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2012–2013 Minerals Yearbook

MONTANA [ADVANCE RELEASE]

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U.S. Geological Survey

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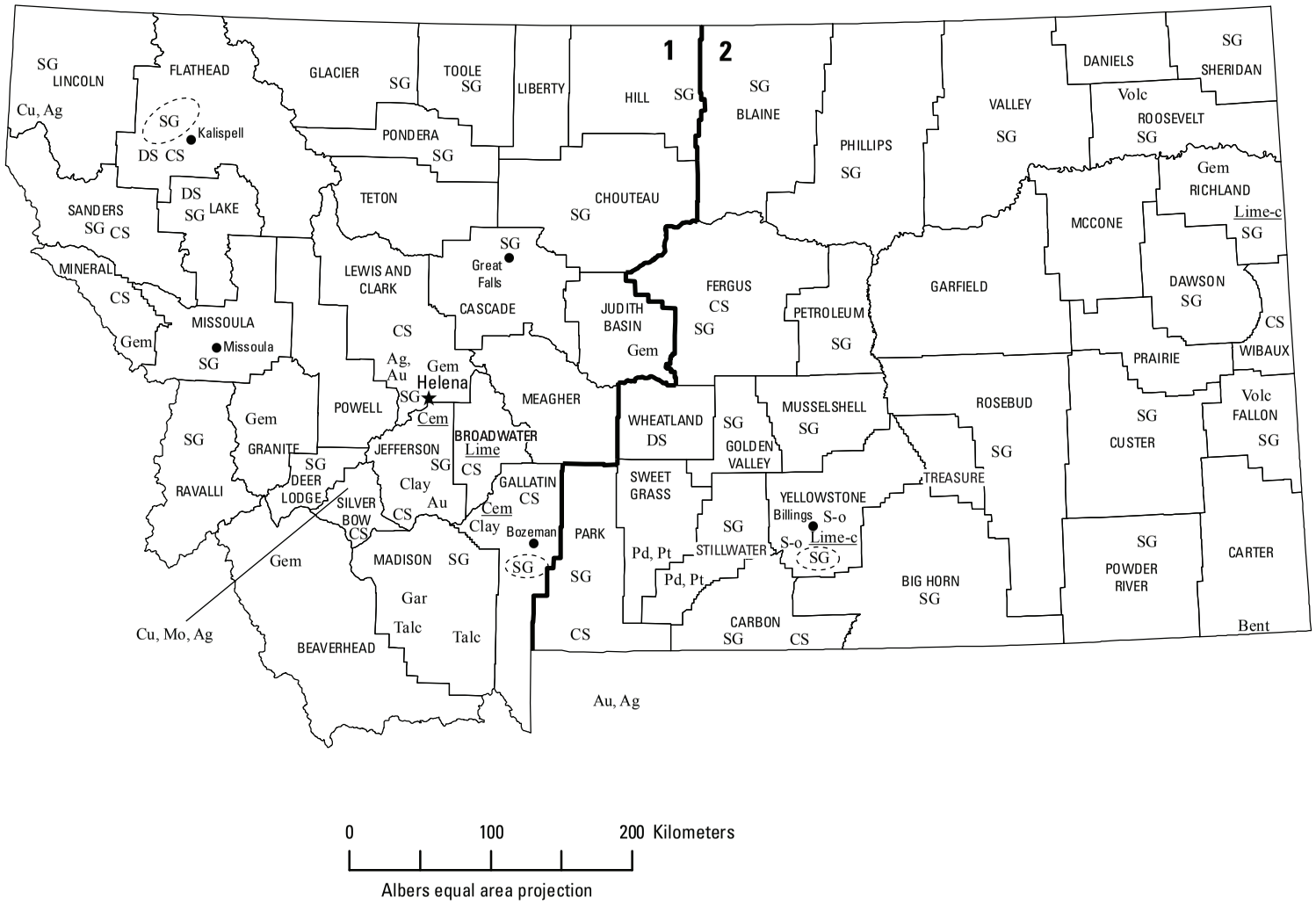
MONTANA



LEGEND

- County boundary
- ★ Capital
- ● City
- 1 Crushed stone/sand and gravel district boundary

MINERAL SYMBOLS (Principal producing areas)

Ag	Silver
Au	Gold
Bent	Bentonite
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
Cu	Copper
DS	Dimension stone
Gar	Garnet
Gem	Gemstones
Lime-c	Lime plant - captive
Lime	Lime plant
Mo	Molybdenum
Pb	Lead
Pd	Palladium
Pt	Platinum
S-o	Sulfur (oil)
SG	Construction sand and gravel
Talc	Talc
Volc	Volcanic cinder

Concentration of mineral operations

Source: Montana Bureau of Mines and Geology/U.S. Geological Survey (2012–13).

