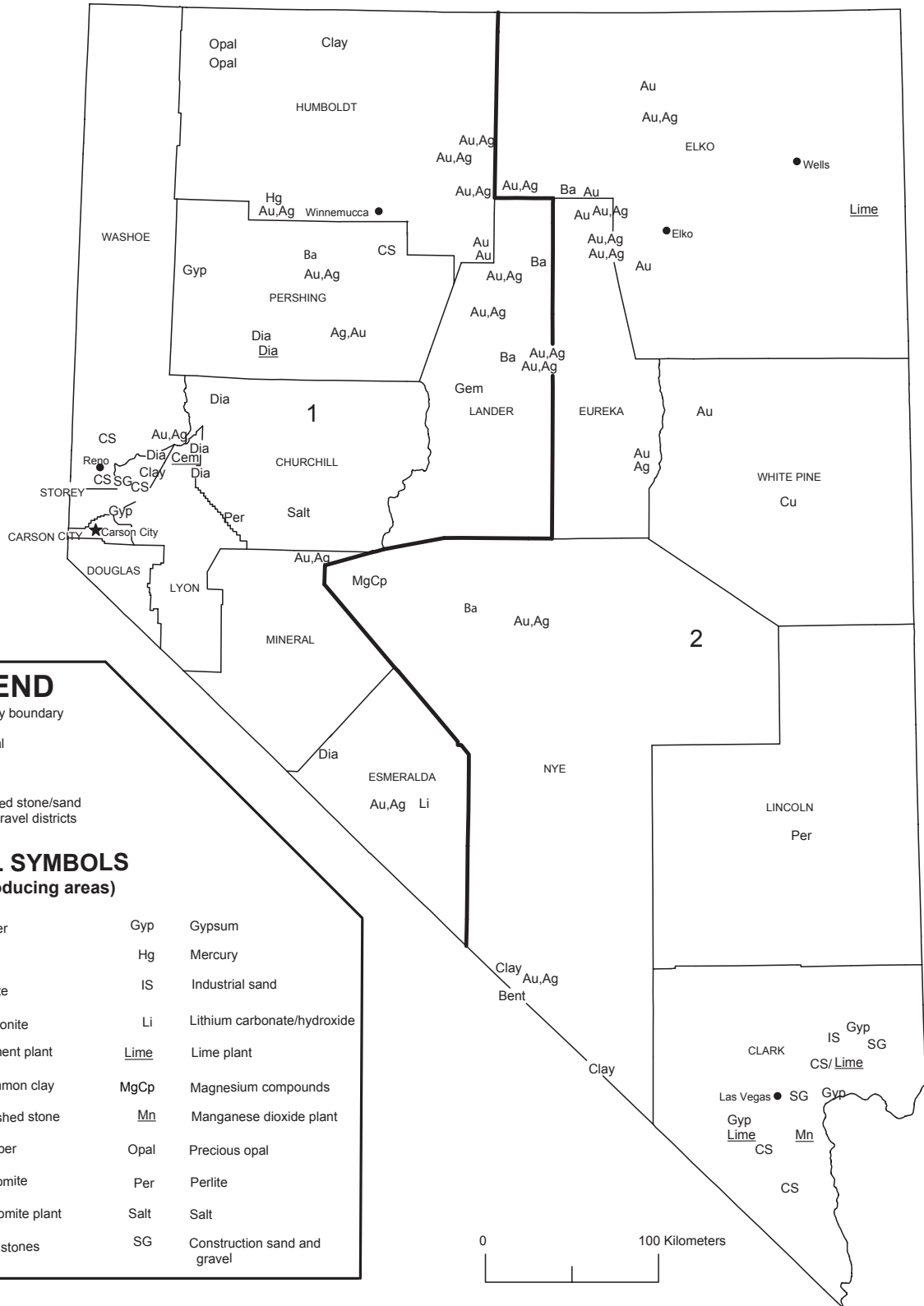


NEVADA



LEGEND

- County boundary
- ★ Capital
- City
- 1 — Crushed stone/sand and gravel districts

MINERAL SYMBOLS (Major producing areas)

Ag	Silver	Gyp	Gypsum
Au	Gold	Hg	Mercury
Ba	Barite	IS	Industrial sand
Bent	Bentonite	Li	Lithium carbonate/hydroxide
<u>Cem</u>	Cement plant	<u>Lime</u>	Lime plant
Clay	Common clay	MgCp	Magnesium compounds
CS	Crushed stone	<u>Mn</u>	Manganese dioxide plant
Cu	Copper	Opal	Precious opal
Dia	Diatomite	Per	Perlite
<u>Dia</u>	Diatomite plant	Salt	Salt
Gem	Gemstones	SG	Construction sand and gravel

THE MINERAL INDUSTRY OF NEVADA

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

In 2004, Nevada's nonfuel raw mineral production was valued¹ at \$3.47 billion, based upon annual U.S. Geological Survey (USGS) data. This was an increase of \$280 million, up 8.7% from 2003,² which followed a 9.6% increase of an identical \$280 million from 2002. The State, for the 6th consecutive year and for the 11th time in the past 13 years, ranked second in the Nation (1st in 1993 and 1998) in total nonfuel mineral production value, accounting for more than 7.5% of the U.S. total.

Nevada, which has led the Nation in gold production since 1981, provided nearly 84% of the Nation's gold in 2004. In 2004, gold accounted for 82% of the State's total nonfuel raw mineral production value, followed by construction sand and gravel with about 5.7%, lime (company proprietary data), and crushed stone and silver with about 2% each. For the third consecutive year, Nevada ranked second in silver production (first from 1987-2001) accounting for nearly 24% of the silver produced from U.S. mines (30% in 2002 and 26% in 2003).

In 2004, gold led the State's rise in value with an increase of \$190 million, a 7% increase from 2003, even though production was down almost 5%. Other particularly significant increases in value (in descending order of change) included those of copper with Quadra Mining Co.'s resumption of mining at the Robinson Mine (company proprietary data), crushed stone and construction sand and gravel, up about \$24 million and \$23 million, respectively, silver, up \$14 million, and a smaller yet significant increase for barite (table 1). These increases were mildly offset by decreases in the values of diatomite (down about \$8 million), lime, gypsum, and brucite.

In 2003, a \$250 million increase in the value of gold accounted for more than 89% of Nevada's increase in nonfuel mineral value from 2002. Also showing increases in value were construction sand and gravel, up \$15 million; lime, up about \$11 million; crushed stone, up nearly \$7 million; gypsum, up about \$5 million; barite, up nearly \$4 million; and diatomite, up nearly \$2 million. The most significant decreases included those of silver, down about \$12 million and portland cement, down about \$5 million. Lithium carbonate also showed a small decrease in value (table 1).

