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NEVADA'S NO. 1 BASIC INDUSTRY



The Story of Nevada Mining

with maps showing mineral deposits, modern mining operations, and historic ghost towns



MACKAY SCHOOL OF MINES *University of Nevada*

The Mackay School of Mines is named for John W. Mackay, a bonanza king of the famed Comstock Lode in Virginia City, Nevada. The School was presented to the University of Nevada in 1908 by Mackay's widow, Louise Hungerford Mackay, and son, Clarence H. Mackay, as a memorial to the man whose mining career in Nevada had brought their name its fame and fortune.

Today, the Mackay School of Mines forms the educational, research, and public service center for Nevada's mineral industry. It provides training and research in mining, metallurgical, chemical, and geological engineering, as well as geology, geography, geophysics, geochemistry, and hydrology. In addition to bachelors' and masters' degrees in all departments, it offers doctoral degrees in geology, geophysics, geochemistry, and hydrology, and professional degrees in each engineering discipline.

As associate organizations of the Mackay School of Mines, the Nevada Bureau of Mines and Nevada Mining Analytical Laboratory serve the public in the development of Nevada's mineral resources. Their function is to analyze and evaluate minerals, rocks, and ores found in Nevada; conduct field studies and provide information on Nevada geology and mineral deposits; and carry out research in mineral and economic problems connected with the mineral industry.

Through its many services to the mineral industry and the fame of its graduates as they have spread into industry, education, and research, the Mackay School of Mines has come to be known as one of the leading colleges of mineral education and research in the world.

Standing before the School of Mines building is a statue of John Mackay by the American sculptor, Gutzon Borglum. Also a gift of the Mackay family, it looks out over the main quadrangle of the University—a constant reminder to succeeding generations of Nevada's rich mining heritage.



The Story of Nevada Mining



Nevada's modern mineral industry is a different estate from the blood-letting boom days of a century ago. Where single fortunes were once made in rich ore and a lucky strike, today's thrills are corporate and they lie in the more clinical results of applied science and technology. The excitement is that of massive machinery unearthing proven values.

Those who think of the Comstock period as Nevada's "golden era," are startled to learn that today's skilled operations produce nearly three times as many millions as the best year known in Virginia City. Fewer people work the modern mines, new towns lack the old glamour, and the drama is gone. But more individuals are profiting; the State is reaping thousands of tax dollars (which it did not do in the old days); and mining itself is a stable, broadbased industry whose growth and economic importance are constant.

In a world tuned to scientific progress, the mineral industry is the laboratory of earth science disciplines, encompassing geology, geochemistry, geophysics, exploration, recovery, and mineral processing, as well as research in new metals and new uses of old. Exploitation of the earth's mineral resources has become a major international problem, with the need for precious and base metals transcending most geopolitical considerations. It is a problem which is not likely to decline as long as man builds cities, fights wars, or probes space.

Because of its known mineral resources and the wide lands which still remain 75 percent untested, Nevada draws an investment of nearly \$2 million a month in exploration alone. Within the industry, from the giant shovels of the copper pits to the huge cyanide vats of the gold mills, from the busy crucibles of the silver assayers to the vast processing plants of the titanium makers, men, machines, and science are pushing Nevada's mining history into the future, with stories yet to be told and with production records yet to be achieved.

THE BEGINNING

The story of Nevada mining began billions of years ago when much of the earth was covered by sea. During the ages which followed, the emerging land suffered agonies of upheaval, pressure, folding, faulting, melting, freezing, shattering, and rebuilding. Only these progressive cataclysms could have produced the rockbound region of mineral wealth which was to create a State and change a nation's history.

THE LAND

The great inland basin, of which Nevada forms the heart, lies between the precipitous scarp of the Sierra Nevada on the west and that of the Wasatch Mountains of Utah to the east. Its rugged surface is formed by more than 160 north-south-trending mountain ranges, flanked by fault-dropped valleys. Stretching for nearly 600 miles east to west and 880 miles north to south, the Great Basin forms a vast area of smaller landlocked basins with no outlet to the sea. It is unique in the world.

THE MINERALS

Extending east from California, across Nevada and southeast into Arizona lies one of the richest mineral belts in existence. Throughout the undulating basin and range formation in unsolved relationship lie the lesser belts and veins and placers which make up the rich mineral deposits laid down by the centuries.

THE PEOPLE

In this land which was to become Nevada, the first men to see beauty and utility in its diversified rocks were the native Indians who gathered bits of turquoise, opal, and obsidian to fashion primitive ornaments and weapons. Presaging an age of higher mineral industry, they also used common sands and clays to create useful tools and vessels. The simplicity of their operation does not deny them the distinction of being the first people to engage in "mining" in Nevada . . . perhaps ten thousand years before the coming of the white man.

Francisco Garcés, a Franciscan monk, is reported to have crossed into southern Nevada from the west in 1776 to become the first known white man to enter what is now the State. Other Franciscans followed along the "old Spanish trail" to Santa Fe. As they crossed the arid waste, some found gold, silver, and turquoise. With their Mexican converts they became Nevada's first miners of recorded history.

In 1848, following the war with Mexico, the land became U.S. territory—and gold was discovered in California. The great Mormon trek for new western settlements had already begun and the ranks of Mormon emigrants were swelled by the hordes of gold-seekers moving toward California.

In the spring of 1850, William Prouse, member of a wagon train from Salt Lake City, panned a few golden grains from a stream flowing down a gully near the present town of Dayton. The discovery caused little excitement, but when the group was delayed by snow in the high Sierra, a couple of the men turned back. For two weeks they whiled their time riffling the sands of the little stream to pick up a few nuggets of gold. They named the gully Gold Canyon and moved on.

Their story found its mark in the minds of many disappointed California gold-seekers, and each spring saw a wave of prospectors working the gravels of the stream and searching its course up Gold Canyon. This went on for nine years as men came by for a bit of gold before moving on to the promise of richer fields. Had they known of the treasure at the source of Gold Canyon, U.S. history might have been changed even sooner.

THE BEGINNING OF MODERN MINING HISTORY

It was not until 1859, with the dramatic discovery of the Comstock Lode in Virginia City—the missed treasure of Gold Canyon—that Nevada's historic mining tradition began.

And even this gold was not enough in itself to spur outside interest. Then another mineral—heavy, blue-black, and cursed by the gold miners for clogging their sluices—was assayed as silver, and the stampede was on. The U.S. had its first major silver mine, and Nevada began its spectacular rise to mining fame.