The Mineral Industry of Montana

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Montana Bureau of Mines and Geology for collecting information on all nonfuel minerals.

In 2013, the value of the nonfuel mineral production[1] in the State of Montana was $1.31 billion, 1.7% of the total U.S. nonfuel mineral production value, ranking it 19th in the Nation. In 2012, the corresponding value was $1.45 billion, 1.9% of the U.S. total nonfuel mineral production, ranking it 16th among the 50 States. In 2013, on a per capita basis, nonfuel mineral production in Montana had a value of $1,290 compared with the national average of $238. In 2012, the per capita value was $1,445 compared with the national average of $241.

The value of nonfuel mineral production in Montana for the years 2006 through 2013 was as follows (in billions of dollars): $1.07 (2006), $1.37 (2007), $1.37 (2008), $0.983 (2009), $1.14 (2010), $1.45 (2011), $1.45 (2012), and $1.31 (2013).

In 2013, there were 2,703 employees in nonfuel mineral mines in Montana and 737 in mills and preparation plants. In 2012, the corresponding numbers were 2,716 in nonfuel mineral mines and 770 in mills and preparation plants (U.S. Mine Safety and Health Administration, 2013, p. 12; 2014, p. 12). In 2013, the average annual wage in Montana for all mining was $83,873 compared with $36,499 for all industries. In 2012, the corresponding figures were $79,843 and $35,983, respectively (National Mining Association, unpub. data, February 4, 2016).

In 2013 and in 2012, Montana was the only State to produce palladium and platinum and, on the basis of production quantity, ranked first in the production of crude talc out of four producing States. The State was second in the production of iodine out of two producing States. In 2013, Montana was fifth in the production of copper concentrates and molybdenum concentrates out of seven producing States, in each case, and in 2012, it was fifth for producing copper concentrates and molybdenum concentrates out of eight and seven producing States, respectively. Additionally in 2012, the State was second in the production of industrial garnet, out of 3 producing States, and fifth in the production of silver out of 11 producing States.

In 2013 and 2012, the State also produced bentonite, common clays, construction sand and gravel, crushed stone, dimension stone, gold, lime, and natural gemstones (table 1). Montana also produced silver in 2013.

[1]The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All USGS mineral production data published in this chapter are those available as of February 2016. Data in this report are rounded to three significant digits and percentages are calculated from unrounded data. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at http://minerals.usgs.gov/minerals.

Commodity Review

The following information is from the U.S. Geological Survey (USGS) and McCulloch (2013) and Senyk (2014). Non-USGS data may differ from USGS data, which are based on company responses to USGS surveys and estimation for nonrespondents. The USGS withheld some data to avoid disclosing company proprietary data.

Metals

Mineral industry activity with respect to metals was as follows:

Gold (Lode Deposits).—In 2013 and 2012, several mines were in operation and deposits under development or being explored.

Butte Highland Mine.—The Montana Department of Environmental Quality (DEQ) issued a draft Environmental Impact Statement (EIS) and collected comments in November 2013. It was anticipated that the mine would start operations in 2014. Highland Mining Co. sold their 50% interest to Montana State Gold Co. (MSGC) for $24 million. The MSGC would fund the rest of the project until commencement of production.

Columbia Gold Project.—In 2012, Atna Resources, Ltd. drilled seven reverse circulation holes totaling 1,060 meters (m) in the Seven-Up Pete deposit, began collecting baseline data, and planned to initiate the permitting process. In 2013, the company continued engineering, metallurgical, and environmental baseline studies at the project, located east of Lincoln.

Grant Hartford Corp.—The mine shipped screened dump material from the Lead King Mine in the Garnet Mountains for most of 2012. It planned to develop the Nancy Hanks Mine from the decline. Much of the infrastructure had been completed.

Silver Bell and St. Lawrence Project.—Montana Gold Mining Co., Inc. owned 100% of the two original mines and geological mapping and geochemical surveys had been initiated.

There were a number of mines where dumps or tailings from old ponds were screened and sent to the Golden Sunlight Mine for further processing, including the Black Friday Mine (the potential of mining underground resources through a decline was also being explored), the Edgerton/Green Campbell Mine, the Hardcash Mine (Reclaim LLC), the Keating Mine, and the Mammouth Mine.