In 2004, while Nevada continued to lead the Nation in the quantity of gold produced, it also continued to be the only State to produce magnesite and lithium carbonate minerals (minerals listed in descending order of value) and remained 2d in silver and barite and 7th in lime. While Nevada rose in rank to 8th from 10th in the production of construction sand and gravel, was 5th in copper, and remained a significant producer of industrial sand and gravel, the State decreased to 2d from 1st in diatomite, to 3d from 1st in gypsum, to 7th from 5th in gemstones (based on value), and to 2d from 1st in brucite.

Mercury was produced as a byproduct of gold-silver processing but data were not available. Mercury has not been mined domestically as a primary mineral commodity since the closure of the McDermitt Mine in 1992 (Brooks and Matos, 2005§³).

The following narrative information was provided by the Nevada Bureau of Mines and Geology⁴ (NBMG). Production data in the following text are those reported by the NBMG, based upon its own surveys, estimates, and information gathered from company annual reports. The NBMG data are reported by that agency to be nonproprietary and may differ from some USGS preliminary estimates and production figures as reported to and estimated by the USGS.

Employment

The mining industry directly employed 9,559 people in 2004, and the industry was responsible for another 48,000 jobs related to providing the goods and services needed by the industry and its employees (Driesner and Coyner, 2005a§). On the average, each of the 9,559 workers in the nonfuel mineral industry in Nevada produced approximately \$357,800 in mined products in 2004, an alltime high.

Exploration and Development Activities

Exploration activity continued at a high pace in Nevada in 2004. Companies continued the search for high-grade veins in and around old districts but, reminiscent of porphyry copper exploration in the southwest in the late 1960s, pediment areas and valleys with deeper gravel cover were blanketed with new claims. Placer Dome Inc.'s successful activities in the Cortez area spawned serious staking programs by several companies in Antelope District, Kobeh Valley, and Pine Valley of central Eureka County. Although the majority of the exploration activity in the State was concentrated on gold, companies and individuals also searched for copper,

¹The 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 2004 USGS mineral production data published in this chapter are those available as of December 2005. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—also can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Values, percentage calculations, and rankings for 2003 may differ from the Minerals Yearbook, Area Reports: Domestic 2003, Volume II, owing to the revision of preliminary 2003 to final 2003 data. Data and rankings for 2004 are considered to be final and are not likely to change significantly.

³References that include a section mark (§) are found in the Internet References Cited section.

⁴Jonathan G. Price, the State Geologist, and Stephen B. Castor and Joseph V. Tingley, Research Geologists, coauthored the text of the State mineral industry information provided by the Nevada Bureau of Mines and Geology.

molybdenum, and zinc. The Standard Gold Mine opened in Pershing County, Nevada's first new gold mine since 1998, and in White Pine County, the Robinson copper mine resumed production. More than 28,800 new mining claims were recorded in Nevada in 2004, 63% more than that of 2003. These claims were scattered in 285 districts and areas across the State, but major activity was in the Antelope District (3,147 claims), the Kobeh Valley area (1,606 claims), Bald Mountain (1,404 claims), and the Pine Valley area (1,217 claims).

Exploration in 2004 included high-grade (mostly vein) targets, which tend to be popular during times of depressed prices for gold, and low-grade, large-tonnage deposits, which generally become more profitable when gold prices are higher. The average price of gold in 2004 was \$410 per ounce, well above prices in 2003 and 2002, \$363 and \$310 per ounce, respectively. New discoveries were reported along the Carlin trend, in the Jerritt Canyon District, along the Battle Mountain-Cortez-Eureka trend, and in several other districts. Barrick added 71,500 kilograms (kg) of gold to its reserves at the Betze-Post Mine, and Newmont added 71,500 kg of gold to its reserves at the Phoenix Project in the Battle Mountain District. Extensions of mineralization were also discovered near the Marigold, Pinson, Sleeper, Hycroft, and Hog Ranch Mines. Exploration has taken place in many greenfield areas as well as in many of Nevada's famous mining districts. By concentrating on a gold deposit that Hecla Mining Co. planned to mine with underground techniques, the company avoided archaeological resources near its Hollister project in Elko County. Interestingly, these resources (chalcedony, used for stone tools) probably were formed by the same hydrothermal system that deposited the gold.

Most exploration efforts focused on gold and silver, but strong prices stimulated exploration for several other mineral commodities, including copper, molybdenum, and zinc. As measured by the numbers of active claims on public lands, grass-roots exploration activity rose significantly during the year. According to the Nevada Division of Minerals Nevada Exploration Survey, exploration activity in Nevada has been steadily increasing since 2001, when companies reported \$51.2 million in expenditures in Nevada (Driesner and Coyner, 2005b§). The 22 companies responding to the survey reported spending \$79.7 million on exploration in Nevada in 2004. This figure was well below the level of \$138.8 million in 1995, but the companies were optimistic about Nevada's potential and project spending \$111.9 million in 2005. Another measure of exploration activity was the number of exploration geologists employed by these companies—124 in 2004 compared with 126 in 2003. These companies projected employing 145 exploration geologists in 2005. Because of its favorable geology and regulatory climate, Nevada continued to attract a large portion of the worldwide exploration expenditures of the companies actively exploring in Nevada. Significant exploration (including drilling, geochemical sampling, geological mapping, and claim staking) was reported in all 17 Nevada counties. The number of active claims in Nevada rose substantially in 2004 to about 120 from about 90 in 2003, but was still close to the relatively low level reached in 1993 after the introduction of new fees by the Federal Government.

Commodity Review

Industrial Minerals

Barite.—Nevada produced nearly all the barite mined in the United States. About 508,000 metric tons (t) of barite was produced in the State in 2004, 15% more than was produced in 2003. About 95% of the barite sold in the United States was used as a weighting agent in oil-and gas-well-drilling fluids. In September 2004, the total domestic drill rig count rose to 1,250 rigs from 1,090 rigs in 2003. According to the USGS, the country imported 2.0 million metric tons (Mt) of barite in 2004, up from 1.65 Mt imported in 2003. Most of the imported barite came from China. Nevada barite was mostly sold into Colorado and Wyoming for gas drilling, which increased in 2004. Nevada producers were also competitive in California and Canada in 2004.

