

# Oklahoma Job Quarterly Earnings Percentile Changes

Mining Years 2005 to 2015



# OKLAHOMA

**Oklahoma Employment Security Commission**  
**Economic Research and Analysis Division**

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# Oklahoma Mining Job Quarterly Earnings Percentile Changes: 2005 to 2015

## I. Introduction

The United States Energy Information Administration (EIA) ranks Oklahoma fifth-highest of all states in energy production, mostly due to our oil and gas production. Therefore, an analysis of the percentile earnings changes in Oklahoma’s mining industry provides an important indicator of economic and business trends as well as job growth for the state. We used our agency’s administrative earnings records to construct a 10-year history of changes in earnings as measured by percentiles for the mining industry, as previously done for an aggregate of all Oklahoma industries. The format for reporting the analysis for mining will be the same as that used in the former publication for the aggregate of all Oklahoma industries—namely, the results for recent years will be reported, followed by long-term 3-year changes, then by long-term 10-year changes.

The data set is by job, not by individual. Consequently, if a person works two part-time jobs, then the two part-time jobs would each show up separately. In addition, jobs with earnings less than \$300 were excluded for the reference quarter. The data for second quarter job quarter earnings for the years 2005 and 2015 as well as a number of years between are included, but the data set does not include federal jobs.

## II. Mining Percentile Job Quarterly Earnings, 1-Year Changes: 2011 to 2015

Table 1 shows the job quarterly earnings and percentile change for NAICS 21 Mining, Quarrying, and Oil and Gas Extraction between the 2<sup>nd</sup> quarter of 2011 and the 2<sup>nd</sup> quarter of 2012.

**Table 1. Mining: Job Quarterly Earnings by Percentile: 2011 to 2012**

Percentile	2011	2012	Numeric Change	Percent Change
5th	\$1,538	\$1,691	\$153	10.0
10th	\$3,000	\$3,244	\$244	8.1
20th	\$6,346	\$6,261	-\$85	-1.3
25th	\$7,735	\$7,543	-\$192	-2.5
30th	\$8,898	\$8,677	-\$221	-2.5
40th	\$10,961	\$10,718	-\$243	-2.2
50th	\$13,011	\$12,749	-\$262	-2.0
60th	\$15,370	\$15,000	-\$370	-2.4
70th	\$18,337	\$17,837	-\$500	-2.7
75th	\$20,350	\$19,581	-\$770	-3.8
80th	\$22,811	\$21,797	-\$1,014	-4.4
90th	\$31,024	\$29,584	-\$1,440	-4.6
95th	\$41,449	\$40,279	-\$1,170	-2.8
99th	\$79,222	\$72,731	-\$6,491	-8.2
<b>Total Jobs</b>	<b>56,146</b>	<b>67,480</b>	<b>11,334</b>	<b>20.2</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Table 1 shows that only the 5<sup>th</sup> and 10<sup>th</sup> percentiles had positive dollar amount and percent job earnings changes: the 5<sup>th</sup> percentile increased by \$153 (10.5 percent), while the 10<sup>th</sup> percentile increased by \$244 (8.1 percent). The remaining percentiles had increasing negative dollar amount changes, from the 20<sup>th</sup>

percentile's \$85 decrease to the 99<sup>th</sup> percentile's \$6,491 decrease. The percent change for these same percentiles were also negative. Table 2 reveals the job quarterly earnings and percentile changes for mining between the 2<sup>nd</sup> quarter of 2012 and the 2<sup>nd</sup> quarter of 2013.

**Table 2. Mining: Job Quarterly Earnings by Percentile: 2012 to 2013**

Percentile	2012	2013	Numeric Change	Percent Change
5th	\$1,691	\$1,675	-\$16	-0.9
10th	\$3,244	\$3,347	\$103	3.2
20th	\$6,261	\$6,960	\$699	11.2
25th	\$7,543	\$8,287	\$744	9.9
30th	\$8,677	\$9,426	\$749	8.6
40th	\$10,718	\$11,674	\$956	8.9
50th	\$12,749	\$13,878	\$1,129	8.9
60th	\$15,000	\$16,350	\$1,350	9.0
70th	\$17,837	\$19,262	\$1,425	8.0
75th	\$19,581	\$21,182	\$1,601	8.2
80th	\$21,797	\$23,550	\$1,753	8.0
90th	\$29,584	\$31,692	\$2,108	7.1
95th	\$40,279	\$42,601	\$2,321	5.8
99th	\$72,731	\$77,063	\$4,333	6.0
<b>Total Jobs</b>	<b>67,480</b>	<b>66,750</b>	<b>-730</b>	<b>-1.1</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

The dollar amount and percent job earnings changes for from 2012 to 2013 (as shown in Table 2) display a drastic turnaround from the previous year. While all but two percentiles in the previous year showed a decline, from 2012 to 2013 all percentiles—with the exception of the 5th percentile—displayed an increase. Moreover, dollar amount changes increased progressively by percentile, up to \$4,333 in the 99<sup>th</sup> percentile; the largest percent change—11.2 percent—occurred in the 20<sup>th</sup> percentile.