From the frenzy and drama which attended the Comstock's early boom days, a fever was born. It spread into the vast reaches of the territory as men went out in search of still greater bonanzas to make them kings. It precipitated the discovery of other lodes and placers, and other minerals. And if these were of lesser stature in value and extent, they formed the fibre and marrow which brought the State to manhood.

A STATE IS BORN

Nevada was born of need. The need of a people for organization and law, and the need of a nation for its preservation.

Between 1860 and 1863 fabulous wealth had begun to pour from the depths of the great shafts in Virginia City. The United States, exhausted and bankrupted by the Civil War, was in desperate need of the power represented by the gold and silver, and by the new population of Nevada Territory. President Lincoln, aware that his Emancipation Proclamation must

Nevada mining today includes modern remote-control plants with push-button panels, radar, and TV screens. Carlin Gold Mining Co., Eureka County.



FRONT COVER: (Left) Panoramic view of new Carlin Gold Mining Co., Lynn mining district, Eureka County, Nevada. (Center) Aerial photo captures vast workings of Kennecott Copper Corp., Nevada Mines Division, near Ruth in eastern Nevada.

eral Localities

- 61. Cinder-Lite cinders
- 62. Lunar Crater cinders

ORMSBY COUNTY

- 63. Cinderlite cinders

STOREY COUNTY

- 64. Naturilite pumice

WASHOE COUNTY

- 65. Basalt pumice

CLAY

CLARK COUNTY

- 66. Muddy Mountain bentonite

ELKO COUNTY

- 67. Railroad halloysite

ESMERALDA COUNTY

- 68. Tonopah kaolin

- 69. Silver Peak bentonite

- 70. Cuprite kaolin

LANDER COUNTY

- 71. Cortez kaolin

LINCOLN COUNTY

- 72. Cave Valley clay

- 73. Boyd bentonite

LYON COUNTY

- 74. Jupiter bentonite

MINERAL COUNTY

- 75. Chjatovich bentonite

- 76. McMillan bentonite

- 77. Sodaville bentonite

NYE COUNTY

- 78. Bond Marks kaolin

- 79. Beatty bentonite

- 80. Ash Meadows bentonite

PERSHING COUNTY

- 81. Stokes kaolin

WASHOE COUNTY

- 82. Sand Pass bentonite

- 83. Flanigan clay

- 84. Steamboat clay

WHITE PINE COUNTY

- 85. Ruth halloysite

COAL

ELKO COUNTY

- 86. Elko

- 87. Carlin Canyon

ESMERALDA COUNTY

- 88. Coaldale

LYON COUNTY

- 89. Washington (Lewis)

ORMSBY COUNTY

- 90. Eldorado Canyon

WASHOE COUNTY

- 91. Verdi

- 92. Pancake Summit

DIATOMITE

CHURCHILL COUNTY

- 93. Nightingale

- 94. Hazen

ELKO COUNTY

- 95. Tri-O-Lite

LINCOLN COUNTY

- 96. Panaca

MINERAL COUNTY

- 97. Aldrich Station

- 98. Basalt

NYE COUNTY

- 99. Nature Products

PERSHING COUNTY

- 100. Lovelock

STOREY COUNTY

- 101. Celatom

- 102. Chalk Hills

WASHOE COUNTY

- 103. Verdi

DUMORTIERITE

PERSHING COUNTY

- 104. Champion

FLUORSPAR

CHURCHILL COUNTY

- 105. Madraso

- 106. Revenue

- 107. Purple Spar

- 108. Dixie

- 109. Merkt

CLARK COUNTY

- 110. Virgin Peak

- 111. Nipton

DOUGLAS COUNTY

- 112. Boulder Hill

ESMERALDA COUNTY

- 113. Flora

- 114. Bullfrog-George

- 115. Amry

HUMBOLDT COUNTY

- 116. Sunset

- 117. Thunderbird

LANDER COUNTY

- 118. Iowa Canyon area

LINCOLN COUNTY

- 119. Florence

- 120. Tempiute district

- 121. Wells Cargo

MINERAL COUNTY

- 122. Broken Hills district

- 123. Montgomery Pass district

NYE COUNTY

- 124. Berlin district

- 125. Colton

- 126. Quinn Canyon Range district

- 127. Fluorine district

PERSHING COUNTY

- 128. Mammoth

- 129. Fluorine mine

- 130. Devaney

- 131. Needle Peak

- 132. Emerald Spar — Bohannan

- 133. Fencemaker area

- 134. Vesco

- 135. Baker

WASHOE COUNTY

- 136. Leadville district

WHITE PINE COUNTY

- 137. Cherry Creek district

- 138. Rainbow

- 139. Rattlesnake Heaven

- 140. Sawmill Canyon

GYPSUM

CLARK COUNTY

- 141. North Muddy Mountains

- 142. Apex

- 143. Blue Diamond

LINCOLN COUNTY

- 144. Wells Cargo

- 145. Galt

LYON COUNTY

- 146. Mound House

- 147. Ludwig

MINERAL COUNTY

- 148. Regan

PERSHING COUNTY

- 149. Empire

- 150. Lovelock

- 151. Table Mountain

LIMESTONE & DOLOMITE QUARRIES

CLARK COUNTY

- 152. Arrowhead

- 153. Sloan

WASHOE COUNTY

- 154. Marble Bluff

WHITE PINE COUNTY

- 155. McGill

MAGNESITE

CLARK COUNTY

- 156. Overton

- 157. Bauer

- 158. Gabbs

WHITE PINE COUNTY

- 159. Windous

- 160. Ala-Mar

PERLITE

CLARK COUNTY

- 161. Continental Eng. Service

- 162. U. S. Perlite Products

- 163. Searchlight district

- 164. Nu-Lite

EUREKA COUNTY

- 165. Palisade area

LINCOLN COUNTY

- 166. Fairview

- 167. Hollinger

- 168. Free

- 169. Snow

- 170. Hackett

- 171. Giant

- 172. Acoma

- 173. Mackie

- 174. Robb

- 175. Johnson & Fitchett

NYE COUNTY

- 176. Doughboy

PERSHING COUNTY

- 1

Industrial Min

BARITE

- CLARK COUNTY
- 1. Lagarto
- 2. Klinger
- 3. Goodsprings district
- ELKO COUNTY
- 4. Junco
- 5. Wildcat
- 6. 76 Creek area
- 7. Rytting
- 8. Anacabe — Gaylord
- 9. Estabrook
- 10. Jones Marvel
- 11. Rossi
- 12. Big Three — Heavy Spar
- 13. Pine Mountain area
- 14. Snow White
- 15. Robinson Mountain area
- ESMERALDA COUNTY
- 16. Lone Mountain district
- 17. Congress
- EUREKA
- 18. Maggie Creek district
- 19. Bear
- 20. Alpha district
- HUMBOLDT COUNTY
- 21. Sander's
- 22. Tomlinson-Mullinix
- LANDER COUNTY
- 23. Argenta district
- 24. Battle Mountain district
- 25. Pleasant View — Bateman Canyon area
- 26. Lewis district
- 27. White Rock
- 28. Mountain Springs
- 29. Greystone
- 30. Bald Mountain
- 31. Laurent

