

Commission on Mineral Resources Nevada Division of Minerals Agency Overview

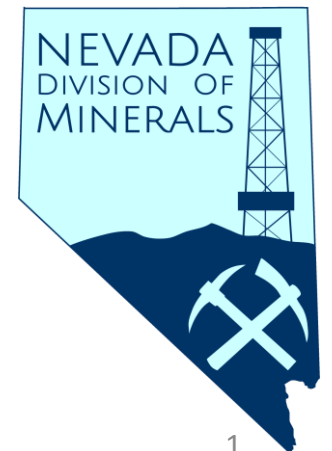


Senate Committee on Natural Resources

February 21, 2023

Mike Visher, Administrator

Rob Ghiglieri, Deputy Administrator



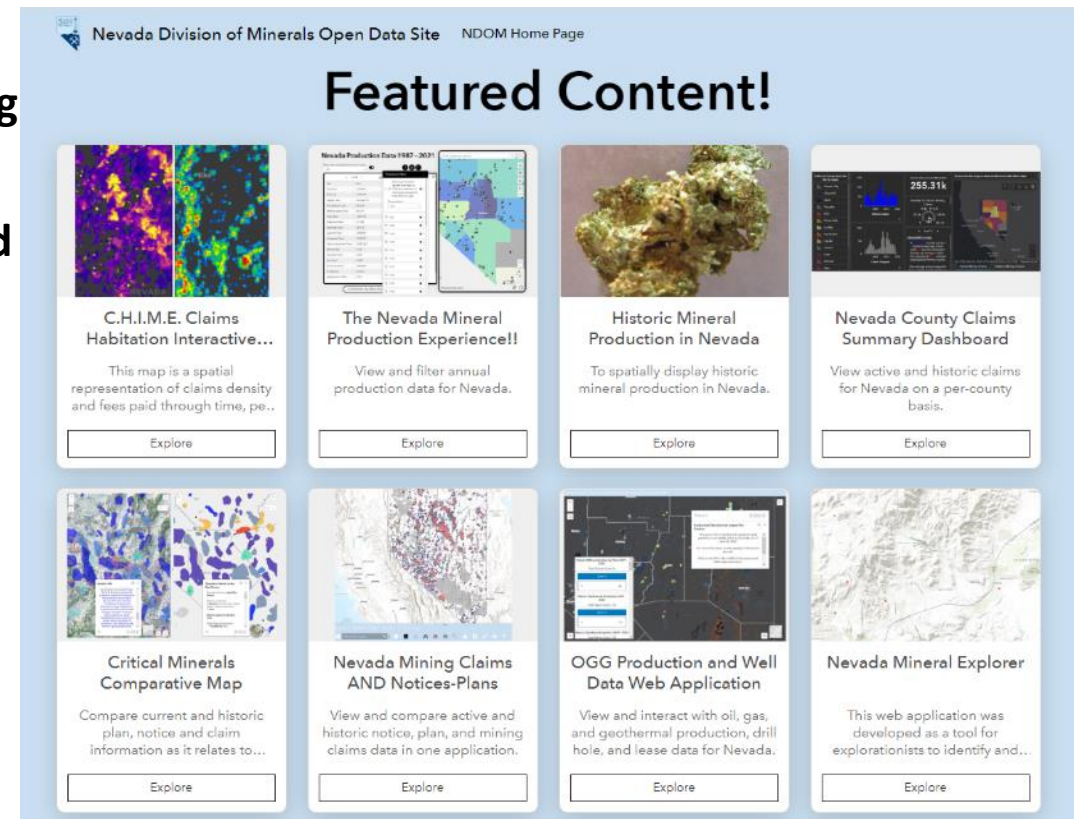
➤ **The Commission on Mineral Resources** is a seven-member body appointed by the Governor for their knowledge of mining, minerals exploration, geothermal, and oil & gas exploration and production. The Commission directs mineral-related policy for the Division, advises the Governor and Legislature on matters relating to mineral policy, and approves any regulations or changes charged to the Division. The Commission on Mineral Resources is a non-Cabinet Executive Branch agency, as defined in NRS 513.

➤ **The Nevada Division of Minerals,** part of the Commission on Mineral Resources, administers programs and activities for abandoned mine land public safety, minerals education, reclamation performance bonds, and annual reporting of all mineral production for the State. Act as a Cooperating Agency in federal land use planning analyses. In addition, the Division is the regulatory agency for geothermal and oil & gas drilling and production and dissolved mineral resource exploration drilling.



Nevada Division of Minerals (NDOM)

- **Offices in Carson City and Las Vegas (11 FTEs - 8 unclassified)**
- **No general fund monies, revenue from mining claim filing fees (70-80% of total revenue), fluid mineral production and permit fees, BLM, NPS, and USFS grants, and one-time fee for surface disturbance of public land permitted under exploration or mining plan.**
- **Authorities provided under chapters:**
 - **NRS 513 – Commission on Mineral Resources, Division of Minerals, and Abandoned Mine Lands Public Safety Program**
 - **NRS 517 – Mining Claims, Mill Sites, and Tunnel Rights**
 - **NRS 519A – Program for the Pooling of Reclamation Performance Bonds**
 - **NRS 522 – Oil and Gas**
 - **NRS 534A – Geothermal Resources**
 - **NRS 534B – Dissolved Mineral Resources**





