

## Major Mines of Nevada 1998



*Mineral Industries in Nevada's Economy*

## NEVADA COMMISSION ON MINERAL RESOURCES

### Division of Minerals

The Nevada Division of Minerals, a part of the Commission on Mineral Resources, is responsible for administering programs and activities to promote, advance, and protect mining and the development and production of petroleum and geothermal resources in Nevada. The Division's mission is to conduct activities to further the responsible development and production of the State's mineral resources to benefit and promote the welfare of the people of Nevada. The seven-member Commission on Mineral Resources is a public body appointed by the Governor and directs mineral-related policy for the Division and advises the Governor and Legislature on matters relating to mineral resources. The Division focuses its efforts on three main areas: Industry relations and public affairs; regulation of oil, gas, and geothermal drilling activities and well operations; and abandoned mine lands.

The agency is involved in a wide array of activities relating to mineral development. Staff compiles annual data on all active mines in Nevada and maintains the State's mine registry. Information concerning mining operations and production is made available to the public through this yearly publication. Educational documents and materials concerning many aspects of the minerals industry are also produced. The Division participates in governmental activities affecting policies and laws concerning the minerals industry and resource development. The Division administers the State's reclamation bond pool.

The Division is responsible for permitting, inspecting, and monitoring all oil, gas, and geothermal drilling activities on both public and private lands in Nevada. Staff also monitors production of oil, gas, and geothermal resources to insure proper management and conservation. The Administrator is the Governor's Official Representative to the Interstate Oil and Gas Compact Commission.

The Division's abandoned mine lands program provides for public safety by identifying and ranking dangerous conditions at mines that are no longer operating, and by securing dangerous orphaned mine openings. The program continually urges the public to recognize and avoid hazardous abandoned mines.

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*Front cover: Haul trucks dumping waste at the BHP Robinson Mine,  
photo by Roy W. Cazier.*

*Back cover: Gold bar (Newmont Mining Corp.), photo by Newmont.*

Nevada Bureau of Mines and Geology  
SPECIAL PUBLICATION P-10

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## Mineral Industries in Nevada's Economy

By Doug Driesner and Alan Coyner

The Nevada Division of Minerals

# 1999

This is the tenth of an annual series of summary reports on major mines of Nevada. Sand and gravel operations are not included. Information on employment and production for the calendar year 1998 was provided by the individual mine operators. The Nevada Division of Minerals maintains a complete register of Nevada mines. For further information, contact them at 400 W. King, Suite 106, Carson City, Nevada 89703 or call (775) 687-5050, or visit their Web site at [www.state.nv.us/minerals](http://www.state.nv.us/minerals).

MACKAY SCHOOL OF MINES

UNIVERSITY  
OF NEVADA  
RENO

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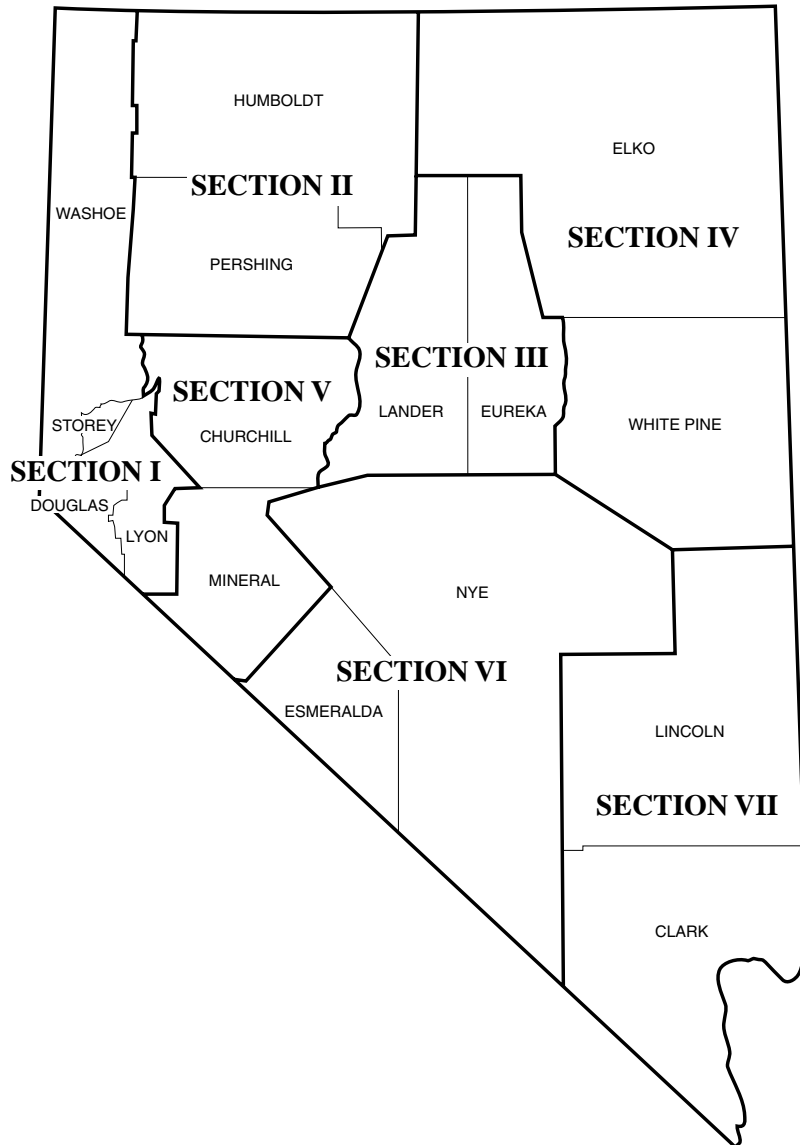
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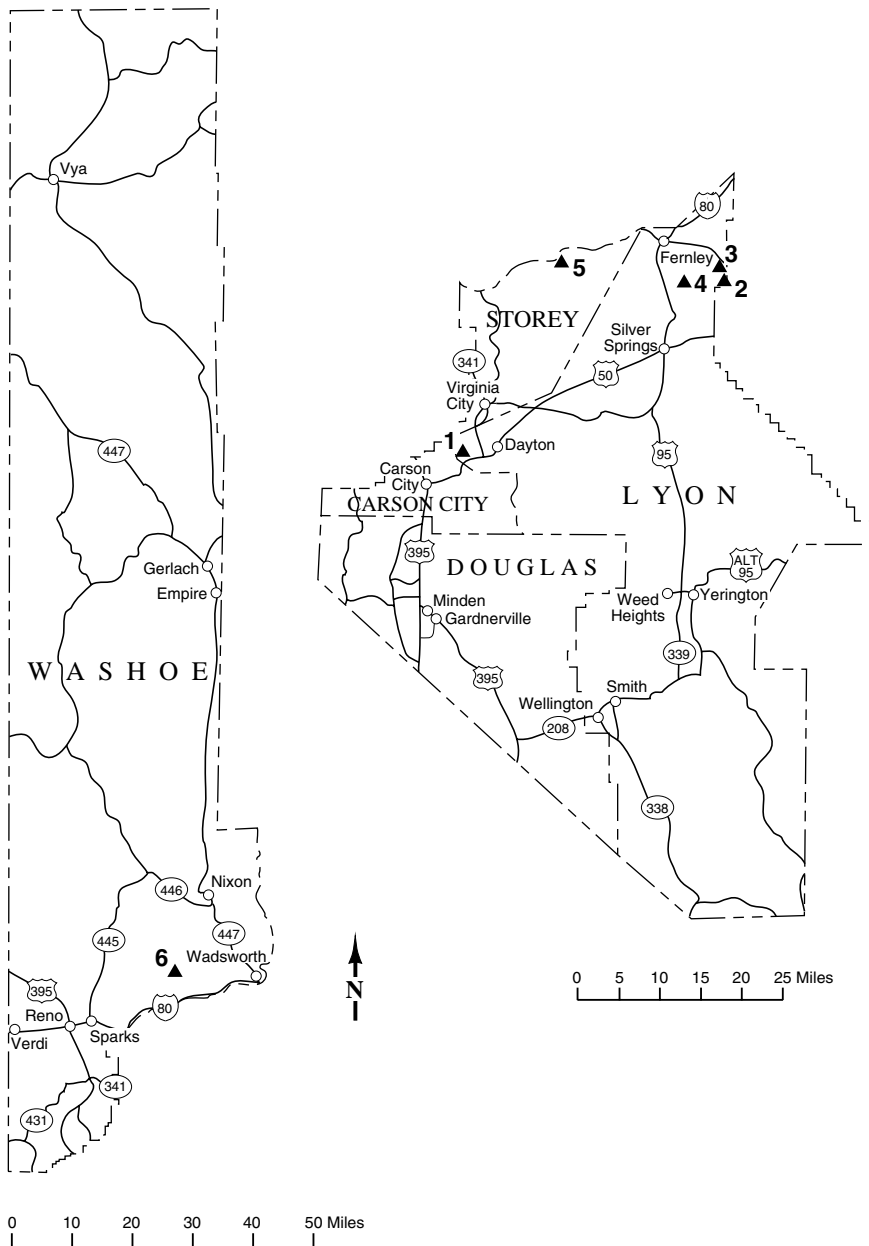
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## Section I