Gold (Placer Deposits).—In 2013 and 2012, there were a number of placer deposits that were either in operation or under evaluation, many sporadically. Among these were the following: American Gulch (on the Stucky Ranch), Big Nugget (the new owner, Potentate Mining, was defining the deposit), Calumet (near Superior on Quartz Creek), Eureka Gulch (also has sapphires; located east of Philipsburg; Potentate Mining

started mining in spring 2013), Grasshopper (on the south side of Grasshopper Creek below Bannack), Lincoln Gulch (the pay zones were narrow and not readily identified), Lower Emigrant (geophysical exploration initiated; located along Emigrant Creek near Chico Hot Springs), Lower Gold Creek (the old dredge tailings showed positive results for remining), Misco (where concurrent reclamation was progressing with production), Ophir (north of Avon; multiple operations existed in the Finn and Ophir Creek mining districts), Pioneer (in the Gold Creek drainage, near Garrison), Scratchgravel Hills (limited mining owing to scarcity of water), Spring Gulch (north of Argenta), Stucky Ranch (deposits near Washington Creek and Jefferson Creek), The Top O'Deep (mothballed during 2012), Trout Creek (where the gold lies above the iron-rich red gravels), Walter (below Lyons Gulch on the Vermillion River), and Wilson Creek (east of Helmville).

Gold and Silver.—The major mines included:

Drumlummon Mine.—In August 2012, U.S. Silver Corp. and RX Gold and U.S. Silver merged to form U.S. Silver and Gold, Inc. The company had expanded exploration within the district and had identified potential resources of gold at the Belmont Mine. They also explored areas of the Penobscot Mine. The merger had provided surplus milling capacity at the Coeur mill near Osburn, ID. The company planned to change milling from the Contact mill in Philipsburg to Osburn, ID, in spite of the considerable trucking distance.

Golden Sunlight Mine.—Northeast of Whitehall, Barrick Gold Corporation maintained production from the Mineral Hill Pit at the Golden Sunlight Mine. Geotechnical constraints required the open pit design to be revised on the west side of the pit. The company completed permitting of the North Area and South Area and received the Record of Decision in January 2014. Barrick Gold Corp. continued exploration and engineering studies in the Bonnie area and on satellite ore bodies around the existing main pit. A new pit was planned about 300 m to the northeast.

Platinum Group Metals.—Stillwater Mining Co. started the Blitz Project at the Stillwater Mine in the third quarter of 2012, which involves extending tunnels east from the existing Stillwater Mine infrastructure, a second underground drift, and a new surface portal and decline to be located about 6.4 kilometers to the east of the existing Stillwater Mine facilities. In 2013, the Stillwater Mine provided over 70% of the company's platinum-group metals production and accessed the eastern portion of the JM Reef. It was projected that the full Blitz development would take about 6 years to complete, but opportunities to expedite the project were being explored.

Stillwater Mining Company was working on a number of diamond drill holes located near the Benbow chromite mine. These holes examined grade and rock conditions that were expected to be encountered by the Blitz Project in their drive toward the east from the Stillwater Mine.

Iron Ore.—Iron ore is listed among the metals but the product is used as an industrial mineral for mixing with cement. At Black Butte Iron Mine, North of White Sulphur Springs, the Holcim USA, Inc. mined this iron ore deposit for flux for the portland cement plant.

Other Metallic Minerals.—Most metal mines generally contain more than one mineral.

Black Butte Copper Project (copper, cobalt, and silver).—Tintina Resources, Inc. continued defining copper resources north of White Sulphur Springs. The company outlined a high-grade copper resource in the Johnny Lee deposit. On July 12, 2013, Tintina Resources filed an updated preliminary economic assessment for an underground mine and milling operation on this resource.

Contact Mill & Mining.—Contact Mill & Mining's mill in Philipsburg processed Drumlummon's ore until mid-year and, late in 2013, processed custom ore from Montana and a bulk sample from a mine in northern British Columbia, Canada.

Continental Pit (copper, molybdenum, and silver).—In the Butte-Anaconda area, Montana Resources removed the planned tonnages of waste rock and ore for 2013. A permit expansion was approved by the Montana DEQ to mine an area to the east of the main pit; this would allow deeper mining of the Continental Pit in the future. In 2012, Montana Resources was compromised briefly by a failure in the Berkeley Pit wall near the main haulage road.

