



MINING IN NEVADA



Nevada Governor's Office of
ECONOMIC DEVELOPMENT
Empowering Success

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The New Nevada Brings New Technology for Mining

- The Nevada mining industry has a **highly trained and educated workforce**.
- The Mackay School of Earth Sciences and Engineering at the University of Nevada, Reno conducts mining-focused research in **mine systems optimization, robotics, mining engineering, emission measurement and more**.
- Collaboration between the mining sector, manufacturers and energy producers are creating synergies that have led to various **breakthroughs resulting in reduced energy use** and lower production costs.
- Award-winning reclamation methods by industry and government partners have **enhanced rangeland health and biological diversity**.



One of the world's largest mining regions with more than

150 YEARS EXPERIENCE

MINING IN NEVADA

Nevada's mineral wealth has attracted prospectors and miners for more than 150 years, and mining continues to be an essential sector in the state's economy. Today, innovative exploration methods along with cutting-edge technology are identifying new potential, making Nevada one of the world's most attractive regions for mining investment.

Nevada's Mineral Resources

Gold	Lithium	Sand and Gravel	Lead
Silver	Dolomite	Silica	Petroleum
Copper	Magnesium	Diatomaceous Earth	Salt
Barite	Gypsum	Perlite	Tungsten
Limestone	Molybdenum	Clays	Zinc

Nevada is the sole producer of lithium in the United States

Nevada's Contribution to United States Mineral Production

Gold
74%



Silver
23%



Lithium
100%



Copper
5.6%



Diatomite
31%



Gypsum
20.5%



Barite
73%



Nevada is a **mine-friendly state**, with government officials committed to the promotion and establishment of mineral exploration and development.

Nevada Mining produced more than **\$8 billion in gross revenue** in 2016.

Exploration: Where it all begins

Nevada exploration companies hold more than 180,000 claims on Federal lands.

Statewide: Over 120 mineral exploration companies explored Nevada for precious and base metals, industrial minerals, lithium, geothermal energy, and oil in 2016. Nevada accounted for 47% of exploration budgets in the U.S. In 2016, 63% of exploration expenditures went towards actual exploration (mainly drilling).

Gold/Silver: Most of Nevada's gold is mined from deposits, known as Carlin-type deposits. These unique deposits have an endowment of 255 Moz of gold (past production and current reserves/resources) in a 300 by 300 km area in Nevada, making it the second largest concentration of gold in the world after the Witwatersrand in South Africa.

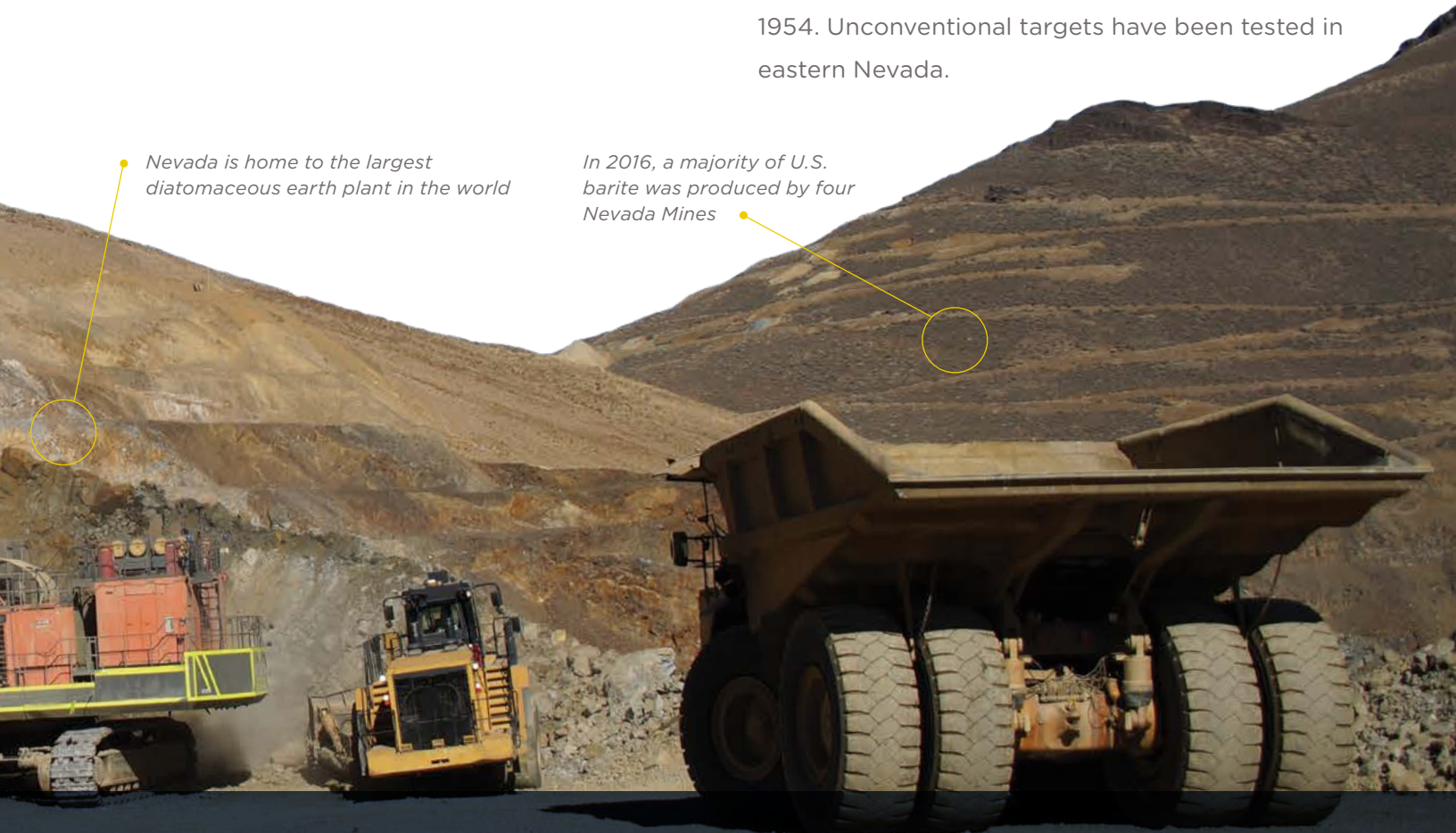
Geothermal Energy: The Great Basin Center for Geothermal Energy is validating exploration methods for blind geothermal systems in its Nevada Play Fairway project. Three prospective locations are being studied with GeoProbe and thermal-gradient drilling. If the Play Fairway method is proven successful, we could unlock more of Nevada's vast geothermal potential.

Lithium: Home to the only lithium producing mine in the US, the geologic model for lithium bearing brines and clays was devolved by Nevada explorers. Nevada's numerous salt playa basins are experiencing exploration, drilling, and testing.

Gas and Oil: Nevada has been producing oil since 1954. Unconventional targets have been tested in eastern Nevada.

Nevada is home to the largest diatomaceous earth plant in the world

In 2016, a majority of U.S. barite was produced by four Nevada Mines



More than 2,000 local vendors and service providers are prepared to address mining operation needs.

Precious Metals

- More than 30 precious metal mines in Nevada are in production.
- **2016 Nevada Gold Production:** 5.4 million troy ounces.
- **2016 Nevada Silver Production:** 8.8 million troy ounces.
- Nevada's major geologic trends have been producing precious metals continuously for more than 50 years with mine lives slated to produce for several more decades.
- If Nevada were its own country, it would have been the world's 4th largest Gold producer in 2016.
- In 2016, multiple Nevada mines reported high-grade gold discoveries, ensuring stable production for the future.
- Nevada mines facilitate water and wildlife conservation by donating millions of dollars annually for research and habitat development.



FOUR OF THE TOP 10 HIGHEST-GRADE ACTIVE, MAJOR GOLD MINES IN THE WORLD ARE IN NEVADA.

Other Metals

- **2016 Nevada copper production:** 160 million pounds.
- Both flotation and SX/EW processes are in use in Nevada.
- Nevada has investment opportunities for base metal concentrate smelting, refining, and metal fabrication.
- Nevada has existing resources of iron, lead, lithium, molybdenum, tungsten, vanadium, and zinc.