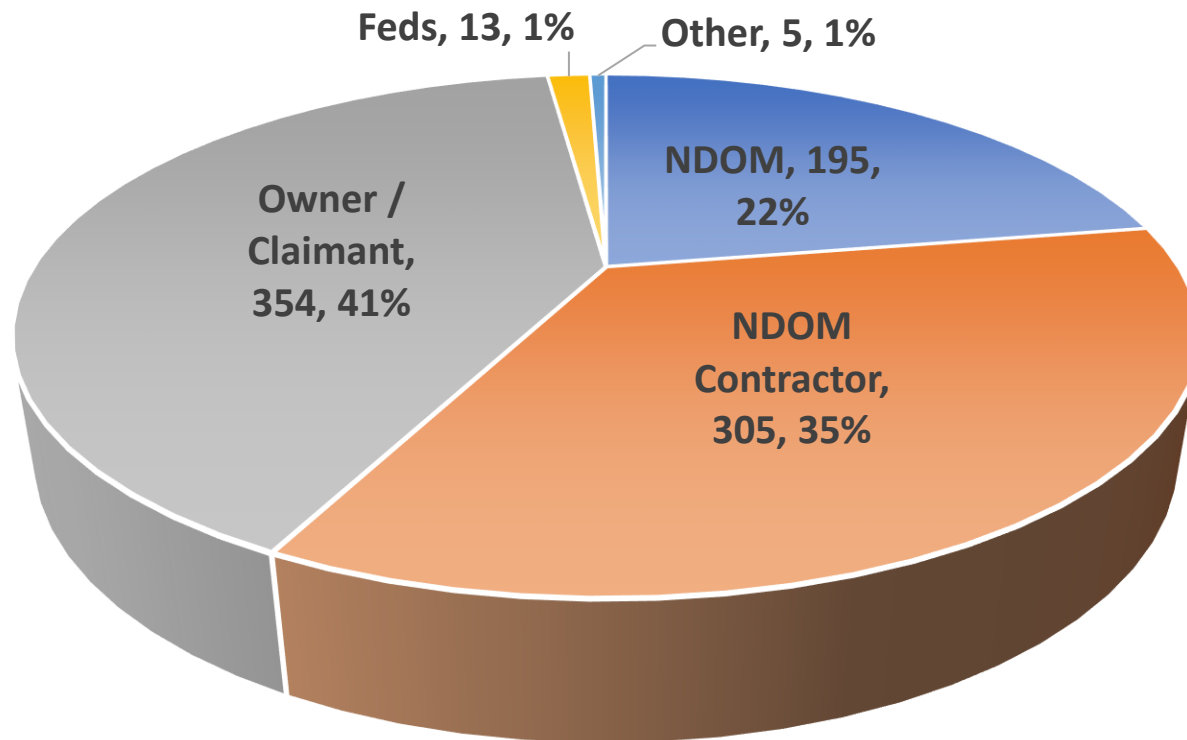
NRS 513 ABANDONED MINE LANDS PUBLIC SAFETY PROGRAM

- Abandoned Mine Lands Program created in 1987 to address physical safety hazards to the public
- Three program activities mandated:
 - Statewide Inventory of Sites, with annual reporting to counties
 - Securing of Orphan Hazardous Mines
 - Public Awareness Campaign
- Funded by claim fees (\$4 per claim filing at county) and permitted surface disturbance fee (one-time \$20/acre on public land)

NRS 513

ABANDONED MINE LANDS PUBLIC SAFETY PROGRAM

872 securings completed in 2022, by:



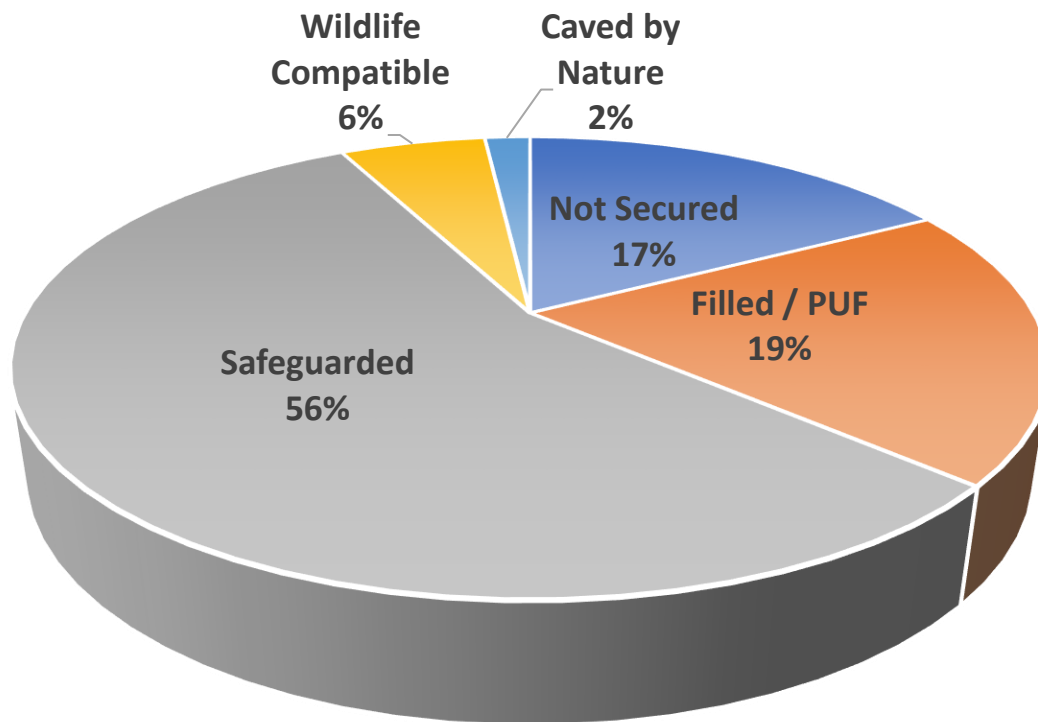
Legacy hazards created before reclamation laws were enacted

- Historic shafts, adits, tunnels, and pits
- Most are located on Federal Land
- Statutory program began in 1987
- Funded largely by current mining claimants
- Program partners include – Bureau of Land Management, US Forest Service, US Army Corps of Engineers, National Park Service, and counties.
- Currently, 83% of 24,685 hazards secured

NRS 513

Abatement of Dangerous Conditions at Non-Operating Mines

83% of the 24,685 known AML hazards are secured





Forman Shaft



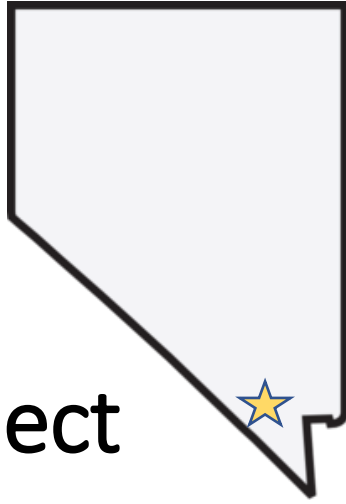
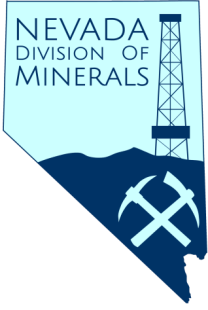
- A five-compartment shaft proposed to open new ore bodies at a depth of up to 4,250 feet.
- The main hoisting building, a massive seven-story, classic revival structure, measured 173 feet long by 52 feet wide and 100 feet tall making it the second tallest building in the west behind the International Hotel in Virginia City. A fire in 1903 burned the hoist house and surrounding buildings.
- Funded on investor dollars, these third-line shafts were some of the deepest shafts on the Comstock. Most third-line shafts were started between 1875 and 1876 during the height of the bonanza and abandoned by the mid-1880's.
- The Forman Shaft intersected the Sutro Tunnel South Lateral at a depth of ~1,650' then continued for about 550' more for a total depth of 2,200 feet before work ceased in December of 1884.
- Today the shaft is bridged (blocked) at 165 feet; the thickness and makeup of the bridge is not known.