Golden Dream Mine (copper and gold).—Development was curtailed early in 2012 at Great Eastern Resources' mine near Elkhorn (Boulder) when water was intercepted in the decline. The operation was put on hold until funding for a water treatment plant could be secured.

Madison Gold (copper and gold).—West of Silver Star, Coronado Resources, Ltd. maintained mining the last of their gold and copper reserves. At the end of summer 2013, operations were closed and the property was sold to Lynx Gold Corp.

Montana Tunnels Mine (gold, lead, silver, and zinc).—Operations remained suspended at Montana Tunnels Mine located west of Jefferson City. The mine was under care-and-maintenance status until funding could be secured.

Rock Creek Project (copper and silver).—In 2013, Revett Mining Company's Rock Creek Project (RC Resources, Inc.) continued working with the U.S. Forest Service and cooperating agencies in preparing the supplemental EIS. It was their 30th year in the permitting process.

Troy Mine, Inc. (copper and silver).—In November 2013, the Troy Mine (Revett Mining Company) began a new development project to access the remaining reserves. At the time, the project life was expected to be 12 years. In 2012, the mine maintained continuous production through November 2012. In mid-December, seismic events eventually led to closure of the mine. Pillars in inactive portions of the main haulage failed and mine access to the new workings was lost. Early in 2013, a development drift, established for inspection of lower workings, was completed. They found minimal damage in the mining areas and operations were resumed.

Industrial Minerals

Mineral industry activity with respect to industrial minerals was as follows:

Cement.—The Ash Grove Cement (portland cement) Company was operating under and meeting new particulate

emission limits. Ash Grove Cement met the new sulfur dioxide limits that became effective in 2013. It was testing a new scrubber that was installed as part of the baghouse project. A low nitrogen oxides (NO_x) burner was installed in the fall of 2013, and the company was designing and procuring selective noncatalytic reduction equipment for additional NO_x reduction, which was expected to be operable by September 2014.

Trident Quarry (portland cement), near Three Forks, Holcim, USA Inc., continued production of portland cement. In 2013, the company modified and improved the crushing circuit at the plant.

Garnets, Industrial.—Garnet is produced primarily for use in abrasives. Through 2013, the environmental analysis of a proposed amendment to the operating permit held by Garnet USA at the Ruby Garnet Mine near Alder continued. The amendment would allow development of a new open pit hard-rock garnet mine with an estimated 37-year life. The company planned quarry boundaries for the new pit and the mill was reconfigured for the transition from placer to lode garnet resources.

Gemstones.—Gem Mountain Sapphire Mine maintained commercial production from the Anaconda bench and was also open to the public for sapphire mining, generally from the end of May to Labor Day.

Graphite, Natural.—Graphite Corp. processed a dump containing crystalline graphite at the Crystal Graphite Mine located south of Dillon.

Talc.—Barretts Minerals, Inc. operated at capacity for talc throughout the 2 years.

Regal and Treasure Mines (talc products)—Barretts Mineral, a subsidiary of Specialty Minerals, Inc., continued talc production from two open pit mines east of Dillon. They also drilled 20 holes on two prospects.

Yellowstone Mine (talc products).—Ore production at the Imerys Talc's operations (mine and mills), south of Ennis, remained steady. The company increased efficiencies and optimized processes to minimize energy consumption.

References Cited

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TABLE 1
NONFUEL MINERAL PRODUCTION IN MONTANA[1, 2]

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2011		2012		2013	
		Quantity	Value	Quantity	Value	Quantity	Value
Garnet, industrial[e]		18	2,650	15	2,650	--	--
Gemstones, natural		NA	524	NA	532	NA	539
Palladium[3]	kilograms	12,400	295,000	12,300	257,000	12,600	295,000
Platinum[3]	do.	3,700	205,000	3,670	184,000	3,720	178,000
Sand and gravel, construction		11,100 [r]	86,400 [r]	12,000	90,300	12,600	95,900
Stone:							
Crushed		2,640 [r]	26,800 [r]	2,750	28,500	2,690	32,200
Dimension		12	2,930	14	1,360	31	1,590
Combined values of cement, clays (bentonite, common), copper, gold, iodine (2012–13), lime, molybdenum concentrates, silver, talc (crude)		XX	829,000 [r]	XX	889,000	XX	709,000
Total		XX	1,450,000 [r]	XX	1,450,000	XX	1,310,000

[e]Estimated. [r]Revised. NA Not available. XX Not applicable. -- Zero.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Data are rounded to no more than three significant digits; may not add to totals shown.
[3]Recoverable content of ores and so forth.