**Table 3. Mining: Job Quarterly Earnings by Percentile: 2013 to 2014**

Percentile	2013	2014	Numeric Change	Percent Change
5th	\$1,675	\$1,800	\$125	7.5
10th	\$3,347	\$3,510	\$163	4.9
20th	\$6,960	\$7,280	\$320	4.6
25th	\$8,287	\$8,718	\$431	5.2
30th	\$9,426	\$9,966	\$540	5.7
40th	\$11,674	\$12,233	\$559	4.8
50th	\$13,878	\$14,571	\$693	5.0
60th	\$16,350	\$17,151	\$801	4.9
70th	\$19,262	\$20,165	\$903	4.7
75th	\$21,182	\$22,143	\$961	4.5
80th	\$23,550	\$24,598	\$1,048	4.5
90th	\$31,692	\$33,078	\$1,386	4.4
95th	\$42,601	\$45,164	\$2,564	6.0
99th	\$77,063	\$82,009	\$4,946	6.4
<b>Total Jobs</b>	<b>66,750</b>	<b>66,214</b>	<b>-536</b>	<b>-0.8</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Table 3 (on the previous page) shows the job quarterly earnings and percentile changes of mining between the 2<sup>nd</sup> quarter of 2013 and the 2<sup>nd</sup> quarter of 2014.

The job earnings dollar amounts shown in Table 3 display an increasing positive change from the 5<sup>th</sup> percentile through the 99<sup>th</sup> percentile. However, the job earnings percent changes for this year differ from the previous two in that they display no obvious pattern of change. The highest change is in the 5<sup>th</sup> percentile, with a 7.5 percent change, followed by changes of 6.4 percent in the 99<sup>th</sup> percentile and 6.0 percent in the 95<sup>th</sup> percentile.

Table 4 shows the job quarterly earnings and percentile changes of mining between the 2<sup>nd</sup> quarter of 2014 and the 2<sup>nd</sup> quarter of 2015.

**Table 4. Mining: Job Quarterly Earnings by Percentile: 2014 to 2015**

<b>Percentile</b>	<b>2014</b>	<b>2015</b>	<b>Numeric Change</b>	<b>Percent Change</b>
5th	\$1,800	\$1,794	-\$6	-0.3
10th	\$3,510	\$3,688	\$178	5.1
20th	\$7,280	\$7,409	\$129	1.8
25th	\$8,718	\$8,748	\$30	0.3
30th	\$9,966	\$9,900	-\$66	-0.7
40th	\$12,233	\$12,200	-\$33	-0.3
50th	\$14,571	\$14,511	-\$60	-0.4
60th	\$17,151	\$17,160	\$9	0.1
70th	\$20,165	\$20,326	\$161	0.8
75th	\$22,143	\$22,414	\$272	1.2
80th	\$24,598	\$25,008	\$410	1.7
90th	\$33,078	\$34,080	\$1,002	3.0
95th	\$45,164	\$47,060	\$1,896	4.2
99th	\$82,009	\$91,840	\$9,831	12.0
<b>Total Jobs</b>	<b>66,214</b>	<b>59,204</b>	<b>-7,010</b>	<b>-10.6</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

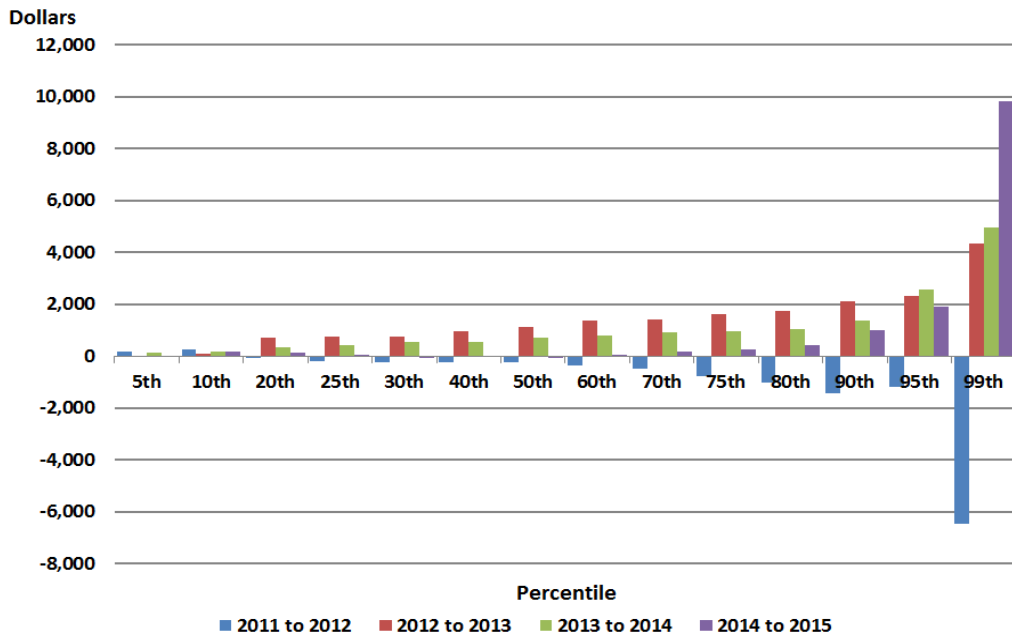
Note<sup>3</sup>: The unit of analysis is a job.

Table 4 reveals that compared to the previous two years (2012 to 2013 and 2013 to 2014), most percentiles in 2014 to 2015 had either a weak negative or relatively weak positive job earnings dollar amount and percent change. The exceptions were the 10<sup>th</sup> percentile with a \$178 earnings increase (5.1 percent change), the 90<sup>th</sup> percentile with a \$1,002 increase (3.0 percent), the 95<sup>th</sup> percentile with a \$1,896 increase (4.2 percent), and the 99<sup>th</sup> percentile with a \$9,831 increase (12.0 percent).