### Lyon County

#### **Adams Claim Gypsum Mine (1)**

Operator:

Art Wilson Co.

P.O. Box 1160

Carson City, NV 89701

775-882-0700 Fax: 882-0790

Company employees: 7

Production:

Gypsum - 115,839 tons

#### **CR Minerals Mine (2)**

Operator:

CR Minerals Corp.

P.O. Box 858

Fernley, NV 89408

775-575-2536 Fax: 575-4857

Company employees: 17

Production:

Diatomite

#### **Hazen Pit (3)**

Operator:

Eagle-Picher Minerals, Inc.

P.O. Box 10408

Reno, NV 89510

775-343-1818 Fax: 343-1821

Production:

Diatomite

#### **NCC Limestone Quarry (4)**

Operator:

Nevada Cement Co.

P.O. Box 840

Fernley, NV 89408

775-575-2281 Fax: 575-4387

Company employees: 129

Production:

Limestone/Clay

### Storey County

#### **Clark Mine and Mill (5)**

Operator:

Eagle-Picher Minerals, Inc.

P.O. Box 10408

Reno, NV 89510

775-343-1818 Fax: 343-1821

Company employees: 62

Production:

Diatomite

### Washoe County

#### **Olinghouse Mine (6)**

Operator:

Alta Gold Co.

1525 E. Newlands Dr. #1

Fernley, NV 89408

775-575-0583 Fax: 575-0617

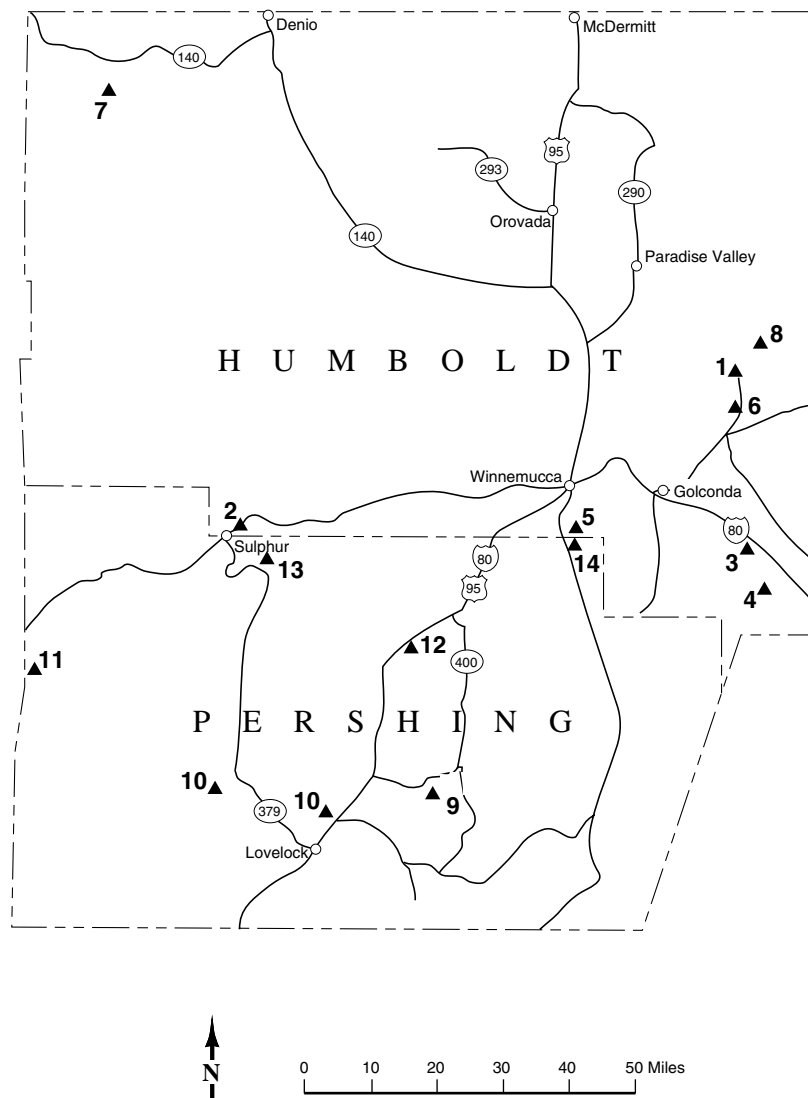
Company employees: 135

Production (partial year):

Gold - 2,912 oz

Silver - 1,879 oz

## Section II



### **Humboldt County**

#### **Getchell Mine (1)**

Operator:  
 Getchell Gold Corp.  
 P.O. Box 220  
 Golconda, NV 89414  
 775-529-5001 Fax: 529-0752  
 Company employees: 635  
 Production (includes Turquoise Ridge Mine):  
 Gold - 175,302 oz  
 Silver - 52,490 oz

#### **Hycroft Mine (2)**

Operator:  
 Hycroft Resources & Dev., Inc.  
 P.O. Box 3030  
 Winnemucca, NV 89446  
 775-623-5260 Fax: 625-0215  
 Company employees: 44  
 Production:  
 Gold - 112,685 oz  
 Silver - 226,000 oz  
 Mercury - 53,240 pounds

#### **Lone Tree Complex (3)**

Operator:  
 Newmont Gold Corp.  
 P.O. Box 388  
 Valmy, NV 89438  
 775-635-9000 Fax: 635-0111  
 Company employees: 373

Production:  
 Gold - 257,702 oz  
 Silver - 27,484 oz

#### **Marigold Mine (4)**

Operator:  
 Rayrock Mines, Inc.  
 P.O. Box 9  
 Valmy, NV 89438  
 775-623-9571 Fax: 635-2551  
 Company employees: 88

Production:  
 Gold - 71,936 oz

#### **MIN-AD Mine and Mill (5)**

Operator:  
 MIN-AD, Inc.  
 4210 W. Junco Road  
 Winnemucca, NV 89445  
 775-623-5944 Fax: 623-9028  
 Company employees: 13  
 Production:  
 Specialty limestone - 61,162 tons

#### **Pinson Mine (6)**

Operator:  
 Pinson Mining Co.  
 P.O. Box 129  
 Winnemucca, NV 89446  
 775-529-5026 Fax: 529-5030  
 Company employees: 66  
 Production:  
 Gold - 34,904 oz  
 Silver - 640 oz

#### **Royal Peacock Opal Mine (7)**

Operator:  
 Walter Wilson  
 1 Homestead Road P.O. 144  
 Orovada, NV 89425  
 775-941-0374  
 Production:  
 Precious opal

