣ

## Mining in Oklahoma, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
		Ţ.		
Contribution to GDP (\$millions)			<b>^</b> .	<b>^</b> -
Direct	\$93	\$93	\$564	\$750
Indirect and Induced	\$335	\$169	\$676	\$1,180
Total	\$428	\$262	\$1,239	\$1,929
Employment				
Direct				
Mine Workers	160	130	2,500	2,790
Support Activities	90	0	20	110
Transportation	230	240	3,870	4,340
Total Direct	480	370	6,390	7,240
Indirect and Induced	3,410	1,640	7,770	12,820
Total	3,890	2,010	14,160	20,060
Labor Income (\$millions)				
Direct	\$44	\$35	\$363	\$442
Indirect and Induced	\$181	\$89	\$367	\$637
Total	\$225	\$124	\$729	\$1,079
Average State Labor Income				
Mining Direct	\$91,570	\$95,246	\$56,777	\$61,062
State Average, All Industries	\$44,900	\$44,900	\$44,900	\$44,900
Tax Contribution (\$millions)				
Overall	\$94	\$56	\$281	\$430
State and Local Only	\$42	\$26	\$107	\$175

Source: PricewaterhouseCoopers calculations based on IMPLAN modeling system (2008 database).

Mining in Oregon, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$32	\$28	\$592	\$653
Indirect and Induced	\$230	\$106	\$682	\$1,018
Total	\$262	\$134	\$1,275	\$1,671
Employment				
Direct				
Mine Workers	0	30	2,480	2,510
Support Activities	0	0	30	30
Transportation	150	80	3,910	4,140
Total Direct	150	110	6,420	6,670
Indirect and Induced	2,930	1,350	9,150	13,430
Total	3,080	1,460	15,570	20,100
Labor Income (\$millions)				
Direct	\$14	\$11	\$399	\$424
Indirect and Induced	\$141	\$65	\$408	\$614
Total	\$155	\$76	\$808	\$1,039
Average State Labor Income				
Mining Direct	\$91,941	\$100,671	\$62,171	\$63,578
State Average, All Industries	\$44,780	\$44,780	\$44,780	\$44,780
Tax Contribution (\$millions)				
Overall	\$65	\$33	\$333	\$430
State and Local Only	\$28	\$15	\$135	\$178

Mining in Pennsylvania, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$3,298	\$45	\$1,617	\$4,960
Indirect and Induced	\$3,102	\$424	\$2,061	\$5,587
Total	\$6,400	\$469	\$3,678	\$10,547
Employment				
Direct				
Mine Workers	9,000	60	6,520	15,580
Support Activities	830	0	0	830
Transportation	7,200	130	9,310	16,640
Total Direct	17,030	190	15,830	33,050
Indirect and Induced	34,970	4,230	23,810	63,010
Total	52,000	4,420	39,640	96,060
Labor Income (\$millions)				
Direct	\$1,643	\$18	\$1,029	\$2,690
Indirect and Induced	\$1,876	\$255	\$1,250	\$3,381
Total	\$3,519	\$273	\$2,279	\$6,071
Average State Labor Income				
Mining Direct	\$96,497	\$93,605	\$64,995	\$81,393
State Average, All Industries	\$51,510	\$51,510	\$51,510	\$51,510
Tax Contribution (\$millions)				
Overall	\$1,605	\$107	\$959	\$2,671
State and Local Only	\$744	\$44	\$363	\$1,150

Mining in Rhode Island, 2008

\$4			
\$4			
54	¢ο	<sub>ው</sub> ርር	<b>ФС</b> 4
	-	•	\$64
•	•	·	\$208 \$272
ФОЭ	<b>Φ</b> 21	φ170	<b>Φ212</b>
0	0	370	370
0	0	0	0
20	0	400	420
20	0	770	790
740	300	1,350	2,390
760	300	2,120	3,180
\$2	\$0	\$43	\$45
\$41	\$17	\$ <b>7</b> 1	\$129
\$43	\$17	\$114	\$174
\$83 374	NA	\$56 155	\$56,526
\$50,270	\$50,270	\$50,270	\$50,270
_			
	•	•	\$68
\$7	\$3	\$18	\$27
	\$65 \$69 0 0 20 20 740 760 \$2 \$41 \$43	\$65 \$27 \$69 \$27 0 0 0 0 20 0 20 0 740 300 760 300 \$2 \$0 \$41 \$17 \$43 \$17 \$43 \$17 \$83,374 NA \$50,270 \$50,270	\$65 \$27 \$116 \$69 \$27 \$176 0 0 370 0 0 0 0 20 0 400 20 0 770 740 300 1,350 760 300 2,120 \$2 \$0 \$43 \$41 \$17 \$71 \$43 \$17 \$114 \$83,374 NA \$56,155 \$50,270 \$50,270