Chart 1 (on the next page) illustrates the job quarterly earnings percentile changes from 2011 to 2015 period, as outlined in Tables 1, 2, 3 and 4 (consult tables for exact numbers).

Chart 1 displays that from 2011 to 2012, mining earnings dollar amounts increased in all percentiles, except the 5<sup>th</sup> and 10<sup>th</sup> percentiles. From 2012 to 2013, only the 5<sup>th</sup> percentile showed a dollar amount decrease. The year from 2013 to 2014 was a good year in mining for job earnings dollar amount increases, with all percentiles showing an increase. The last year—from 2014 to 2015—mostly consisted of moderate increases in mining, with the 5<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup>, and 50<sup>th</sup> percentiles having dollar amount decreases, while the 99<sup>th</sup> percentile experienced a large quarterly earnings increase of \$9,831.

**Chart 1. Mining Job Quarterly Earnings Percentile Dollar Change Per Year: 2011 to 2015**



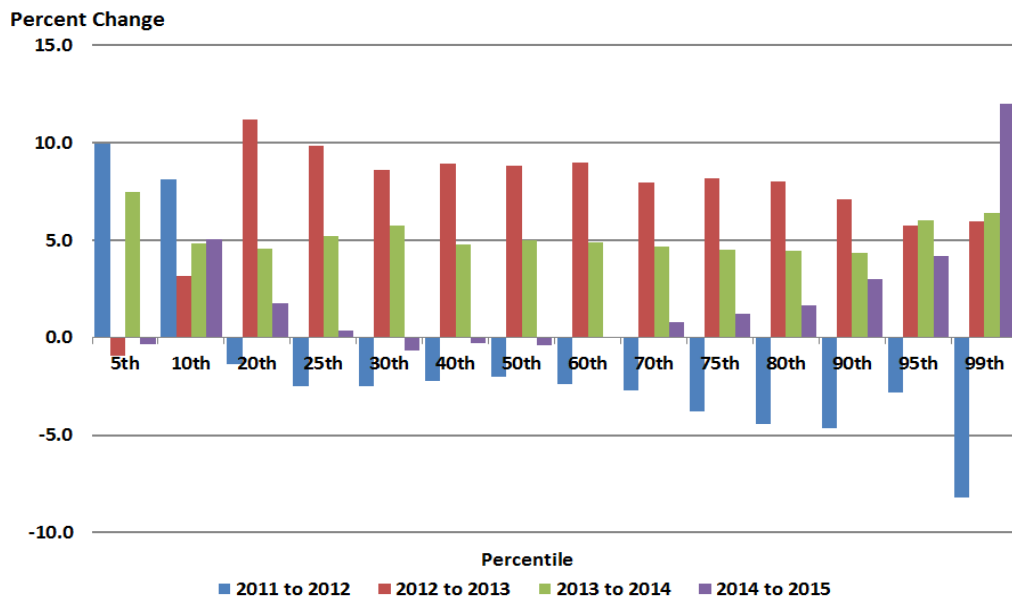
Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Chart 2 displays job quarterly earnings percent changes by percentile for mining for from 2011 to 2015.

**Chart 2. Mining Job Quarterly Earnings Percentile Percent Change Per Year: 2011 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed.

Note<sup>3</sup>: The unit of analysis is a job.

Chart 2 shows that from 2011 to 2012, mining earnings decreased in all percentiles, except the 5<sup>th</sup> and 10<sup>th</sup> percentiles. From 2012 to 2013, only the 5<sup>th</sup> percentile showed an earnings decrease, while earnings increased for all other percentiles. Likewise, from 2013 to 2014 all percentiles showed an increase in quarterly earnings. From 2014 to 2015, there were mostly moderate increases in mining earnings; however, the 5<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup> and 50<sup>th</sup> percentiles had slight earnings decreases, while the 99<sup>th</sup> percentile experienced a large increase of 12.0 percent.

### III. Mining Percentile Job Quarterly Earnings, 3-Year Changes: 2006 to 2015

This section looks at job earnings changes for mining in 3-year intervals falling within 2006 to 2015. The advantage of a 3-year interval analysis is that we can examine job earnings changes that occurred before our nation’s recent recession. Oklahoma’s entry and exit from this recession was somewhat delayed from that of other states. However, it fell within the same three year period of 2009 to 2012.

Table 5 (below) displays the job quarterly earnings percentile changes in dollars and percent changes for mining between the 2<sup>nd</sup> quarter of 2006 and the 2<sup>nd</sup> quarter of 2009.

Table 5 shows that in this 3-year interval—just prior to the recent recession—mining had a relatively robust job earnings increase. The dollar amount changes range from the 5<sup>th</sup> percentile’s \$559 increase to the 99<sup>th</sup> percentile’s increase of \$13,730; the percent changes range from the 50<sup>th</sup> percentile’s 8.0 percent increase to the 10<sup>th</sup> percentile’s 51.0 percent increase. All of the percentiles—except the 5<sup>th</sup>, 40<sup>th</sup> and 50<sup>th</sup> percentiles—had quarterly job earnings increases of \$1,000 or more. The largest job earnings increases by dollar amount were in the 20<sup>th</sup>, 25<sup>th</sup>, and the 60<sup>th</sup> through the 99<sup>th</sup> percentiles.

