



JOE LOMBARDO
Governor

STATE OF NEVADA
COMMISSION ON MINERAL RESOURCES
DIVISION OF MINERALS
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MICHAEL VISHER
Administrator

Las Vegas Office: 375 E. Warm Springs Rd. #205, Las Vegas, NV 89119
Phone: (702) 486-4343; Fax: (702) 486-4345

Wednesday February 1, 2023

1:00 P.M.

MINUTES

Commissioners	Staff	Public
Josh Nordquist	Mike Visher	Robert Ernaut (via Zoom)
Mary Korpi	Rob Ghiglieri	Jim Faulds (NBMG)
Art Henderson	Jessie Dumas	
Bob Felder	Anthony Walsh, DAG	
Nigel Bain (via Zoom)	Garrett Wake	
Randy Griffin	Carol Shelton	
Stephanie Hallinan (via Zoom)	Sean Derby	

CALL TO ORDER

1:07 PM

ROLL CALL

All Commissioners present.

PLEDGE OF ALLEGIANCE

COMMENTS BY THE GENERAL PUBLIC

There were no public comments.

I. AGENDA

A. Approval of the Agenda

Administrator Mike Visher requested to move agenda item III D. into Old Business upon the arrival of Jim Faulds.

Motion to approve with change made by Administrator Visher by: Bob Felder

Seconded by: Mary Korpi

Unanimously approved.

II. MINUTES

A. Approval of the November 30, 2022, meeting minutes

Motion to approve the November 30, 2022, minutes made by: Randy Griffin

Seconded by: Stephanie Hallinan

Unanimously approved.

III. NEW BUSINESS

A. Introduction to New Staff

Administrator Visher introduced new staff member Carol Shelton, who joined December 27, 2022, as the new Field Specialist for the Las Vegas office. Carol Shelton introduced herself and provided a background of her career. Carol Shelton received her education in Biology and Health Physics. Having worked at Nevada Test Site with nuclear high explosives as well as at Round Mountain in gold mining and other various positions, safety is always on her mind.

B. Review of Existing Regulations per Executive Order 2023-003

Administrator Visher summarized Governor Lombardo's January 12, 2023, Executive Order 2023-003 (attached). Administrator Visher proposed a Special Meeting in April to go over the identified statutes to meet the May 1 deadline. Proposing to have a workshop with stakeholders impacted by the regulations.

Bob Felder: How big of a task is this for you and your staff?

Mike Visher: Biggest efforts will be in the workshop. 2019 Geothermal regulations were updated, not much to change. Ensuring that Open Meeting Law is followed for the Special Meeting with the Commission.

Anthony Walsh: Governor's order requires that workshops need to be in accordance with NRS 233B, which requires the notice to be 15 days in advance.

Stephanie Hallinan: By May 1st, you have to have submitted notable changes and what changes would be?

Josh Nordquist: To be clear, it is not all changes you want to make for the year, just the ones you want to remove?

Mike Visher: Regulations to remove in regard to streamlining regulations, who benefits and the impacts, with the intent of streamlining regulations. This is a requirement of agencies to do this task every 10 years.

C. Review of Agency's Fiscal 2023 Revenue, Expenditures and Forecast

Administrator Visher stated that generally by the end of January all payments of counties are received for the mining claim filings that occur in December or before. The updated number for December is \$2.4 million instead of \$2.27 which is an increase in revenue. The reserve balance was presented (attached). In the forecast Administrator Visher included what the Commission has approved in Special Projects and AML contracts. One exception is the most recent AML biological contract with West which was not included in the forecast. Under Category 01, personnel, the Governor has proposed an 8% cost-of-living increase for State employees, and proposing to eliminate inequity where employees in collective bargaining unit got a 3 percent increase. In FY24, everyone will get a 10% increase who was not a part of a collective bargaining agreement. Also be a \$2,000 a year bonus paid out quarterly beginning in March and June. These are not forecasted in the budget. There will be an agency budget hearing before the legislature to review requested enhancements which includes one additional employee. If approved NDOM will have 12 FTEs. That is for the GIS Analyst that was approved by the Governor's Office. The current reserve and forecast through FY25 is still well above the guidance amount.

IV. OLD BUSINESS

A. Update on McCaw School of Mines Exhibit

Garrett Wake provided an update for the McCaw School of Mines life-size projection exhibit (presentation attached). Asked for donation of video services with a high-resolution screen to showcase underground mining. Eleven minutes of footage was received, paring down to one 3-to-5-minute video with voice over geared. (Video played).

Randy Griffin: Can you obtain pictures of a blast?

Garrett Wake: We can do that.

Josh Nordquist: What's the completion date looking like?

Garrett Wake: We have everything needed to produce the video; all we need is the voice-over. Completion will be around 3 weeks.

B. Update on "Stay Out, Stay Alive" Digital Marketing Campaign

Sean Derby provided a presentation (attached) with updates from the Jimmy King media campaign.

Josh Nordquist: If I remember right, we kicked this off in late November?

Sean Derby: Yes, the program allotted \$50,000 just for software that drive this social media campaign. This campaign officially ended on December 28th and another TV campaign ended two weeks ago from local channels 4 and 11, with the 30 second version.

Mike Visher: What was the range of cost for each push to get momentum?

Sean Derby: Cost per ad was at \$4-\$5, but the cost per impression was 11 cents.

Mike Visher: Any feedback from their (contractor Modus Media) impressions of the ad?

Sean Derby: The media company was satisfied with the results, they stated we outperformed any other campaign they've had on a cost per click. Almost twice as good due to the engaging content. Impression given by ad campaign is that the cost could go down by focusing on targeted ads. The actor who did Jimmy is willing to volunteer his time.

Rob Ghiglieri: When I shared these videos in Grand Junction, I was asked if they can give us money to run these as they are so generic. We will attend the NAAMLPL annual business meeting in Wyoming and share the success. This could be an opportunity to collaborate and help.

Art Henderson: How much in the video says Nevada?

Sean Derby: Just the end where it reads NDOM.

Art Henderson: This could be easy to bring others in.

Sean Derby: I am planning on giving a presentation on this at the NAAMLPL Conference in Chicago this fall. Also going to back channel with people in Wyoming.

Rob Ghiglieri: They're at a good point to where we can collaborate.

Nigel Bain: Sounds like it's been a major success, congratulations on that.

Josh Nordquist: This has shown key results.

Mike Visher: Lessons learned?

Sean Derby: First, the State website not great for hosting this type of content, had to use a 3rd party page to draw people to the NDOM page. Other content including Lucia's work applies to future pushes and supply links. People traveling interested in other things. Unsure how much more we can tighten the geo-target, focus on not as many ads. The comedy approach engages with people.

Mike Visher: Will you be using this content for the Las Vegas billboard?

Sean Derby: Yes, we are having a billboard proof drawn up by a graphic designer. He is also coming up with ideas for rebranding imagery, pamphlets, and activity books.

C. Update on Federal Funding for AML

Deputy Administrator Rob Ghiglieri gave a verbal update on Federal funding of hardrock AML. He reviewed that in November 2022 CMR meeting in Las Vegas, that it was anticipated to receive additional funding from the federal government's Office of Environmental Policy and Compliance (OEPC). Rob hoped that OEPC would receive funding of \$65 million annually for the nation. When the federal budget passed, they were funded at the previous year's \$5 million in fiscal year 2023. