

Nevada Bureau of Mines and Geology

SPECIAL PUBLICATION P-14

Major Mines of Nevada 2002

Mineral Industries in Nevada's Economy

By Doug Driesner and Alan Coyner

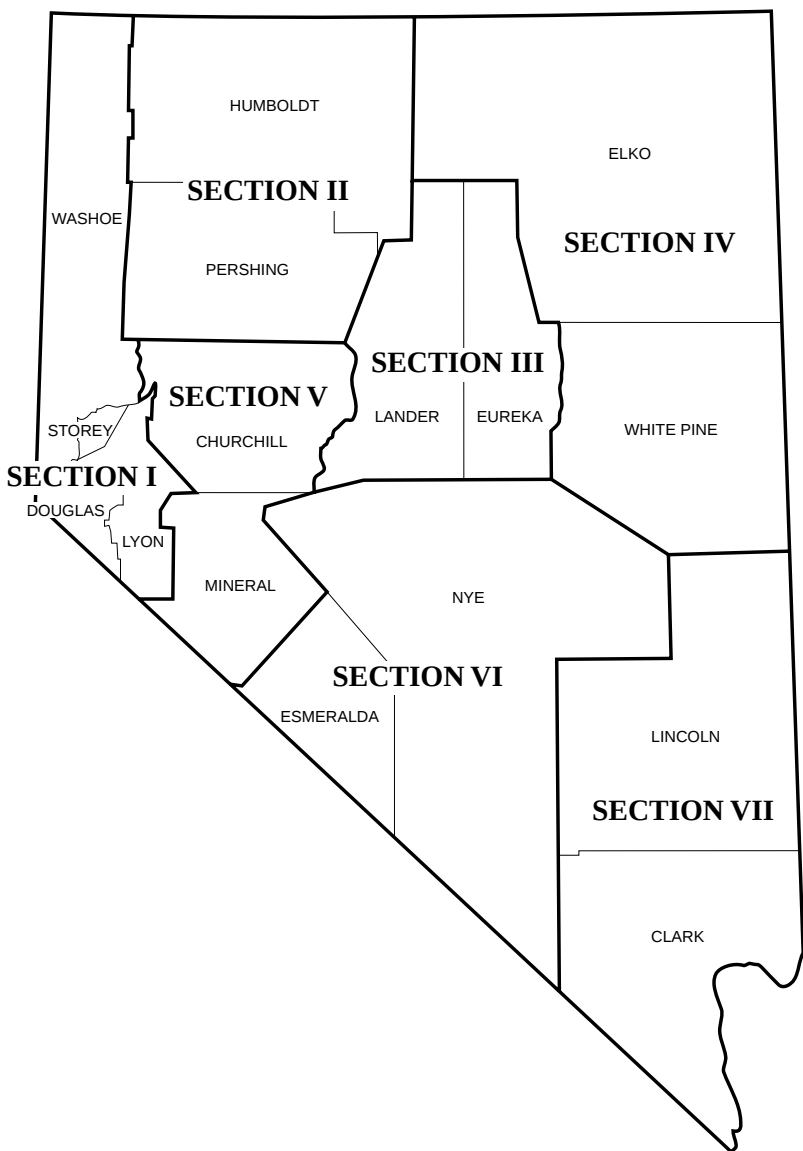
The Nevada Division of Minerals

2003

This is the fourteenth 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 2002 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) 684-7040, fax (775) 684-7052, or visit their Web site at <http://minerals.state.nv.us>.

MACKAY SCHOOL OF MINES

UNIVERSITY
OF NEVADA
RENO



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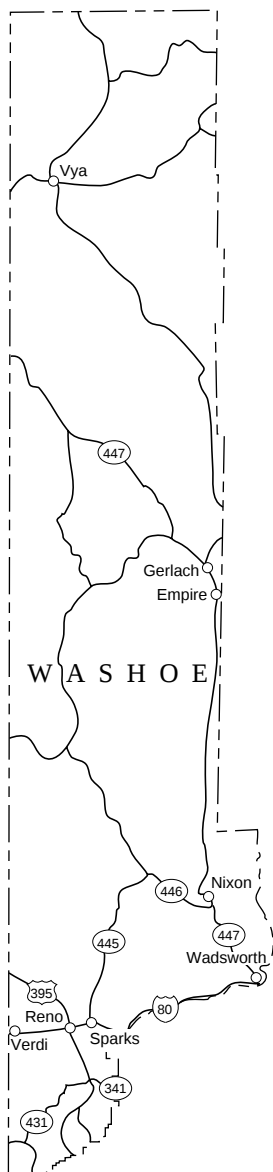
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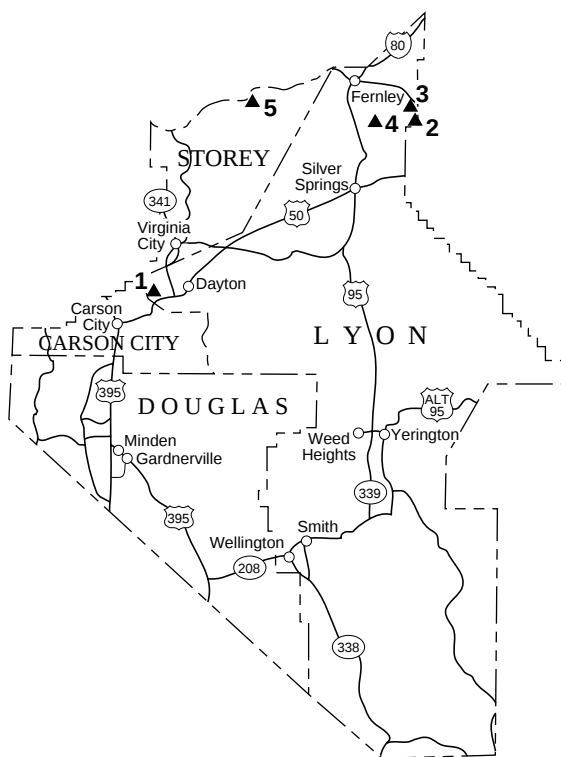
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0 10 20 30 40 50 Miles



0 5 10 15 20 25 Miles

Section I

Lyon County

Adams Claim Gypsum Mine (1)

Operator:

Art Wilson Co.
P.O. Box 20160
Carson City, NV 89721
775-882-0700 Fax: 882-0790
Company employees: 35

Production:

Gypsum - 128,163 tons

Celite Diatomite Mine (2)

Operator:

World Minerals, Inc.
100 Front Street
Fernley, NV 89408
775-575-2536 Fax: 575-4857
Company employees: 17
Contract employees: 1

Production:

Diatomite

Hazen Pit (3)

Operator:

Eagle-Picher Filtration &
Minerals, Inc.
P.O. Box 10480
Reno, NV 89510
775-824-7700 Fax: 824-7715

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: 122

Production:

Limestone/Clay

Storey County

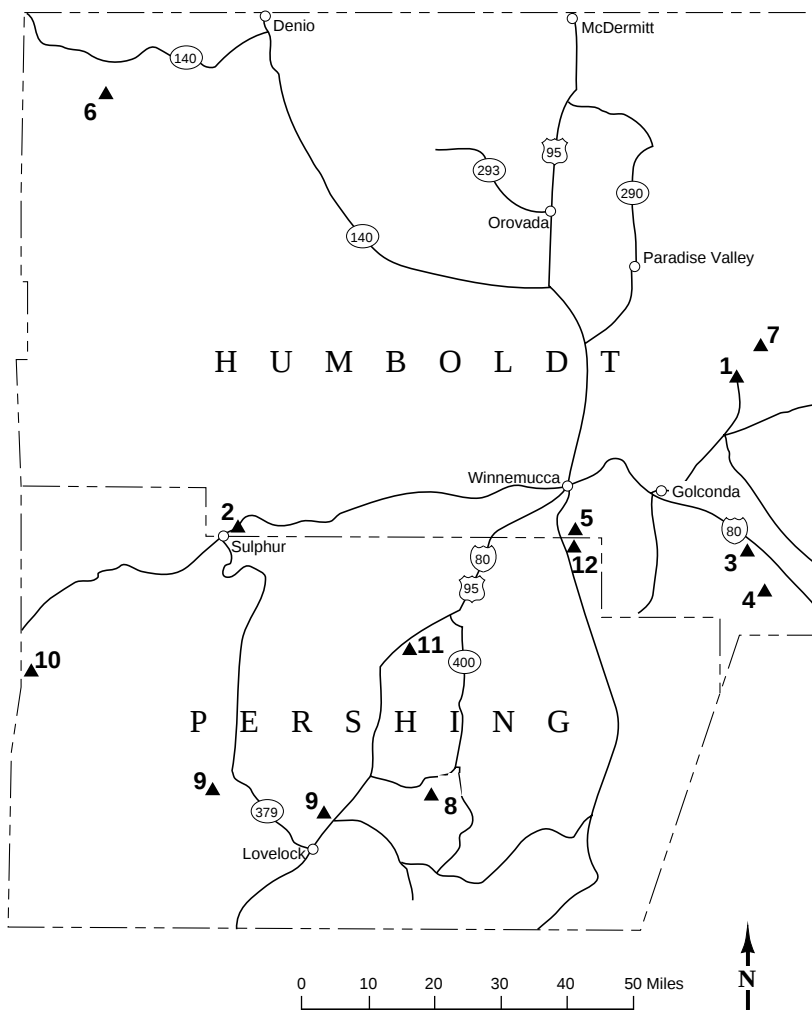
Clark Mine and Mill (5)

Operator:

Eagle-Picher Filtration
Minerals, Inc.
P.O. Box 10480
Reno, NV 89510
775-824-7700 Fax: 824-7715
Company employees: 69

Production:

Diatomite



Guests digging for fire opals at Royal Peacock Mine, Humboldt County (NDOM photo).

Section II

Humboldt County

Getchell Underground Mine (1)

Operator:

Getchell Gold Corp.
HC 66 Box 220
Golconda, NV 89414
775-529-5001 Fax: 529-0753
Company employees: 62
Contract employees: 56

Production:

Gold - 54,600 oz
Silver - 5,400 oz

Hycroft Mine (2)

Operator:

Hycroft Resources & Dev., Inc.
P.O. Box 3030
Winnemucca, NV 89446
775-623-5260 Fax: 623-0215
Company employees: 4
Contract employees: 3

Production:

Gold - 1,771 oz
Silver - 217 oz

Lone Tree Mine (3)

Operator:

Newmont Mining Corp.
P.O. Box 388
Valmy, NV 89438
775-635-9000 Fax: 635-0111
Company employees: 455

Production:

Gold - 327,160 oz
Silver - 65,905 oz

Marigold Mine (4)

Operator:

Glamis Gold Inc.
P.O. Box 160
Valmy, NV 89438
775-635-2317 Fax: 635-2551
Company employees: 126
Contract employees: 2

Production:

Gold - 83,321 oz
Silver - 1,281 oz

MIN-AD Mine and Mill (5)

Operator:

MIN-AD, Inc.
P.O. Box 39
Winnemucca, NV 89446
775-623-5944 Fax: 623-9028
Company employees: 16

Production:

Dolomite

Royal Peacock Opal Mine (6)

Operator:

Walter Wilson
P.O. Box 144
Orovada, NV 89425
775-941-0374

Production:

Precious opal

Twin Creeks Mine (7)

Operator:

Newmont Mining Corp.
P.O. Box 69
Golconda, NV 89414
775-623-4300 Fax: 635-4602
Company employees: 476

Production:

Gold - 786,313 oz
Silver - 158,401 oz

Pershing County

Coeur Rochester Mine (8)

Operator:

Coeur d'Alene Mines Corp.
P.O. Box 1057
Lovelock, NV 89419
775-273-7995 Fax: 273-7423
Company employees: 240

Production:

Gold - 71,905 oz
Silver - 6,417,792 oz

Colado Mine and Plant (9)

Operator:

Eagle-Picher Filtration &
Minerals, Inc.
150 Coal Canyon Road
Lovelock, NV 89419
775-824-7540 Fax: 824-7582
Company employees: 132

Production:

Diatomite, Perlite

Empire Mine (10)

Operator:

United States Gypsum Co.
P.O. Box 130
Empire, NV 89405
775-557-2341 Fax: 557-2212
Company employees: 151

Production:

Gypsum - 305,505 tons

Florida Canyon Mine (11)

Operator:

Apollo Gold, Inc.
P.O. Box 330
Imlay, NV 89418
775-538-7300 Fax: 538-7324
Company employees: 169
Contract employees: 5

Production:

Gold - 121,516 oz
Silver - 72,567 oz

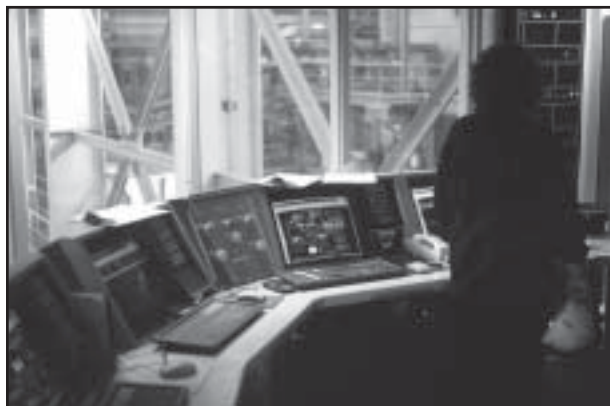
W. Glen Sexton Family Trust (12)

Operator:

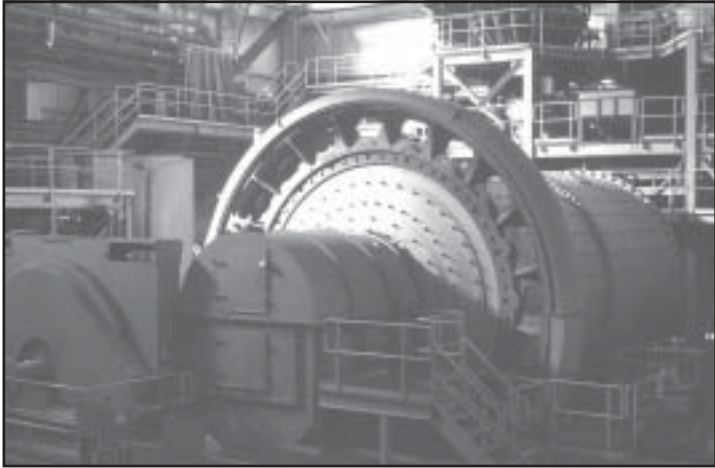
Nutritional Additives Corp.
415 Wellington Street
Winnemucca, NV 89445
775-623-1151 Fax: 623-1153
Company employees: 6