- LINCOLN COUNTY
- 32. Lucky Boy
- MINERAL COUNTY
- 33. Eagleville district
- 34. Gravity
- 35. Crystal Barite
- 36. Cowden-Knowles
- 37. Belleville district
- 38. Candelaria district
- 39. Little Mountain
- 40. Miller Mountain area
- 41. Basalt district
- NYE COUNTY
- 42. Northumberland district
- 43. Summit Creek
- 44. Warm Springs district
- 45. Jumbo

- ORMSBY COUNTY
- 46. Brunswick Canyon district
- PERSHING COUNTY
- 47. Sugar Loaf

BORATES

- CHURCHILL COUNTY
- 48. Sand Springs
- CLARK COUNTY
- 49. White Basin
- 50. Callville Wash

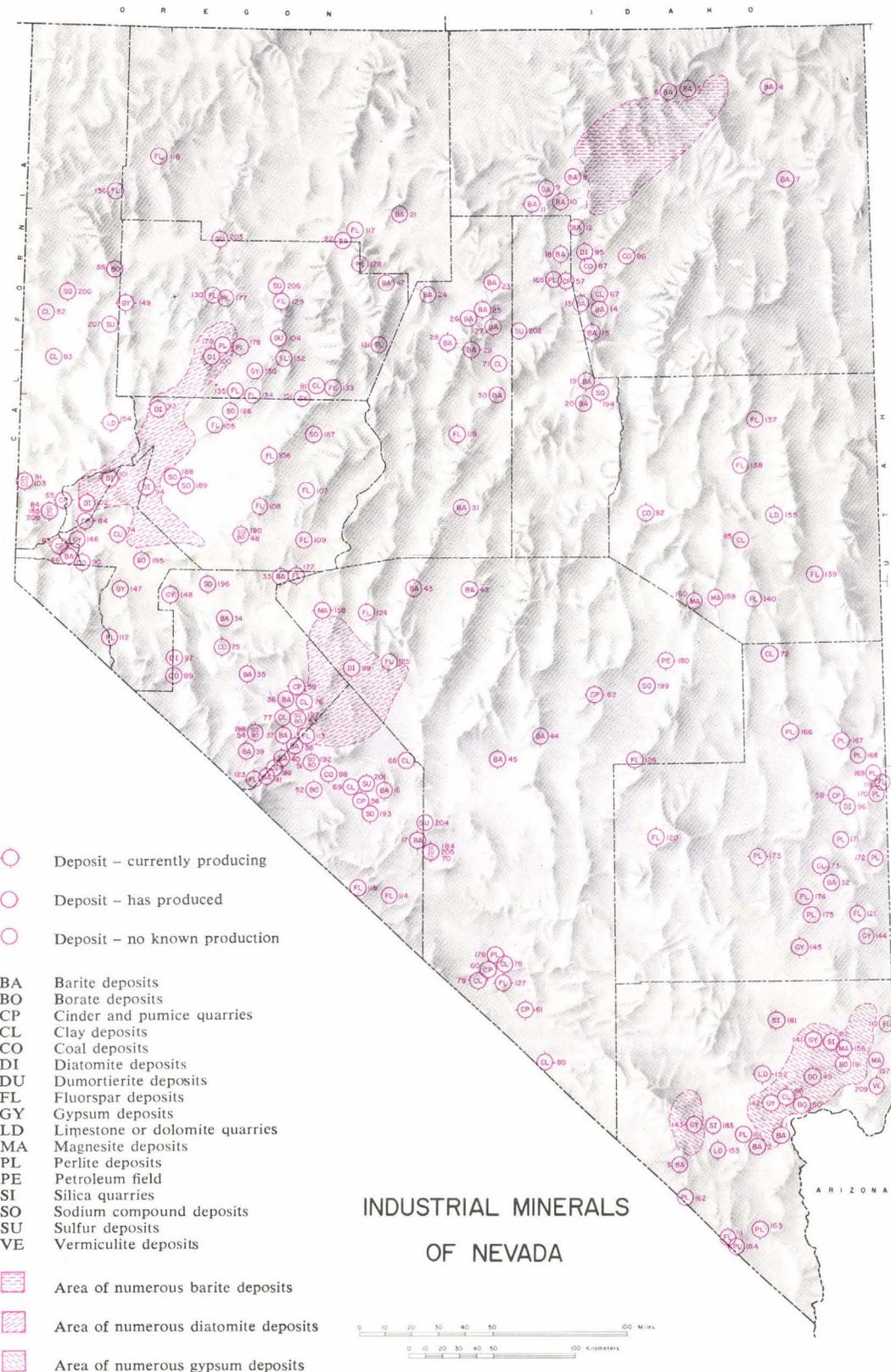
- ESMERALDA COUNTY
- 51. Columbus Marsh
- 52. Fish Lake Marsh

- MINERAL COUNTY
- 53. Rhodes Marsh
- 54. Teels Marsh

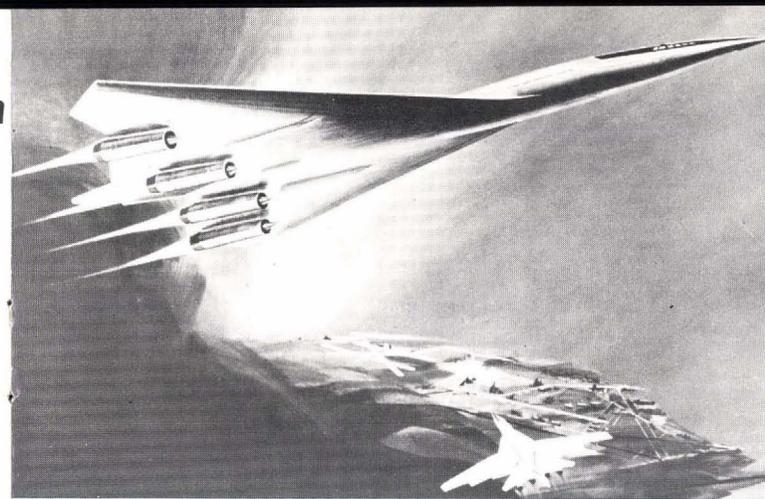
- WASHOE COUNTY
- 55. Gerlach Hot Springs

CINDER & PUMICE QUARRIES

- ESMERALDA COUNTY
- 56. Silver Peak cinders
- EUREKA COUNTY
- 57. Palisade pumice
- LINCOLN COUNTY
- 58. Panaca pumice
- MINERAL COUNTY
- 59. Pumco pumice
- NYE COUNTY
- 60. Beatty pumice



INDUSTRIAL MINERALS OF NEVADA



Boeing 2707 supersonic transport will be constructed mainly of titanium. Nevada-made titanium from the Henderson plant of Titanium Metals Corp. of America has gone into each space vehicle and is used in most jet engines throughout the world.

become law or that war would destroy the nation, threw the full weight of his persuasive and political ability to secure the necessary three extra votes to ratify the 13th Amendment. With hard-fought Congressional approval, Nevada was proclaimed a State on October 31, 1864. The 13th Amendment was passed the day Nevada's first three national representatives took their seats in Congress.

Five months from the day Nevada became a State, the Civil War ended. A majority opinion of the people of the United States had prevailed, including the new citizens of Nevada.

THE NEW STATE

Following its vivid and influential beginning, Nevada's history began to unfold; and just as it had begun, it became the history of Nevada mining. Through bonanza and borrasca, mining has survived as the economic and moral backbone of the State, held together through five major cycles of alternating prosperity and depression by the strong bond of tradition and man's hope.

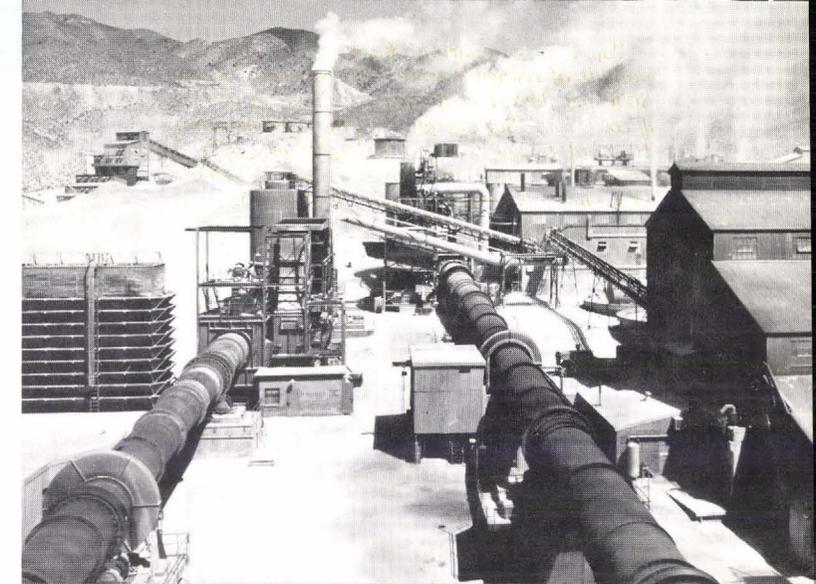
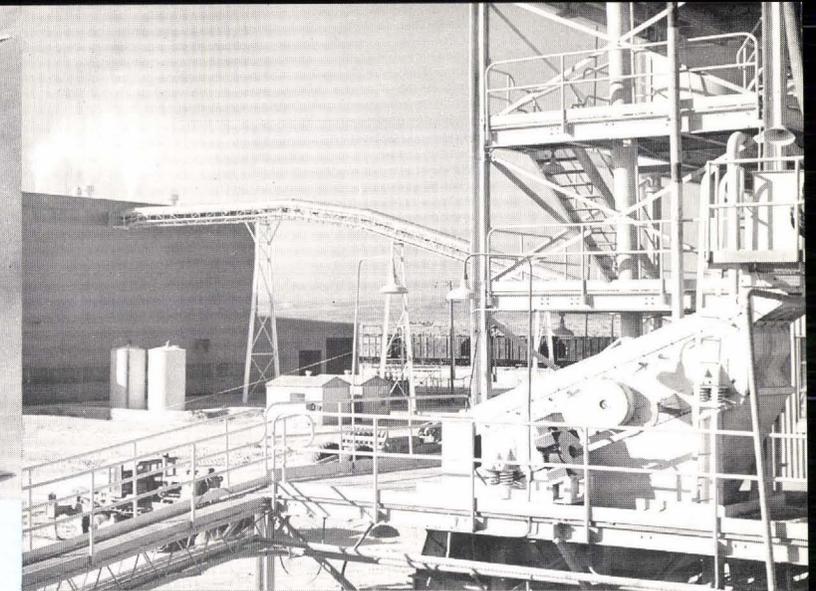
The Comstock boom and other major discoveries of gold and silver carried the first cycle of prosperity to about 1880. A 20-year decline followed, caused by exhaustion of the rich Comstock deposits and by the demonetization of silver. In 1900 silver ore was discovered in Tonopah, followed by the Goldfield strike, the discovery of copper in Ely, and subsequently by other strikes in widely separated areas of the State. World War I extended this prosperous cycle by raising the price of silver and base metals and by creating a market for war-useful tungsten, manganese, antimony, molybdenum, and vanadium.

By 1920, mining was beginning its second period of decline, again caused by a drop in the price of silver, followed by growing depression. However, conditions never again reached the low ebb of the first decline after the exhaustion of the Comstock mines. Since the turn of the century mining has continued its major contribution to the State's economy. By 1956, production had climbed to the unprecedented annual peak of \$126,381,000. At the height of the Comstock era, total production for 1876, the district's best year, was \$38,048,145!

Since 1859, Nevada mines have produced more than \$3 billion in mineral wealth. Of the early great riches, very little remained in the State; fortunes drawn from the land were converted to other interests in other parts of the world. Yet Nevada's first great bounty will be remembered as having "built San Francisco, laid the first Atlantic cable, founded a newspaper empire, and saved the Union."

Today, as mining grows, the State and its people profit directly.