Forman Shaft

- Largest known wildlife cupola
- In a National Historic Landmark
- Years of planning and coordination
- Took 4 months to complete
- <120 square feet surface disturbance

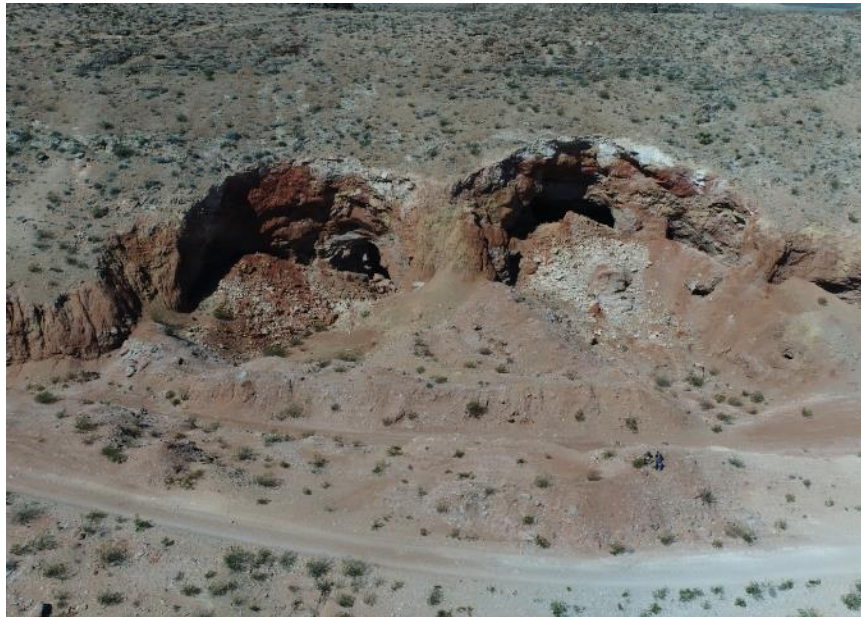


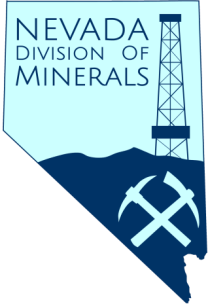


Arden Project

Project Challenges

- Land Status – County surface with proposal for adjacent trail system
- Size of Features – Very Large
 - 47 total hazards
- Human Interaction
 - Homeless
 - Recreation
 - Removal of 4x4 road access
- Funding
- Wildlife





Arden Partners

- **Clark County**
 - Multiple days with Sheriff's deputies
 - Closed area to the public
 - Help by maintenance staff with public
 - Facilitated Media interactions
 - Homeless liaison
 - Permitting
 - Funding
- **Department of Wildlife**
 - Nearly 20 days of surveys and vacancy confirmations
- **BLM**
 - NEPA work for hazards on BLM

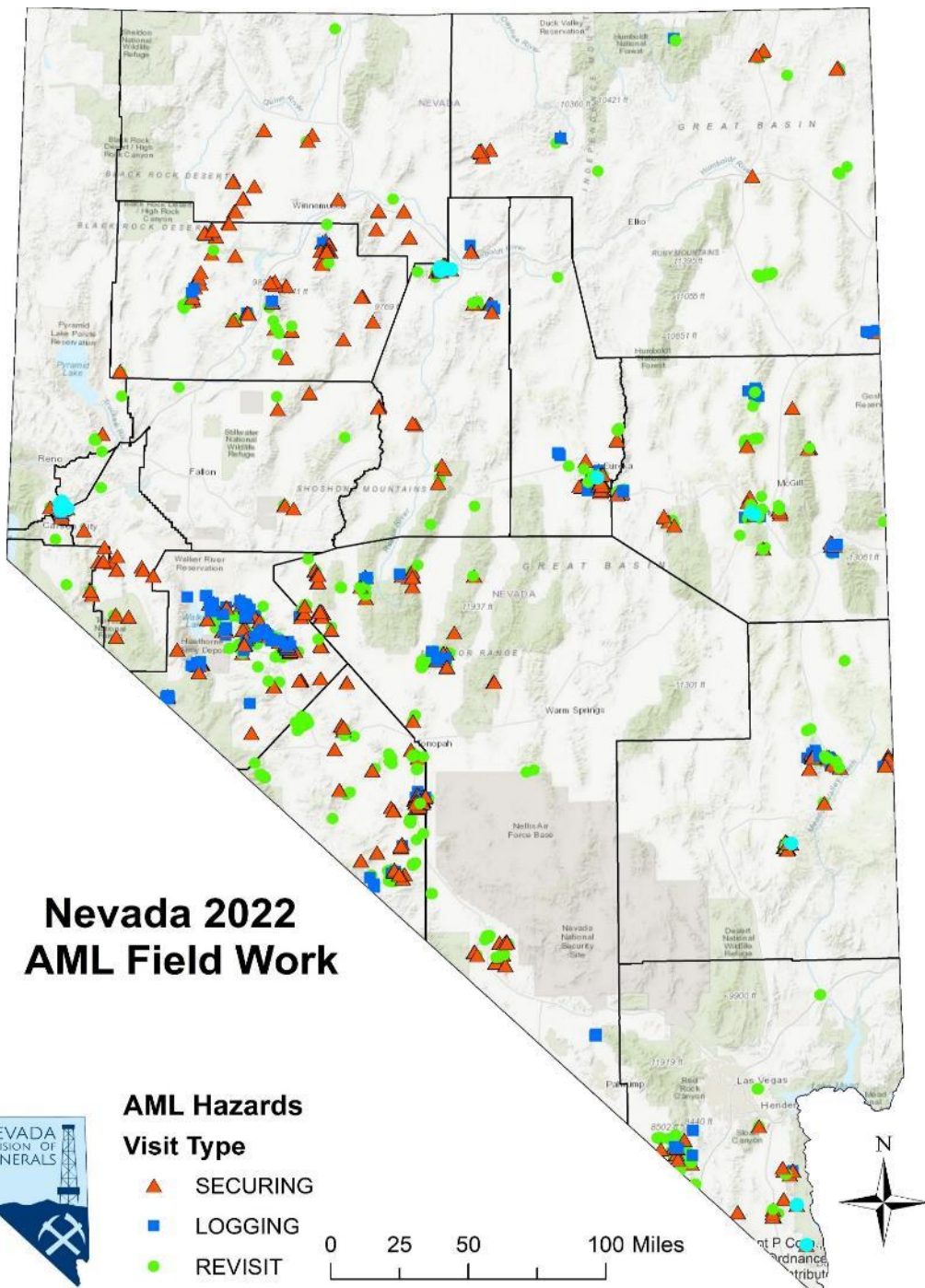
Arden Closure Results

- Project completed on-time with a total construction cost of \$303,424
- Division of Minerals funded \$153,424
- Clark County funded \$150,000