**Table 5. Mining: Job Quarterly Earnings in 3-Year Interval by Percentile: 2006 to 2009**

Percentile	2006	2009	Numeric Change	Percent Change
5th	\$1,100	\$1,660	\$559	50.8
10th	\$2,100	\$3,170	\$1,070	51.0
20th	\$4,608	\$6,150	\$1,542	33.5
25th	\$5,928	\$7,235	\$1,307	22.0
30th	\$6,999	\$8,132	\$1,133	16.2
40th	\$8,952	\$9,821	\$869	9.7
50th	\$10,818	\$11,686	\$868	8.0
60th	\$12,639	\$13,845	\$1,206	9.5
70th	\$14,877	\$16,606	\$1,729	11.6
75th	\$16,286	\$18,364	\$2,078	12.8
80th	\$18,017	\$20,763	\$2,746	15.2
90th	\$24,512	\$28,790	\$4,278	17.5
95th	\$33,120	\$39,900	\$6,780	20.5
99th	\$69,779	\$83,509	\$13,730	19.7
<b>Total Jobs</b>	<b>46,148</b>	<b>45,957</b>	<b>-191</b>	<b>-0.4</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Table 6 (on the following page) displays the quarterly earnings percentile changes for mining for the 3-year period from 2009 to 2012, which includes the recent recession.



**Table 6. Mining: Job Quarterly Earnings in 3-Year Interval by Percentile: 2009 to 2012**

Percentile	2009	2012	Numeric Change	Percent Change
5th	\$1,660	\$1,691	\$31	1.9
10th	\$3,170	\$3,244	\$74	2.3
20th	\$6,150	\$6,261	\$111	1.8
25th	\$7,235	\$7,543	\$309	4.3
30th	\$8,132	\$8,677	\$545	6.7
40th	\$9,821	\$10,718	\$897	9.1
50th	\$11,686	\$12,749	\$1,063	9.1
60th	\$13,845	\$15,000	\$1,155	8.3
70th	\$16,606	\$17,837	\$1,231	7.4
75th	\$18,364	\$19,581	\$1,217	6.6
80th	\$20,763	\$21,797	\$1,034	5.0
90th	\$28,790	\$29,584	\$794	2.8
95th	\$39,900	\$40,279	\$379	0.9
99th	\$83,509	\$72,731	-\$10,779	-12.9
<b>Total Jobs</b>	<b>45,957</b>	<b>67,480</b>	<b>21,523</b>	<b>46.8</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Table 6 shows mining's job earnings changes in the 3-year interval that includes the recent recession. Both the job earnings dollar amounts and the percent changes are not as robust as in the previous 3-year period. However, with the exception of the 99<sup>th</sup> percentile, all are positive and reveal a respectable positive increase. The 99<sup>th</sup> percentile had a large dollar amount decrease of \$10,779 (-12.9 percent).

**Table 7. Mining: Job Quarterly Earnings in 3-Year Interval by Percentile: 2012 to 2015**

Percentile	2012	2015	Numeric Change	Percent Change
5th	\$1,691	\$1,794	\$103	6.1
10th	\$3,244	\$3,688	\$444	13.7
20th	\$6,261	\$7,409	\$1,148	18.3
25th	\$7,543	\$8,748	\$1,205	16.0
30th	\$8,677	\$9,900	\$1,223	14.1
40th	\$10,718	\$12,200	\$1,482	13.8
50th	\$12,749	\$14,511	\$1,762	13.8
60th	\$15,000	\$17,160	\$2,160	14.4
70th	\$17,837	\$20,326	\$2,489	14.0
75th	\$19,581	\$22,414	\$2,833	14.5
80th	\$21,797	\$25,008	\$3,211	14.7
90th	\$29,584	\$34,080	\$4,496	15.2
95th	\$40,279	\$47,060	\$6,781	16.8
99th	\$72,731	\$91,840	\$19,109	26.3
<b>Total Jobs</b>	<b>67,480</b>	<b>59,204</b>	<b>-8,276</b>	<b>-12.3</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Table 7 shows the job quarterly earnings percentile changes for the three years after the recent recession: 2012 to 2015.