M.I. Drilling Fluids (jointly owned by Smith International and Schlumberger Ltd.) was the largest Nevada barite producer in 2004, with combined production of about 290,000 t of screened and crushed high-grade ore from the Greystone Mine and ground and bagged barite from its Battle Mountain plant, both in Lander County. The company was reportedly evaluating barite deposits elsewhere in Nevada, particularly in the Lone Mountain area in Elko County in 2003.

Baroid Drilling Fluids (a subsidiary of Halliburton Co.) was the second largest producer in Nevada in 2004. The company mined barite from the Rossi Mine in Elko County and processed it at the Dunphy Mill in Eureka County. Baker Hughes INTEQ also produced a significant amount of barite from its Argenta property near Battle Mountain, in Lander County. Standard Industrial Minerals shipped a small amount of barite from a deposit of white, paint-grade barite at the P and S Mine in Nye County to a processing plant in Bishop, California.

Boron.—American Borate Co. processed borate minerals at the Lathrop Wells mill in Nye County from a mine in Death Valley, CA, which has a 20,000-metric-ton-per-year (t/yr) (B₂O₃ basis) capacity. This production was not included in the estimate of total value of Nevada minerals because the ore was from out of State.

Cement.—Based on USGS data, in 2004, about 95 Mt of cement was produced in the United States at an average mill price of about \$85 per metric ton. The only major Nevada producer is the Nevada Cement Co. (part of Texas-based Eagle Materials Inc.) in Fernley, Lyon County. The NBMG estimated the company's cement production capacity to be about 540,000 t/yr. The cement was manufactured from Tertiary lacustrine limestone mined a few kilometers south of Fernley, and other ingredients came from northern Nevada. The deposit near Fernley had limited reserves, and Nevada Cement was drilling limestone of the Natchez Pass Formation in its Echo Canyon Claim Group in the Humboldt Range of Pershing County. The limestone was evaluated as a raw material for possible use in a new cement plant on mill site claims near the Rye Patch exit on Interstate 80.

Limestone suitable for cement production is widespread near Las Vegas, and several attempts have been made to initiate cement production in the area without long-term success. In 1999, Royal Cement Co. restarted an idle cement plant near Logandale.

In July 2004, Ash Grove Cement Co., a Kansas firm, announced an agreement with the Moapa Band of Paiute Indians to build a 1.4 million-metric-ton-per-year-capacity cement plant on the Moapa reservation northeast of Las Vegas; the cement would be quarried

from a site on the east flank of the Arrow Canyon Range near the western border of the reservation. The mine site would include approximately 530 hectares (ha) in Sections 5-8, T16S, and R64E. The limestone would be crushed and delivered by belt conveyor to the proposed cement plant east of the mine near the Union Pacific Railroad. The rock was considered to be relatively pure Devonian limestone and to be part of the same Sultan Formation unit that was quarried for lime manufacture at Apex, which is about 24 kilometers (km) to the southwest. Other materials used in the cement manufacturing process (mainly alumina, clay, coal, gypsum, iron, and silica) would be delivered by truck or rail, or if found to be available on the reservation, could be mined under separate agreements. In addition to land and water payments, as well as limestone royalties, Ash Grove would pay substantial tribal taxes. Construction of the plant, which was projected to cost \$250 million, was expected to begin in early 2006, with completion projected by late 2007 or early 2008. Ash Grove operated nine U.S. cement plants, but the Moapa facility would be the company's first plant in the Southwest. Also in 2004, Cementos Pacasmayo, a large Peruvian cement company, decided not to pursue plans, previously announced, to build a cement plant in the Las Vegas area.

Clays.—Nevada clay production was estimated to be 33,000 t in 2004, about the same as that of 2003. This does not include clay mined in Washoe County for Nevada Cement (which is included in the cement figure). IMV Nevada (owned by Mud Camp Mining Company, LLC) produced more than 29,000 t of bentonite, saponite, and sepiolite from deposits in lacustrine sediments in the Ash Meadows-Amargosa Flat area of Nye County. The clay occurs in shallow, flat-lying deposits in Pliocene lacustrine rocks. It was processed at a plant in Amargosa Valley, and clay products were exported worldwide. The saponite and sepiolite deposits were unusual, and were considered to have originated in a Pliocene playa with an area of at least 5,700 ha. The sepiolite, which yields most of the profits for the operation, occurs in an almost continuous bed with an average thickness of about 2 meters (m). Sepiolite is rare in playa sediments elsewhere in the western United States, but these other occurrences have not been of economic importance. Two companies mined and shipped relatively minor amounts of Nevada clay from several sites on an irregular basis for use in high-cost specialty products. At its White Caps Mill near Beatty in Nye County, Vanderbilt Minerals Co. processed small amounts of clay stockpiled from several Arizona, California, and Nevada deposits. In 2004, the company shipped stockpiled clay from the New Discovery Mine near Beatty, the Blanco Mine in Esmeralda County, and the Buff and Satin Mines in Pershing County. The American Colloid Co. mined white bentonite from Coal Canyon in Pershing County and hectorite from the Disaster Peak Mine in Humboldt County. The clays were shipped to the American Colloid plant in South Dakota, where they were blended into specialty clay products. Art Wilson Company mined clay sporadically from the Jupiter Mine near Wabuska in Lyon County: the clay is mostly used as pond liner. Specialty Clays Corporation has been evaluating a deposit of bentonite in Churchill County about 16 km southeast of Fallon. This bentonite was reported to have expansive qualities similar to that of Wyoming bentonite.

In 1999, Oil-Dri Corp., the world's leading manufacturer of cat litter, announced the discovery of a large calcium montmorillonite deposit in Hungry Valley north of Reno. The clay, considered to be excellent for making clumping cat litter, occurs as an extensive, near-surface deposit of clay-rich strata as much as 30 m thick. In 2001, U.S. Bureau of Land Management (BLM) issued a final environmental impact statement for a clay mine and plant with a capacity of 180,000 t/yr. In 2002, Washoe County denied operating permits on the basis of local opposition to the plan, and the decision was in litigation. Oil-Dri also held the Capricorn clay deposit in northern Washoe County, which was also considered to contain good cat litter material but to be too remote to be competitive.

Nevada Cement Co. staked 12 placer claims in the Terraced Hills north of Pyramid Lake in 2004. The claims were staked near the company's clay mine, where halloysite was mined as a source of alumina in portland cement that is manufactured in the Fernley Plant about 80 km to the southwest.

Crushed Stone and Sand and Gravel.—Nevada's construction crushed stone, sand and gravel (aggregate) production was estimated to be 36 Mt, 2 Mt more than production for 2003. This production had an approximate value of \$180 million, well below that of gold but higher than that of any other of the State's mined commodities. Aggregate production from sand and gravel deposits accounted for about 65% of aggregate production statewide, with crushed stone and lightweight aggregate making up the balance.

Construction aggregate produced in the Las Vegas area in 2004, estimated to be 27 Mt, which was 3 Mt higher than that of 2003. Las Vegas topped the University of Central Florida's Private Construction Intensity Index for domestic metropolitan areas every year since 1999. In the first 5 months of 2004, more than 3,400 Las Vegas area new home construction permits were issued monthly, compared with about 2,000 per month in the same period in 2003. The boom in new home construction, along with attendant infrastructure construction and tourist destination building, has maintained local demand for construction aggregate at high levels.

Sand and gravel operations accounted for about 70% of the aggregate used in the Las Vegas metropolitan area in 2004, with crushed stone and lightweight aggregate making up the balance. The most important source of sand and gravel aggregate for Las Vegas is the Lone Mountain area northwest of Las Vegas, which accounted for more than 7 Mt in 2004. Significant production also came from sand and gravel pits in the southwest part of Las Vegas. Since the mid-1990s, portable crushers that produced aggregate from sand and gravel at construction sites have been important producers of base aggregate in Las Vegas, although this production may have fallen off in 2004. Crushed stone, mostly crushed carbonate rock mined from outlying areas has gained importance in the Las Vegas construction aggregate market in recent years, particularly for concrete aggregate.

Companies in the Las Vegas area that produced more than 900,000 t/yr of aggregate in 2004 were Nevada Ready Mix Corp., Las Vegas Paving Corp., Fehner Construction Co., and Rinker Materials Corp. Companies with production in excess of 450,000 t/yr were American Sand and Gravel LLC, Granite Construction Inc., American Asphalt & Grading Co., Wells Cargo Inc., and Hollywood Gravel Co.

Nevada Ready Mix mined all of its aggregate from a complex of pits in alluvium in the Lone Mountain area; minor production also came from adjacent bedrock. Las Vegas Paving Corp. produced sand and gravel from its Blue Diamond and Lone Mountain pits and portable crushing operations. The company also produced crushed stone from the Apex landfill about 16 km northeast of Las Vegas. Rinker Materials (a subsidiary of the Australian-based CSR Group) produced sand and gravel from its Buffalo Road pit and crushed granite from the El Dorado pit near Railroad Pass. Fehner Construction (a subsidiary of Aggregate Industries of England) mined and

crushed limestone from its Sloan property a few kilometers south of Las Vegas. Community pits and other aggregate mining facilities administered by BLM and operated by several companies contributed more than 6 Mt to the Las Vegas area total in 2004. The Southern Nevada Lightweight operation near Jean mainly produced aggregate for lightweight concrete block and sand for use in stucco. Lightweight aggregate was also shipped into the Las Vegas market from a cinder operation near Amargosa Valley in Nye County by Cind-R-Lite Block Company.

Most Las Vegas area aggregate is mined from private property; however, some is produced as a salable commodity from BLM community pits. Lode claims continued to be held on carbonate rock resources that may be used for aggregate in the Las Vegas area. This process was initiated in 2001 when Rinker Materials Inc. acquired claims on carbonate rock in the Sloan area south of Las Vegas. In 2004, BLM completed a Mining Claim Validity Report on these claims, which included comparative testing of materials from the claims with similar material from producers of crushed carbonate rock in the Las Vegas area. On the basis of this report, a hearing in Federal court was scheduled for early 2005. Finalization of judgment and appeal on this matter may take years. Companies that held claims on carbonate rock or other aggregate material in the Las Vegas area in 2004 included Frehner Construction Co. in the Sloan area, Sierra Ready Mix and Diamond Generating Corp. in the Ivanpah area about 32 km south of Las Vegas, and Las Vegas Paving in the Dry Lake area northeast of Las Vegas. Other companies may have staked aggregate resources in the Las Vegas area by proxy. Production of construction aggregate in the Reno-Sparks-Carson City area, at about 6 Mt, climbed 20% higher than that of 2003. Companies in the area that produced more than 900,000 t of aggregate were Granite Construction Co., RMC Nevada Inc., Martin Marietta Materials Inc., and Rilite Aggregate. Granite Construction produced aggregate from five pits in the area. RMC Nevada, part of a United Kingdom group, owned the former All-Lite Aggregate and Paiute Pit Aggregates operations. Most of Martin Marietta's production came from the Rocky Ridge Quarry north of Sparks. Frehner Construction and A&K Earthmovers, Inc. was also an important producer. Crushed rock, which accounted for about 65% of the aggregate used in 2004 in the Reno-Sparks-Carson City area, included material from Martin Marietta Materials, Granite Construction, and Frehner operations and lightweight rhyolite aggregate from RMC Nevada, Rilite, and Naturalite Aggregate Corp.

Aggregate that was produced outside of the major metropolitan areas in 2004 was estimated at about 3 Mt. Lincoln County producers shipped more than 450,000 t of aggregate mostly into the Las Vegas market. Operators in Nye County together produced more than 450,000 t of aggregate in 2004 mostly in the Pahrump area. Elko, Churchill, and Lyon Counties each produced more than 180,000 t of aggregate; much of the Lyon County material was sold into the Reno-Carson City metropolitan area. Storey and Humboldt County each produced more than 90,000 t of aggregate; other rural Nevada counties are estimated to have produced less than 90,000 t of aggregate each in 2004.

Diatomite.—Diatomite production in Nevada, which accounted for more than 30% of domestic production, was virtually unchanged from 2003 to 2004. About two-thirds of the diatomite produced was used in filtration, with the remainder largely used in absorbents, fillers, and cement. Emerging small-scale uses included pharmaceutical processing and nontoxic insecticides. According to the USGS, the average domestic price in 2004 was about \$286 per metric ton free on board (f.o.b.) plant. EaglePicher Filtration and Minerals, Inc. (a division of EaglePicher, Inc.) produced most of Nevada's diatomite at three different locations in 2004. The company's Colado operation in Pershing County proved the most productive. It consisted of a plant at Lovelock that mostly made filtration products and diatomite mines about 24 km northwest of Lovelock. The company also produced diatomite used in fillers and absorbents at its Clark plant and mine in Storey County about 32 km east of Reno and diatomite used in insulation from a pit near Hazen in Lyon County. EaglePicher (a wholly owned subsidiary of Granaria Holdings, B.V. of the Netherlands) was reportedly for sale. Molten Co. of Tennessee produced absorbent products, cat litter, and soil conditioner at a mine and plant complex in Churchill County about 32 km northeast of Fernley. The diatomite resource was reported to contain 100 years of reserves. Molten shipped diatomaceous earth absorbents under several labels. The Celite Corp. (a subsidiary of World Minerals Inc. with a large diatomite facility in California) recently acquired the CR Minerals Mine at Hazen and plant in Fernley, which produced functional filler. The Grefco diatomite operation near the Esmeralda/Mineral County line was small relative to other Nevada diatomite producers. American Diatomite Inc., which staked four claims in 2003 in the Monte Cristo Range in Esmeralda County about 16 km north of Coaldale, staked another 24 claims in the same area in 2004. The claims were in the vicinity of the Shu Fly diatomite deposit.