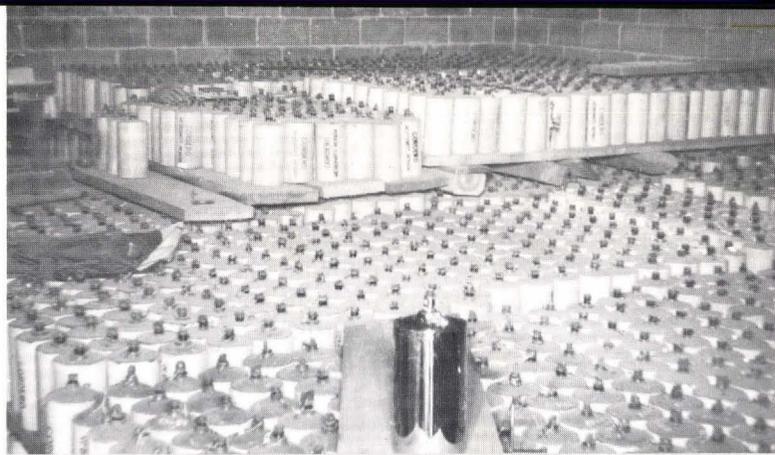
(Upper right) Industrial giant which grew from Nevada's rich gypsum deposits: production plant of Fiberboard Corp. near Las Vegas. (Center) Magnesite processing plant of Basic Refractories, Inc., Gabbs, Nye County, is one of Nevada's largest mineral producers. (Right) Minnesota Mine of The Standard Slag Co. in Douglas County is largest producer of iron ore in the State. Entire production is shipped to Japan.



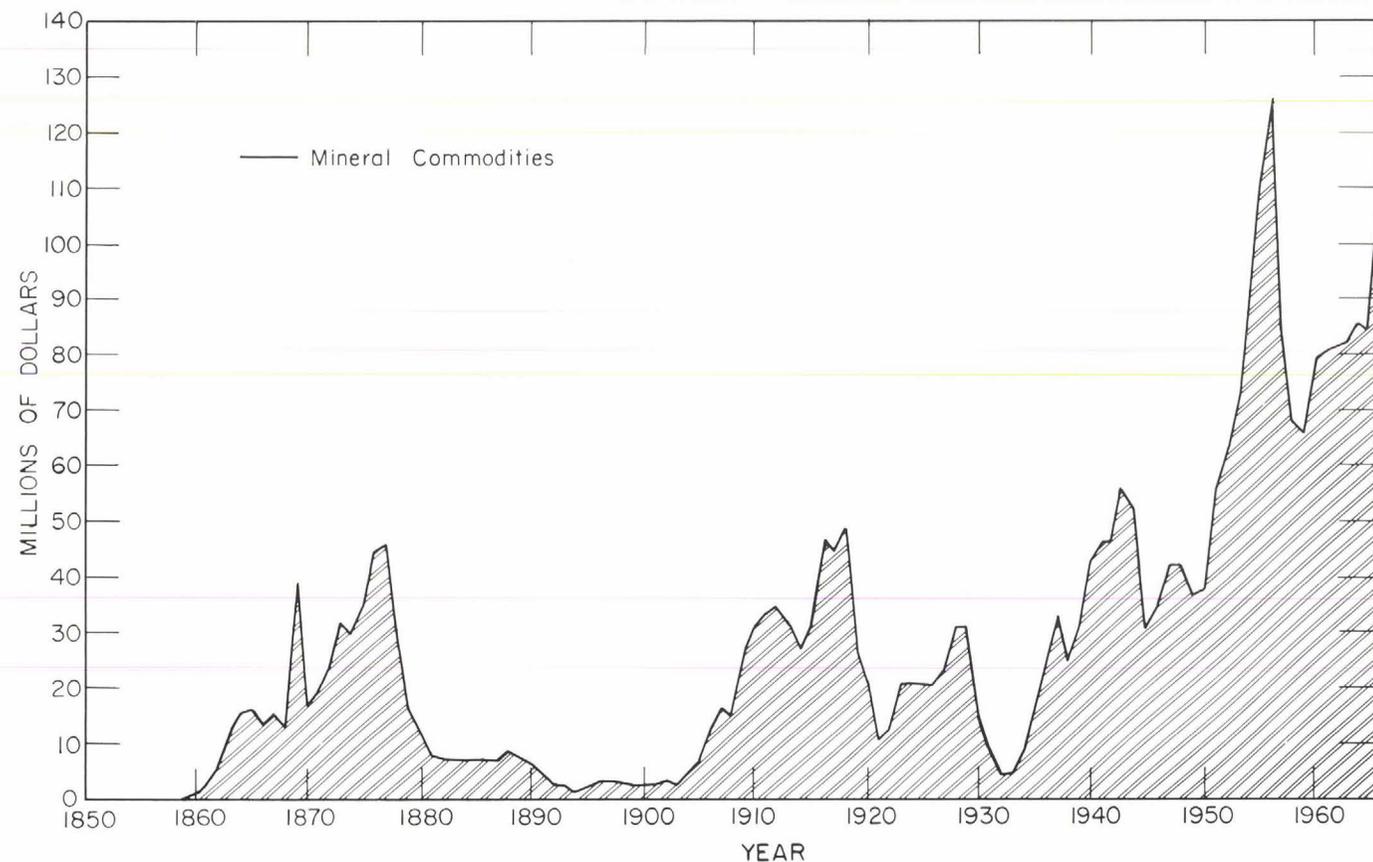
MINING IS and always has been NEVADA'S LEADING BASIC INDUSTRY

NEVADA'S MINERAL PRODUCTION 1859-1968

1859-1880.....	\$447,330,536
1881-1900.....	107,849,015
1901-1920.....	471,850,633
1921-1940.....	415,159,935
1941-1960.....	1,253,926,000
1961.....	81,533,000
1962.....	83,074,000
1963.....	85,441,000
1964.....	85,137,000
1965.....	99,916,000
1966.....	112,631,000
1967.....	90,883,000
1968.....	114,034,000
Total.....	\$3,448,765,119



(Upper right) Chrome flasks, each holding 72 pounds of refined mercury and valued at nearly \$600 per flask, are stacked for shipment at Cordero. (Right) Surface plant of the Cordero mine, Humboldt County, second largest producer of mercury in the United States. (Below) Production chart, Nevada minerals, 1859-1966.