#### **Twin Creeks Mine (8)**

Operator:  
 Newmont Gold Co.  
 P.O. Box 69  
 Golconda, NV 89414  
 775-623-4300 Fax: 635-4602  
 Company employees: 721  
 Contract employees: 60  
 Production (does not include Rosebud):  
 Gold - 871,011 oz  
 Silver - 252,677 oz



**Coeur Rochester Mine (Coeur D'Alene Mines Corp.),**  
*photo by Nevada Division of Minerals*

**Rosebud Mine (13)**

Operator:

Hecla Mining Co.  
 P.O. Box 2610  
 Winnemucca, NV 89446  
 775-623-6912 Fax: 623-6967  
 Company employees: 103

Production (processed at Twin Creeks):

Gold - 131,703 oz  
 Silver - 477,956 oz

**W. Glen Sexton Family Trust (14)**

Operator:

Nutritional Additives Corp.  
 415 Wellington Street  
 Winnemucca, NV 89445  
 775-623-1151 Fax: 623-1153  
 Company employees: 8

Production:

Dolomite

**Pershing County**

**Coeur Rochester Mine (9)**

Operator:

Coeur D'Alene Mines Corp.  
 P.O. Box 1057  
 Lovelock, NV 89419  
 775-273-7995 Fax: 273-7423  
 Company employees: 255

Production:

Gold - 88,615 oz  
 Silver - 7,225,396 oz

**Colado Mine and Plant (10)**

Operator:

Eagle-Picher Minerals, Inc.  
 150 Coal Canyon Road  
 Lovelock, NV 89419  
 775-273-2636 Fax: 273-7553  
 Company employees: 157

Production:

Diatomite, Perlite

**Empire Mine (11)**

Operator:

United States Gypsum Co.  
 P.O. Box 130  
 Empire, NV 89405  
 775-557-2341 Fax: 557-2212  
 Company employees: 142

Production:

Gypsum - 524,260 tons

**Florida Canyon Mine (12)**

Operator:

Florida Canyon Mining, Inc.  
 P.O. Box 330  
 Imlay, NV 89418  
 775-538-7300 Fax: 538-7324  
 Company employees: 220  
 Contract employees: 7

Production:

Gold - 152,080 oz  
 Silver - 131,153 oz



**Gold Quarry mill (Newmont Mining Corp.),**  
*photo by Nevada Division of Minerals*

## Section III

### Eureka County

#### **Betze-Post Mine (1)**

Operator:  
Barrick Goldstrike Mines, Inc.  
P.O. Box 29  
Elko, NV 89803  
775-778-8196 Fax: 738-6543  
Company employees: 1,455  
Contract employees: 220

Production:  
Gold - 1,498,683 oz  
Silver - 58,000 oz

#### **Ruby Hill Mine (3)**

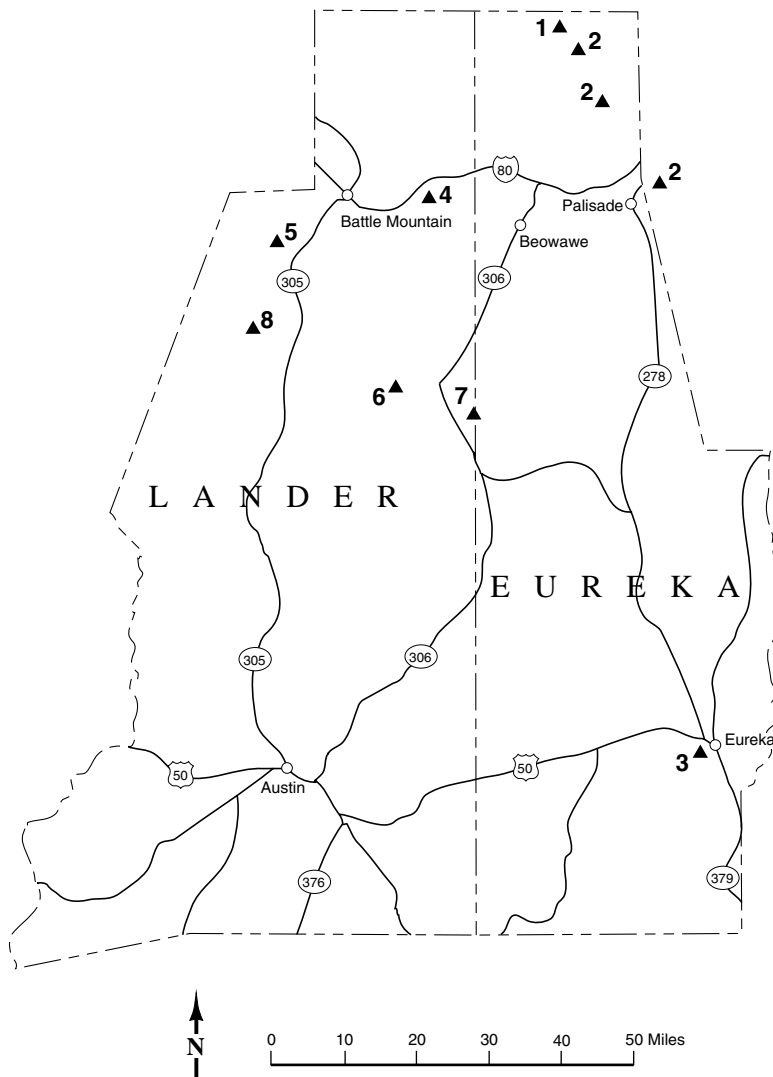
Operator:  
Homestake Mining Co.  
P.O. Box 676  
Eureka, NV 89316  
775-237-6060 Fax: 237-5408  
Company employees: 93  
Contract employees: 12

Production:  
Gold - 116,500 oz  
Silver - 8,436 oz

#### **Carlin Operations (2)**

Operator:  
Newmont Mining Corp.  
P.O. Box 669  
Carlin, NV 89822  
775-778-4000 Fax: 778-4757  
Company employees: 1,773

Production:  
Gold - 1,575,391 oz  
Silver - 150,400 oz



Ruby Hill Mine tailings dryer (Homestake Mining Co.),  
photo by Nevada Division of Minerals





Gold Quarry Mine (Newmont Gold Corp.), photo by Newmont.

## **Lander County**

### **Argenta Mine and Mill (4)**

Operator:

Baker Hughes INTEQ  
P.O. Box 277  
Battle Mountain, NV 89820  
775-635-5441  
Company employees: 20

Shipped:

Barite - 69,869 tons

### **Battle Mountain Complex (5)**

Operator:

Battle Mountain Gold Co.  
P.O. Box 1627  
Battle Mountain, NV 89820  
775-635-2465 Fax: 635-8677  
Company employees: 21

Production:

Gold - 36,787 oz  
Silver - 80,325 oz

### **Battle Mountain Grinding Plant (Greystone Mine) (6)**

Operator:

M-I L.L.C.  
P.O. Box 370  
Battle Mountain, NV 89820  
775-635-5135 Fax: 635-2191  
Company employees: 73

Shipped:

Barite - 284,263 tons

### **Cortez Gold Mines (7)**

Operator:

Placer Dome North America  
HC66-50  
Beowawe, NV 89821  
775-468-4400 Fax: 468-4496  
Company employees: 455

Production:

Gold - 1,138,725 oz  
Silver - 6,860 oz

### **McCoy/Cove Mine (8)**

Operator:

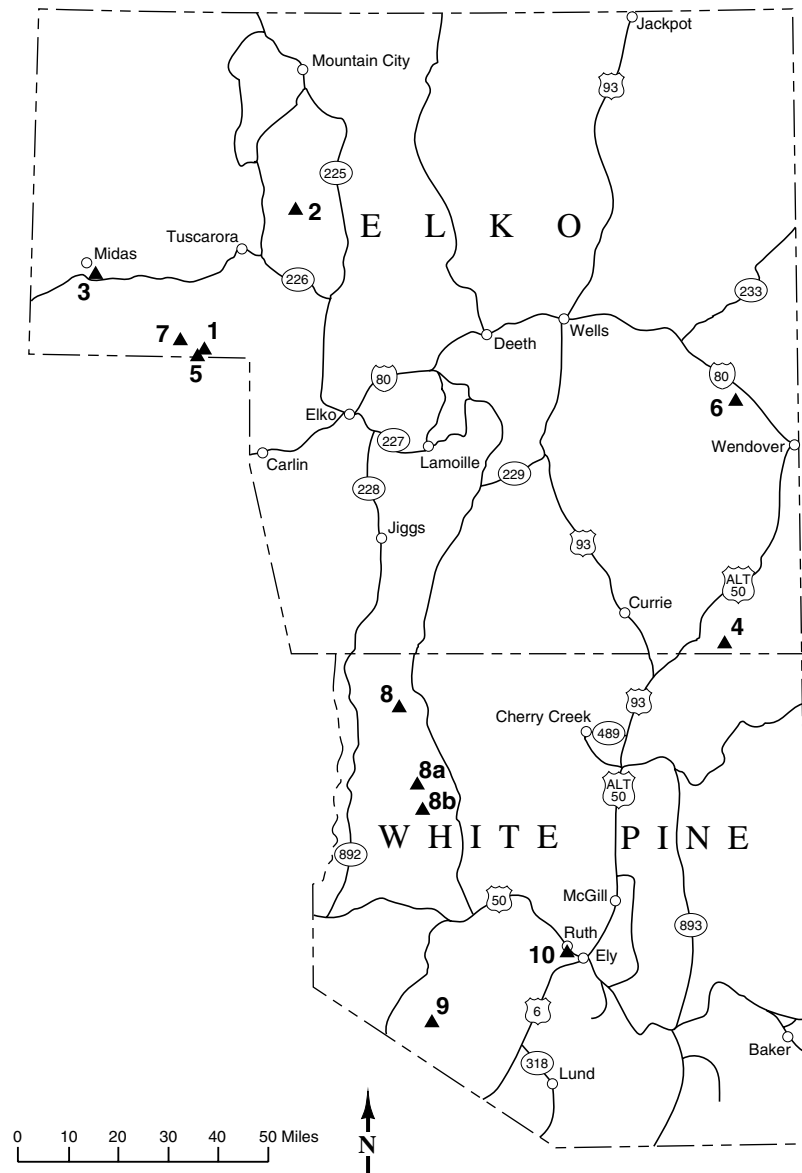
Echo Bay Minerals Co.  
P.O. Box 1658  
Battle Mountain, NV 89820  
775-635-5500 Fax: 635-5098  
Company employees: 356

Production:

Gold - 167,494 oz  
Silver - 9,412,323 oz



## Section IV



### Elko County

#### **Dee Gold Mine (1)**

Operator: Rayrock Mines, Inc.  
P.O. Box 99  
Valmy, NV 89438  
775-635-8810 Fax: 635-8858  
Company employees: 37  
Production: Gold - 33,156 oz

#### **Jerritt Canyon Mine (2)**

Operator:  
Independence Mining Co., Inc.  
HC31 Box 78  
Elko, NV 89801  
775-758-9221 Fax: 758-9231  
Company employees: 449  
Production: Gold - 347,000 oz

#### **Ken Snyder Mine (3)**

Owner: Midas Joint Venture  
Operator: Dynatec Mining Corp.  
P.O. Box 2310  
Winnemucca, NV 89446  
775-529-0611 Fax: 529-0612  
Company employees: 13  
Contract employees: 95  
Production (partial year):  
Gold - 4,357 oz,  
Silver - 55,329 oz

#### **Kinsley Mountain Mine (4)**

Operator: Alta Gold Co.  
778 S. Pioche Highway  
Ely, NV 89301  
775-289-3007 Fax: 289-4138  
Company employees: 95  
Contract employees: 2  
Production: Gold - 9,543 oz

#### **Meikle Mine (5)**

Operator:  
Barrick Goldstrike Mines, Inc.  
P.O. Box 29  
Elko, NV 89803  
775-778-8196 Fax: 738-6543  
Company employees: 279  
Contract employees: 75  
Production: Gold - 847,313 oz  
Silver - 232,000 oz

#### **Pilot Peak Lime Plant (6)**

Operator: Continental Lime Inc.  
P.O. Box 2520  
Wendover, NV 89883  
775-478-5463 Fax: 478-5149  
Company employees: 43  
Production: Lime

#### **Rossi MineDDunphy Mill (7)**

Operator: Baroid Drilling Fluids, Inc.  
912 Dunphy Ranch Rd.  
Battle Mountain, NV 89820  
775-468-0515 Fax: 468-2060  
Company employee: 1  
Contract employees: 59  
Shipped: Barite - 135,295 tons

### White Pine County

#### **Bald Mountain Mine (8)**

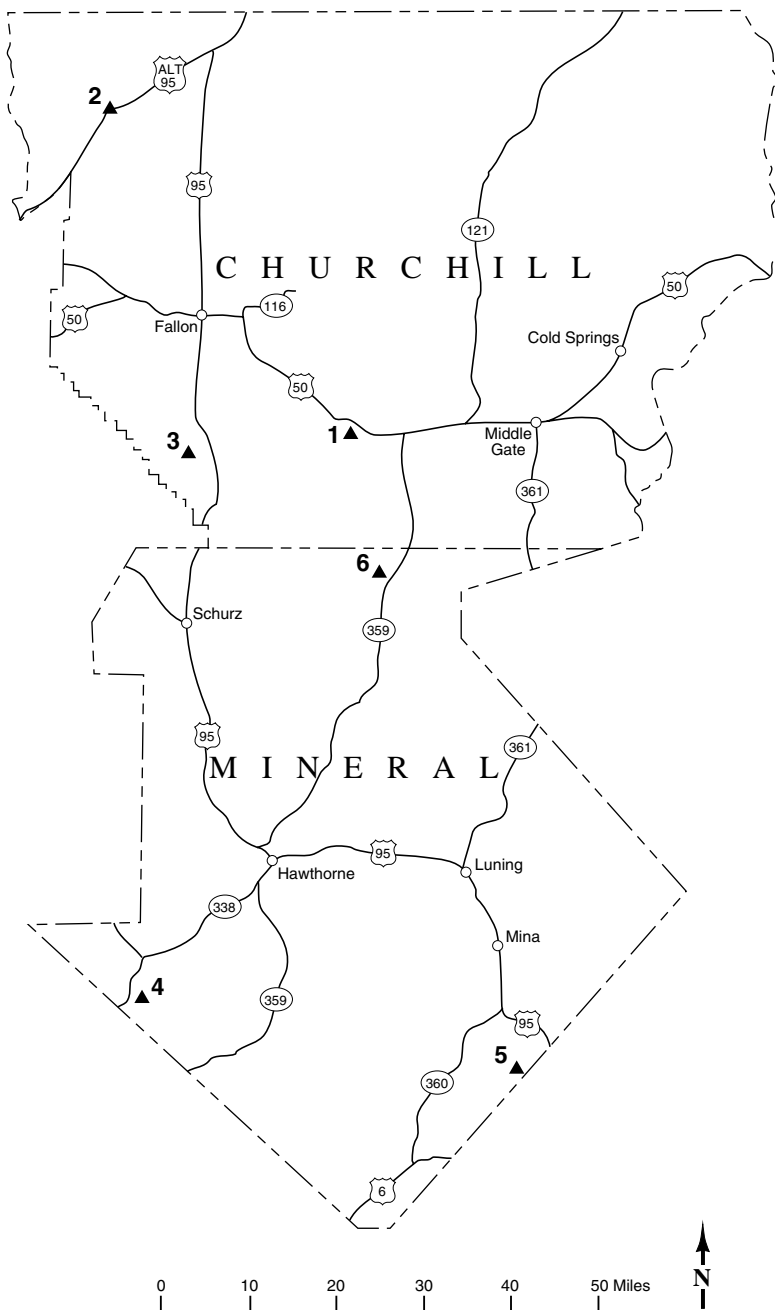
Operator: Placer Dome U.S. Inc.  
P.O. Box 2706  
Elko, NV 89803  
775-744-4227 Fax: 744-4216  
Company employees: 148  
Production (includes Casino/Winrock,  
Little Bald Mountain, Alligator Ridge [8a],  
and Yankee [8b]):  
Gold - 130,000 oz, Silver - 2,000 oz