Dimension Stone.—Nevada was not well known as a producer of dimension stone, and high-quality, cut and polished products were not produced from stone mined in the State. However, split dimension stone products were produced at two localities in Nevada, new dimension stone operations were being evaluated, and oversize stone blocks were used in wall construction. Las Vegas Rock produced flagstone, ashlar, boulders, and crushed landscape rock from its Rainbow Quarries near Goodsprings about 32 km southwest of Las Vegas. The stone was quartz-cemented sandstone that is part of the Jurassic Aztec Sandstone, which crops out extensively in Clark County, but is generally too friable for building stone. Mt. Moriah Stone quarried flaggy, light-gray quartzite from the Cambrian Prospect Mountain Quartzite about 24 km north of Baker in White Pine County. This material, which naturally splits into slabs up to 1.5 m by 2.4 m by 10 centimeters thick, was used for flagstone and other types of uncut building stone. The company typically operates from April to December each year.

Gemstones.—Precious opal has been produced from the Virgin Valley District in Humboldt County since its discovery in the early 20th century and is mined today by several small operations. The best known of these operators were the Royal Peacock, Rainbow Ridge, Bonanza, and Hidden Valley Mines. Much of the opal came from pay-to-dig operations and was unreported. Eight individuals and groups staked a total of 43 claims in the Virgin Valley District in 2004. The largest 2004 claim group is the 29-claim WRT Rainbow Ridge Opal et al Group staked by the Wentzell Revocable Trust.

Turquoise has come from many Nevada locations in the past, but no turquoise production was reported in 2004, although turquoise and the related gemstone faustite were mined from one site in 2003.

Gypsum.—In 2004, gypsum production in Nevada was an estimated 1.9 Mt, about 10% more than that of 2003. The three largest Nevada producers, PABCO Gypsum, BPB PLC, and USG Corp., used most of this gypsum in local wallboard plants.

PABCO Gypsum in Clark County northeast of Las Vegas mined and processed about 1 Mt of gypsum ore in 2004. The total gypsum production figure reported here reflects the 70% recovery from this deposit. Although processing yields only about 70% by weight gypsum from the ore, the company still ranks as the largest producer in Nevada. The gypsum, which is in a nearly flat-lying gypsite blanket in excess of 37 m thick in places, occurs atop a 1,300 ha mesa.

The Blue Diamond operation of BPB PLC southwest of Las Vegas in Clark County was the second largest producer with about 662,000 t. The gypsum deposit is the largest of several Permian deposits in the Las Vegas area. It consists of more or less flat-lying beds of pure gypsum as much as 9 m thick on a table mountain that overlooks the city. The Blue Diamond area has been the site of gypsum mining since 1925, but is in the path of metropolitan growth in 2004, and gypsum mining there was scheduled to cease in 2005 to make way for an upscale housing development. The adjacent BPB wallboard plant planned to continue to operate on gypsum imported from southern Utah.

USG, the Nation's leading wallboard producer, was the third leading Nevada producer in 2004 at about 322,000 t. The company mined gypsum in western Pershing County and processed it into wallboard and plaster at a plant at Empire in Washoe County. The gypsum is of Triassic or Jurassic age and forms several masses in a 520-ha area. The largest mass, the Selenite ore body, contained 85% to 95% gypsum and was generally well bedded with variable dips.

The Art Wilson Company of Carson City shipped anhydrite and gypsum from the Adams Mine in Lyon County, and the D.L. Denman Construction Company mined gypsum at the Pioneer Mine about 16 km east of Las Vegas. Material from these relatively small operations was used in agricultural and cement applications. The Adams deposit is a folded, diapiric mass associated with limestone in Triassic metavolcanic rocks. The Pioneer Mine is in the same gypsite deposit as the PABCO operation about 8 km to the north.

Lime, Limestone, and Dolomite.—In 1997, lime supplanted diatomite as Nevada's second most valuable industrial mineral. Limestone was mined for lime production at two sites in Nevada that are nearly at opposite ends of the State; however, the high-calcium limestone that is used at both sites is from the same Devonian limestone unit (although it is assigned to different stratigraphic formations). In addition to lime, relatively minor amounts of crushed limestone were also shipped from both sites, and dolomite was mined at one of the sites.

The Pilot Peak high-calcium lime operation of Graymont Western US, Inc. (formerly Continental Lime, Inc.) 16 km northwest of Wendover in Elko County, was Nevada's leading producer, mainly marketing lime to gold-mining operations for use in cyanide-solution pH control. The Pilot Peak plant has three kilns with a combined capacity of more than 635,000 t/yr of quicklime and a hydrated lime plant capable of producing 318 metric tons per day. In 2000, the Pilot Peak plant was rated the ninth ranking producer in the country.

Chemical Lime Co. produced lime at Apex about 32 km northeast of Las Vegas. The Apex operation made high-calcium quicklime used in metallurgical processing, paper manufacturing, and environmental markets, and also produced hydrated lime that was mainly used in construction. The Chemical Lime dolomite quarry at Sloan ceased operating in 1997, but in 2004, the company's Henderson plant processed dolomitic quicklime from Apex into Type S hydrated lime for construction uses. In addition to lime, Graymont Western U.S. and Chemical Lime shipped crushed limestone. Other carbonate rock producers in Nevada were Min-Ad, Inc. and Nutritional Additives Corp., producers of agricultural and nutritional dolomite products near Winnemucca. Columbus S.M. LLC, a small California-based company, was evaluating the production of calcium carbonate and magnesium hydroxide from the Columbus Salt Marsh in Esmeralda County. The company planned to leach the commodities from material mined from the playa and to market the calcium carbonate as a food additive.

