Nevada Division of Minerals (NDOM)

- State Agency and part of the Commission on Mineral Resources (7 members appointed by Governor)
- Administrator reports through Commission and Governor’s office
- Mission Statement: To encourage and assist in the responsible exploration for and the production of minerals, oil, gas, and geothermal energy which are economically beneficial to the State.
- Offices in Carson City (8 employees) and Las Vegas (3 employees)
- No general fund monies, all revenue from mining claim fees, geothermal and oil permit and production fees, surface disturbance fee, reclamation bond pool administrative fee, BLM and USFS assistance agreements for AML securing activities
Nevada Gold

2017 Production
5.64 Moz, +3.2% vs. '16
27 mines, 17 operators

Gold production, millions of troy ounces

Gold price, $/troy ounce

Production
Price

Nevada silver

2017 Production
8.48 Moz, -5.2% vs. '16
24 mines, 15 operators

Silver price, $/troy ounces
Silver production, millions of troy ounces

Production
Price
Nevada copper

2017
145,811,951 lbs.
-12% vs 16’
2 producers

Production

Price

Copper production, millions of pounds

Copper price, $/pound

Year: 1989-2017
Nevada Barite Production

2017
391,402 tons shipped
+ 70% vs. '16
4 producers

Average Annual Price per Barrel of Oil

Production (1,000 short tons)

Oil Price
Other Industrial Minerals
Produced, 2017

- 10,233,342 lbs of lithium compounds (+9.6%)
- 112,139 tons of magnesium compounds (+1.9%)
- 277,043 tons of diatomaceous earth (+15.1%)
- 727,088 tons of silica products (-27.3%)
- 24,855 tons of salt (+30.1%)
Active claims in Nevada

Number of claims

Change from Annual Assessment Work to Fees

Price of gold

Gold price, $/troy ounce

Number of active claims on public lands in Nevada

Oil & Gas Development
2017-2018

As of 12/31/2018 there were 119 permitted oil wells.

There are currently 14 active oil fields in Nevada.

To date there are 194 authorized oil leases which total 337,404 acres.

There is one oil refinery in Nevada.

NEVADA OIL PRODUCTION
1955 - 2017
CUMULATIVE PRODUCTION 53,945,378 BARRELS

2017 Production: 286,820 Barrels (+2.9% vs. '16)

Legend:
- Oil Refinery
- Oil Drilling Activity (2 wells)
- Active Oil Fields
- Authorized Oil & Gas Leases
- County Boundary
Geothermal Development 2017-2018

Wells Drilled 2017-2018
3 Domestic
4 Industrial Injection
8 Industrial Production
3 Observation
31 Temperature Gradient

As of 12/31/2018 there were 459 permitted commercial and industrial wells.

There are 25 active geothermal plants in Nevada.

There are 727 authorized geothermal leases as of 01/07/2019 which total 334,303 acres.

NEVADA GEOTHERMAL POWER PRODUCTION
2017 Production
3.3 Million megawatt hours sold
-0.6% vs. ’16

Map Produced By:
Lucia M. Patterson
Nevada Division of Minerals
Projection:
UTM Nad 1983 Zone 11

Legend
Number of 2017-2018 Wells Drilled
- 1
- 2 - 3
- 4 - 6
- 7 - 10
- 11 - 14

Sections With Authorized Federal Geothermal Leases and Geothermal Fields
- Green
- County Boundary

Date: 1/28/2019
ABANDONED MINE LANDS PUBLIC SAFETY PROGRAM

- Created the Abandoned Mine Lands Program in 1987
- Regulated by NRS 513 and NAC 513
- Funded by claim fees
- Three program activities mandated:
  - Statewide Inventory of Sites
  - Securing of Hazardous Mines
  - Public Awareness Campaign
NDOM AML PROGRAM

EACH YEAR HAZARD AREAS ARE PRIORITIZED FOR FIELD WORK BASED ON A RATING SYSTEM FOR DEGREE OF DANGER AND ACCESSIBILITY
Over 20,000 Hazards Inventoried

- Since program inception in 1987, 22,596 abandoned mine hazards logged and 18,015 have been secured.

20,000th Logging  
16,000th Securing
Hard Closure Projects - 206 closures in 2016

- Backfills
- Polyurethane Foam Plugs
- Bat Compatible Closures
Monte Cristo Claims-6 Mile Canyon area, Comstock District, Storey County

Backfilled: 6/22/2017
REPORTED AML INCIDENTS VS. CUMULATIVE HAZARDS SECURED

POSITIVE RESULTS: SECURING AND PUBLIC EDUCATION EFFORTS HAVE RESULTED IN "NO REPORTABLE ACCIDENTS OR INJURIES" AT AML FEATURES FOR PAST 3 YEARS.

CONCERN: INCREASING VANDALISM OF FENCING AND GATES REQUIRES RE-VISITS FOR MAINTENANCE
DISSOLVED MINERAL RESOURCE EXPLORATION UPDATE

• Statute from 2017 session
• NRS/NAC 534B
• Addresses sampling of brines in exploration boreholes and wells
• Replaces NDWR MM well waivers
• NDEP, NDWR and NDOM jointly developed regs.
• Regulation must be approved by Commission on Mineral Resources
• Statute became effective 1/1/2018
What is in the statute?

• Defines a “dissolve mineral exploration borehole”, and allows for sampling of water in exploration boreholes.
• Defines “dissolved mineral resource exploration well”, and enables an application process by NDOM.
• DMRE approved well permits have 2 year limits, renewable for another 2 years.
• Defines a “dissolved mineral resource exploration project” as a notice or plan-level approved project on Federal lands (claims), or a defined project area on non-federal lands.
• Requires a Nevada licensed water well driller to drill boreholes and wells.
What is in the Statute?

- NDOM Administrator or State Engineer may call a public hearing if they deem necessary to gather facts.
- Allows for up to 5 acre-feet of water to be pumped for testing per project (not annually). > 5 acre-feet requires a water right from NDWR.
- Must comply with NRS 445A for discharges during pump tests
- Does not change the appropriation procedures in NRS/NAC 533, 534
- Allows for application fee for wells and fines for violations
What is in the Draft Regulations?

- Boreholes: notice of intent form required, no fee
- DMRE wells: permitting process, application fee
- Well design approval required: casing, seals, etc.
- Consultation with NDOM triggered when proposing boreholes or wells within “areas with limitations”
- Setbacks from existing oil, geothermal or water wells.
- No limit on number or boreholes or wells, but total pumping for sampling is limited to < 5 AF
- Plugging logs required for boreholes and wells
- Reclamation bonding of Federal land through BLM
NDOM Open Data Site

- Public interface data repository available for download or interactive viewing
- A practical response to high volumes of data requests and limited staff
First DMRE Well Permit Approved Jan. 10th, 2018
Sierra Lithium LLC CB-1 Exploration Well Schematic
STATE OF NEVADA
COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
400 W. King Street, Suite 106
Carson City, Nevada 89703
(775) 684-7040 | Fax (775) 684-7052
http://minerals.nv.gov

NOTICE OF INTENT TO DRILL
DISSOLVED MINERAL RESOURCE EXPLORATION BOREHOLE

Note: one form per borehole, to be submitted at least five (5) days prior to drilling

Today’s Date: 2/1/2018
Intended Start Date: 2/5/2018

Operator Name: Mathers Lithium Corp.
Operator Address: 1470-701 West Georgia Street, Vancouver, British Columbia V7Y 1C6, Canada
Email Address: bbbconsult@gmail.com

Groundwater Basin Name and Number:
Clayton Valley, NV - 143

☐ Federal Lands - BLM NVN Number N-95118 3808(NVB0200)
☐ Non-Federal Lands
Land owner’s name:
APN Number:
Address:

Drilling Method:
☐ Mud Rotary
☐ Rev Circ
☐ Air
☐ Core
☐ Sonic
☐ Other

Diameter (inches): 6
Anticipated Final Depth (feet): 1000 feet

Location: NE of the 1/4 SE 1/4, Sec 32, T2 N, R 40 E

County: Esmeralda

Global Positioning System (GPS) coordinates and datum for borehole:
Universal Transverse Mercator (UTM) or Geographic Coordinate System (decimal degrees)
UTM East: -450815
UTM North: -4175005
☐ NAD 83 ☐ WGS 84

Drilling Company Name: Harris Exploration Drilling
On-site Driller’s Name: Pat Harris
On-site Driller’s License Number: NV 2554

Submit completed form to: (email) ndom@minerals.nv.gov or (fax) 775-684-7052

RECEIVED
FEB 8 2018

 NOTICE OF INTENT TO DRILL DISSOLVED MINERAL RESOURCE EXPLORATION BOREHOLE

v12/07/2017
Lithium Brine Exploration in NV

• Nevada has the only operating lithium mine in the U.S. – located in Clayton Valley, Esmeralda County
  – Operated since 1967, employs 85 people
  – Produces lithium carbonate
  – Uses surface evaporation ponds to concentrate lithium pumped from brine aquifers in valley

• Geologic Model for a lithium brine deposit:
  – Salar deposits – a salt flat that may represent the basin of a salt lake
  – Accumulations of saline groundwater that are enriched in dissolved lithium.
  – Exploration by drilling and sampling of brine aquifers
Lithium

• Is a locatable mineral on Federal land under the general Mining law
• Placer claims are used to locate potential lithium brine deposits
• Lode claims are used to locate potential lithium clay deposits
MINERALS EDUCATION - 2018

- **325 PRESENTATIONS, DELIVERED TO 15,744 ATTENDEES**
  - 317 K-12 CLASSROOM PRESENTATIONS
  - 50 PRESENTATIONS ON NEVADA MINING & OIL/GAS/GEOTHERMAL PRODUCTION TO CIVIC GROUPS, CLUBS AND ORGANIZATIONS
  - 9 MEDIA PRESENTATION
  - 94 PRESENTATIONS IN NORTHERN NEVADA, 25 IN SOUTHERN NEVADA
- **FILLED AN EDUCATION & OUTREACH SPECIALIST POSITION IN LV OFFICE**
  - Established position to meet demand for K-12 classroom education

Kindergartener examining a rock collection
• CALL US FOR A PRESENTATION FOR CLASSROOMS, CIVIC OR PROFESSIONAL GROUPS
  • Classroom: minerals & rocks, geology, mining, abandoned mine safety
  • K-12 career day events
  • Civic group & trade associations: Nevada mineral production, geothermal/oil/gas production

1st Grade, Bead Mining
State of Nevada
Commission on Mineral Resources
Division of Minerals

Current Information
- Dissolved Mineral Resources regulation update
- Dissolved Mineral Resources permitting page
- 2017 Nevada Excellence in Mine Reclamation Award
- Recent Presentations
- Information Related to Proposed Land Use Plans and Withdrawals

Programs
- Oil and Gas
- Abandoned Mine Lands
- Bond Pool
- Dissolved Mineral Resource Exploration
- Education & Outreach
- Geothermal