Mining in South Carolina, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$22	\$7	\$327	\$355
Indirect and Induced	\$224	\$98	\$437	\$758
Total	\$245	\$105	\$763	\$1,113
Employment				
Direct				
Mine Workers	0	10	1,500	1,510
Support Activities	0	0	0	0
Transportation	100	30	2,320	2,450
Total Direct	100	40	3,820	3,960
Indirect and Induced	3,040	1,280	6,220	10,540
Total	3,140	1,320	10,040	14,500
Labor Income (\$millions)				
Direct	\$9	\$3	\$210	\$222
Indirect and Induced	\$135	\$59	\$258	\$452
Total	\$144	\$62	\$468	\$674
Average State Labor Income				
Mining Direct	\$93,231	\$68,721	\$54,955	\$56,070
State Average, All Industries	\$41,670	\$41,670	\$41,670	\$41,670
Tax Contribution (\$millions)				
Overall	\$55	\$24	\$182	\$261
State and Local Only	\$24	\$10	\$71	\$105

Mining in South Dakota, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$11	\$75	\$161	\$247
Indirect and Induced	\$52	\$45	\$144	\$241
Total	\$63	\$120	\$304	\$488
Employment				
Direct				
Mine Workers	0	150	780	930
Support Activities	0	0	10	10
Transportation	50	190	1,100	1,340
Total Direct	50	340	1,890	2,280
Indirect and Induced	730	660	2,190	3,580
Total	780	1,000	4,080	5,860
Labor Income (\$millions)				
Direct	\$5	\$28	\$109	\$142
Indirect and Induced	\$30	\$26	\$83	\$138
Total	\$34	\$54	\$192	\$280
Average State Labor Income				
Mining Direct	\$92,845	\$82,932	\$57,757	\$62,191
State Average, All Industries	\$37,390	\$37,390	\$37,390	\$37,390
Tax Contribution (\$millions)				
Overall	\$13	\$25	\$68	\$106
State and Local Only	\$5	\$11	\$22	\$39

Mining in Tennessee, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (forillians)				
Contribution to GDP (\$millions)  Direct	\$131	\$311	\$736	\$1,178
Indirect and Induced	\$473	\$297	\$867	\$1,176 \$1,636
Total	\$604	\$608	\$1,603	\$2,814
rotai	ΨΟΟΨ	φοσσ	Ψ1,000	Ψ2,014
Employment				
Direct				
Mine Workers	300	840	2,460	3,600
Support Activities	120	60	160	340
Transportation	400	730	4,430	5,560
Total Direct	820	1,630	7,050	9,490
Indirect and Induced	5,660	3,700	11,130	20,490
Total	6,480	5,330	18,180	29,980
Labor Income (\$millions)				
Direct	\$60	\$117	\$479	\$655
Indirect and Induced	\$288	\$184	\$530	\$1,002
Total	\$348	\$301	\$1,009	\$1,658
. 5 ta.	Ψ0.0	Ψ.σ.σ.	Ψ.,σσσ	<b>\$</b> 1,000
Average State Labor Income				
Mining Direct	\$72,715	\$71,686	\$67,876	\$69,071
State Average, All Industries	\$45,880	\$45,880	\$45,880	\$45,880
Tax Contribution (\$millions)	_			•
Overall	\$128	\$127	\$365	\$620
State and Local Only	\$47	\$55	\$117	\$219