#### **Griffon Mine (9)**

Operator: Alta Gold Co.  
778 Great Basin Blvd.  
Ely, NV 89301  
775-289-3007 Fax: 289-4138  
Company employees: 51  
Production: Gold - 37,921 oz  
Silver - 269 oz

#### **Robinson Mine (10)**

Operator:  
BHP Nevada Mining Co.  
P.O. Box 382  
Ruth, NV 89319  
775-289-7000 Fax: 289-7009  
Company employees: 440  
Production:  
Concentrate containing:  
Copper - 148,485,000 pounds  
Gold - 86,000 oz  
Silver - 299,500 oz



## Section V

### Churchill County

#### **Huck Salt (1)**

Operator:

Huck Salt & Sons, Inc.  
2900 Phritzie Lane  
Fallon, NV 89406  
775-423-2055 Fax: 423-0467  
Company employees: 4

Production:

Salt - 18,190 tons

#### **Moltan Company/Fernley Nevada Facility (2)**

Operator:

Moltan Company  
P.O. Box 860  
Fernley, NV 89408  
775-423-6668 Fax: 423-6411  
Company employees: 49

Production:

Diatomite

#### **Popcorn Perlite Mine (3)**

Operator:

Eagle-Picher Minerals, Inc.  
P.O. Box 10408  
Reno, NV 89510  
775-343-1818 Fax: 343-1821

Production:

Perlite

### Mineral County

#### **Aurora Mine (4)**

Operator:

Nevada Goldfields, Inc.  
P.O. Box 3070  
Hawthorne, NV 89415  
775-945-3368 Fax: 945-3360  
Company employees: 36

Production (partial year):

Gold - 2,130 oz  
Silver - 7,287 oz

#### **Candelaria Mine (5)**

Operator:

Kinross Candelaria Mining Co.  
P.O. Box 1240  
Hawthorne, NV 89415  
775-573-2471 Fax: 573-2520  
Company employees: 18

Production:

Silver - 1,109,619 oz  
Gold - 3,006 oz

#### **Denton-Rawhide Mine (6)**

Operator:

Kennecott Rawhide Mining Co.  
P.O. Box 2070  
Fallon, NV 89407  
775-945-1015 Fax: 945-1213  
Company employees: 179  
Contract employees: 4

Production:

Gold - 123,800 oz  
Silver - 848,000 oz

## Section VI

### Esmeralda County

#### **Basalt Mine and Mill (1)**

Operator:  
Grefco Minerals, Inc.  
P.O. Box 288  
Mina, NV 89422  
Dicalite Toll Station #1  
Fax: 760-872-6006  
Company employees: 6  
Production:  
Diatomite

#### **Mineral Ridge Mine (2)**

Operator:  
Mineral Ridge Resources, Inc.  
P.O. Box 67  
Silver Peak, NV 89047  
775-937-2266 Fax: 937-2202  
Company employees: 74  
Production:  
Gold - 8,582 oz  
Silver - 4,877 oz

#### **Silver Peak Operations (3)**

Operator:  
Chemetall Foote Corp.  
P.O. Box 98  
Silver Peak, NV 89047  
775-937-2222 Fax: 937-2250  
Company employees: 74  
Contract employees: 8  
Production:  
Lithium compounds

### Nye County

#### **Bullfrog Mine (4)**

Operator:  
Barrick Bullfrog, Inc.  
P.O. Box 519  
Beatty, NV 89003  
775-553-2900 Fax: 553-2963  
Company employees: 127  
Production:  
Gold - 208,123 oz  
Silver - 299,944 oz

#### **Daisy Gold Mine (5)**

Operator:  
Rayrock Mines Inc.  
P.O. Box 190  
Beatty, NV 89003  
775-553-2234 Fax: 553-2295  
Company employees: 14  
Contract employees: 37  
Production:  
Gold - 32,504 oz

#### **IMV Nevada (6)**

Operator:  
Mud Camp Mining Co. LLC  
dba IMV Nevada  
Route Box 549  
Amargosa Valley, NV 89020  
775-372-5341 Fax: 372-5640  
Company employees: 35  
Contract employees: 3  
Production:  
Specialty clays - 32,555 tons

#### **New Discovery Mine and Mill (7)**

Operator:  
Vanderbilt Minerals Corp.  
2320 Viking Road  
Las Vegas, NV 89109  
702-732-3174 Fax: 731-3621  
Company employees: 6  
Production:  
Specialty clay - 374 tons

#### **Premier Chemical (8)**

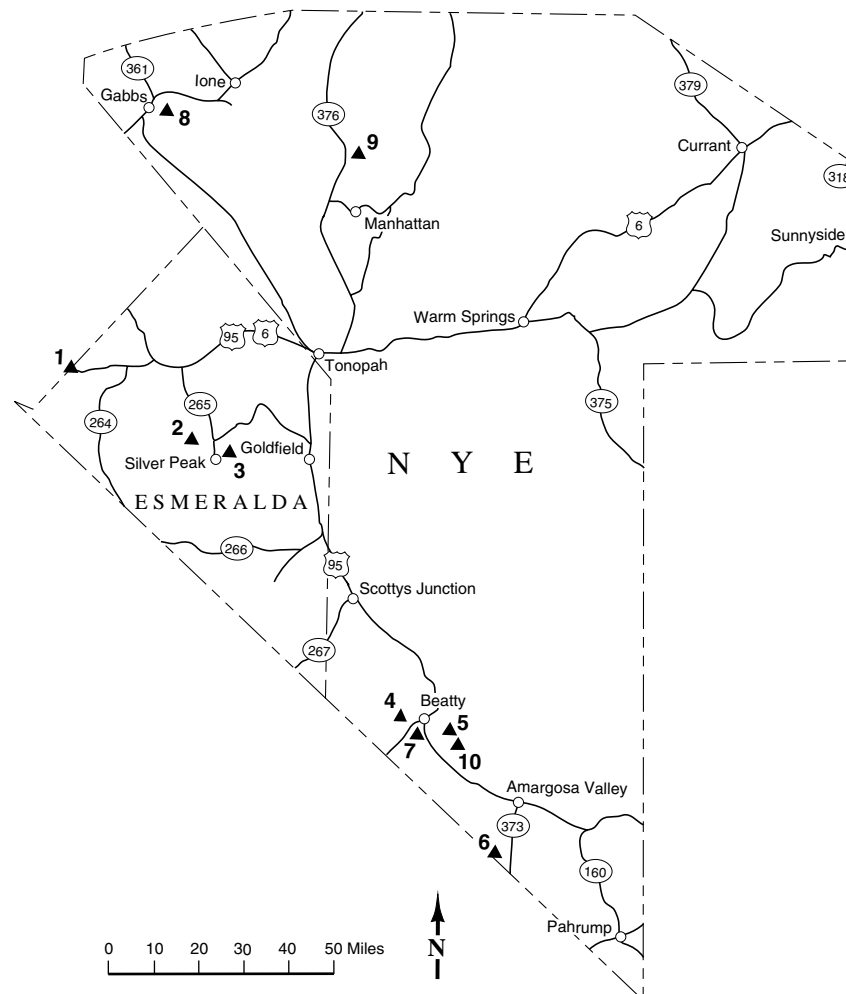
Operator:  
Premier Refractories International  
P.O. Box 177  
Gabbs, NV 89409  
775-285-2601 Fax: 285-4021  
Company employees: 79  
Production:  
Magnesium oxide

#### **Smoky Valley Common Operation (9)**

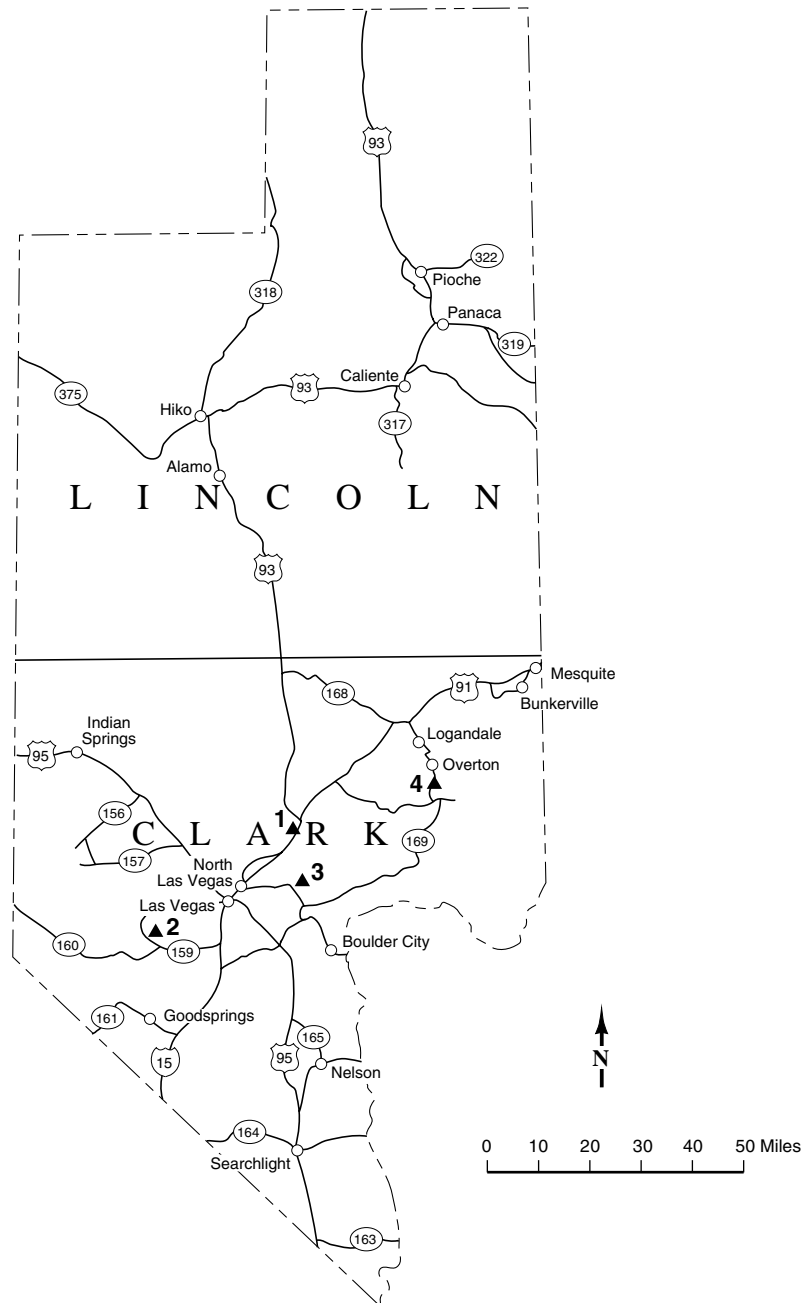
Operator:  
Round Mountain Gold Corp.  
P.O. Box 480  
Round Mountain, NV 89045-0480  
775-377-2366 Fax: 377-3240  
Company employees: 673  
Production:  
Gold - 510,502 oz  
Silver - 511,320 oz

#### **Sterling Mine (10)**

Operator:  
Cathedral Gold US Corp.  
P.O. Box 549  
Beatty, NV 89003  
775-222-4844 Fax: 372-1720  
Company employees: 12  
Production:  
Gold - 3,970 oz



## Section VII



### Clark County

#### **Apex Quarry and Plant (1)**

Operator:  
 Chemical Lime Co.  
 P.O. Box 3609  
 North Las Vegas, NV 89036  
 702-643-7702 Fax: 643-9517  
 Company employees: 60  
 Production:  
 Limestone, Lime

#### **James Hardie Gypsum (2)**

Operator:  
 James Hardie Gypsum  
 HCR 89033, Box 2900  
 Las Vegas, NV 89124  
 702-875-4111 Fax: 875-4213  
 Company employees: 121  
 Production:  
 Gypsum - 769,881 tons

#### **PABCO Gypsum (3)**

Operator:  
 Pacific Coast Building  
 Products, Inc.  
 1733 N. Nellis Blvd. #328  
 Las Vegas, NV 89115  
 702-643-1016 Fax: 643-6249  
 Company employees: 80  
 Contract employees: 3  
 Production:  
 Gypsum - 584,872 tons

#### **Simplot Silica Products (4)**

Operator:  
 Simplot Industries  
 P.O. Box 308  
 Overton, NV 89040  
 702-397-2667 Fax: 397-2798  
 Company employees: 44  
 Production:  
 Silica sand - 640,000 tons

## Economic Impacts of Mining in Nevada --1998

### SUMMARY OF 1998 PRODUCTION

Gold	8,865,000	ounces *
Silver	21,519,000	ounces *
Barite (shipped)	490,000	tons
Copper	148,485,000	pounds
Diatomite	**	
Dolomite	**	
Gypsum	1,994,000	tons
Limestone	**	
Lithium carbonate	**	
Magnesium oxide	**	
Mercury	**	
Perlite	**	
Precious opal	1.5	pounds
Salt	18,190	tons
Silica sand	640,000	tons
Specialty clay	35,000	tons

\*Includes production from smaller mines not listed in this report.

\*\*Proprietary information.

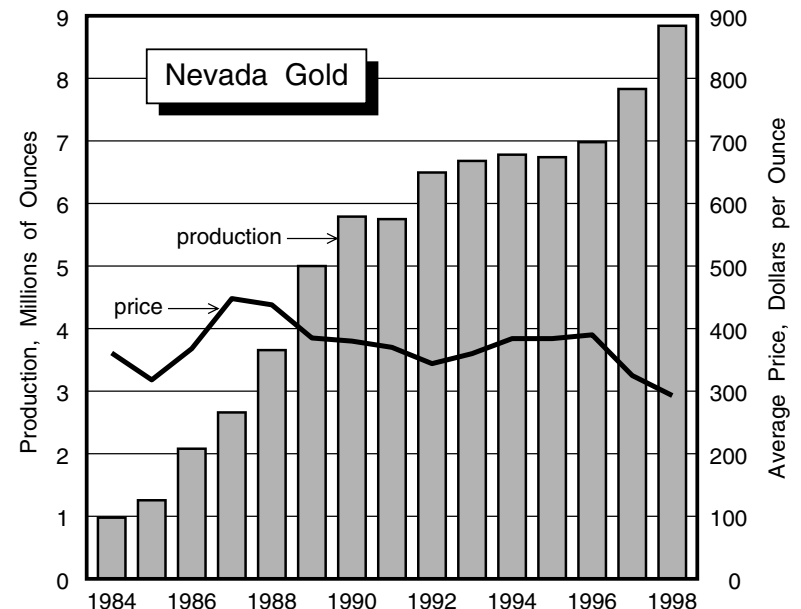
Mining in Nevada in 1998 increased over 1997 in terms of production amounts, but due primarily to lower gold prices, the value of the production hardly changed. From the discovery of the Comstock silver deposits in 1859 to the present, mining has continued to play a major role in the state's economy. The Nevada mineral industry led the nation in the production of gold, silver and barite as it has for several years. Nevada ranked second in the nation in production of diatomite and was the only domestic producer of mined magnesite. Nevada's mines also produced a variety of other mineral commodities, including copper, gypsum, lithium compounds, salt, silica, and others. Total mineral production in Nevada in 1998 had an estimated value of about \$3.32 billion, down slightly from \$3.36 billion in 1997.