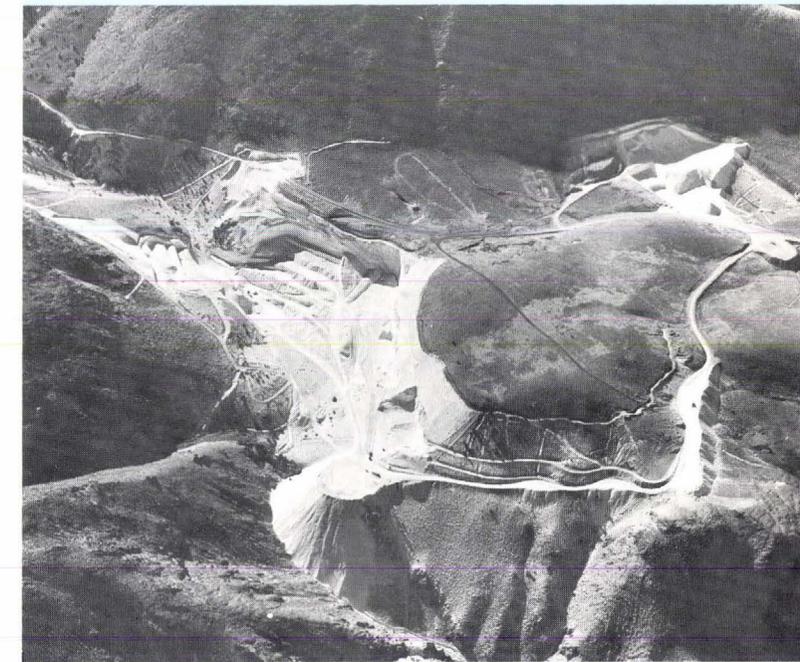
CHRONOLOGY

Nevada's historically important mining towns or mining areas, and the year in which they were discovered. Names not shown on map (p. 5-6) may be located by number according to county and district (p. 7). Major industrial mineral localities are located under name of mineral (map, p. 9).

- | | |
|------------------------------------|------------------------------------|
| 1855—Potosi (G-5) | 1876—Charleston, Elko County, 47 |
| 1856—Mill City (B-2) | 1877—Alpha (C-4) |
| Las Vegas (F-5) | 1879—Bell, Mineral County, 190 |
| 1857—Nelson (G-6) | Santa Fe, Mineral County, 207 |
| Eldorado (G-6) | 1880—Jackson, Nye County, 233 |
| 1859—Virginia City (C-1) | 1890—Delano (A-6) |
| 1860—Imlay (B-2) | 1892—Delamar (E-6) |
| Aurora (D-2) | 1894—Crescent (G-5) |
| Olinghouse (C-1) | 1897—Searchlight (G-6) |
| Basalt (D-2) | 1898—Edgemont (A-4) |
| 1861—Unionville (B-2) | 1899—Klondyke, Esmeralda County, |
| Bolivia (C-2) | 94 |
| Star (Star City), Pershing | Goodsprings (G-5) |
| County, 301 | 1900—Tonopah (D-3) |
| 1862—Dun Glen (Sierra), Pershing | 1901—Divide, Esmeralda County, 87 |
| County, 299 | 1902—Hannapah (D-4) |
| Washoe City (C-1) | Goldfield (E-3) |
| La Plata (C-2) | 1904—Rhyolite (F-4) |
| Austin (C-3) | Bullfrog (F-4) |
| Rye Patch, Pershing County, | 1905—Seven Troughs (B-2) |
| 294 | Fairview (C-2) |
| 1863—Union, Nye County, 258 | Goldyke (D-3) |
| Lodi, Nye County, 238 | Carrara (F-4) |
| Ellsworth, Nye County, 226 | Manhattan (D-3) |
| Peavine, Washoe County, 318 | Johnnie (F-4) |
| Ashdown (A-2) | Vernon (B-2) |
| Arabia (B-2) | Cuprite, Esmeralda County, 86 |
| Como (C-1) | 1906—La Panta (D-2) |
| San Antone (D-3) | Rawhide (C-2) |
| Ione (D-3) | Round Mountain (D-3) |
| Cortez (B-4) | Hilltop (B-4) |
| Pioche (E-6) | 1907—Midas (A-4) |
| Grantsville (D-3) | Jarbidge (A-5) |
| 1864—Candelaria (D-2) | Lynn, Eureka County, 115 |
| Eureka (C-5) | National, Humboldt County, |
| Silver Peak (E-3) | 133 |
| 1865—Yerington (C-1) | Rand, Mineral County, 191 |
| Ludwig (D-1) | Tenabo (B-4) |
| Columbus (D-3) | Gold Acres (B-4) |
| Belmont (D-4) | 1908—Jessup (C-2) |
| Tybo (D-4) | Buckhorn (B-4) |
| Hamilton (C-5) | 1909—Arden, Clark County (gypsum) |
| 1866—Adelaide (B-3) | 1910—Leadville (A-1) |
| Rockland (D-1) | 1911—Rochester (B-2) |
| Reville (D-4) | 1916—Wonder (C-2) |
| Newark (C-5) | Ivanhoe, Elko County, 62 |
| Battle Mountain (B-4) | 1918—Nightingale, Pershing County, |
| Gold Point (Hornsilver), (E-3) | 286 |
| Northumberland, Nye County, | 1919—Rio Tinto (A-5) |
| 242 | 1920—Argentite, Esmeralda County, |
| Pine Grove (D-1) | 83 |
| Morey (D-4) | Quartz Mountain (D-3) |
| Copper Canyon (B-4) | 1921—Empire, Pershing County (gyp- |
| 1867—Ely (Robinson) (C-6) | sum) |
| Ft. Halleck (B-5) | 1925—Daveytown (A-3) |
| 1868—Union (B-5) | Blue Diamond, Clark County |
| Tempiute (E-5) | (gypsum) |
| Mineral Hill (B-4) | 1935—Gabbs, Nye County (magne- |
| Paradise Valley (A-3) | site) |
| 1869—Aura (A-4) | 1936—Getchell (A-3) |
| Mountain City (A-5) | 1943—Celatom (Clark Station), |
| Bullion (B-5) | Storey County (diatomite) |
| Sprucemont (Spruce Mountain) | 1948—Hollinger, Lincoln County |
| (B-6) | (perlite) |
| Atlanta (D-6) | 1953—Lovelock (Colado), Pershing |
| 1870—Contact (A-6) | County (diatomite) |
| Merrimac, Elko County, 70 | 1954—Eagle Springs, Nye County |
| Caliente (E-6) | (petroleum) |
| 1871—Jack Rabbitt, Lincoln County, | 1962—Lynn, Eureka County (new |
| 171 | mine, Carlin Gold Mining |
| Lida (E-3) | Co.), 115 |
| Tuscarora (A-4) | 1964—Silver Peak, Esmeralda County |
| Aurum (C-6) | (new operation, lithium), |
| 1872—Cornucopia (A-4) | 101 |
| Victoria (B-6) | 1965—Battle Mountain, Lander |
| Osceola (C-6) | County (new mines, Cop- |
| Dolly Varden (B-6) | per Basin and Copper |
| Cherry Creek (C-6) | Canyon), 147 |
| Ward, White Pine County, 343 | |
| 1873—Belleville (D-2) | |
| Taylor (C-6) | |
| 1874—Lewis (B-4) | |