Lithium.—Chemetall Foote Corp. (a subsidiary of Chemetall GmbH) produced lithium carbonate, lithium hydroxide anhydrite, and lithium hydroxide monohydrate at Silver Peak in Esmeralda County. This operation, the only primary lithium producer in the United States, produced these chemicals from brine that was pumped from beneath Clayton Valley playa, where 50 production wells as deep as 350 m tap 6 stratigraphically and structurally controlled aquifer systems. Lithium preconcentration was carried out in evaporation ponds that covered more than 1,600 ha. Production figures were company proprietary; the most recent public information, from 1998 Securities and Exchange Commission data, reported annual production of about 5,400 t of lithium carbonate and 2,300 t of lithium hydroxide. Lithium carbonate was the main feedstock for major uses of the element in aluminum production, batteries, ceramics, glass, and lubricants. Lithium use in rechargeable batteries was a rapidly expanding market.

Magnesium Compounds.—Premier Chemicals LLC of Cleveland, OH, owned the Gabbs magnesite operation in Nye County, the only magnesite mine in the United States. Brucite was recovered as a byproduct.

During the 1990s, the availability of cheap foreign refractory magnesia caused production at Gabbs to be switched to light-burned (caustic) magnesia that is mainly marketed for wastewater treatment and agricultural uses. Although production of magnesia at Gabbs was still substantially below its peak in 1981, magnesia shipments from the Gabbs operation have increased steadily since 1996.

The Gabbs brucite, which was shipped in relatively small amounts, was mainly sold as a byproduct mined from pods in magnesite pits. Magnesite and brucite at Gabbs occur over an area of about 520 ha in complex replacement bodies in Triassic dolomite, and the remaining resource is very large.

Perlite.—Although the United States was the second leading producer of perlite, domestic perlite production suffered transportation cost disadvantages in the eastern United States compared with perlite from Greece, which ranked first in the world in perlite production. Prior to 2004, domestic production had slipped for 4 years in a row while imports increased; this trend ended in 2004 with a decrease in perlite imports of more than 25%. Perlite is mined in eight western States, led by New Mexico. Nevada has large perlite resources, and several deposits of perlite were mined extensively in the past. Historically, the leading producer was the Hollinger Mine near Pioche in Lincoln County. Current perlite production in Nevada was restricted to relatively small-scale mining of two deposits for niche markets, and the State produced less than 1% of the domestic total in 2004.

Wilkin Mining and Trucking Inc. mined perlite from the Tenacity Perlite Mine about 40 km west of Caliente in Lincoln County. The company had been mining perlite in the area for more than 25 years. In the past, most of the perlite was shipped as crude; however, the company recently opened a small popping plant in Caliente, and present sales of 1,400 to 1,800 t/yr of expanded perlite was sold mostly to horticultural markets. In 2003, the company filed a plan to mine perlite from the Sunny Mine, which is near the Hollinger Mine in the Wilson Creek Range northeast of Pioche.

EaglePicher Minerals produced expanded perlite at its Colado diatomite plant in Pershing County from perlite mined at the Popcorn Mine about 24 km south of Fallon in Churchill County. The perlite was marketed as a filter aid, and plant capacity was reportedly about 7,300 t/yr.

Salt.—The Huck Salt Company produced about 12,700 t of salt in 2004, up 55% from 2003. Because the salt was mainly used for deicing roads, production levels were dependent on weather. The heavy winter of 2004-05 sent production higher. The salt came from a playa in Fourmile Flat about 40 km southeast of Fallon in Churchill County, where it has been harvested almost continuously since the 1860s when it was hauled to the mills that processed Comstock silver and gold ore.

Silica.—The United States was by far the world's leading producer of silica sand in 2004. Annual domestic production had hovered nearly 28 Mt for the past 9 years. In 2004, Simplot Silica Products at Overton in Clark County shipped about 680,000 t of silica sand, 10% more than 2003 shipments. The sand was mined from an open pit 2.4 km long and 91 m deep in the relatively friable Cretaceous Baseline Sandstone, washed in the pit, and transported via a 8-km slurry pipeline to a plant where it is screened and bagged. Silica sand had been produced from the deposit since the 1930s; Simplot acquired the operation in 1955.

American Cement and Aggregate produced silica sand from the Silica LLC pit near Mercury in Nye County. A plan of operations submitted to the BLM in 2001 called for annual production of as much as 73,000 t. The silica-rich rock mined was the Ordovician Eureka Quartzite. The quartzite was crushed, sieved, and bagged in several sizes and sold mostly as stucco sand; however, the product was relatively pure at more than 98% SiO₂, and the company was seeking other markets.

James Hardie Building Materials Inc., an Australian company, staked eight claims about 3 km south of Golconda in Humboldt County on a probable silica deposit in the Prospect Mountain Quartzite. The company, which once mined gypsum and made wallboard near Las Vegas, manufactured highly durable fiber-cement building materials. It opened a siding manufacturing plant in Reno in late 2004 and was exploring for raw materials. The company also staked small claim groups in the vicinity of the Stone Corral Silica Mine in Humboldt County about 16 km north of Golconda and in the vicinity of the Lucky Boy silica property in Mineral County.

Vermiculite.—In 2004, IBI Corp., a junior international mining and investment company, through its subsidiary North American Vermiculite Inc., was scheduled to evaluate unpatented claims near Mica Peak in Clark County for vermiculite deposits. Minor amounts of vermiculite were mined from a deposit in the area in the 1940s, and Oglebay Norton leased the property in the 1980s. The ore, which consists of altered ultramafic rock, has been described as containing 20% to 35% of good to superior exfoliating vermiculite.

Zeolites.—Nevada contains several large zeolite deposits that were discovered and evaluated during a flurry of zeolite exploration activity in the 1950s and 1960s; however, natural zeolite production never evolved into a major industry in the State. Ash Meadows Zeolite LLC (a subsidiary of Badger Mining Corp.) shipped 900 to 4,000 t/yr of clinoptilolite used in water filtration, odor control, and nuclear cleanup from a plant in Amargosa Valley in Nye County. The clinoptilolite was mined from a deposit of white zeolitized tuff in California, but the company also holds nearby claims in Nevada underlain by green zeolite that has been mined in the past.

Moltan Company mined chabazite and mordenite from a deposit in the Trinity Range in Churchill County about 64 km northeast of Fernley. The company used the mineral in absorbents that were produced at its Fernley plant.