### Production Highlights

Nevada's gold production reached 8,865,000 troy ounces in 1998, a new state record, and a 16.8% increase over the former record of

7,853,000 troy ounces set in 1997. Nevada is the third largest producer of gold in the world, behind only South Africa and Australia. Silver production exceeded 20 million troy ounces for the sixth year in a row, giving Nevada undisputed claim to being the Silver State. Silver production was 21.5 million troy ounces, down somewhat from 1997's record 24.7 million. Copper production was 148.5 million pounds, essentially the same as the 148.6 million pounds produced in 1997. Gypsum production increased nearly 15% over 1997 due to increased demand for wallboard.

The increase of over a million troy ounces of gold in 1998 over 1997 was due largely to Placer Dome's Pipeline Mine and Homestake's Ruby Hill Mine, which began operations in mid-1997 and achieved full production in 1998. The production of gold from underground operations increased in 1998 over 1997 from 1.57 million troy ounces to 1.97 million troy ounces. In 1998, about 22% of Nevada's gold production was mined at underground operations. The trend of growing production from underground mines is likely to continue in



1999 as the Midas Joint Venture's Ken Snyder Mine and Getchell Gold's Turquoise Ridge Mine reach full production, although in July 1999 Placer Dome announced a temporary shutdown at Turquoise Ridge.

## Employment

According to the Nevada Department of Employment, Training, and Rehabilitation, for the year ending in 1998, Nevada mining operations employed 13,236 workers. The total payroll for that period was \$699,181,917, making the average annual pay for a mine worker \$52,824, the highest average for any sector in the state. The average salary for all Nevada workers for the calendar year was \$30,159. In addition to the direct employment in mining, there are an estimated 43,000 additional indirect jobs in the state related to providing goods and services needed by the mining industry. Employment trends were down in 1998 over 1997 due to lower commodity prices and a slowdown in mine development primarily in the precious metal sector.

## Taxes and Other Impacts

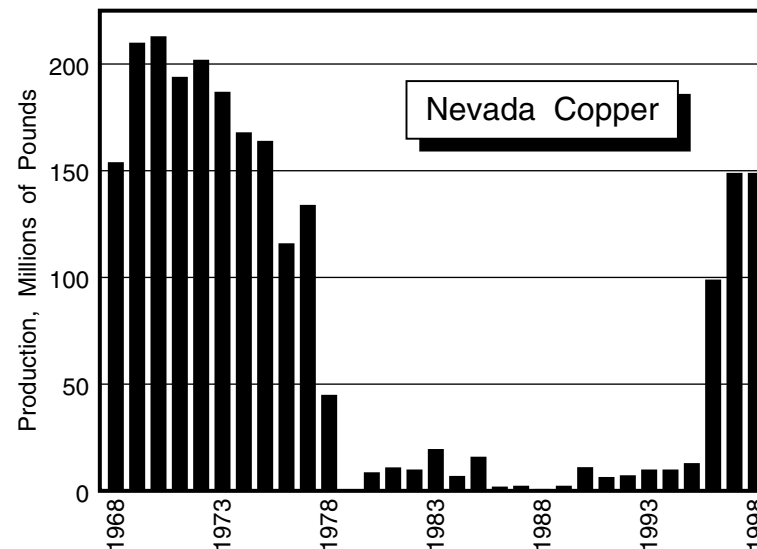
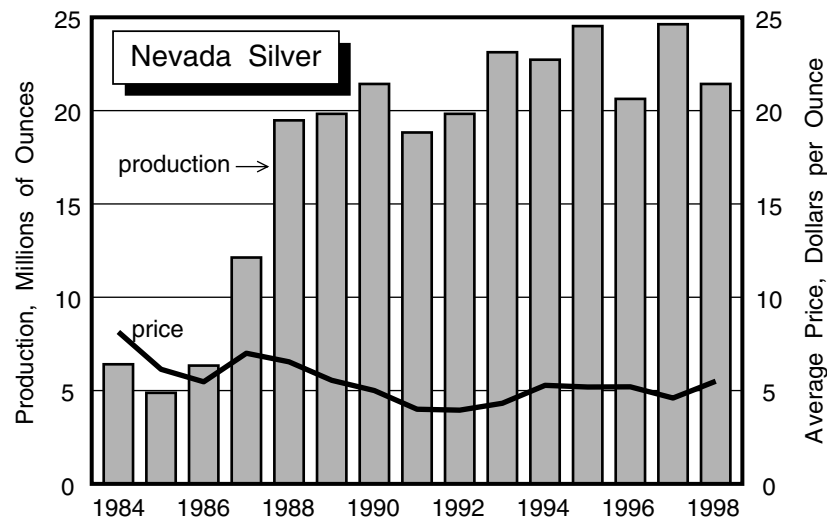
The taxes paid by the mining industry to state and local government are property taxes, sales and use tax, and unique to the minerals industry, net proceeds of mines

tax. The net proceeds of mines tax for 1998 totaled approximately \$33.3 million, with \$16.0 million paid to the state and \$17.3 million paid to the counties. According to the Nevada Department of Taxation and industry surveys, property taxes paid in 1998 were about \$31.5 million. Revenues generated from sales and use taxes in 1998 were not yet totaled as of this report, but they should be about the same as those paid in 1997 (about \$59.5 million).

While the economic impact of mining is important to the state as a whole, the greatest impacts are felt by the local communities near the mines. Towns such as Elko, Lovelock, Battle Mountain, Winnemucca, Beatty, Eureka, and Ely have much healthier economies than they would otherwise because of the high paying jobs, taxes, and contributions provided by the mining industry.

## Permitting and Reclamation

Before mining can take place, plans of operation must be submitted and permits must be obtained from federal and state agencies to ensure that other resources such as wildlife, air, and water are protected. Nevada and federal laws and regulations require that lands disturbed by mining activities must be rehabilitated so they can be used for other purposes once mining is



complete. This process, called reclamation, returns mined areas to other productive uses such as wildlife habitat, livestock grazing, recreation, or new industrial applications. To insure that reclamation is done, mine operators are required to post bonds which are held by government agencies. The bonds are released only after the mined area is stabilized and the reclamation goals have been met. Over \$420 million in bonds are currently posted. Mine operators are proud of their efforts, and are constantly seeking ways to enhance their reclamation technology.