(Above) Nevada's Governor Paul Laxalt confers with mine officials during tour of State's new mining and exploration activities. (Below) Diatomite quarry of Eagle-Picher Industries, Inc., near Reno.



Brochure prepared by La Verne Rollin. Mineral maps by Robert C. Horton and John H. Schilling. Produced by the Nevada Bureau of Mines.

For information concerning the mineral resources and mineral industry of Nevada, write to: Director, Nevada Bureau of Mines, University of Nevada, Reno, Nevada, 89507.

Mining Districts

(Key to map, p. 6-7)

Metal production listed in order of decreasing dollar value. Metals that make up the major production in a district are in bold-face type.

County	District	Metals	
CHURCHILL COUNTY	1. ALPINE (Old Alpine)	Ag, Au, W	
	2. BERNICE	Ag, Au, W	
	3. CHALK MOUNTAIN	Ag, Au, W	
	4. DESERT (White Pine)	Ag, Au, W	
	5. DESERT (White Pine)	Ag, Au, W	
	6. EASTGATE	Ag, Au, W	
	7. FANVIEW (Bell Mountain, Gold)	Ag, Au, W	
	8. HIGGS (Hill, Terrell)	Ag, Au, W	
	9. IXL (Cox Canyon, Job Peak)	Ag, Au, W	
	10. JESSIE (Mojave Hills)	Ag, Au, W	
	11. MOUNTAIN WELLS (La Paz)	Ag, Au, W	
	12. SAND SPRINGS (La Paz)	Ag, Au, W	
	13. SHEDY RUN (Fendway)	Ag, Au, W	
	14. TABLE MOUNTAIN (Bell)	Ag, Au, W	
	15. TOWER (Hill, Terrell)	Ag, Au, W	
	16. TOWER (Hill, Terrell)	Ag, Au, W	
	17. TRUCKEE (Fendway)	Ag, Au, W	
	18. TUNSTEN MOUNTAIN (Hill)	Ag, Au, W	
	19. WESTGATE	Ag, Au, W	
	20. WHITE CLOUD (Copper)	Ag, Au, W	
	21. WANDER (Hill)	Ag, Au, W	
CLARK COUNTY	22. ALPINE (Bell Mountain, Hill)	Ag, Au, W	
	23. BERNICE (Copper King)	Ag, Au, W	
	24. CHARLESTON	Ag, Au, W	
	25. DINE	Ag, Au, W	
	26. DINE	Ag, Au, W	
	27. ELDORADO (Colorado, Nelson)	Ag, Au, W	
	28. GASS PEAK	Ag, Au, W	
	29. GOLD BUTTE (Pahre)	Ag, Au, W	
	30. GOLDSPIRES (Yellow Pine, Pahre)	Ag, Au, W	
	31. LAS VEGAS	Ag, Au, W	
	32. NORTHERN	Ag, Au, W	
	33. SUNSET	Ag, Au, W	
	34. SUNSET	Ag, Au, W	
	DOUGLAS COUNTY	35. BUCKSON (Satin Valley)	Ag, Au, W
		36. GARBERVILLE (Eagle)	Ag, Au, W
		37. GENOA	Ag, Au, W
		38. MOUNTAIN HOUSE (Hoback)	Ag, Au, W
		39. MOUNT SIEGEL	Ag, Au, W
		40. RED CANYON (Silver Lake)	Ag, Au, W
		41. SIEGEL	Ag, Au, W
		42. SIEGEL	Ag, Au, W
		43. SIEGEL	Ag, Au, W
		44. SIEGEL	Ag, Au, W
	ELKO COUNTY	45. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W
		46. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W
		47. BUCKSON (Satin Valley)	Ag, Au, W
		48. BUCKSON (Satin Valley)	Ag, Au, W
		49. BUCKSON (Satin Valley)	Ag, Au, W
		50. BUCKSON (Satin Valley)	Ag, Au, W
		51. BUCKSON (Satin Valley)	Ag, Au, W
52. BUCKSON (Satin Valley)		Ag, Au, W	
53. BUCKSON (Satin Valley)		Ag, Au, W	
54. BUCKSON (Satin Valley)		Ag, Au, W	
ESMERALDA COUNTY	55. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	56. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	57. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	58. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	59. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	60. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	61. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	62. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	63. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	64. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
HUMBOLDT COUNTY	65. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	66. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	67. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	68. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	69. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	70. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	71. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	72. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	73. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	74. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
LINCOLN COUNTY	75. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	76. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	77. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	78. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	79. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	80. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	81. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	82. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	83. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	84. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
MINERAL COUNTY	85. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	86. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	87. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	88. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	89. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	90. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	91. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	92. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	93. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	94. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
NEVADA COUNTY	95. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	96. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	97. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	98. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	99. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	100. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	101. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	102. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	103. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	104. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
ORMSBY COUNTY	105. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	106. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	107. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	108. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	109. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	110. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	111. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	112. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	113. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	114. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
PERKINS COUNTY	115. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	116. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	117. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	118. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	119. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	120. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	121. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	122. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	123. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	124. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
STOREY COUNTY	125. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	126. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	127. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	128. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	129. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	130. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	131. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	132. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	133. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	134. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
WASHOE COUNTY	135. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	136. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	137. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	138. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	139. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	140. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	141. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	142. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	143. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	144. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
WHITE PINE COUNTY	145. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	146. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	147. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	148. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	149. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	150. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	151. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	152. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	153. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	
	154. ALPINE (Tennessee Gulch, Tennessee Mountain)	Ag, Au, W	



(Top) Mine, plant, and townsite of The Anaconda Copper Co., Weed Heights, near Yerington. (Above) Massive machines make it possible to mine huge tonnages of ore. Sixty-five-ton truck is one of new fleet in use at Anaconda's Yerington Mines operation.