2022 Nevada AML Field Work

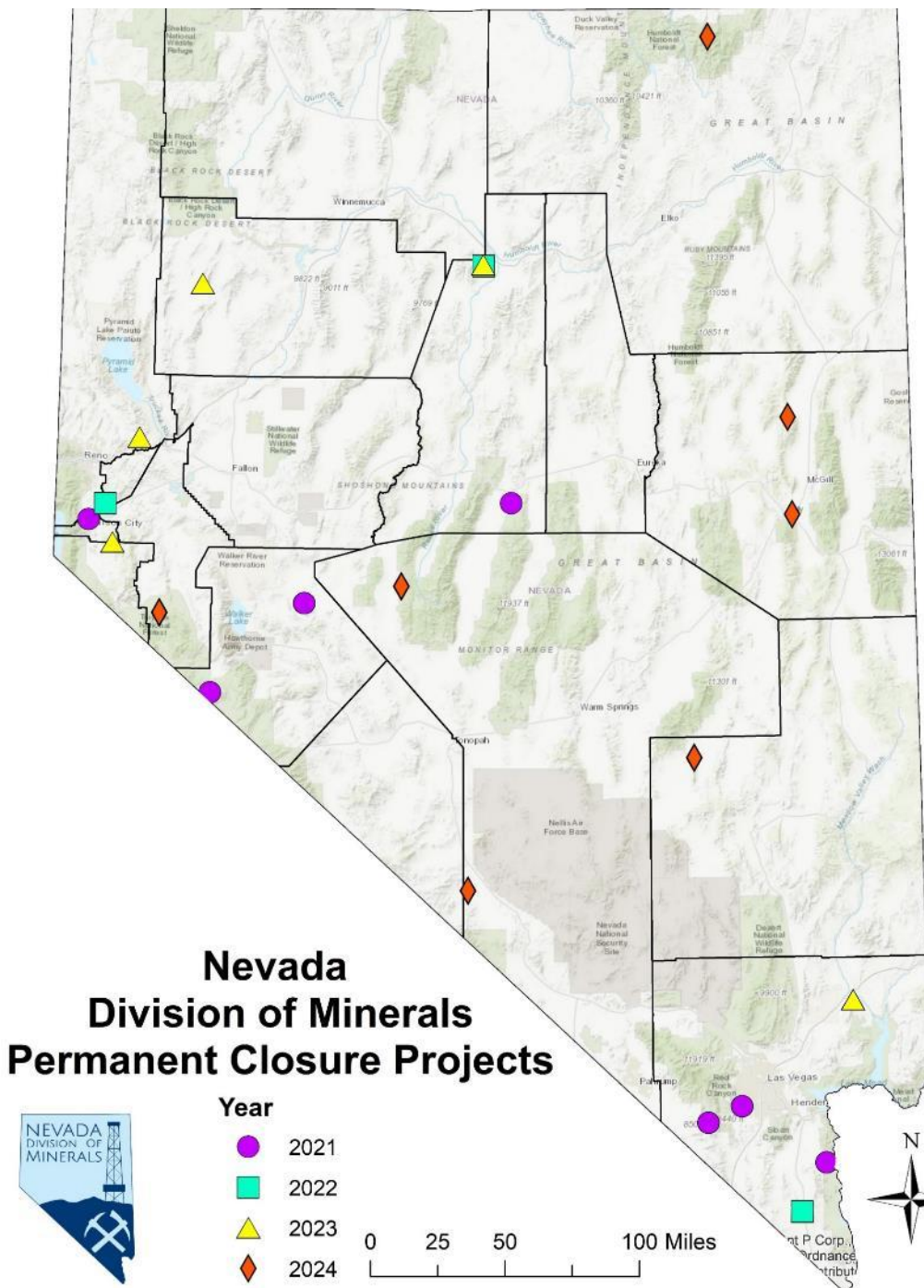
- 639 hazards inventoried
- 872 hazards secured
- 1,392 hazards revisited
- Work performed by NDOM Staff, 8 interns hired in summer, and contractor (Environmental Protection Services)
- Secure database of hazards and securings accessible in the field via internet



Permanent Closure Projects

- 2021
 - 7 projects (Copper Butte)
 - 58 hazards
- 2022
 - 3 Projects (VC Grand Prix)
 - 54 hazards
- 2023
 - 5-6 projects
 - >100 hazards
- 2024
 - 5-6 projects
 - >100 hazards

Completed by State Contractor: Environmental Protection Services



Fluid Mineral Resources

- Oil and Gas well permitting and compliance, NRS 522
- Geothermal well permitting and compliance, NRS 534A
- Dissolved Mineral Resource Exploration well and borehole permitting NRS 534B (e.g., lithium brine)

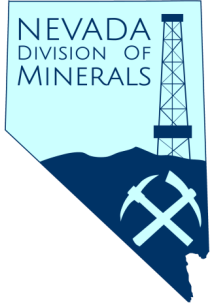
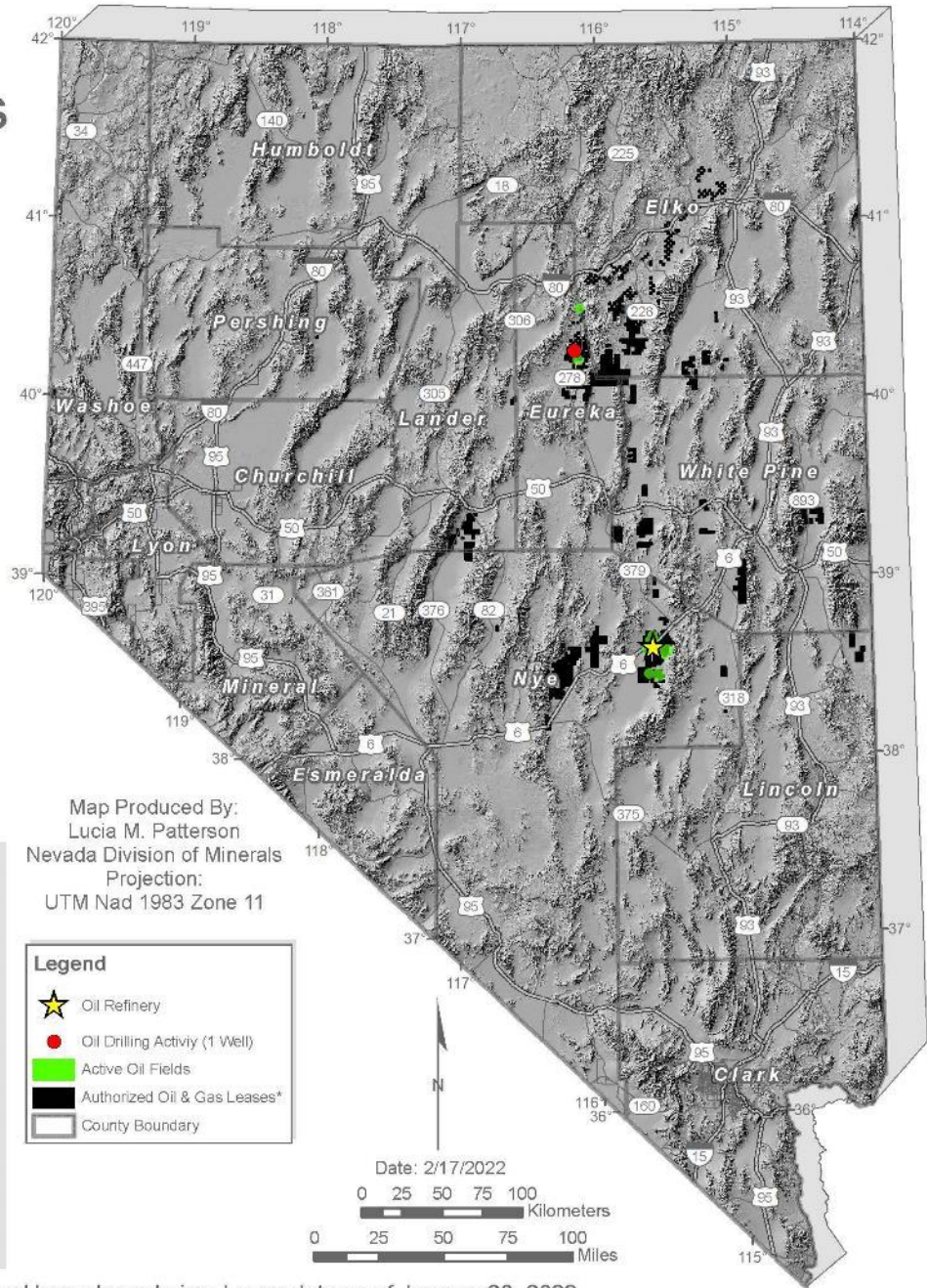
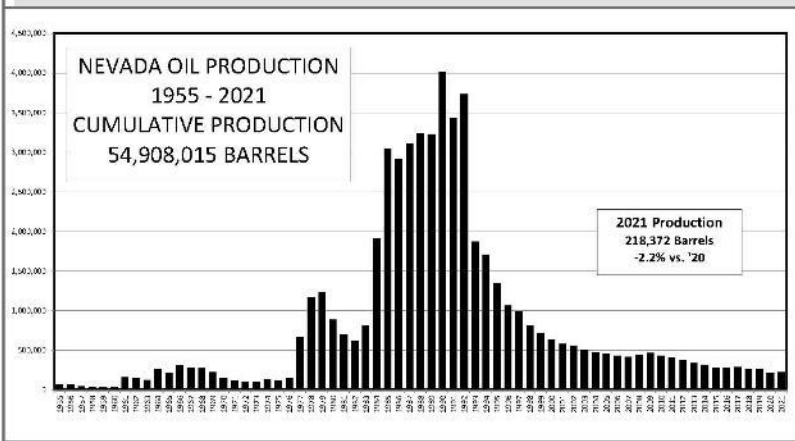