Production:

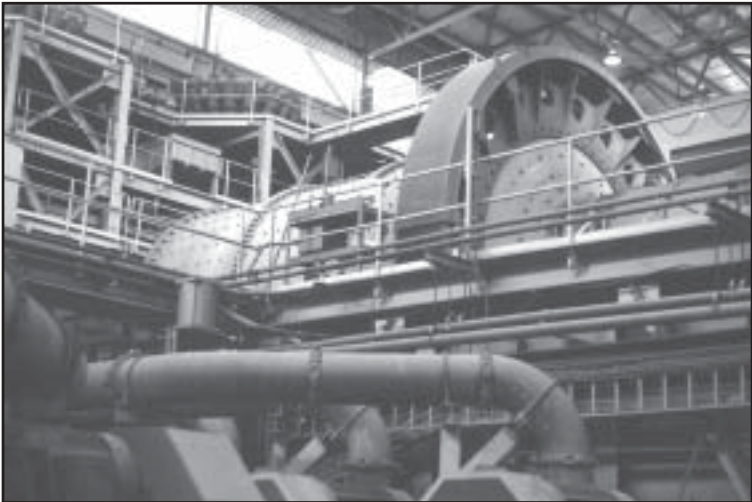
Dolomite



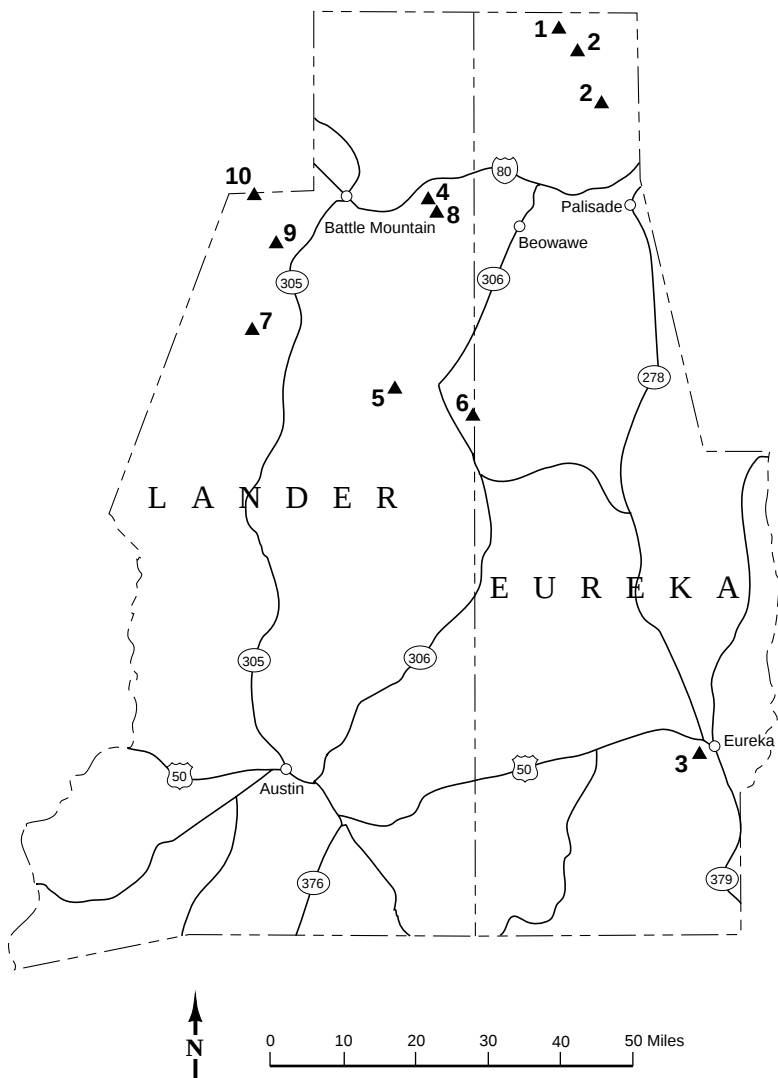
Twin Creeks Mill control room, Humboldt County (NDOM photo).



Twin Creeks Mill, Humboldt County (*NDOM photo*).



Twin Creeks Mill, Humboldt County (*NDOM photo*).



Section III

Eureka County

Betze-Post Mine (1)

Operator:

Barrick Goldstrike Mines, Inc.
P.O. Box 29
Elko, NV 89803
775-738-8043 Fax: 738-6543
Company employees: 1,142
Contract employees: 71

Production:

Gold - 1,409,984 oz
Silver - 135,716 oz

Ruby Hill Mine (3)

Operator:

Barrick Gold Corporation
P.O. Box 676
Eureka, NV 89316
775-237-6060 Fax: 237-5408
Company employees: 17
Contract employees: 6

Production:

Gold - 135,448 oz
Silver - 9,750 oz

Carlin Operations (2)

Operator:

Newmont Mining Corp.
P.O. Box 669
Carlin, NV 89822
775-778-4000 Fax: 778-4757
Company employees: 1,519

Production:

Gold - 1,335,302 oz
Silver - 268,994 oz



300 ton truck (NDOM photo)

Lander County

Argenta Mine and Mill (4)

Operator:

Baker Hughes INTEQ
P.O. Box 277
Battle Mountain, NV 89820
775-635-5441 Fax: 635-5455
Company employees: 19

Shipped:

Barite - 47,301 tons

Battle Mountain Grinding Plant (Greystone Mine) (5)

Operator:

M-I L.L.C.
P.O. Box 370
Battle Mountain, NV 89820
775-635-5135 Fax: 635-2191
Company employees: 68

Shipped:

Barite - 204,332 tons

Cortez Gold Mines (6)

Operator:

Placer Dome U.S. Inc.
HC66 Box 1250
Crescent Valley, NV 89821
775-468-4400 Fax: 468-4496
Company employees: 391

Production:

Gold - 1,081,677 oz

McCoy/Cove Mine (7)

Operator:

Echo Bay Minerals Co.
P.O. Box 1658
Battle Mountain, NV 89820
775-635-5500 Fax: 635-5098
Company employees: 70

Production:

Gold - 33,142 oz
Silver - 1,987,421 oz

Mule Canyon Mine (8)

Operator:

Newmont Mining Corp.
P.O. Box 388
Valmy, NV 89438
775-635-9000 Fax: 635-0111

Company employees:
included with Lone
Tree Mine

Production:

Gold - 13,444 oz
Silver - 2,708 oz

Phoenix Project (9)

Operator:

Newmont Mining Corp.
P.O. Box 388
Valmy, NV 89438
775-635-9000 Fax: 635-0111

Production:

Gold - 6,134 oz
Silver - 1,236 oz

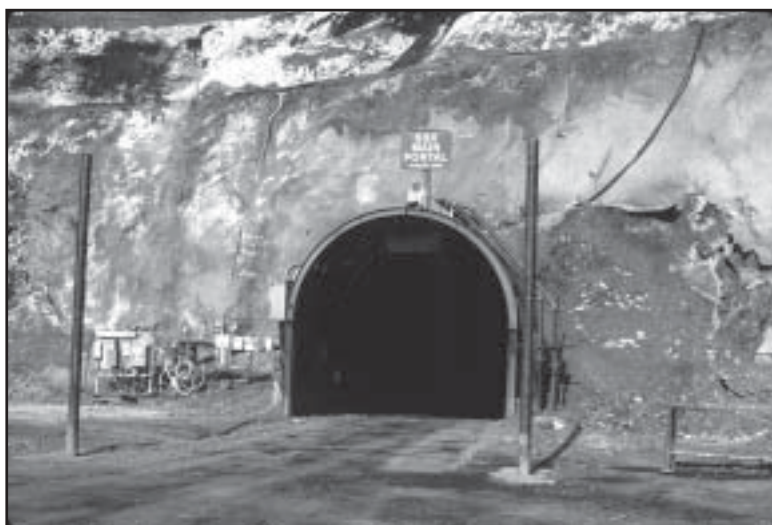
Trenton Canyon Mine (10)

Operator:

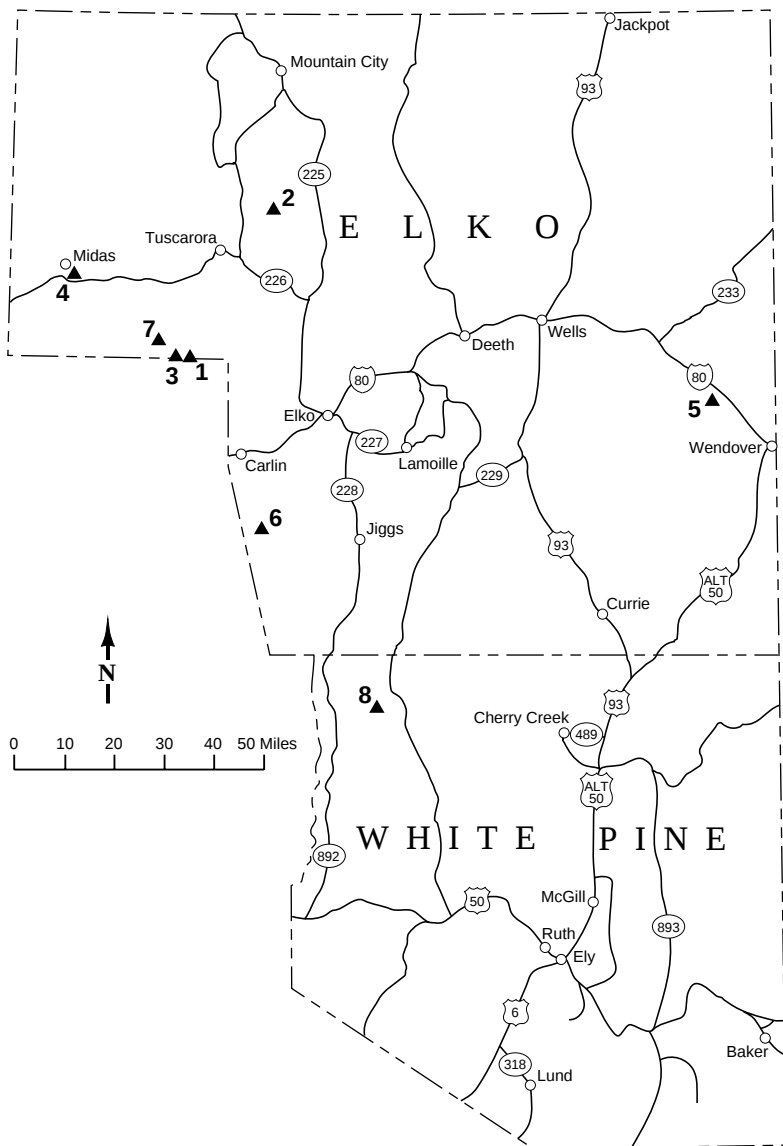
Newmont Mining Corp.
P.O. Box 388
Valmy, NV 89438
775-635-9000 Fax: 635-0111
Company employees:
included with Lone Tree
Mine

Production:

Gold - 3,685 oz
Silver - 742 oz



SSX Portal at Jerritt Canyon Mine (*NDOM photo*).



Section IV

Elko County

Capstone Mine (1)

Operator: Newmont Mining Corp.
P.O. Box 669
Carlin, NV 89822
775-778-4000 Fax: 778-4757
Employees: included with
Carlin Operations
Production: Gold - 23,415 oz
Silver - 4,717 oz

Jerritt Canyon Mine (2)

Operator:
AngloGold (Jerritt Canyon) Corp.
HC31 Box 78
Elko, NV 89801
775-738-5006 Fax: 758-9231
Company employees: 421
Production: Gold - 338,660 oz
Silver - 8,154 oz

Meikle Mine (3)

Operator: Barrick Goldstrike Mines, Inc.
P.O. Box 29
Elko, NV 89803
775-738-8043 Fax: 738-6543
Company employees: 486
Contract employees: 81
Production: Gold - 640,337 oz
Silver - 203,574 oz

Midas Mine (4)

Operator: Newmont Mining Corp.
Operation, Inc.
HC 66 Box 125
Midas, NV 89414
775-635-6423 Fax: 635-6460
Company employees: 162
Production:
Gold - 232,949 oz
Silver - 2,870,164 oz

Pilot Peak Lime Plant (5)

Operator: Graymont Western U.S.
P.O. Box 2520
West Wendover, NV 89883
775-483-5463 Fax: 483-5149
Company employees: 48
Production: Limestone, Quicklime,
Hydrated lime

Rain Mine (6)

Operator: Newmont Mining Corp.
P.O. Box 669
Carlin, NV 89822
775-778-4000 Fax: 778-4757
Employees: included with
Carlin Operations
Production: Gold - 20,065 oz
Silver - 4,042 oz