Metals

Gold and Silver.—Nevada produced 216,000 kg gold and 323,000 kg of silver in 2004. Gold production was down by about 9,600 kg compared with that of 2003, but silver production increased by about 22,000 kg. Nevada maintained its place as the leading producer of gold in the United States but was second to Alaska in silver production. Twenty-five mines in Nevada reported gold production in 2004, while 20 reported silver production. Newmont Mining Corp., reported production from its Carlin trend mines and the Twin Creeks, Lone Tree, Mule Canyon, Phoenix, McCoy/Cove, and Midas Mines (plus its 25% share of the Turquoise Ridge Joint Venture), and had a total Nevada production of 75,200 kg of gold, making it the leading producer for 2004. Barrick Gold Corp., with production from its Betze-Post, Meikle, and Ruby Hill Mines (plus its 50% share of Round Mountain's production and 33% share of Marigold's production) had a total production of 73,900 kg of gold. For the fifth consecutive year, Barrick Gold's Betze-Post Mine was Nevada's most productive gold mine, with an output of 43,000 kg. Newmont's Carlin trend mines produced 35,200 kg of gold, and Placer Dome's Cortez operations produced 32,700 kg of gold. Barrick's Meikle Mine, the leading underground mine in Nevada, produced 17,500 kg of gold in 2004, almost 310 kg more than that of 2003.

Coeur d'Alene Mines Corp.'s Rochester Mine maintained its place as the leading silver mine in Nevada in 2004 with a production of 174,000 kg. Newmont's Midas Mine held second place with 67,900 kg of silver, and the Round Mountain Mine followed in third place with 24,100 kg.

Much of Nevada's silver production in 2004 was a coproduct or byproduct of gold mining. With a ratio of value (average price of gold to average price of silver) of 63:1 in 2004, only those deposits with more than 63 times as much silver as gold can be considered primary silver deposits. Only one such deposit was mined in Nevada in 2004—the Coeur Rochester Mine in Pershing County (with a silver to gold production of 82:1 and total silver production of 174,000 kg). This one mine produced 55% of Nevada's silver in 2004. The mine also reached a significant milestone in 2004—cumulative production of 100 million troy ounces or more than 3 million kilograms of silver.

Barrick's Betze-Post Mine in Eureka County produced 43,000 kg, making it the leading gold mine in the State, and Barrick's Meikle Mine in Elko County produced 17,500 kg making it the leading underground producer in 2004. Barrick's overall gold production in the State in 2004, including its portion of joint ventures, totaled 73,900 kg, slightly less than Newmont's overall production of 75,200 kg from several mines, including one joint venture, Newmont's production on the Carlin trend, including its Carlin operations and Capstone/Bootstrap and Rain Mines, totaled 40,100 kg. Placer Dome's Cortez operation (Pipeline and nearby deposits in Crescent Valley, Lander County) produced 32,700 kg of gold in 2004. One new gold mine (Apollo Gold's Standard Mine in Pershing County) opened in 2004, and Quadra Mining Ltd. reopened the Robinson copper-gold mine near Ely in White Pine County.

As mentioned earlier in this chapter, mercury was produced as a byproduct of gold-silver processing but data were not available.

Government Programs

Through a survey conducted early in 2005, the Nevada Division of Minerals collected data for Nevada Bureau of Mines and Geology Special Publication P-16, Major Mines of Nevada 2004 (Driesner and Coyner, 2005a§). This publication includes, in handbook form, location maps, names and telephone numbers of operators, numbers of employees, and nonproprietary production figures for most mines in Nevada. It also contains a section on economic impacts of the industry. This 28-page publication was available for free on the Internet at <http://www.nbmg.unr.edu>.

Additional information about the Nevada mineral industry and the U.S. gold industry, including the contents of selected publications, was available from the Nevada Bureau of Mines and Geology Web site at <http://www.nbmg.unr.edu/> and the Nevada Division of Minerals Web site at <http://minerals.state.nv.us/>. Useful national and international data on nonfuel minerals can be obtained from the USGS Web site at <http://minerals.usgs.gov/minerals/>, and the U.S. Energy Information Administration Web site at <http://www.eia.doe.gov/> provides data on oil and gas, geothermal, and other energy sources.

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TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEVADA^{1,2}

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2002		2003		2004		
	Quantity	Value	Quantity	Value	Quantity	Value	
Clays:							
Bentonite	6	W	6	817	7	W	
Fuller's earth	28	3,870	28	3,870	W	W	
Gold ³	kilograms	240,000	2,410,000	227,000	2,660,000	216,000	2,850,000
Sand and gravel:							
Construction	35,400	159,000	37,100	174,000	43,100	197,000	
Industrial	615	11,000	W	W	W	W	
Silver ³	kilograms	424,000	63,000	322,000	50,900	302,000	65,000
Stone, crushed	8,010	41,900	7,830	48,500	9,760	72,800	
Combined values of barite, brucite, cement (portland), clays (kaolin), copper (2004), diatomite, gemstones, gypsum (crude), lead (2002), lime, lithium carbonate, magnesite, perlite (crude), salt, zeolites (2004), and values indicated by symbol W	XX	228,000	XX	252,000	XX	286,000	
Total	XX	2,910,000	XX	3,190,000	XX	3,470,000	

W Withheld to avoid disclosing company proprietary data. Withheld values included in "Combined values" data. XX Not applicable.

¹Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Recoverable content of ores, etc.

TABLE 2
NEVADA: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	2002				2003				2004			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	4	3,760	\$16,600	\$4.41	4	3,800	\$14,700	\$3.88	5	4,330	\$29,900	\$6.92
Dolomite	4	W	W	4.72	3	W	W	93.38	3	W	W	96.06
Granite	4	W	W	4.78	4	W	W	5.87	3	W	W	5.87
Traprock	3	84	388	4.63	3	84	388	4.63	--	--	--	--
Volcanic cinder and scoria	2	W	W	7.68	2	W	W	6.39	2	W	W	6.54
Miscellaneous stone	4	1,350	10,700	7.94	4	945	9,320	9.86	3	968	9,200	9.49
Total or average	XX	8,010	41,900	5.23	XX	7,830	48,500	6.20	XX	9,760	72,800	7.46

W Withheld to avoid disclosing company proprietary data; included in "Total or average." XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

TABLE 3a
NEVADA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate, graded:			
Concrete aggregate (coarse)	710	\$4,320	\$6.08
Bituminous surface treatment aggregate	W	W	4.63
Fine aggregate (-3/8 inch), stone sand, concrete	W	W	7.62
Coarse and fine aggregates:			
Graded road base or subbase	(2)	(2)	2.96
Unpaved road surfacing	(2)	(2)	4.78
Crusher run, select material or fill	(2)	(2)	3.55
Other coarse or fine aggregate	172	1,270	7.39
Total or average	250	1,510	6.04
Agricultural limestone	W	W	94.52
Chemical and metallurgical:			
Cement manufacture	(2)	(2)	4.73
Lime manufacture	(2)	(2)	3.64
Total or average	1,820	7,330	4.03
Special, mine dusting or acid water treatment	W	W	5.84
Unspecified³			
Reported	1,370	6,630	4.84
Estimated	3,000	18,000	5.93
Total or average	4,420	24,700	5.59
Grand total or average	7,830	48,500	6.20

W Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Withheld to avoid disclosing company proprietary data; included in "Total or average."