## Gold Reserves

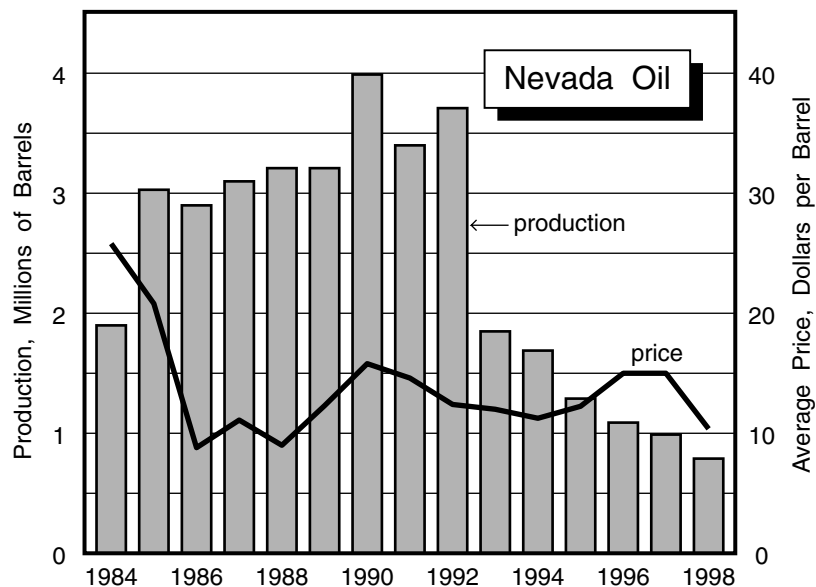
Nevada's reported gold reserves at or near currently operating mines that can be mined at a profit under current economic conditions stood at about 88 million troy ounces at the end of 1998. The amount of reserves is always in a state of flux, with some reserves being lost to production, additional discoveries being made, and changing economic conditions. Many Nevada operations are able to add to their reserves each year through development drilling. Extensive gold resources, not currently economic, also exist at many operations. The price of gold and the cost of production are the main factors used to determine whether a reserve is really a

reserve or just a sub-economic resource. With the price of gold below \$300 per troy ounce, many companies have had to reevaluate their reserves and reclassify some as resources. An increase in the cost of regulatory compliance has the same effect as a lowering of the gold price, thus increasingly complex and expensive regulations can reduce reserves. Under current conditions, the existing proven reserves are sufficient to sustain gold production at current levels for about 10 years.

## Exploration

Exploration for new deposits, particularly gold, is an ongoing effort by the producing companies and many others who do not operate mines in the state. About 215 geologists were employed in Nevada in 1998 primarily to explore for mineral properties that can be developed into new mines, or to find new ore deposits around existing mines. These geologists, together with their support staff of drillers, samplers, assayers and others represent a significant positive economic impact, particularly in the rural areas. Exploration spending in Nevada declined significantly in 1998 to about \$87 million from about \$139 million in 1997.





## Minerals Other Than Gold and Silver

Minerals besides gold and silver are also important to Nevada's economy. Copper and industrial minerals such as barite, diatomite, gypsum, limestone, lithium compounds, magnesite, and specialty clays are mined in the state. Sand, gravel, and crushed stone are critical to the building requirements of the state's cities and towns.

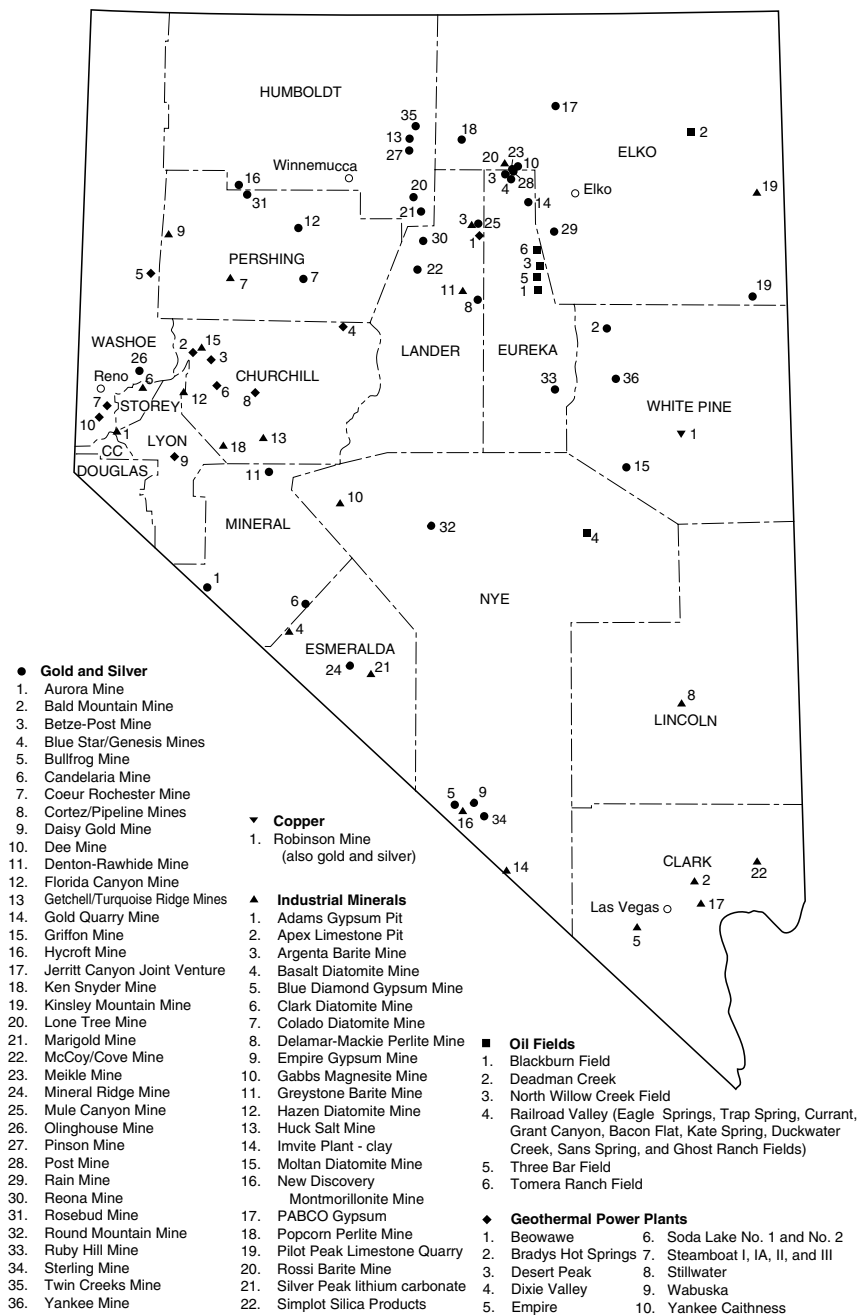
Oil and gas exploration and production in Nevada is a small industry when compared with mining, but it does contribute to the economy of east-central Nevada. In oil field terms, Nevada is a frontier, meaning its potential is yet to be realized. Oil production in 1998 was about 800,000 barrels (42 gallons per barrel) with an average value of \$10.37 per barrel for a total value of about \$8.3 million. Nevada oil is used for the production of kerosene, diesel, boiler fuel, and asphalt. No natural gas is commercially produced in the state, but minor gas produced at some wells is used to fuel onsite equipment.

Nevada is rich in geothermal resources. Currently, there are 14 plants at 10 locations that produced 1.63 million

megawatt hours of electricity in 1998. Electric generating capacity and production have remained fairly steady for the past several years. Geothermal heat is also used for a variety of commercial, domestic, and public applications in Nevada. Mining, aquaculture, and agriculture are among the beneficiaries of geothermal heat. Schools in Elko County, and homes and commercial buildings in Lincoln and Washoe Counties are examples of public and private facilities using this renewable energy resource.

## Conclusion

Nevada's mineral industry continued to be a major economic force in the state during 1998. This situation should continue for many years to come. Challenges will exist, as they always have, but Nevada's mineral reserves and the potential to add to them will spur the creativity of the mineral industry. During the past year of relatively low commodity prices, many mineral producers have found ways to reduce their production costs. They will be well positioned to take advantage of increased margins when commodity prices rebound.



Major mines, oil fields, and geothermal plants, 1998.

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## The Nevada Bureau of Mines and Geology

The Nevada Bureau of Mines and Geology (NBMG) is a research and public service unit of the University of Nevada and is the state geological survey. NBMG is part of the Mackay School of Mines at the University of Nevada, Reno. NBMG scientists conduct research and publish reports on mineral resources, engineering geology, environmental geology, hydrogeology, and geologic mapping. Individuals interested in Nevada geology are encouraged to visit, call, or write NBMG or visit our homepage at [www.nbmgnr.edu](http://www.nbmgnr.edu).

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