Mining in Texas, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$1,509	\$269	\$2,268	\$4,046
Indirect and Induced	\$3,070	\$1,183	\$4,725	\$8,978
Total	\$4,579	\$1,452	\$6,993	\$13,024
Employment				
Direct				
Mine Workers	2,900	380	8,930	12,210
Support Activities	100	10	170	280
Transportation	3,400	750	16,150	20,300
Total Direct	6,400	1,140	25,250	32,790
Indirect and Induced	27,620	9,000	42,850	79,470
Total	34,020	10,140	68,100	112,260
Labor Income (\$millions)				
Direct	\$741	\$105	\$1,513	\$2,359
Indirect and Induced	\$1,680	\$618	\$2,527	\$4,825
Total	\$2,421	\$723	\$4,040	\$7,184
Average State Labor Income				
Mining Direct	\$115,712	\$92,220	\$59,933	\$71,929
State Average, All Industries	\$54,050	\$54,050	\$54,050	\$54,050
Tax Contribution (\$millions)				
Overall	\$1,012	\$304	\$1,626	\$2,943
State and Local Only	\$421	\$127	\$588	\$1,135

Mining in Utah, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to CDD (Conillings)				
Contribution to GDP (\$millions)  Direct	\$676	\$595	\$532	¢4 000
Indirect and Induced	\$597	\$373	ъзг \$489	\$1,803 \$1,459
Total	\$1,273	\$968	\$1,020	\$1,459 \$3,261
Total	Ψ1,275	Ψ300	Ψ1,020	Ψ5,201
Employment				
Direct				
Mine Workers	2,250	1,220	1,860	5,330
Support Activities	60	190	280	530
Transportation	1,500	1,380	2,570	5,450
Total Direct	3,810	2,790	4,710	11,300
Indirect and Induced	8,190	5,060	8,080	21,330
Total	12,000	7,850	12,790	32,630
Labor Income (\$millions)				
Direct	\$334	\$225	\$307	\$865
Indirect and Induced	\$354	\$231	\$298	\$883
Total	\$687	\$455	\$605	\$1,748
. 5 ta.	400.	Ψ.00	Ų O O O	Ψ.,
Average State Labor Income				
Mining Direct	\$87,541	\$80,538	\$65,131	\$76,557
State Average, All Industries	\$42,370	\$42,370	\$42,370	\$42,370
Tax Contribution (\$millions)	<b></b>	<b>A</b> = -	<b></b>	0.55
Overall	\$318	\$207	\$280	\$806
State and Local Only	\$147	\$97	\$107	\$352

Mining in Vermont, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$2	\$0	\$187	\$189
Indirect and Induced	\$37	\$16	\$149	\$201
Total	\$39	\$16	\$335	\$390
Employment				
Direct				
Mine Workers	0	0	880	880
Support Activities	0	0	0	0
Transportation	10	0	1,190	1,200
Total Direct	10	0	2,070	2,080
Indirect and Induced	520	210	2,160	2,890
Total	530	210	4,230	4,970
Labor Income (\$millions)				
Direct	\$1	\$0	\$125	\$126
Indirect and Induced	\$22	\$9	\$88	\$120
Total	\$23	\$10	\$213	\$246
Average State Labor Income				
Mining Direct	\$86,208	NA	\$60,360	\$60,452
State Average, All Industries	\$40,980	\$40,980	\$40,980	\$40,980
Tax Contribution (\$millions)				
Overall	\$9	\$4	\$78	\$91
State and Local Only	\$4	\$2	\$29	\$35

Mining in Virginia, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$2,441	\$118	\$894	\$3,453
Indirect and Induced	\$2,030	\$314	\$1,064	\$3,408
Total	\$4,472	\$432	\$1,956	\$6,860
Employment				
Direct				
Mine Workers	4,290	140	2,580	7,010
Support Activities	670	0	*	670
Transportation	5,040	340	6,020	11,400
Total Direct	10,000	480	8,600	19,080
Indirect and Induced	22,120	3,150	13,080	38,350
Total	32,120	3,630	21,680	57,430
Labor Income (\$millions)				
Direct	\$1,228	\$49	\$571	\$1,847
Indirect and Induced	\$1,227	\$189	\$647	\$2,063
Total	\$2,455	\$238	\$1,217	\$3,910
Average State Labor Income				
Mining Direct	\$122,751	\$102,033	\$66,339	\$96,780
State Average, All Industries	\$54,860	\$54,860	\$54,860	\$54,860
Tax Contribution (\$millions)				
Overall	\$1,134	\$100	\$534	\$1,768
State and Local Only	\$524	\$42	\$201	\$768