Industrials and Energy Production 2016

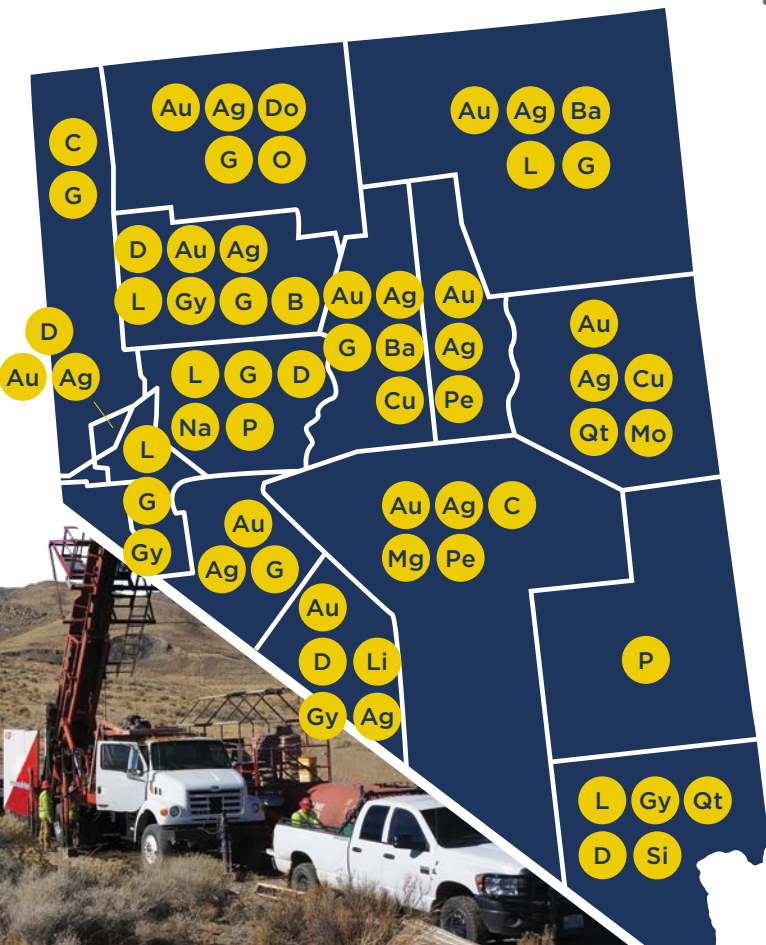
Industrial Minerals

Barite	230K short tons
Diatomaceous Earth	586K short tons
Gypsum	3.1M short tons
Limestone	3.2M short tons
Magnesium	110K short tons
Perlite	19K short tons
Molybdenite	823K pounds
Aggregates	37.8M short tons
Silica	754K short tons
Lithium Compounds	9.3M pounds
Salt	19K short tons

Geothermal and Oil

Oil	278,599 Barrels
Geothermal Energy	3.3 million MWh

- Nevada’s geothermal electrical power production exceeded 700 MW.
- Nevada is home to one oil refinery and five oil producing companies that operate multiple producing fields.
- Nevada was named the “International leader in geothermal energy business and development” by the Geothermal Energy Association.
- Nevada led the U.S. in the number of developing geothermal projects in 2014, with nearly twice as many projects as its closest contender.
- If Nevada were its own country, it would rank 8th for geothermal nameplate capacity.
- Nevada’s 2016 geothermal electrical production was enough to supply 300,000 homes with electricity, the highest per-capita geothermal production of any U.S. state.



Existing Mining Activity

Ba Barite	Li Lithium
B Bentonite	Mg Magnesium
C Clays	Mo Molybdenum
Cu Copper	O Opals
D Diatomite	P Perlite
Do Dolomite	Pe Petroleum
G Geothermal Energy	Qt Quartzite
Au Gold	S Salt
Gy Gypsum	Si Silica
L Limestone	Ag Silver

Nevada Advantages:

- Less than one day's drive to more than 40 million customers and five major U.S. ports serving the Pacific Rim.
- Consistently ranked in the top 10 among states for business friendliness.
- Permitting systems in Nevada provide legal and regulatory stability.
- No corporate or personal income tax, no inventory tax, no franchise tax, no unitary tax, and no special intangible tax.
- Affordable large-scale real estate.
- Strong mining infrastructure (power, natural gas, and transportation).
- Able and willing workforce in a right-to-work state.
- Diverse and rewarding quality of life.



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