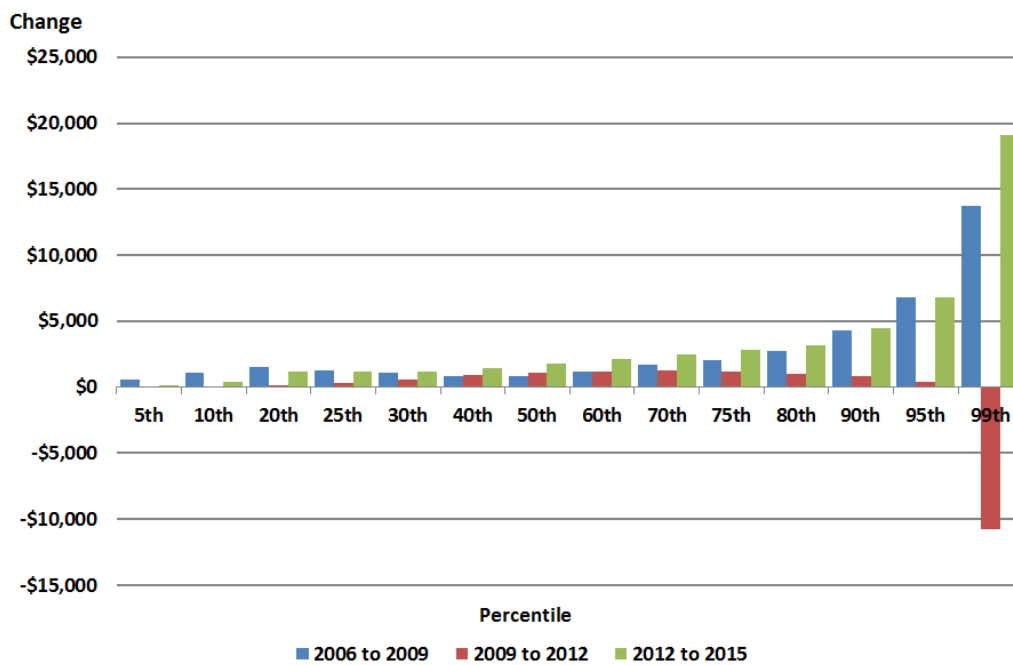


Of all of the 3-year intervals analyzed for mining, this most recent one shows the largest overall job earnings dollar amount and percent change increases. This positive increase is shared by all of the fourteen studied percentiles, with the 5<sup>th</sup> percentile experiencing the smallest dollar amount (\$103) and percent change increases (6.1 percent); the 99<sup>th</sup> percentile had the largest dollar amount (\$19,840) and percent increases (26.3 percent). A review of the previous four 1-year intervals (shown earlier in Tables 1-4) indicates that the largest job earnings increases were between the years of 2013 and 2014.

Two visual representations—in the form of graphs—are displayed below, illustrating the dollar amount and percent changes in each of the 3-year intervals. Chart 3 (below) shows the job earnings dollar amount changes for each of the three 3-year intervals during 2006 to 2015, as outlined in Tables 5, 6, and 7 (consult tables for exact numbers).

It is revealing to see mining job earnings dollar amounts in this illustrated form. For the 3-year interval from 2006 to 2009, the smallest dollar amount increases in earnings were in the 5<sup>th</sup>, 40<sup>th</sup>, and 50<sup>th</sup> percentiles. The 3-year interval from 2009 to 2012 shows the dollar amount increases by percentile as being very asymmetric, with the largest increases occurring in the mid-range percentiles (40<sup>th</sup> through 80<sup>th</sup>), while the 99<sup>th</sup> percentile experienced a large decrease (-\$10,779). On the other hand, in the 3-year interval from 2012 to 2015, mining job earnings steadily increased in dollar amounts for every percentile.

**Chart 3. Mining Job Quarterly Earnings Percentile Dollar Change, 3-Year Intervals: 2006 to 2015**

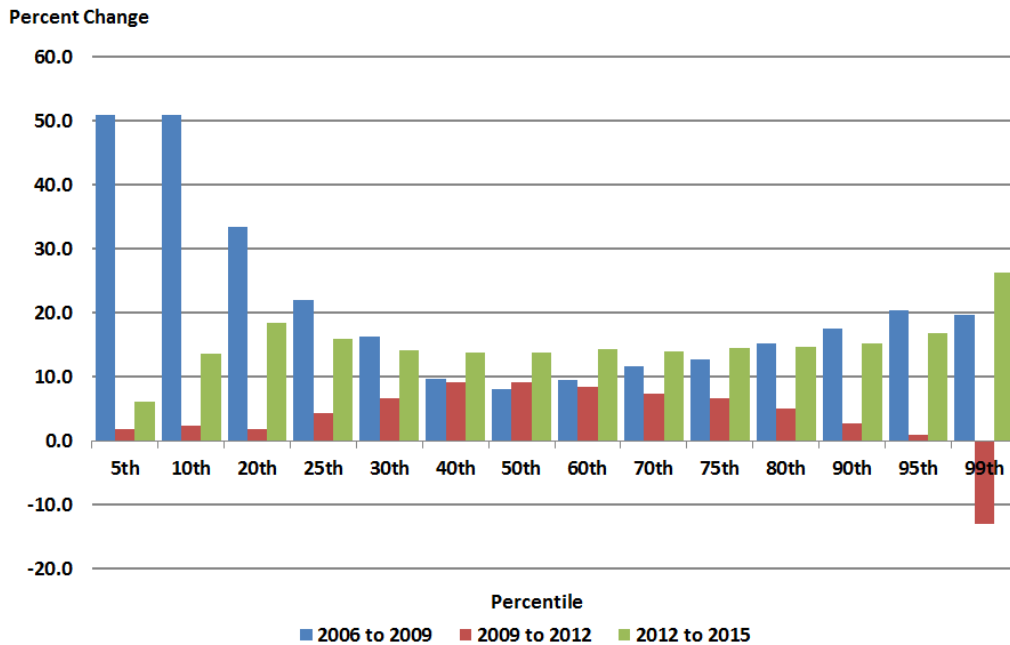


Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.  
 Note<sup>2</sup>: Cases where earnings are less than \$300 removed  
 Note<sup>3</sup>: The unit of analysis is a job.

Chart 4 (on the following page) displays percent changes in mining job earnings from 2006 to 2015.