³Reported and estimated production without a breakdown by end use.

TABLE 3b
NEVADA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1½ inch), other coarse aggregate	W	W	\$5.28
Coarse aggregate, graded, concrete aggregate (coarse)	W	W	13.90
Coarse and fine aggregates, other coarse and fine aggregates	W	W	14.45
Agricultural limestone	W	W	97.20
Chemical and metallurgical:			
Cement manufacture	(2)	(2)	5.37
Lime manufacture	(2)	(2)	13.78
Sulfur oxide removal	(2)	(2)	6.61
Total or average	1,800	\$19,300	10.72
Special, mine dusting or acid water treatment	W	W	2.67
Unspecified³			
Reported	2,830	16,700	5.89
Estimated	1,300	4,300	3.31
Total or average	4,120	20,900	5.08
Grand total or average	9,760	72,800	7.46

W Withheld to avoid disclosing company proprietary data; included in "Grand total or average."

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Withheld to avoid disclosing company proprietary data; included in "Total or average."

³Reported and estimated production without a breakdown by end use.

TABLE 4a

NEVADA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2003, BY USE AND BY DISTRICT

(Thousand metric tons and thousand dollars)

Use	District 1		District 2	
	Quantity	Value	Quantity	Value
Construction:				
Coarse aggregate graded ²	W	W	W	W
Fine aggregate (-3/8 inches) ³	--	--	W	W
Coarse and fine aggregate ⁴	W	W	W	W
Agricultural ⁵	W	W	--	--
Chemical and metallurgical ⁶	W	W	W	W
Special ⁷	--	--	W	W
Unspecified: ⁸				
Reported	1,290	6,430	76	198
Estimated	430	2,600	2,600	15,000
Total	2,700	20,300	5,130	28,200

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.²Includes concrete aggregate (coarse) and bituminous surface treatment aggregate.³Includes stone sand (concrete).⁴Includes crusher and (select material or fill), graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.⁵Includes agricultural limestone.⁶Includes cement and lime manufacture.⁷Includes mine dusting or acid water treatment.⁸Reported and estimated production without a break down by end use.

TABLE 4b

NEVADA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2004, BY USE AND BY DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2	
	Quantity	Value	Quantity	Value
Construction:				
Coarse aggregate (+1½ inch) ²	2,460	13,200	646	3,200
Coarse aggregate graded ³	--	--	82	1,140
Coarse and fine aggregate ⁴	209	1,540	292	5,690
Agricultural ⁵	78	7,580	--	--
Chemical and metallurgical ⁶	647	3,480	1,150	15,800
Special ⁷	--	--	79	211
Unspecified:⁸				
Reported	1,120	5,450	1,720	11,200
Estimated	--	--	1,300	4,300
Total	4,510	31,200	5,260	41,600

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.²Includes other coarse aggregate.³Includes concrete aggregate (coarse).⁴Includes other coarse and fine aggregates.⁵Includes agricultural limestone.⁶Includes cement and lime manufacture and sulfur oxide removal.⁷Includes mine dusting or acid water treatment.⁸Reported and estimated production without a break down by end use.

TABLE 5a
 NEVADA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003,
 BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete products (blocks, bricks, pipe, decorative, etc.)	4,040	\$27,300	\$6.75
Plaster and gunitite sands	322	5,040	15.64
Concrete products (blocks, bricks, pipe, decorative, etc.)	175	1,760	10.05
Asphaltic concrete aggregates and other bituminous mixtures	1,200	8,060	6.72
Road base and coverings ²	4,760	19,900	4.19
Fill	2,000	8,560	4.29
Snow and ice control	27	130	4.81
Other miscellaneous uses ³	827	2,500	3.03
Unspecified: ⁴			
Reported	10,700	33,500	3.14
Estimated	13,000	67,000	5.14
Total or average	37,100	174,000	4.69

¹Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

²Includes road and other stabilization (cement and lime).

³Includes railroad ballast.

⁴Reported and estimated production without a breakdown by end use.

TABLE 5b
NEVADA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004,
BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete products (blocks, bricks, pipe, decorative, etc.)	3,210	\$21,900	\$6.85
Plaster and gunite sands	812	8,050	9.91
Asphaltic concrete aggregates and other bituminous mixtures	1,040	6,810	6.58
Road base and coverings ²	7,550	29,100	3.85
Fill	1,920	7,630	3.98
Snow and ice control	57	284	4.96
Other miscellaneous uses ³	1,690	6,110	3.62
Unspecified: ⁴			
Reported	11,600	41,500	3.57
Estimated	15,000	75,000	4.93
Total or average	43,100	197,000	4.56

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes road and other stabilization (cement).

³Includes filtration.

⁴Reported and estimated production without a breakdown by end use.

TABLE 6a
 NEVADA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2003, BY USE AND DISTRICT¹

(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	635	3,970	3,910	30,100	--	--
Asphaltic concrete aggregates and road base materials ³	1,250	6,880	4,710	21,100	--	--
Fill	1,500	6,850	496	1,710	--	--
Other miscellaneous uses ⁴	200	714	655	1,920	--	--
Unspecified: ⁵						
Reported	1,100	5,490	4,290	19,300	5,270	8,710
Estimated	1,700	8,600	11,000	59,000	--	--
Total	6,330	32,500	25,500	133,000	5,270	8,710

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

³Includes road and other stabilization (cement and lime).

⁴Includes railroad ballast and snow and ice control.

⁵Reported and estimated production without a breakdown by end use.

TABLE 6b
NEVADA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2004, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		Unspecified districts	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand) ²	675	5,190	3,340	24,800	--	--
Asphaltic concrete aggregates and other bituminous mixtures	306	3,330	664	3,270	65	214
Road base and coverings ³	1,160	5,740	6,360	23,300	39	86
Fill	1,490	6,230	424	1,400	--	--
Other miscellaneous uses ⁴	684	1,920	1,060	4,470	--	--
Unspecified: ⁵						
Reported	1,520	6,900	5,540	27,100	4,560	7,530
Estimated	1,900	9,500	13,000	66,000	--	--
Total	7,700	38,800	30,800	150,000	4,660	7,830

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

³Includes road and other stabilization (cement).

⁴Includes filtration and snow and ice control.

⁵Reported and estimated production without a breakdown by end use.