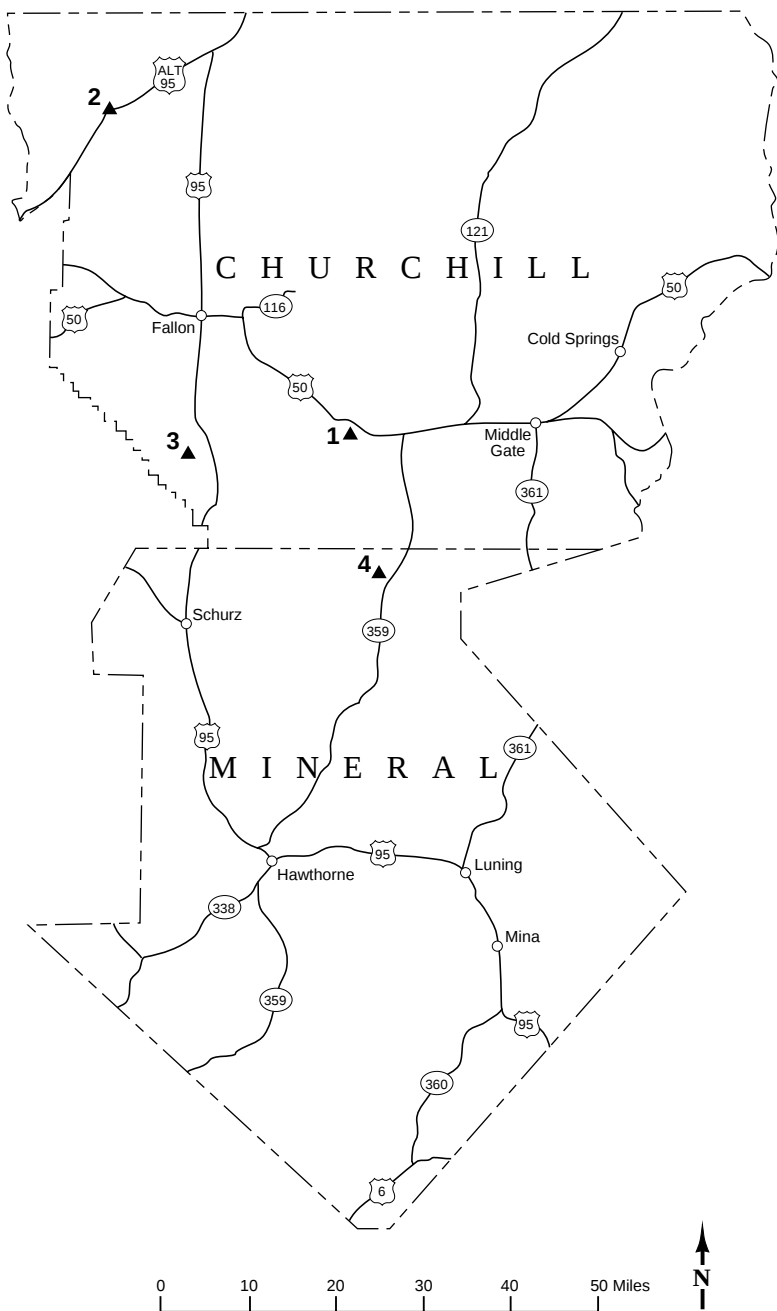
Rossi Mine-Dunphy Mill (7)

Operator: BAROID (Halliburton
Energy Services, Inc.)
912 Dunphy Ranch Rd.
Battle Mountain, NV 89820
775-468-0515 Fax: 468-2060
Company employee: 37
Contract employees: 23
Shipped: Barite - 125,000 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: 95
Contract employees: 5
Production (includes Mooney Basin):
Gold - 172,328 oz,
Silver - 21,547 oz



Section V

Churchill County

Huck Salt (1)

Operator:

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

Production:

Salt - 14,159 tons

Moltan Company (2)

Operator:

B.J. Gurley General Partner
P.O. Box 860
Fernley, NV 89408
775-423-6668 Fax: 423-6411
Company employees: 50

Production:

Diatomite

Popcorn Perlite Mine (3)

Operator:

Eagle-Picher Filtration &
Minerals, Inc.
P.O. Box 10480
Reno, NV 89510
775-824-7700 Fax: 824-7715

Production:

Perlite

Mineral County

Denton-Rawhide Mine (4)

Operator:

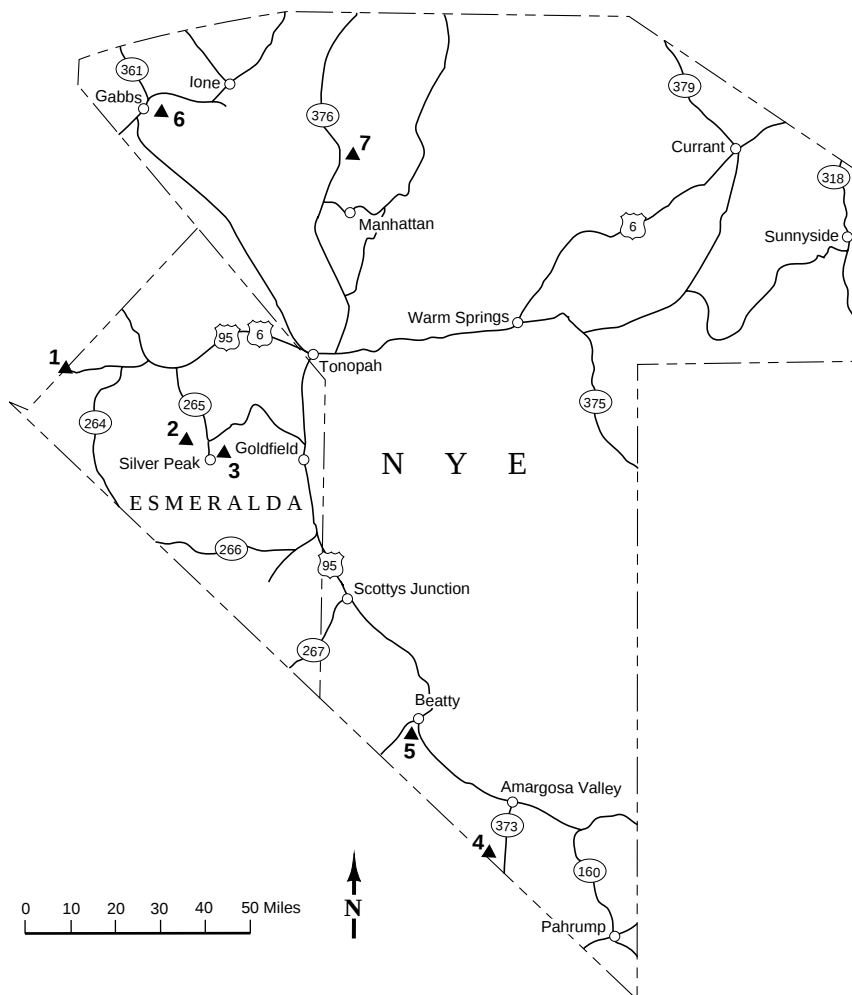
Kennecott Rawhide Mining Co.
P.O. Box 2070
Fallon, NV 89407
775-945-1015 Fax: 945-1213
Company employees: 111

Production:

Gold - 82,584 oz
Silver - 695,248 oz



Lithium brine evaporation
ponds (NDOM photo)



Section VI

Esmeralda County

Grefco Minerals (1)

Operator:

Grefco Minerals, Inc.
P.O. Box 288
Mina, NV 89422
775-573-2422
Fax: 775-573-2422

Company employees: 18

Production:

Diatomite

Mineral Ridge Mine (2)

Operator:

Golden Phoenix Minerals, Inc.
3595 Airway Drive, Suite 405
Reno, NV 89511
775-482-4406 Fax: 482-4036
Company employees: 8

Production:

Gold - 397 oz
Silver - 396 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: 60
Contract employees: 8

Production:

Lithium compounds

Nye County

IMV Nevada (4)

Operator:

Mud Camp Mining Co. LLC
dba IMV Nevada
Route Box 549
Amargosa Valley, NV 89020
775-372-5341 Fax: 372-5640
Company employees: 34

Production:

Specialty clays - 30,410 tons

New Discovery Mine and White Caps Mill (5)

Operator:

Vanderbilt Minerals Corp.
3570 Burgundy Drive
Pahrump, NV 89048
775-537-6944 Fax: 537-0629
Company employees: 7

Production:

Specialty clay - 374 tons

Premier Chemicals (6)

Operator:

Premier Chemicals, LLC
P.O. Box 177
Gabbs, NV 89409
775-285-2601 Fax: 285-4021
Company employees: 78

Production:

Magnesium compounds

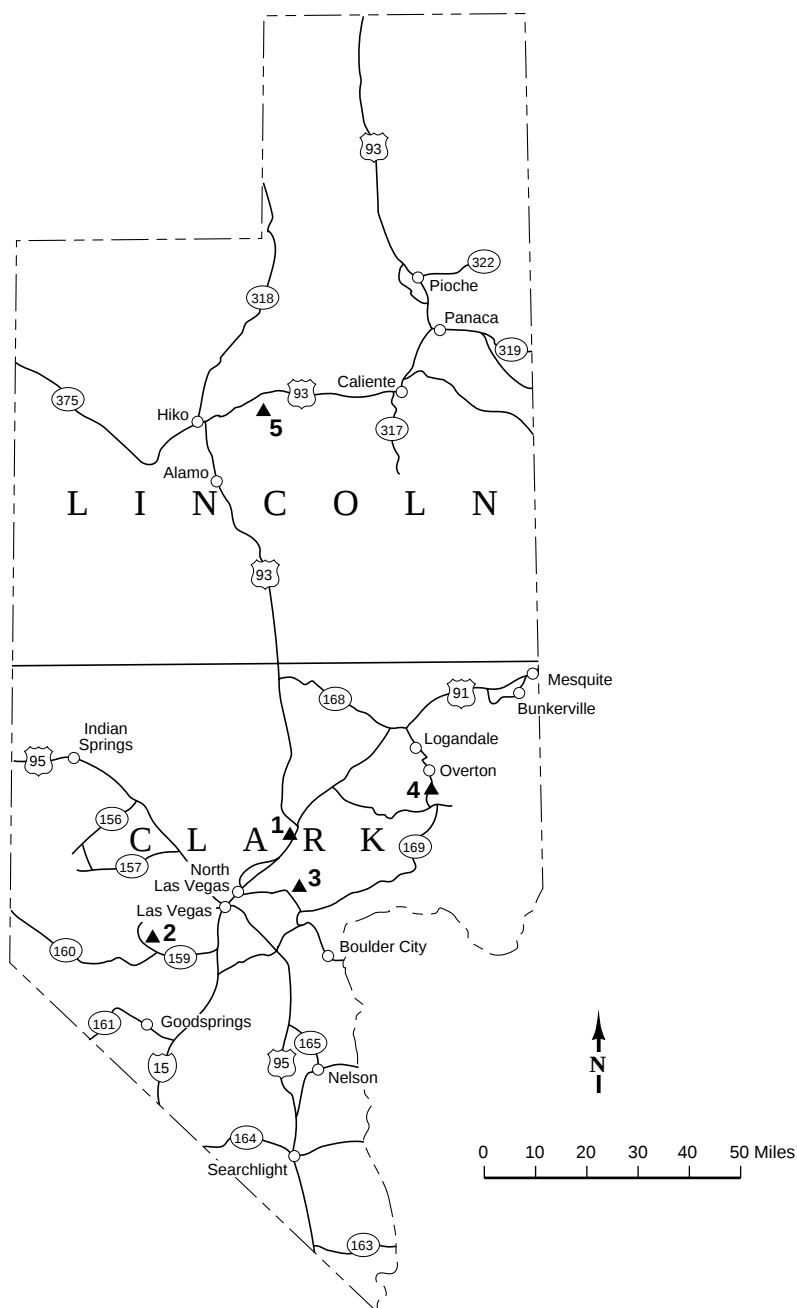
Smoky Valley Common Operation (7)

Operator:

Round Mountain Gold Corp.
P.O. Box 480
Round Mountain, NV 89045-0480
775-377-2366 Fax: 377-3224
Company employees: 642

Production:

Gold - 755,493 oz
Silver - 627,579 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: 110

Production:

Limestone, lime

BPB Gypsum, Inc. (2)

Operator:

BPB Gypsum, Inc.
HCR 89033, Box 2900
Las Vegas, NV 89124
702-875-4111 Fax: 875-4213
Company employees: 123

Production:

Gypsum - 543,238 tons

PABCO Gypsum (3)

Operator:

Pacific Coast Building
Products, Inc.
1973 N. Nellis Blvd. #328
Las Vegas, NV 89115
702-643-1016 Fax: 643-6249
Company employees: 120

Production:

Gypsum - 1,105,088 tons

Simplot Silica Products (4)

Operator:

Simplot Industries
P.O. Box 308
Overton, NV 89040
702-397-2667 Fax: 397-2798
Company employees: 43

Production:

Silica sand - 675,869 tons

Lincoln County

Tenacity Perlite Mine and Mill (5)

Operator:

Wilkin Mining & Trucking, Inc.
P.O. Box 829
Panaca, NV 89042
775-728-4463 Fax: 728-4456
Company employees: 10

Production:

Perlite

SUMMARY OF 2002 PRODUCTION

Gold	7,732,000	ounces *
Silver	13,564,000	ounces *
Barite (shipped)	377,000	tons
Copper	0	pounds
Diatomite	**	
Dolomite	**	
Gypsum	2,082,000	tons
Limestone	**	
Lithium carbonate	**	
Magnesium oxide	**	
Mercury	no report	
Perlite	**	
Precious opal	**	
Salt	14,000	tons
Silica sand	676,000	tons
Specialty clay	33,000	tons

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

**Proprietary information.

Economic Impacts of Mining in Nevada—2002

The Nevada mineral industry led the nation in 2002 in the production of gold, silver, and barite as it has for several years. Nevada also produced a wide variety of other mineral and energy commodities such as aggregates, diatomite, dolomite, geothermal energy, gypsum, lapidary and gem stones, lime and limestone, lithium compounds, magnesium compounds, oil, perlite, salt, silica, and specialty aggregates and clays. The total value of Nevada's mineral production in 2002 was about \$2.8 billion (not including oil and geothermal energy). The production of precious metals accounted for about \$2.5 billion.