Nevada Oil-Gas Drilling, Production & Federal Leases 2021

As of February 7, 2022 there were 121 permitted oil wells that are active or shut-in.

There are currently 10 active oil fields in Nevada

As of January 20, 2022 there were 394 authorized oil leases which total 705,861 acres



*Authorized leases are plotted by section and do not necessarily depict actual lease boundaries. Lease data as of January 20, 2022

Geothermal Development 2022



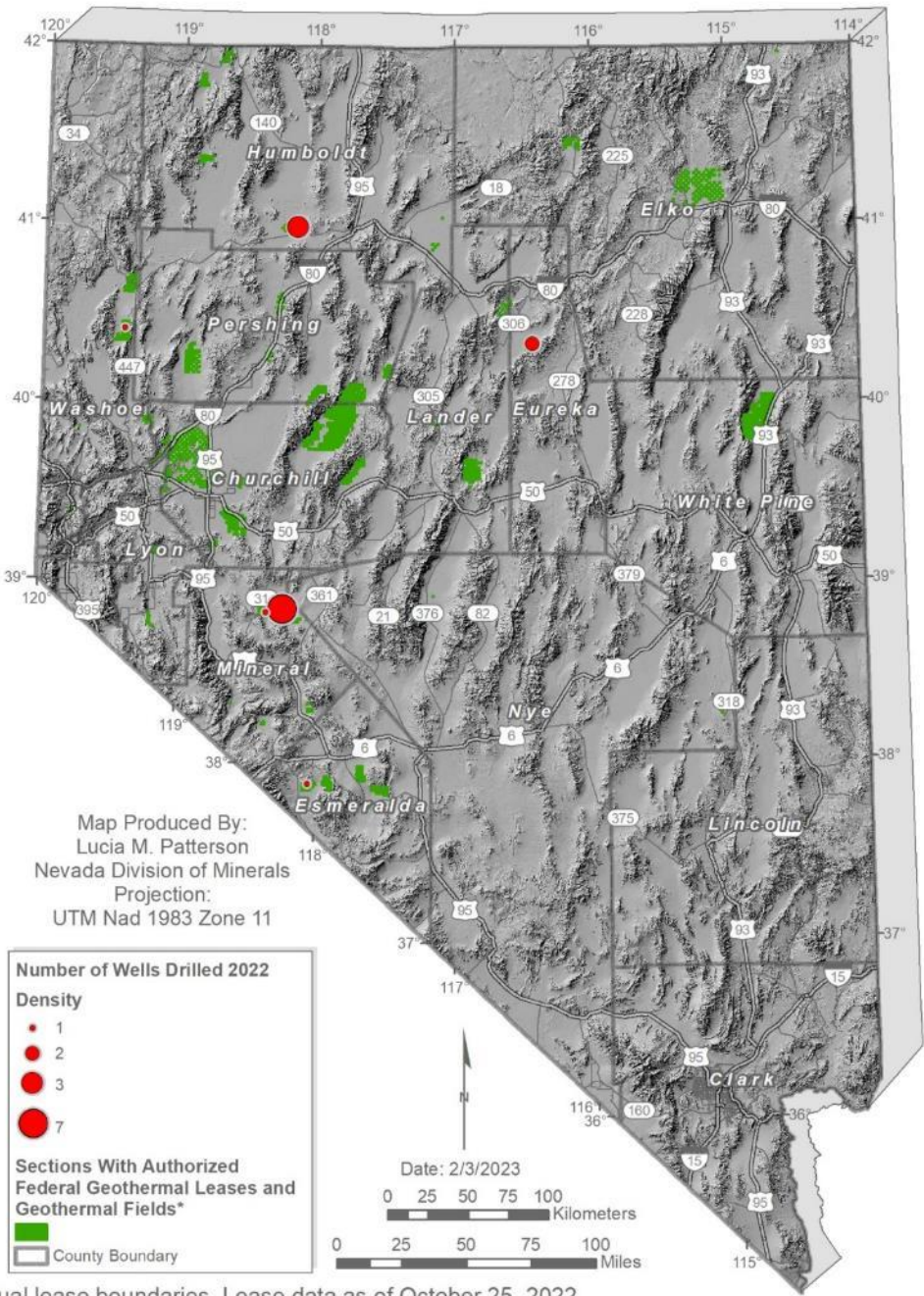
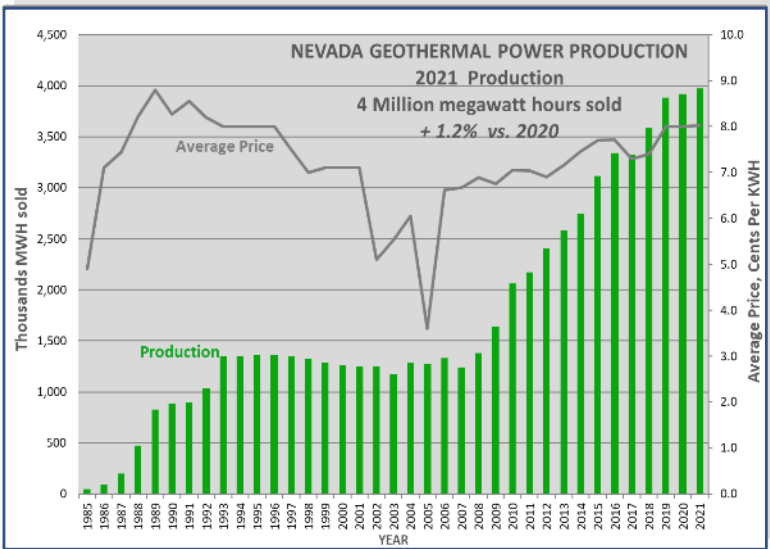
Wells Completed