Chart 4 also shows asymmetrical patterns of percent change for the first 3-year interval of 2006 to 2009, with lower percent increases in the mid-range percentiles. The second 3-year interval of 2009 to 2012

**Chart 4. Mining Job Quarterly Earnings Percentile Percent Change, 3-Year Intervals:  
2006 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

shows an inverse asymmetrical pattern to that of the first: mid-range percentiles had higher percent increases, while the 99<sup>th</sup> percentile experienced a large decrease. However, the job earnings percent changes for the most recent 3-year interval—2012 to 2015—have a different pattern than that of the dollar amount, in that the size of the percent changes does not steadily increase from lower to higher percentiles; instead, the lower and middle percentiles experienced smaller percent changes in earnings. This is an example of the size of percentile dollar amount change being comparatively different than the size of the percentile percent change. A consideration of either alone might lead to a misapprehension of mining job earnings changes.

One way of comparing quarterly job earnings and earnings changes is by placing quarterly earnings dollar amounts and percent changes for the four individual years of the 3-year intervals side-by-side in a table. Table 8 (on the next page) shows quarterly earnings dollar amounts in for each of these years, alongside the percent change in earnings between these years.

As shown in both Chart 4 (above) and Table 8 (on the following page), the percent change in each percentile differed greatly in each of the three 3-year periods. From 2006 to 2009, the lower percentiles (30<sup>th</sup> and below) had the largest percent increase in earnings. During the 3-year period from 2009 to 2012, middle percentiles (30<sup>th</sup> through 80<sup>th</sup>) had the largest percent increases in earnings. During the most recent 3-year period of 2012 to 2015, all but the lowest (6.1 percent for the 5<sup>th</sup> percentile) and highest (26.3 percent for the 99<sup>th</sup> percentile) percent increases were similar, ranging from 13.7 percent for the 10<sup>th</sup> percentile to 18.3 percent for the 20<sup>th</sup> percentile.

**Table 8. Mining: Job Quarterly Earnings Dollar Amounts by Percentile: 2006, 2009, 2012 & 2015**

Percentile	2006	2009	2012	2015	2006-09 % Change	2009-12 % Change	2012-15 % Change
5th	1,100	1,660	1,691	1,794	50.8	1.9	6.1
10th	2,100	3,170	3,244	3,688	51.0	2.3	13.7
20th	4,608	6,150	6,261	7,409	33.5	1.8	18.3
25th	5,928	7,235	7,543	8,748	22.0	4.3	16.0
30th	6,999	8,132	8,677	9,900	16.2	6.7	14.1
40th	8,952	9,821	10,718	12,200	9.7	9.1	13.8
50th	10,818	11,686	12,749	14,511	8.0	9.1	13.8
60th	12,639	13,845	15,000	17,160	9.5	8.3	14.4
70th	14,877	16,606	17,837	20,326	11.6	7.4	14.0
75th	16,286	18,364	19,581	22,414	12.8	6.6	14.5
80th	18,017	20,763	21,797	25,008	15.2	5.0	14.7
90th	24,512	28,790	29,584	34,080	17.5	2.8	15.2
95th	33,120	39,900	40,279	47,060	20.5	0.9	16.8
99th	69,779	83,509	72,731	91,840	19.7	-12.9	26.3
<b>Total Jobs</b>	<b>46,148</b>	<b>45,957</b>	<b>67,480</b>	<b>59,204</b>	<b>-0.4</b>	<b>46.8</b>	<b>-12.3</b>

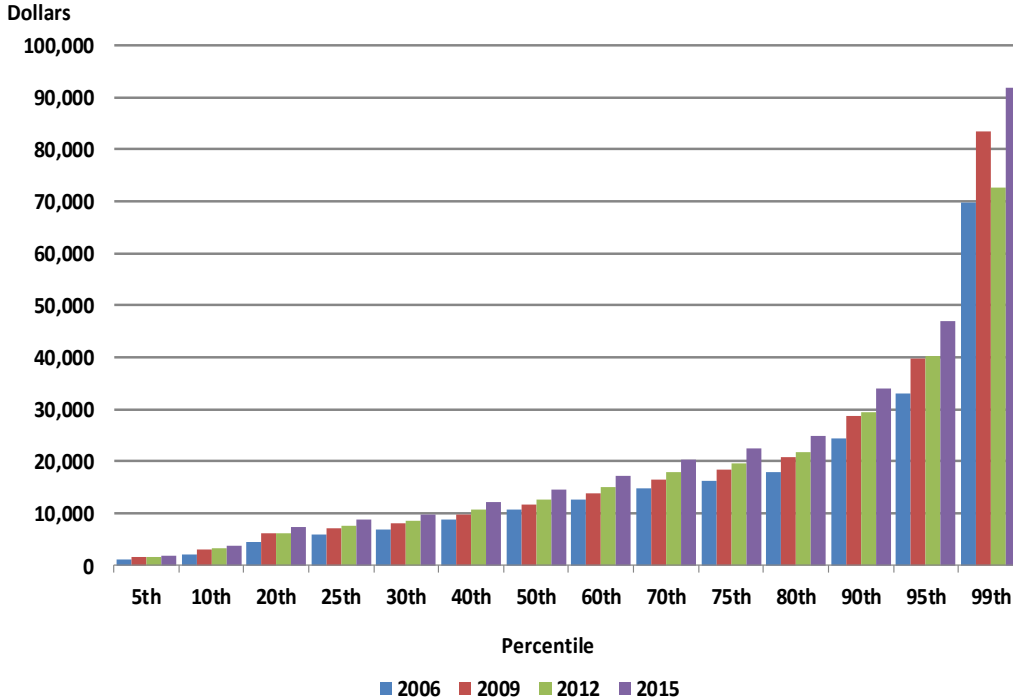
Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Chart 5—summarizing Table 8 data for mining dollar amounts—also provides an enlightening illustration of the quarterly earnings dollar amounts and their changes in each 3-year period.