TABLE 2
MONTANA: CRUSHED STONE SOLD OR USED IN THE UNITED STATES, BY TYPE[1]

Type	2012 Number of quarries	2012 Quantity (thousand metric tons)	2012 Value (thousands)	2012 Unit value	2013 Number of quarries	2013 Quantity (thousand metric tons)	2013 Value (thousands)	2013 Unit value
Limestone[2]	7	1,740	$17,300	$9.95	4	1,800	$23,400	$13.04
Granite	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Traprock	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Sandstone and quartzite[4]	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Volcanic cinder and scoria	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Miscellaneous stone	37	1,010	11,100	11.03	30	894	8,800	9.85
Total or average	XX	2,750	28,500	10.34	XX	2,690	32,200	11.98

XX Not applicable.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes limestone-dolomite reported with no distinction between the two kinds of stone.
[3]Withheld to avoid disclosing company proprietary data; included with "Miscellaneous stone."
[4]Includes sandstone-quartzite reported with no distinction between the two kinds of stone.

TABLE 3
MONTANA: CRUSHED STONE SOLD OR USED BY PRODUCERS BY USE[1]

Use	2012 Quantity (thousand metric tons)	2012 Value (thousands)	2012 Unit value	2013 Quantity (thousand metric tons)	2013 Value (thousands)	2013 Unit value
Construction:						
Coarse aggregate (+1½ inch):						
Riprap and jetty stone	18	$176	$9.75	W	W	W
Filter stone	15	225	14.97	W	W	W
Coarse aggregate, graded:						
Concrete aggregate, coarse	7	81	11.61	--	--	--
Bituminous aggregate, coarse	W	W	W	W	W	W
Bituminous surface-treatment aggregate	21	46	2.19	--	--	--
Railroad ballast	327	3,080	9.41	W	W	W
Fine aggregate (-⅜ inch):						
Stone sand, concrete	W	W	W	W	W	W
Coarse and fine aggregates:						
Graded road base or subbase	22	247	11.24	295	$3,200	$10.87
Unpaved road surface	114	685	6.01	W	W	W
Terrazzo and exposed aggregate	9	141	15.68	--	--	--
Crusher run or fill or waste	W	W	W	W	W	W
Unspecified coarse and fine aggregates	268	4,700	17.54	--	--	--
Unspecified and other construction materials	1	14	13.93	26	395	15.46
Agricultural:						
Agricultural Limestone	W	W	W	--	--	--
Poultry grit and mineral food	12	443	36.90	W	W	W
Chemical and metallurgical:						
Cement manufacture	W	W	W	425	6,320	14.87
Lime manufacture	W	W	W	1,100	14,000	12.70
Flux stone	2	80	40.15	W	W	W
Sulfur oxide removal	178	1,570	8.83	W	W	W
Special:						
Mining dusting or acid water treatment	5	169	33.80	W	W	W
Asphalt fillers or extenders	W	W	W	W	W	W
Other miscellaneous uses and specified uses not listed	4	66	16.46	3	54	17.34
Unspecified:[2]						
Reported	68	700	10.29	101	1,040	10.34
Estimated	901	9,330	10.35	63	647	10.33
Total or average	2,750	28,500	10.34	2,690	32,200	11.98

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Reported and estimated production without a breakdown by end use.

TABLE 4
MONTANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2012, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	7	42	26	359	--	--
Coarse aggregate, graded[3]	344	3,170	25	114	--	--
Fine aggregate (-⅜ inch)[4]	W	W	--	--	--	--
Coarse and fine aggregates[5]	407	5,620	15	205	--	--
Other construction materials	1	14	--	--	--	--
Agricultural[6]	--	--	12	444	--	--
Chemical and metallurgical[7]	W	W	549	4,900	--	--
Special[8]	--	--	5	177	--	--
Other miscellaneous uses and specified uses not listed[9]	3	18	787	48	--	--
Unspecified:[10]						
Reported	(11)	1	(11)	(11)	68	698
Estimated	823	8,520	78	809	--	--
Total	1,970	20,700	710	7,060	68	698

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes riprap and jetty stone and filter stone.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, and railroad ballast.
[4]Includes stone sand (concrete).
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.
[6]Includes agricultural limestone, and poultry grit and mineral food.
[7]Includes cement manufacture, lime manufacture, flux stone, and sulfur oxide removal.
[8]Includes mine dusting or acid water treatment and asphalt fillers or extenders.
[9]Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.
[10]Reported and estimated production without a breakdown by end use.
[11]Less than ½ unit.