- 9 Industrial Injection
- 3 Industrial Production
- 3 Observation

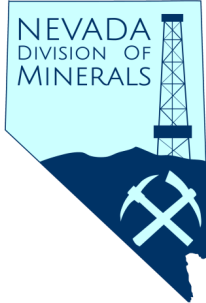
As of February 3, 2023 there were 469 permitted commercial and industrial geothermal wells.
(Injection, production or observation wells that are ; active or shut-in)

There are 26 active geothermal plants in Nevada

There are 315 authorized geothermal leases as of October 25, 2022 which total 666,573 acres



*Authorized leases are plotted by section and do not necessarily depict actual lease boundaries. Lease data as of October 25, 2022



Dissolved Minerals Development 2017-2022

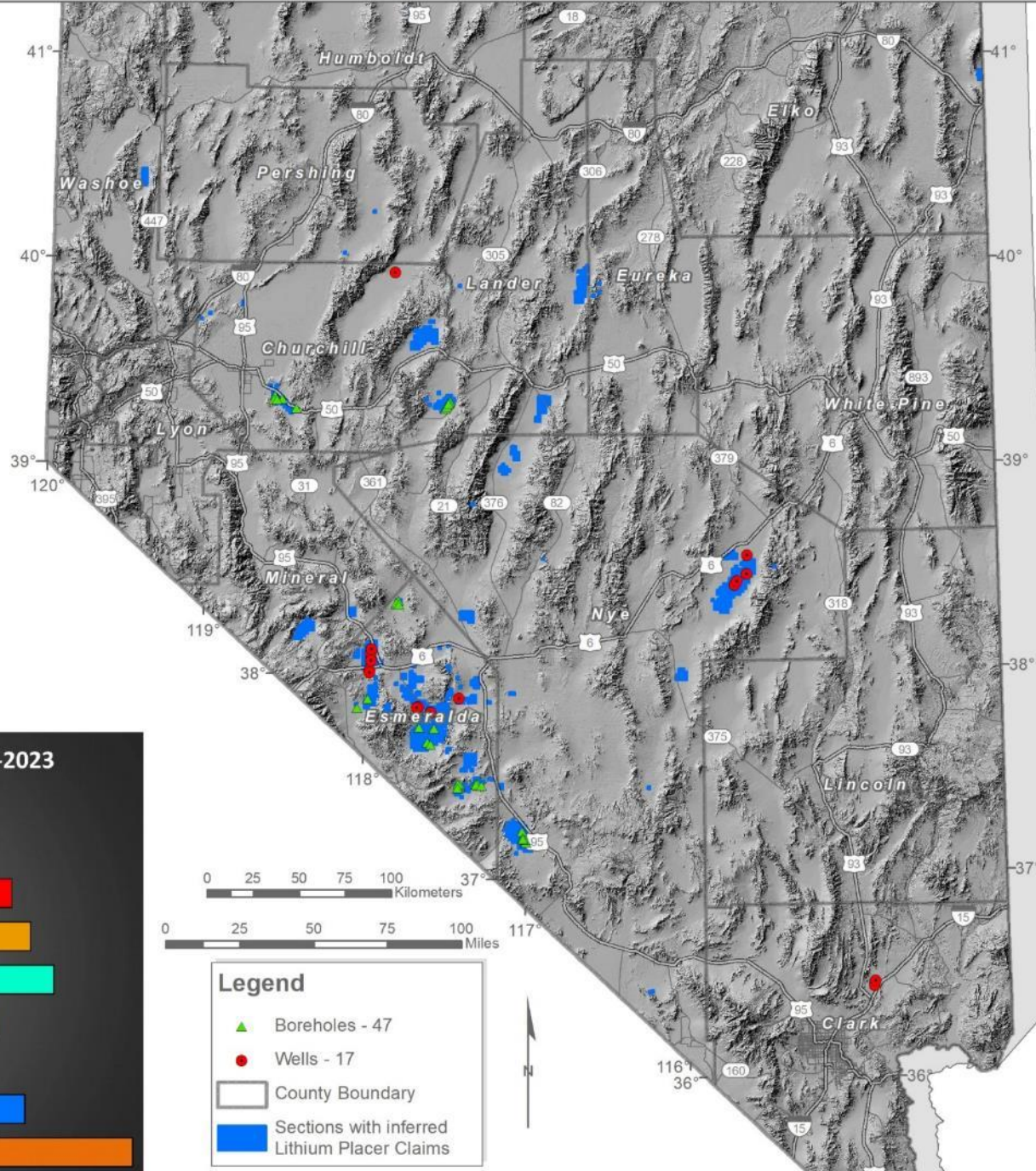
Map Produced By:
Lucia M. Patterson
Nevada Division of Minerals
Projection:
UTM Nad 1983 Zone 11
Date: 2/3/2023

Permitting To Date:

As of 2/3/2023 there were 64 DMRE holes drilled

47 Wells
17 Boreholes

As of 11/3/2022 there were 18,281 inferred lithium placer claims

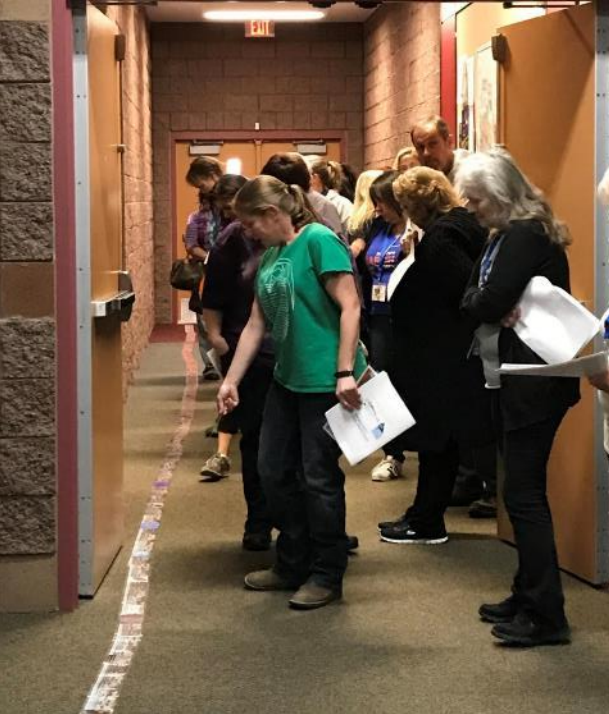


NRS 513 Outreach Efforts



- Earth Science Workshops – Classes and Tours
- Classroom Presentations, School Events
- Career Fairs, Nevada Day Celebrations, Science Technology Engineering and Math (STEM) Fairs
- Conference booths, trade talks
- Provide Educators with Mineral Kits, Activities, Mineral ID books, etc..





Earth Science Workshop Statistics

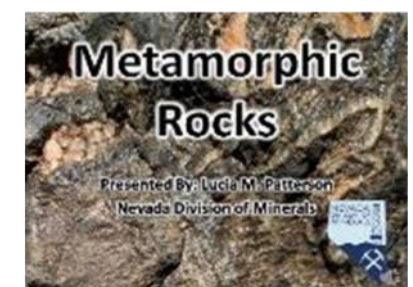
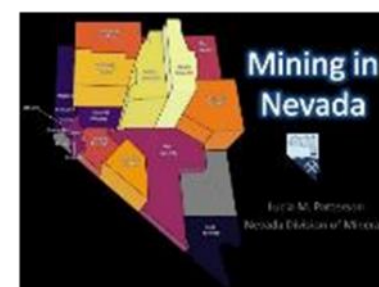
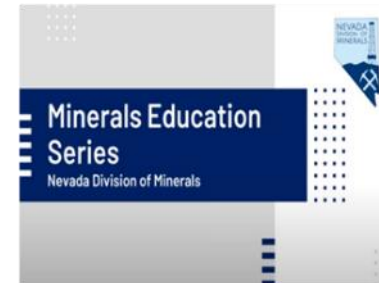
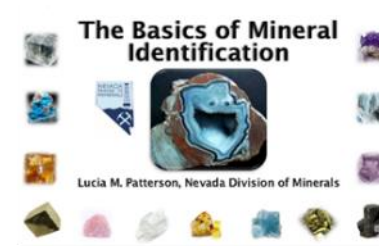
- In cooperation with the Nevada Mining Association Education Committee
- 69 workshops since 1984 in eight counties
- Greater than:
 - 6,700 attendees
 - 100 field trips to geological locations, mines, museums, and mineral processing plants
 - 2,000 professional development education or continuing education credits given since 2006
- Ready-to-use activities for classrooms provided to each attendee
- Classroom materials given to each teacher including rock and mineral kits
- Next workshops:
 - March 14-15 in Las Vegas
 - June 21-22 in Winnemucca

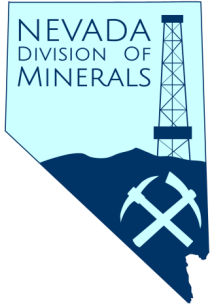


NRS 513

Distance Learning Videos

- Over 20 videos
- Earth Science / Geology based
- Created due to the pandemic and desire to still reach students
- Story Maps include:
 - Abandoned Mine Lands
 - Carson City, Reno, and Las Vegas geology overview
 - Various geology and mining related tours





NRS 513

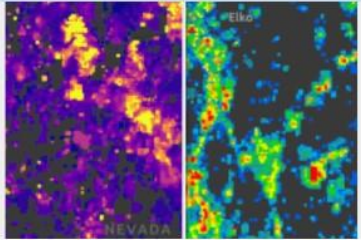
PUBLIC OUTREACH/MINERALS EDUCATION

STAFF PRESENTATIONS – CALENDAR YEAR 2022

- 239 PRESENTATIONS CONDUCTED
 - 116 PRESENTATIONS IN NORTHERN NV, 123 IN SOUTHERN NV
 - 96 K-12 CLASSROOM PRESENTATIONS INCLUDING VIRTUAL
 - 85 PRESENTATIONS ON NEVADA MINING & OIL/GEOTHERMAL PRODUCTION TO CIVIC GROUPS, CLUBS, AND ORGANIZATIONS
 - 29 CAREER FAIR PRESENTATIONS
 - 9 PUBLIC MEDIA PRESENTATIONS
- CALL US IF YOU NEED A PRESENTATION FOR CLASSROOMS, PROFESSIONAL OR CIVIC GROUPS
 - Classroom: minerals & rocks, geology, mining, oil, geothermal, abandoned mine safety
 - Civic group & trade associations: Nevada mineral production, geothermal/oil production, lithium updates

Open Data Site

Nevada Division of Minerals Open Data Site NDOM Home Page



C.H.I.M.E. Claims Habitation Interactive...

This map is a spatial representation of claims density and fees paid through time, pe...

Explore



The Nevada Mineral Production Experience!!

View and filter annual production data for Nevada.

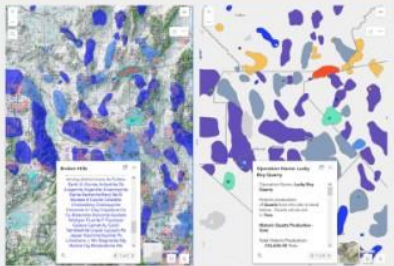
Explore



Historic Mineral Production in Nevada

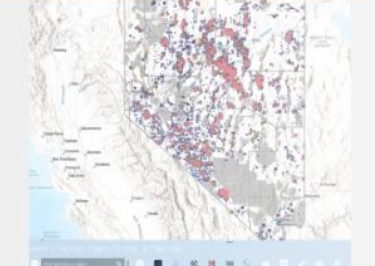
To spatially display historic mineral production in Nevada.

Explore



Critical Minerals Comparative Map

Compare current and historic plan, notice and claim information as it relates to...



Nevada Mining Claims AND Notices-Plans

View and compare active and historic notice, plan, and mining claims data in one application.



OGG Production and Well Data Web Application

View and interact with oil, gas, and geothermal production, drill hole, and lease data for Nevada.