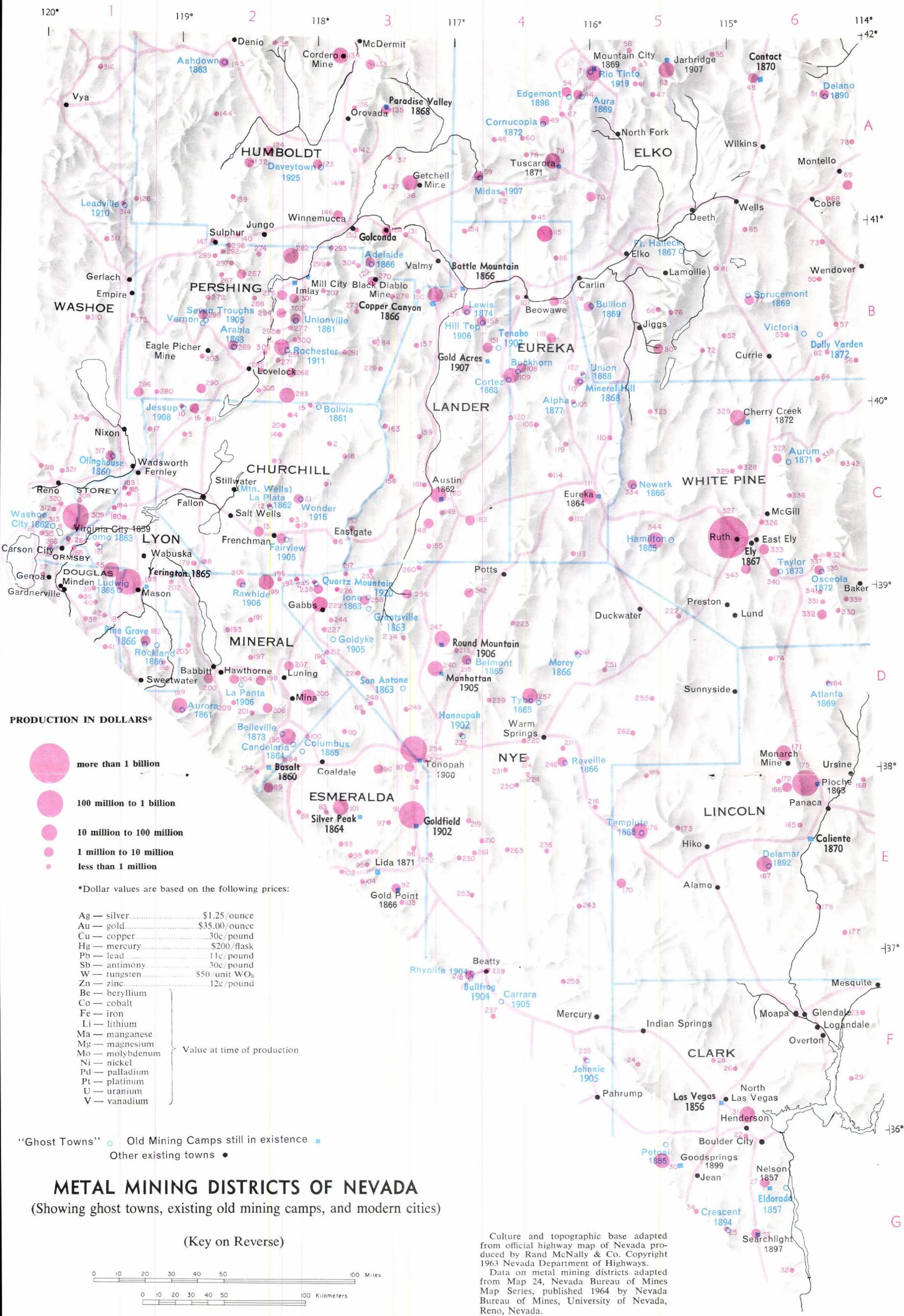


NEVADA'S MINERAL PRODUCTS

Whether discovered accidentally, prospected laboriously, or researched scientifically, Nevada's minerals have emerged to form a brilliant spectrum of variety and wealth, ranging from precious and base metals to gem stones and nonmetallic or "industrial" minerals. Each of Nevada's seventeen counties produces two or more minerals. Most of them produce many. Precious and base metals actively mined in Nevada have included gold, silver, copper, iron, tungsten, lead, zinc, mercury, manganese, molybdenum, antimony, beryllium, uranium, and lithium.

Generously deposited throughout the State, gem stones have long attracted both Indians and white men. Turquoise, variscite, fire opal, jasper, and agate are among Nevada's semiprecious minerals. Some of the largest fire opals found in the Western Hemisphere have come from Humboldt County, while the quality of Nevada turquoise is considered among the best in the world.

Industrial minerals, though less spectacular in their seduction of man, have become a vital part of the State's mineral industry, making up more than one quarter of the total product. From such pedestrian items as sand, gravel, and volcanic cinders to the fossilized remains of microscopic diatoms, they find their way to thousands of marketable uses, including antibiotics and even space capsules. Nevada's vast wealth of industrial minerals also includes barite, brucite, clays, fluorspar, gypsum, lime, marl, magnesite, perlite, petroleum, pumice, pumicite, salt, stone, talc and soapstone, vermiculite, and volcanic ash.



The Significance of Mining

The importance of the mineral industry to the national and State economy as well as to man's everyday life is not always apparent unless one stops to ask himself where he would be without it—without iron and steel, oil and gas, coal, building materials . . . The very strength of a nation can be measured in the production and use of its mineral products.

For every child born in the United States, years of research and applied technology are required to provide him with the tons of ore, pounds of metal, and barrels of oil he will use in his lifetime. It is an unremitting cycle.

Significance of the mineral industry may be gauged by these facts:

On a NATIONAL level:

Nearly one-half of the national industrial labor force is employed in metal-working industries. About one-half of the value of output of all manufacturing activities in the U.S. is from metal-working industries.

More than one-half of all railroad freight traffic in the United States is made up of raw mineral materials.

On STATE level:

Total impact of the mineral industry on the economy of Nevada is \$450,000,000 a year.

Among Nevada's basic industries, mining is three times greater than agriculture, its nearest competitor.

Approximately 80 percent of all rail freight revenues originating in Nevada comes from the mineral industry.