

NEVADA'S MINERAL PRODUCTION IN 1998

Nevada's 1998 mineral production (including petroleum and geothermal energy) is estimated at \$3.31 billion, a 1% decrease from 1997.

Nevada produced 8.86 million troy ounces of gold in 1998, which is about 74% of all gold produced in the United States and over 11% of all gold produced in the world. Our gold production makes the United States the second leading gold producer in the world. Although Nevada's gold production in 1998 increased 13% over 1997, the value of production increased only 1% to \$2.61 billion, due to an 11% decrease in the average price of gold.

Newmont Mining Corp. continued to be the largest gold-producing company in the United States with 2.70 million ounces of gold produced in 1998 from its operations, which include Twin Creeks and the Lone Tree Complex in Humboldt County as well as all of the company's Carlin Trend mines in Eureka County.

Barrick Gold was second in U.S. gold production with 2.35 million ounces. Barrick's Betze-Post Mine in Eureka County, which produced 1.50 million ounces in 1998, is the largest gold mine in the United States. Nearby in Elko County, Barrick's Meikle Mine, with 847,000 ounces in 1998, had the highest production among underground gold mines in the United States.

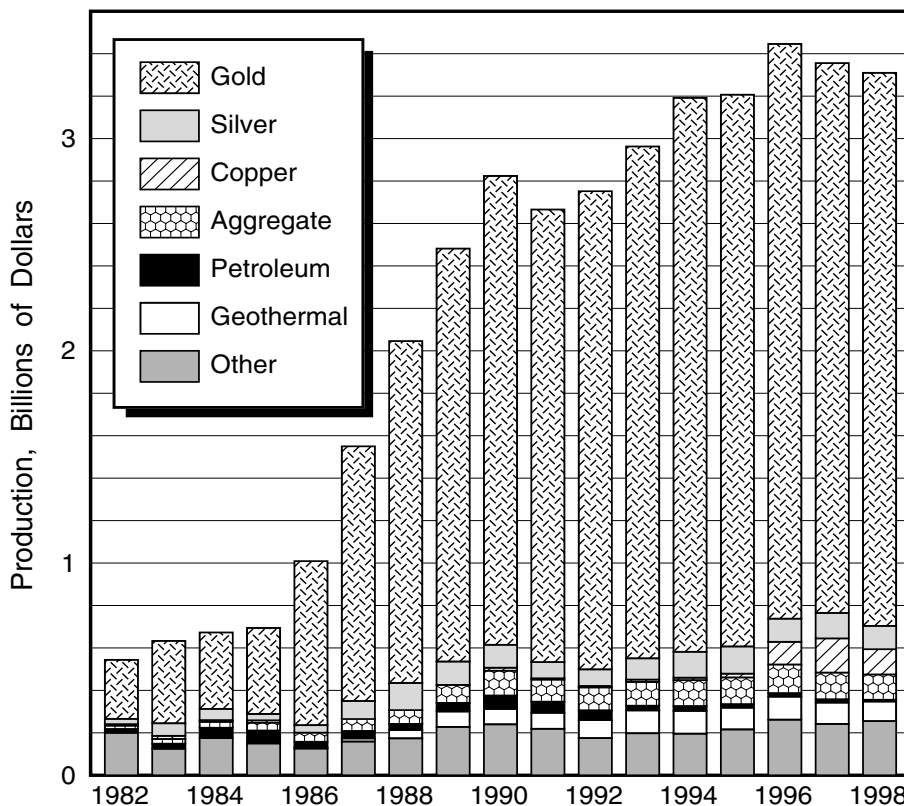
Placer Dome's Cortez Joint Venture in Crescent Valley increased output substantially to 1.14 million ounces in 1998.

Other major gold producers in Nevada in 1998 included Smoky Valley Common Operation's Round Mountain Mine (510,500 oz), Independence Mining's Jerritt Canyon Mine (347,000 oz), Getchell Gold's Getchell Mine (175,300 oz), and Echo Bay Minerals' McCoy/Cove operation (167,500 oz).

Five new mines came into production in 1998:

Midas Joint Venture's Ken Snyder Mine in Elko County, Independence Mining Company's SSX underground operation at Jerritt Canyon in Elko County, Getchell Gold Corporation's (now Placer Dome) Turquoise Ridge Mine in Humboldt County, and Alta Gold Company's Olinghouse Mine in Washoe County and its Griffon Gold Property in White Pine County.

Nevada produces more silver than any other state in the Union. Although only two mines in Nevada are currently being operated primarily for silver, most Nevada gold mining operations produce silver as well. Nevada mines produced 21.5 million troy ounces of silver worth \$110 million in 1998. Echo Bay Minerals' McCoy/Cove operation, although primarily a gold producer, produced 9.4



million ounces of silver in 1998. Nevada's second largest silver producer, Coeur d'Alene Mines' Rochester Mine, produced 7.2 million ounces of silver. Kinross Gold's Candelaria Mine was the third largest silver producer in 1998 with about 1.1 million ounces.

BHP Copper's Robinson Mine in White Pine County produced 148.6 million pounds of copper along with 86,000 ounces of gold and 300,000 ounces of silver in 1998, about the same production as in 1997. This mine, the only copper mine operated in Nevada in 1998, was shut down in early 1999.

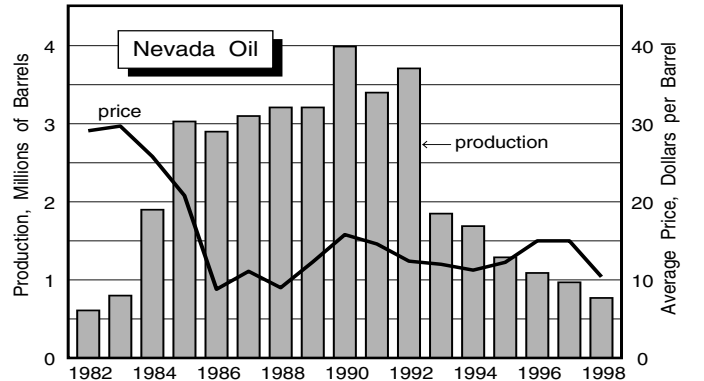
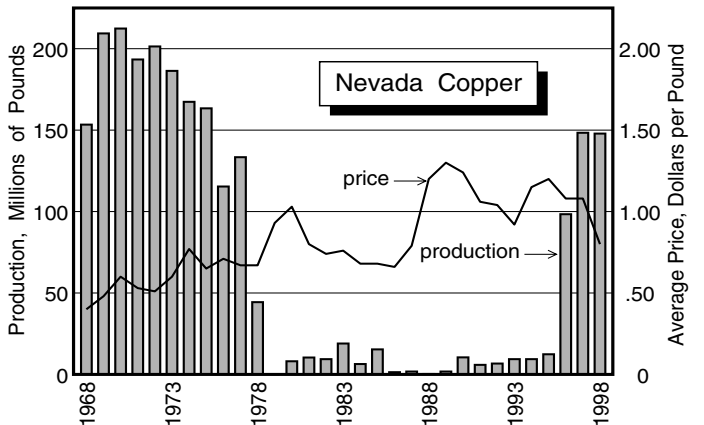
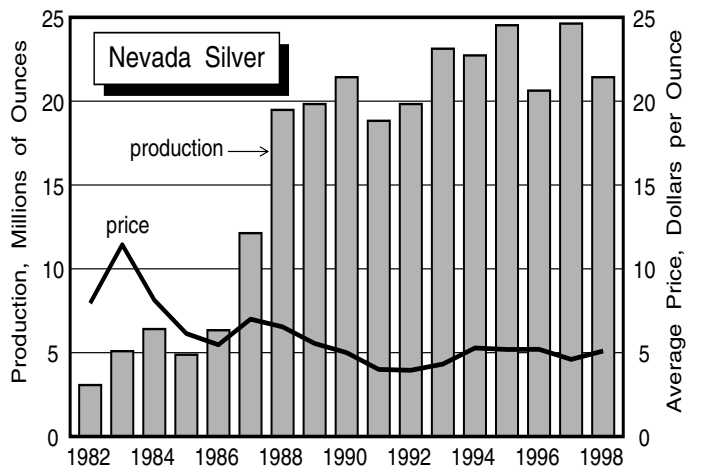
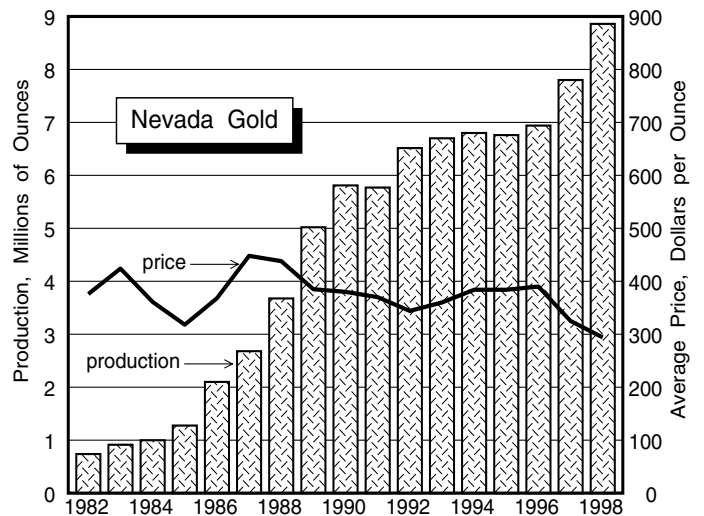
Although no mines are currently being operated for mercury, several gold mining operations produce enough by-product mercury to make Nevada the leading mercury-producing state.

Nevada produced about \$373 million worth of industrial minerals in 1998, slightly more than in 1997. Sand and gravel (aggregate) was the the second most important mineral produced in Nevada in 1998, valued at \$119 million, well behind gold but slightly ahead of copper and silver. Other important industrial minerals (in order of total value sold) were lime, diatomite, barite, cement, gypsum, lithium carbonate, clay, silica, and magnesia. Nevada leads the nation in barite and lithium production and is second in the production of diatomite.

Nevada's geothermal electric power sales in 1998 were 1,327,000 megawatt-hours worth \$93 million, about the same as in the five previous years. Total geothermal power-generating capacity of Nevada's 14 plants (on ten sites) stands at 210 megawatts, also about the same as during the past five years. No new plants have been installed in the past five years.

There are two oil-producing areas in Nevada: Railroad Valley in Nye County, and Pine Valley in Eureka County. Annual production reached a high of about 4 million barrels in 1990 but, as a result of watering out of the most productive wells, production has declined markedly in the past six years. Nevada produced 0.8 million barrels of oil worth \$8 million in 1998. Only two new wells became producers in 1998, both in Railroad Valley.

Most of the production data reported here were collected by the Nevada Division of Minerals. Some of the 1998 figures are still preliminary. For more complete information on Nevada's 1998 mineral production as well as other aspects of the Nevada mineral industry, see NBMG Special Publication MI-1998, *The Nevada Mineral Industry 1998* (see page 4 of this newsletter for ordering information, or visit www.nbm.unr.edu/mi/98.pdf to see an online version).



Nevada Team Receives Top Honors for Innovative Web Site Creation

A Nevada team with a focus on mining was recognized for their exceptional Web design at the ThinkQuest Awards Gala in Los Angeles on November 22, 1999. Members of the team include Collette Craig, science teacher at Reed High School; Beth Price, science teacher at O'Brien Middle School; Lindsay Craig, a student in the master's degree program in the College of Education at the University of Nevada, Reno; John Fuetsch, a Reno High School junior; and Jon Price, Nevada State Geologist, Director of the Nevada Bureau of Mines and Geology, and member of the Graduate Faculty in the Department of Geological Sciences at the Mackay School of Mines, University of Nevada, Reno. Collette and Lindsay have backgrounds in geology, and Beth has a background in chemistry.

Beth and Jon have been instructors in the Nevada Mining Association Teachers' Workshops, and Beth, with the help of Dana Sue Kimbal from Newmont Mining Corporation, has introduced mining-related activities into the Nevada version of the Operation Chemistry program of the American Chemical Society.

The team was given the first-place, Platinum Award in the ThinkQuest for Tomorrow's Teachers competition in the category of Materials for Use in Teacher Education. Their Web site, titled the "Science of the Comstock" (<http://library.advanced.org/50041/>), provides content, activities, and lesson plans related to physics, chemistry, Earth science, and environmental science applied to the historically and industrially important mining on the Comstock. The materials provided on the site can be used as a part of a traditional science course by selecting the relevant field of science, as part of an integrated science course in which a topic is chosen and the science involved is addressed, or even as a part of an multidisciplinary integrated course in which the relevance of a topic to society is studied through various academic disciplines such as science, social studies, and language arts. The team also hopes the materials on the site will be of interest to others who are curious about the natural and human history of the Comstock.

Offering almost \$500,000 in cash awards, ThinkQuest for Tomorrow's Teachers challenges teams of K-12 teachers, prospective teachers and college and university faculty to build content-rich, Web-based educational materials that are easily integrated into K-12 classrooms or teacher education programs. Tomorrow's Teachers requires teams to develop high quality educational Web sites, tie them to the relevant standards, and provide a road map to show how students and teachers can use the site in their everyday classroom activity.

The Science of the Comstock site shows teachers the linkages between classroom activities and both the National Science Education Standards and the Nevada State Science Standards. The team had some first-hand knowledge of the standards. In 1993 and 1994, during the development of the National Science Education Standards, Jon was on loan from the University of Nevada, Reno to the Board on Earth Sciences and Resources at the National Research Council and helped in the review of the national standards. Collette,

Beth, and Jon participated in the writing and review of the Nevada standards, and Beth and Collette are involved in their implementation in the Washoe County School District.

"This inaugural year of Tomorrow's Teachers was an incredible experience for us," explains Allan H. Weis, founder of ThinkQuest. "Our vision for Tomorrow's Teachers is to cultivate a generation of educators for the new millennium, who harness technology to improve the learning process. It is clear with this year's award-winners we are well on our way."

Beginning November 19, 1999, the ThinkQuest for Tomorrow's Teachers finalists attended the Fourth Annual ThinkQuest Weekend in Los Angeles. Judging for the competition was conducted by the Internet Society, culminating on November 22 with the gala ceremony where leaders in the fields of education, science, technology, and government announced the contest winners. Adding to the excitement, Bill Nye, the Science Guy, was the master of ceremonies, and several celebrities, including Academy Award Winner Marlee Matlin, Olympic Gold Medallist Kerri Strug, and LeVar Burton, helped with presenting the awards. Sponsors for the event included Dell Computer Corporation, Goldman Sachs, Global Schoolhouse at Lightspan, Nortel Networks, and Spencer Trask and Company, among others.

Each year, ThinkQuest participants identify and create compelling and accurate content of interest to others, improve their technical expertise and time-management skills, and work in teams as they become proficient at building imaginative and graphically rich sites. Tomorrow's Teachers are translating their newfound resources into improving their instructional process. They are ensuring students are not only equipped for the new millennium, but also prepared to become the leaders and mentors.

Since its inception in 1996, 50,000 young Web designers from 100 countries have participated in the not-for-profit ThinkQuest program, competing yearly for nearly \$2 million in scholarships, cash awards, and technology products for themselves and their schools. The challenge encourages collaboration, leadership, and critical thinking and helps raise students' self-esteem, along with their technological skills. Collectively these students, many of whom are new to technology, have created nearly 3,000 Web sites on topics ranging from Shakespeare to space exploration to holistic health practices. These Web sites are found in the ThinkQuest Library at www.thinkquest.org, the most heavily trafficked educational destination on the Internet with an estimated 20 million hits per week.