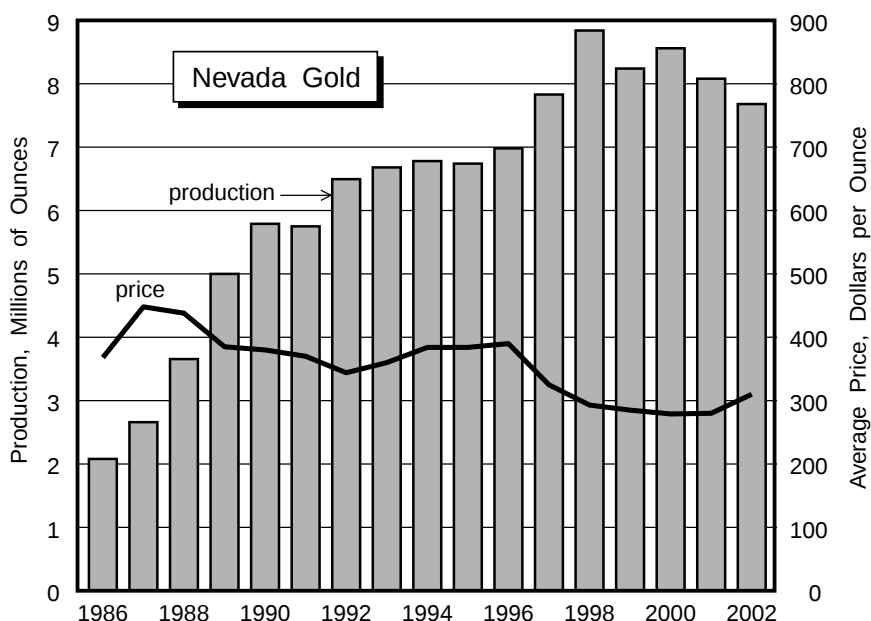
Production Highlights

Nevada's gold production was 7,732,000 troy ounces in 2002. This is lower than the 8,125,000 ounces produced in 2001, but still enough to make Nevada the third largest producer of gold in the world, behind only South Africa and Australia. Underground operations contributed about 27% of the gold production in 2002, higher than the 20 percent

in 2001. Silver production dropped to 13,564,000 troy ounces, compared to the 2001 production level of 17,452,000 ounces. Nevada's nickname of the "Silver State" is still appropriate. Gypsum production was about 2.1 million tons, unchanged from 2001.

Employment

According to the Nevada Department of Employment, Training, and Rehabilitation, the Nevada mining industry employed 8,998 employees for the last quarter of 2001 and the first three quarters of 2002, the latest yearlong period for which employment figures are available. The average pay for mineral industry employees was \$61,578 for this time period, the highest average of any employment sector in the state. In addition, it is estimated that there are over 44,000 jobs in the state relating to providing goods and services needed by the mining industry. Mining employment dropped for the fourth year in a row due primarily to the planned closure of some precious metal mines and a slowdown in the development of new precious metal mines.



Taxes and Other Impacts

The taxes paid by the mining industry to state and local government include property taxes, sales and use tax, and unique to the mining industry, net proceeds of minerals tax. Based on information from the Nevada Department of Taxation, the property taxes paid by the mining industry in 2002 totaled \$22.0 million. The amount of net proceeds of minerals taxes in 2001 was \$21.4 million with \$11.4 million going to the counties and \$10.0 million going to the state. Based on industry surveys, the sales and use taxes paid in 2001 were \$48.3 million.

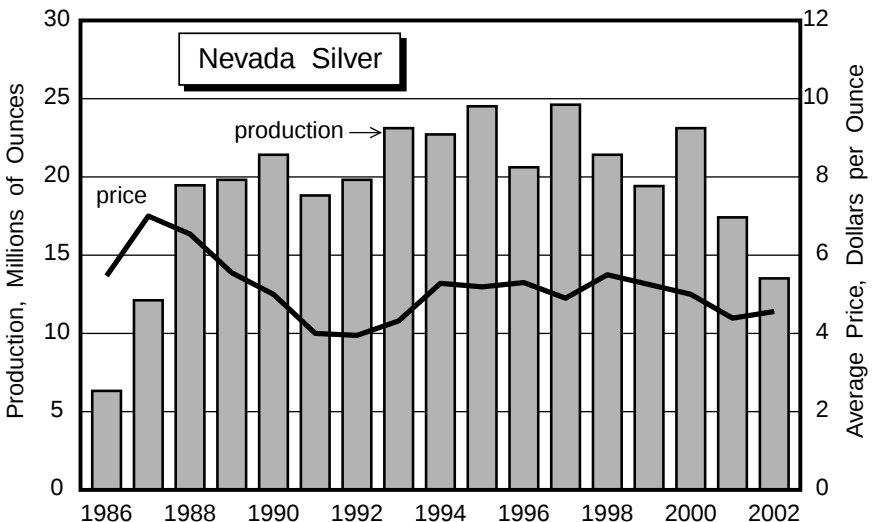
Permitting and Reclamation

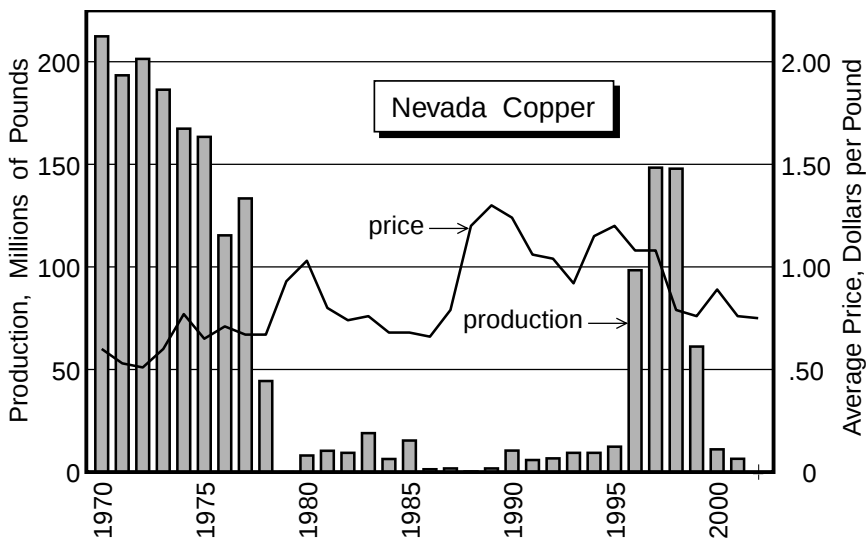
Before mining can take place, plans of operation must be submitted and permits must be obtained from federal and state agencies to ensure that other resources such as wildlife, air, and water are protected. Nevada and federal laws and regulations require that lands disturbed by mining activities must be rehabilitated so they can be used for other purposes once mining is completed. This process, called reclamation, returns mined areas to other productive uses such as livestock grazing, wildlife habitat, or new industrial applications. To ensure that reclamation is done, mine operators are

required to post reclamation bonds that are held by government agencies. The bonds are released only after the mined area is stabilized and the reclamation goals have been met. According to the Nevada Division of Environmental Protection, approximately \$560 million in reclamation 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 64 million troy ounces at the end of 2002. The amount of reserves is always in a state of flux, due to some reserves being lost to production, additions to reserves through new discoveries, and changing economic conditions. Notwithstanding nearly 8 million ounces produced in 2002, statewide reserves are down by only 3 million ounces from the 67 million ounces reported for the end of 2001. The price of gold and the cost of production are the main factors in determining whether a reserve is really a reserve or just a sub-economic resource. Extensive gold resources, not currently economic, exist at





or near many operations. An increase in the gold price would mean many companies would be able to reclassify their resources back into reserve category. 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 over 8 years.