Mining in Washington, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$82	\$259	\$613	\$954
Indirect and Induced	\$492	\$326	\$973	\$1,791
Total	\$573	\$585	\$1,587	\$2,745
Employment				
Direct				
Mine Workers	60	410	2,590	3,060
Support Activities	0	40	220	260
Transportation	280	650	3,860	4,790
Total Direct	340	1,100	6,670	8,110
Indirect and Induced	5,020	3,450	10,620	19,090
Total	5,360	4,550	17,290	27,200
Labor Income (\$millions)				
Direct	\$37	\$101	\$407	\$544
Indirect and Induced	\$296	\$199	\$581	\$1,075
Total	\$332	\$299	\$987	\$1,618
Average State Labor Income				
Mining Direct	\$107,430	\$91,554	\$60,984	\$67,032
State Average, All Industries	\$54,510	\$54,510	\$54,510	\$54,510
Tax Contribution (\$millions)				
Overall	\$124	\$122	\$377	\$623
State and Local Only	\$43	\$49	\$118	\$209

Mining in West Virginia, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$4,896	\$22	\$286	\$5,204
Indirect and Induced	\$1,603	\$115	\$198	\$1,915
Total	\$6,499	\$136	\$484	\$7,119
Employment				
Direct				
Mine Workers	23,370	50	810	24,230
Support Activities	1,860	140	2,300	4,300
Transportation	7,140	50	1,400	8,590
Total Direct	32,370	240	4,510	37,120
Indirect and Induced	19,140	1,220	1,340	21,700
Total	51,510	1,460	5,850	58,820
Labor Income (\$millions)				
Direct	\$2,509	\$12	\$159	\$2,680
Indirect and Induced	\$919	\$67	\$132	\$1,118
Total	\$3,428	\$79	\$292	\$3,799
Average State Labor Income				
Mining Direct	\$77,514	\$49,603	\$35,251	\$72,211
State Average, All Industries	\$42,910	\$42,910	\$42,910	\$42,910
Tax Contribution (\$millions)				
Overall	\$1,823	\$25	\$186	\$2,034
State and Local Only	\$970	\$11	\$86	\$1,067

Mining in Wisconsin, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$42	\$2	\$745	\$789
Indirect and Induced	\$369	\$156	\$875	\$1,399
Total	\$411	\$158	\$1,619	\$2,188
Employment				
Direct				
Mine Workers	0	0	2,940	2,940
Support Activities	0	0	120	120
Transportation	180	10	4,590	4,780
Total Direct	180	10	7,650	7,840
Indirect and Induced	4,720	1,970	12,010	18,700
Total	4,900	1,980	19,660	26,540
Labor Income (\$millions)				
Direct	\$18	\$1	\$495	\$514
Indirect and Induced	\$228	\$96	\$528	\$852
Total	\$246	\$97	\$1,023	\$1,366
Average State Labor Income				
Mining Direct	\$100,466	\$87,679	\$64,711	\$65,556
State Average, All Industries	\$44,300	\$44,300	\$44,300	\$44,300
Tax Contribution (\$millions)				
Overall	\$97	\$38	\$408	\$542
State and Local Only	\$41	\$16	\$164	\$221

Mining in Wyoming, 2008

Measure	Coal Mining	Metal Mining	Non-Metallic Mining	All Mining
Contribution to GDP (\$millions)				
Direct	\$2,378	\$88	\$809	\$3,275
Indirect and Induced	\$813	\$58	\$254	\$1,125
Total	\$3,191	\$147	\$1,062	\$4,400
Employment				
Direct				
Mine Workers	6,570	150	2,360	9,080
Support Activities	330	0	30	360
Transportation	4,160	200	4,360	8,720
Total Direct	11,060	350	6,750	18,160
Indirect and Induced	10,500	560	4,110	15,170
Total	21,560	910	10,860	33,330
Labor Income (\$millions)				
Direct	\$1,195	\$34	\$502	\$1,731
Indirect and Induced	\$449	\$29	\$123	\$601
Total	\$1,644	\$63	\$625	\$2,332
Average State Labor Income				
Mining Direct	\$108,065	\$96,589	\$74,370	\$95,319
State Average, All Industries	\$45,980	\$45,980	\$45,980	\$45,980
Tax Contribution (\$millions)				
Overall	\$816	\$30	\$271	\$1,118
State and Local Only	\$395	\$13	\$93	\$502

National Mining Association 101 Constitution Avenue, NW Suite 500 East Washington, D.C. 2000 I (202) 463-2000 | www.nma.org