**Chart 5. Mining Job Quarterly Earnings Dollar Amounts by Percentile:  
2006, 2009, 2012 & 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

#### IV. Mining Percentile Quarterly Job Earnings, 10-Year Changes: 2005 to 2015

A fourth way in which all mining percentile earnings and earnings changes can be illustrated is by displaying the quarterly job earnings dollar amounts and percent changes for the 10-year interval from 2005 to 2015. Table 9 shows both the 10-year quarterly earnings dollar amounts and percent changes for mining.

**Table 9. Mining Job Quarterly Earnings in 10-Year Interval by Percentile: 2005 to 2015**

Percentile	2005	2015	Number Change	Percent Change
5th	\$1,209	\$1,794	\$585	48.4
10th	\$2,248	\$3,688	\$1,440	64.0
20th	\$4,749	\$7,409	\$2,660	56.0
25th	\$5,928	\$8,748	\$2,820	47.6
30th	\$6,900	\$9,900	\$3,001	43.5
40th	\$8,606	\$12,200	\$3,594	41.8
50th	\$10,157	\$14,511	\$4,354	42.9
60th	\$11,794	\$17,160	\$5,366	45.5
70th	\$13,753	\$20,326	\$6,573	47.8
75th	\$15,000	\$22,414	\$7,414	49.4
80th	\$16,729	\$25,008	\$8,279	49.5
90th	\$22,646	\$34,080	\$11,434	50.5
95th	\$30,030	\$47,060	\$17,030	56.7
99th	\$62,860	\$91,840	\$28,980	46.1
<b>Total Jobs</b>	<b>38,004</b>	<b>59,204</b>	<b>21,200</b>	<b>55.8</b>

Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

Table 9 displays that between 2005 and 2015, the dollar amounts for mining earnings increased for all percentile levels, with dollar amount gains increasing as the percentile level increases. However, the percent change in mining earnings varied little for most levels, with the highest percent gains occurring at the 10<sup>th</sup> percentile (64.0 percent), followed by the 95<sup>th</sup> percentile (56.7 percent) and the 20<sup>th</sup> percentile (56.0 percent).

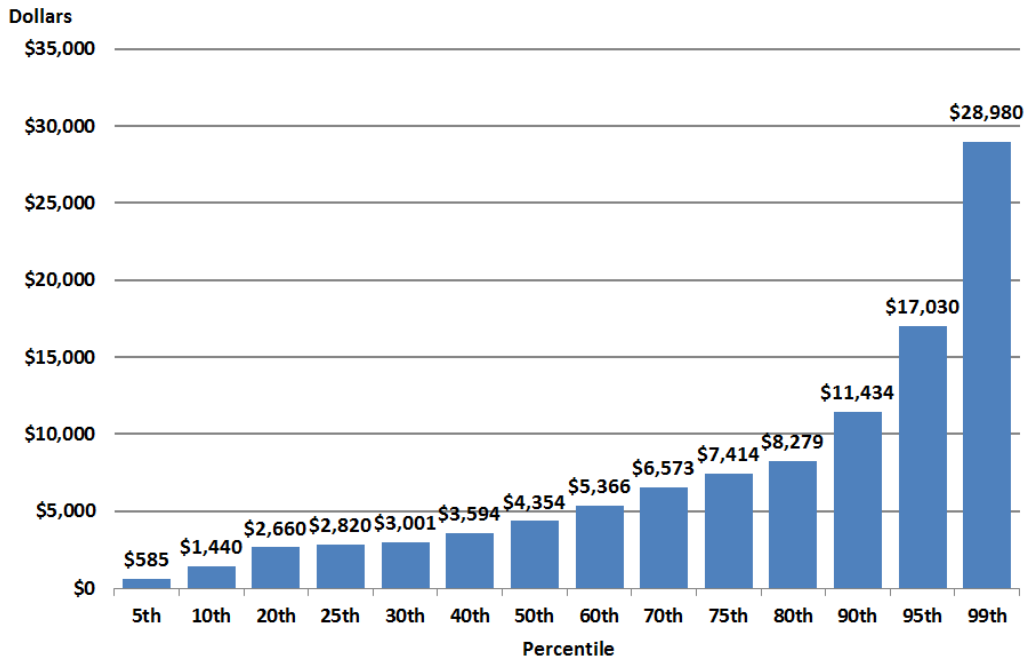
Chart 6 (on the following page) displays the quarterly job earnings dollar amount changes for mining between 2005 and 2015.

As shown in Chart 6, as the level of the percentile increases, the change in size of the quarterly dollar amount also increases. The jump in size of change is greatest between the 95<sup>th</sup> and 99<sup>th</sup> percentiles.

Chart 7 (on the following page) displays the percent changes in quarterly earnings for mining between 2005 and 2015.