Exploration

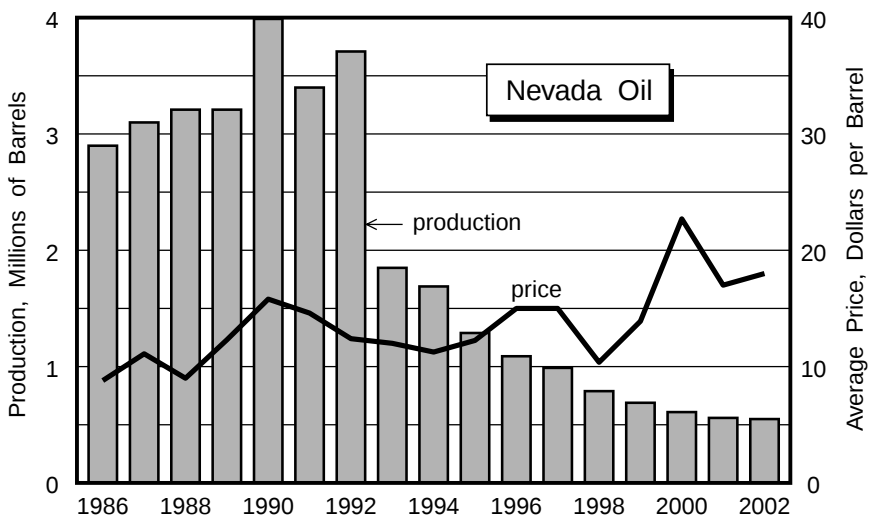
Exploration for new deposits, particularly gold, is an ongoing effort by both the producing companies and many others who do not operate mines in the state. Each year, the Division of Minerals conducts an exploration survey to determine the level of exploration activity and the factors that are responsible for those levels. The respondents to the latest survey indicated they spent \$66.6 million on exploration in Nevada in 2002 and projected spending \$69.4 million in 2003. The respondents reported having 128 geologists on their payrolls in 2002, and projected an increase to 140 geologists in 2003. Existence of favorable geology was the most important factor influencing the level of the respondents' activity, while

commodity prices were the second most important factor. Exploration geologists and the drillers, assayers, and others who support their activities, represent a significant positive economic impact, particularly in Nevada's rural areas.

Minerals Other Than Gold and Silver

Minerals besides gold and silver are also important to Nevada's economy. Industrial minerals such as barite, diatomite, dolomite, gypsum, limestone, lithium compounds, magnesite, perlite, salt, and specialty clays are produced in the state. Sand, gravel, and crushed stone are critical to the building requirements of the state's infrastructure.

Oil and gas exploration and production is a relatively small industry when compared to mining, but is nonetheless important to the economy of east-central Nevada. In oil field terms, Nevada is considered a frontier, meaning its potential has yet to be realized. Oil production in 2002 was about 553,000 barrels (42 gallons per barrel) with an average value of \$17.91 per barrel for a total calculated value of \$9.91 million. This compares with an oil production of about 571,000 barrels in 2001. Nevada oil is used for the production of kerosene, diesel, boiler fuel, and asphalt. No natural gas is

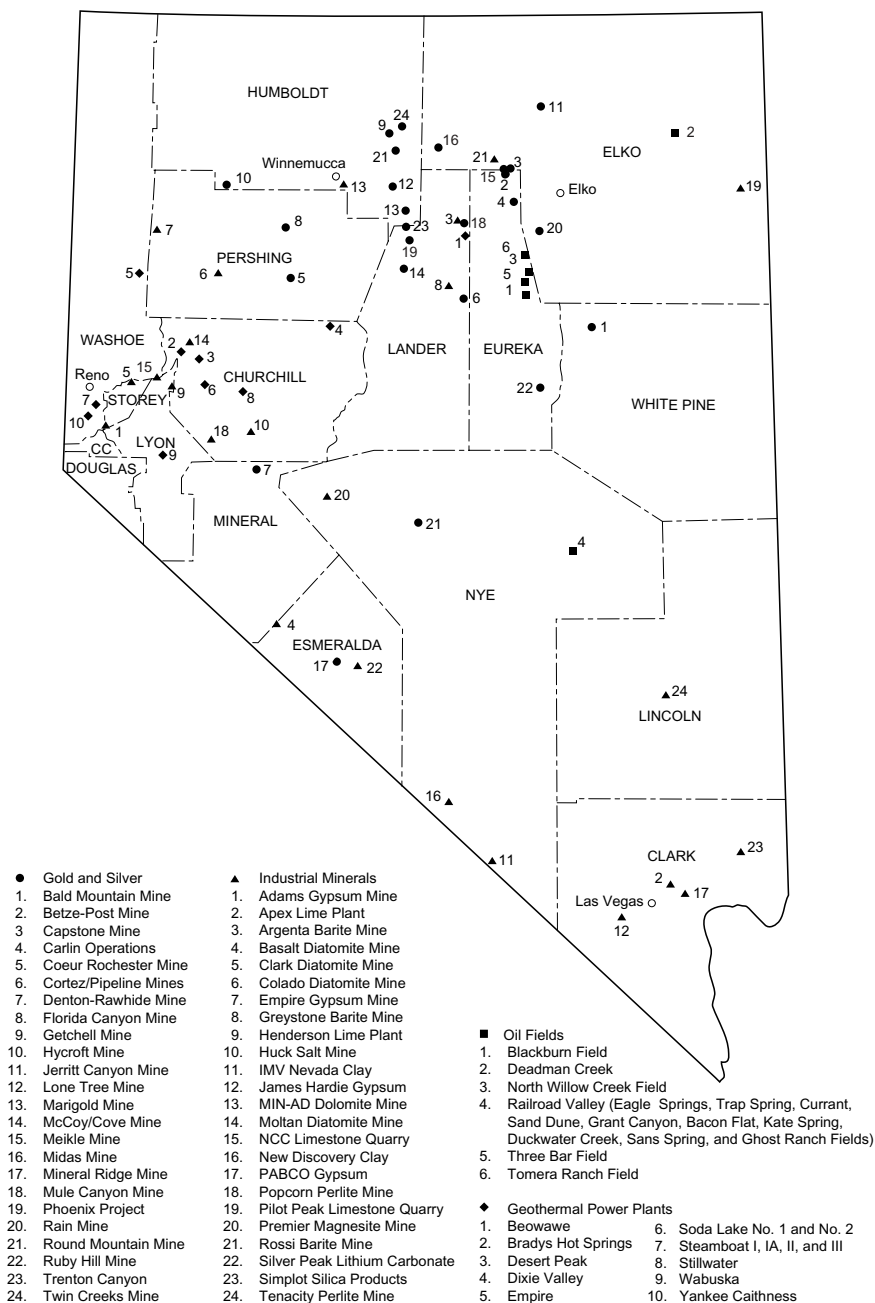


commercially produced in the state although minor amounts of gas produced from some wells are used to fuel onsite equipment.

Nevada is rich in geothermal resources, and is second only to California in the production of geothermal power. Currently, Nevada has 14 plants at 10 locations that sold approximately 1.3 million megawatt hours of electricity in 2002. This is enough to power about 80,000 typical homes. Geothermal heat is also used for a variety of commercial, domestic, and public applications in Nevada. Mining 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 source.

Conclusion

Nevada's mineral industry continued to be a major economic force in the state during 2002. 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 years of relatively low commodity prices and increasing energy costs, many producers have found ways to cut their production costs. Many companies have merged in recent years in an effort to lower overhead costs and increase synergies. They will be well positioned to take advantage of increased margins when commodity prices improve.



Major mines, oil fields, and geothermal plants, 2002.

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