TABLE 5
MONTANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2013, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch)[2]	W	W	W	W	--	--
Coarse aggregate, graded[3]	W	W	W	W	--	--
Fine aggregate (-⅜ inch)[4]	W	W	--	--	--	--
Coarse and fine aggregates[5]	W	W	W	W	271	3,000
Other construction materials	4	61	22	333	--	--
Agricultural[6]	--	--	W	W	--	--
Chemical and metallurgical[7]	W	W	W	W	--	--
Special[8]	--	--	W	W	--	--
Other miscellaneous uses and specified uses not listed[9]	2	11	1	43	--	--
Unspecified:[10]						
Reported	1	12	(11)	1	99	1,030
Estimated	11	114	52	809	--	--
Total	1,620	19,000	696	9,240	371	4,030

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes riprap and jetty stone and filter stone.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, and railroad ballast.
[4]Includes stone sand (concrete).
[5]Includes graded road base or subbase, unpaved road surface, terrazzo and exposed aggregate, crusher run, and unspecified coarse and fine aggregates.
[6]Includes agricultural limestone, and poultry grit and mineral food.
[7]Includes cement manufacture, lime manufacture, flux stone, and sulfur oxide removal.
[8]Includes mine dusting or acid water treatment and asphalt fillers or extenders.
[9]Includes drain fields, waste material, lightweight aggregate (slate), pipe bedding, refractory stone (including ganister), and other miscellaneous uses.
[10]Reported and estimated production without a breakdown by end use.
[11]Less than ½ unit.

TABLE 6
MONTANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products[2]	701	$6,980	$9.96
Asphaltic concrete aggregates and other bituminous mixtures	445	3,650	8.20
Road base and coverings	2,860	20,400	7.13
Road and other stabilization (cement)	6	44	7.33
Fill	173	1,090	6.30
Other miscellaneous uses[3]	119	1,060	8.91
Unspecified:[4]			
Reported	2,290	15,900	6.94
Estimated	5,450	41,200	7.56
Total or average	12,000	90,300	7.53

[1]Data are rounded to no more than three significant digits, may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes railroad ballast, and snow and ice control.
[4]Reported and estimated production without a breakdown by end use.

TABLE 7
MONTANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate and concrete products	714	$6,590	$9.24
Asphaltic concrete aggregates and other bituminous mixtures	561	6,330	11.27
Road base and coverings[2]	3,440	24,700	7.18
Fill	128	696	5.44
Other miscellaneous uses[3]	265	1,270	4.79
Unspecified:[4]			
Reported	2,290	16,900	7.40
Estimated	5,160	39,400	7.63
Total or average	12,600	95,900	7.64

[1]Data are rounded to no more than three significant digits, may not add to totals shown.
[2]Includes road and other stabilization (cement).
[3]Includes railroad ballast, and snow and ice control.
[4]Reported and estimated production without a breakdown by end use.

TABLE 8
MONTANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2012, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products[2]	531	5,460	170	1,520	--	--
Asphaltic concrete aggregates and road base materials[3]	2,400	18,100	755	4,640	156	1,390
Fill	84	437	89	656	--	--
Other miscellaneous uses[4]	118	1,060	1	5	--	--
Unspecified:[5]						
Reported	797	6,240	942	8,470	550	1,210
Estimated	3,360	25,300	2,100	15,800	--	--
Total	7,290	56,600	4,050	31,100	706	2,600

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road base and other stabilization (cement).
[4]Includes railroad ballast, and snow and ice control.
[5]Reported and estimated production without a breakdown by end use.

TABLE 9
MONTANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2013, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products	542	5,060	172	1,530	--	--
Asphaltic concrete aggregates and road base materials[2]	1,790	15,800	2,210	15,200	--	--
Fill	31	193	96	503	--	--
Other miscellaneous uses[3]	76	627	187	642	--	--
Unspecified:[4]						
Reported	745	6,600	1,020	9,190	525	1,160
Estimated	3,390	25,700	1,610	12,300	163	1,430
Total	6,570	53,900	5,290	39,300	688	2,590

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes road base and other stabilization (cement).
[3]Includes railroad ballast, and snow and ice control.
[4]Reported and estimated production without a breakdown by end use.