Interactive Digital Resources For:

- Historic and Active Mining Claims
- Historic and Active Mines
- Geothermal Leases
- Dissolved Minerals
- Land Withdrawals
- Oil and Gas Production
- Critical Minerals
- Lithium
- Free Data Downloads

Useful Tool For:

- Land Use Planning
- Impact Analysis of Proposed Land Withdrawals
- Quantifying Mineral Potential
- Evaluation of Mineral Exploration Investment
- Exploration Activity, Mineral Production, Employment and Net Proceeds by County

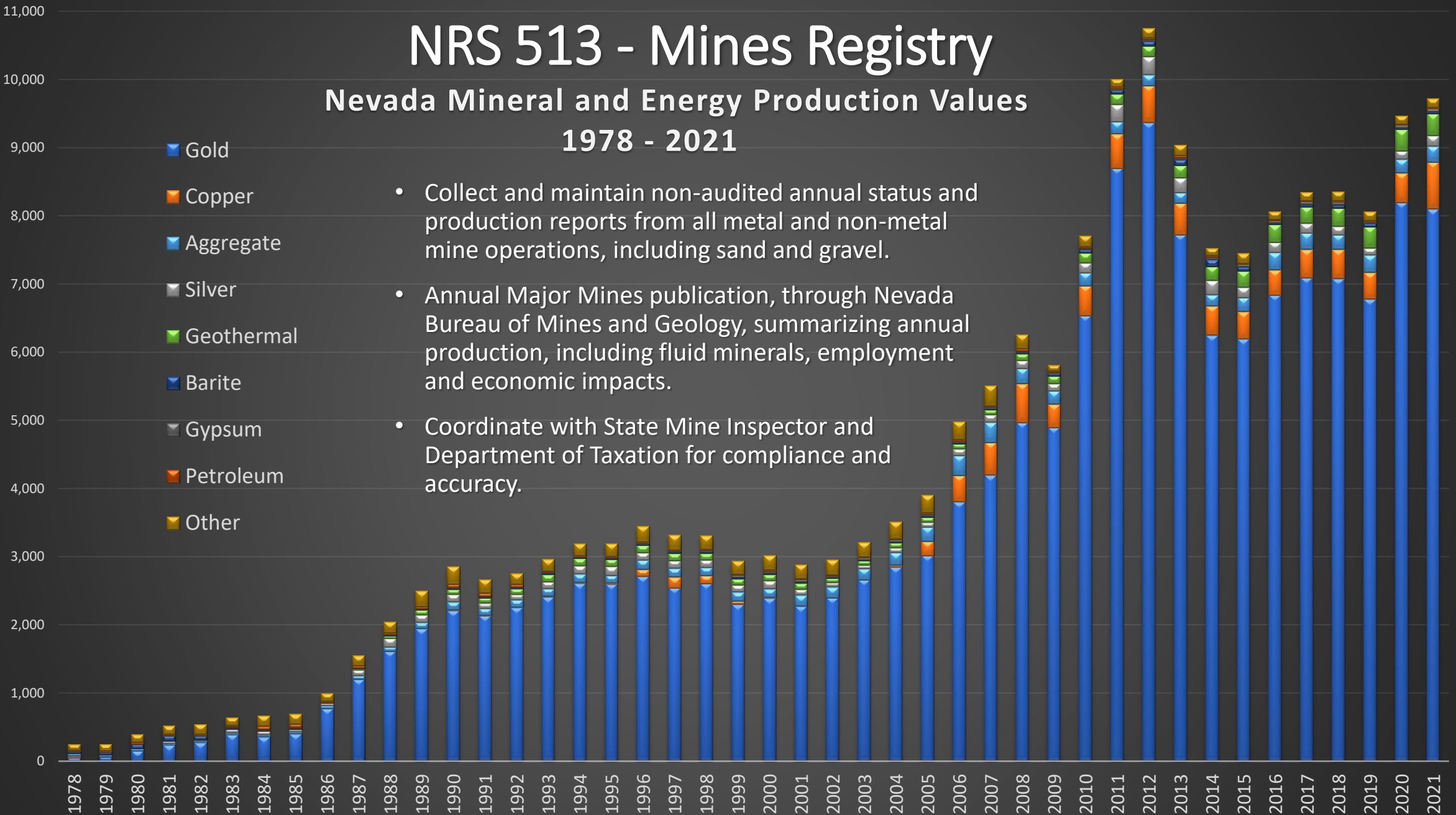
NRS 513 - Mines Registry

Nevada Mineral and Energy Production Values 1978 - 2021

PRODUCTION VALUE, \$ MILLIONS



- Collect and maintain non-audited annual status and production reports from all metal and non-metal mine operations, including sand and gravel.
- Annual Major Mines publication, through Nevada Bureau of Mines and Geology, summarizing annual production, including fluid minerals, employment and economic impacts.
- Coordinate with State Mine Inspector and Department of Taxation for compliance and accuracy.



NRS 517 Mining Claims

- Requirements for monumenting, filing, deadlines, fees.
- Fee of \$6/claim filing collected by county and remitted to the Division for general operations of the agency.
- Website has fill-in enabled forms which meet state and county recorder requirements and are suggested for use but not required.
- Website also has numerous links to pertinent publications and presentations.

The following Document contains no Personal Information
as defined by NRS 603A.040

CERTIFICATE OF LOCATION LODE MINING CLAIM

TO ALL WHOM IT MAY CONCERN:

Name and mailing address of locator:

located the _____ Lode Mining Claim in the following quarter section(s):

1/4	Section	Township	Range	Meridian
_____	_____	_____	_____	MDB&M
_____	_____	_____	_____	MDB&M
_____	_____	_____	_____	MDB&M
_____	_____	_____	_____	MDB&M

in _____ County, Nevada, on the _____ day of _____, 20____.

The Claim is approximately _____ feet long and _____ feet wide, such that _____ feet are claimed in a _____ direction and _____ feet in a _____ direction from the point of discovery (monument of location), at which the Notice of Location was posted, together with _____ feet on each side of the monument of location and center line of the Claim. The general course of the lode or vein is from the _____ to the _____ direction.

The number, location and markings on each corner monument are as follows:

	Location	Markings	Description
No. 1:	_____	_____	_____
No. 2:	_____	_____	_____
No. 3:	_____	_____	_____
No. 4:	_____	_____	_____


As erected on the ground each corner monument is marked by _____
(metal tags, paint, etc.)

The undersigned certifies that work of location included making a claim map as provided in NRS 517.040.

Dated this _____ day of _____, 20____.

By _____ Locator or Agent Signature
(circle one) _____ Locator or Agent Name (printed)

Suggested Form - Nevada Division of Minerals (REV. 8-27-2015)
Nevada Lode Certificate of Location - NRS 517.050



NRS 519A Reclamation Bond Pool

- Created to assist small exploration and mine operators with compliance of State and Federal bonding requirements.
- Agency functions like an insurance company providing surety bonds, is not involved in determining bond amounts or authorizing refunds.
- A handful of current plan-level participants.
- \$2.5M statewide bond established with Bureau of Land Management for notice-level participants allows for expeditious bonding.
- Bond Pool works with Nevada Division of Environmental Protection and/or Bureau of Land Management to pay or perform when participant fails to fulfill reclamation obligations.

Questions?