The largest surprise revealed in Chart 7 is how relatively modestly (compared to all industries in the previous report) the size of earnings percent changes varied between percentile levels, ranging from 41.8 percent (at the 40<sup>th</sup> percentile) to 64.5 percent (at the 10<sup>th</sup> percentile). As noted in Table 9 and shown in Chart 7, the second- and third-highest percent changes were at the 95<sup>th</sup> and 20<sup>th</sup> percentiles, respectively.

**Chart 6. Mining Job Quarterly Earnings Percentile Dollar Change: 2005 to 2015**

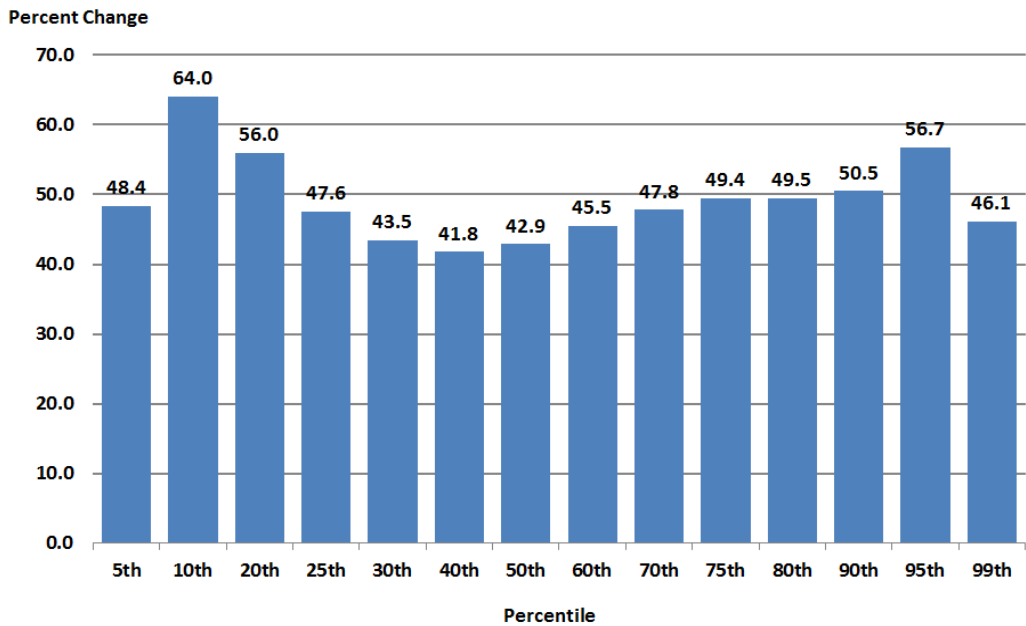


Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

**Chart 7. Mining Job Quarterly Earnings Percentile Percent Change: 2005 to 2015**



Note<sup>1</sup>: Earnings are second quarter job totals, excluding Federal jobs.

Note<sup>2</sup>: Cases where earnings are less than \$300 removed

Note<sup>3</sup>: The unit of analysis is a job.

## V. Summary and Conclusions

The 1-year analyses of mining's dollar earnings changes from 2011 to 2015 reveal an uneven percentile change from year to year. From 2011 to 2012, earnings decreased at all percentiles, with the exception of the 5<sup>th</sup> and 10<sup>th</sup> percentiles. From 2012 to 2013, earnings increased for all but the 5<sup>th</sup> percentile, with progressively larger dollar amount increases by percentile. From 2013 to 2014, earnings increased at all percentiles, with progressively larger dollar amount increases by percentile. From 2014 to 2015 earnings changes were mixed, with earnings decreases occurring at the bottom (5<sup>th</sup>) and middle (30<sup>th</sup>-50<sup>th</sup>) percentiles, while earnings increased at higher percentiles. Mining earnings percent changes for each of the 1-year periods were similar to the dollar amount change—with the exception of 2012 to 2013, during which the largest percent changes occurred in the 20<sup>th</sup> through the 90<sup>th</sup> percentiles.

The analysis of mining dollar amount changes from 2006 to 2009 indicated the higher percentiles had the largest dollar amount changes, while the lower percentiles had the largest percent changes. From 2009 to 2012, the middle percentiles levels had both the largest dollar amount changes and percent changes. In the most recent 3-year period—2012 to 2015—mining dollar amount earnings increased steadily by percentile, while percent changes were largest at the highest levels (90<sup>th</sup> and 95<sup>th</sup> percentiles) as well as some lower levels (20<sup>th</sup> and 25<sup>th</sup> percentiles).

The examination of dollar earnings amounts for the key years of 2006, 2009, 2012, and 2015 (Table 8 and Chart 5) revealed that the higher percentile levels increased the most between each of these years, with earnings decreasing at the 99<sup>th</sup> percentile only in 2012.

An important finding in the examination of the 10-year period from 2005 to 2015 is that the dollar earnings amounts increased steadily as the percentile levels increased, with higher percentiles experiencing larger dollar amount increases in earnings. The largest difference in changes in dollar amount earnings between adjacent percentiles occurred between the 95<sup>th</sup> and 99<sup>th</sup> percentiles. Interestingly, the largest percent changes in earnings occurred at both lower and higher percentile levels: the largest and third-largest percent increases in earnings were at the 10<sup>th</sup> and 20<sup>th</sup> percentiles respectively, while the second- and fourth-largest percent increases in earnings were at the 90<sup>th</sup> and 95<sup>th</sup> percentiles.