The Science of the Comstock team shared the top prize of \$75,000 in its category. Each team member received a check for \$15,000 at the awards ceremony. Jon Price donated \$10,000 to the University of Nevada, Reno Foundation to establish an endowment for Earth Science Outreach through the Nevada Bureau of Mines and Geology. The interest on this endowment will be used for educational outreach to teachers, students, and the general public. Individuals who would like to add to this endowment may contact the UNR Foundation at 775-784-6622.

New Publications

Earthquakes in Nevada, 1852–1998, by *Diane M. dePolo and Craig M. dePolo*. NBMG Map 119, one 32x28" color plate, released December 1999, \$8.00 plus shipping.

A 1:1,000,000-scale shaded relief map of Nevada, showing locations and magnitudes of major earthquakes during the period 1852–1998. Prepared by the Nevada Seismological Laboratory and the Nevada Bureau of Mines and Geology in cooperation with the Nevada Earthquake Safety Council, the Nevada Division of Emergency Management, the U.S. Geological Survey, and the Federal Emergency Management Agency. Supersedes NBMG Map 111.

Gold and silver resources in Nevada, by *David A. Davis and Joseph V. Tingley*. NBMG Map 120, one 36x28" color plate, released December 1999, \$5.00 plus shipping.

A 1:1,000,000-scale map of Nevada showing locations of deposits with a noted or implied gold and/or silver resource or reserve discovered since 1930. Base-metal and industrial-mineral deposits that contain a significant amount of gold or silver are also shown. Supersedes NBMG Map 91.

Geologic map of the Corn Creek Springs Quadrangle, Nevada, by *John W. Bell, Alan R. Ramelli, Craig M. dePolo, Florian Maldonado, and Dwight L. Schmidt*. NBMG Map 121, one 29x27" color plate, released November 1999, \$10.00 plus shipping.

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A 1:24,000-scale, full-color map of the Corn Creek Springs Quadrangle in Clark County, Nevada, with two cross sections and descriptions of 45 geologic units.

Bouguer gravity map of Nevada—Lovelock sheet, by *D.A. Ponce, R.L. Morin, and Donald Plouff* (U.S. Geological Survey). NBMG Map 122, one 22x36" plate, released November 1999, \$8.50 plus shipping.

This 1:250,000-scale Bouguer gravity map of the Lovelock 1°x2° Quadrangle is a compilation of gravity data obtained from several sources including the U.S. Geological Survey. Terrain corrections were applied to the data throughout the sheet. Gravity contours are shown at 5-mGal intervals. Includes generalized geology.

The Nevada mineral industry 1998, by *the NBMG Staff*. NBMG Special Publication MI-1998, 58 pages, released December 1999, \$5.00 plus shipping.

This report, twentieth of an annual series, describes the 1998 mineral and geothermal activities and accomplishments in Nevada. Includes statistics of known gold and silver deposits and a directory of mines and mills.

Purchasing Information

NBMG publications are available at the sales office (open 7:30 a.m. to 3:00 p.m., Mon., Wed., Thur., and Fri., and 7:30 a.m. to 5:00 p.m. on Tues.) in room 310, Scrugham Engineering-Mines Building on the Reno campus of the University of Nevada. They may also be obtained on the Internet (www.nbmgu.unr.edu/sales.htm), by telephone (775-784-6691 ext. 2), by fax (775-784-1709), or by mail (Nevada Bureau of Mines and Geology/178, University of Nevada, Reno, NV 89557). For shipping charges when ordering by mail or fax, please telephone 784-6691 ext. 2 or check www.nbmgu.unr.edu/order.htm on the Internet. Orders may be charged to Visa or MasterCard or prepaid by check or money order payable to "Board of Regents." When using a credit card, please include card number, expiration date, and your daytime phone number.

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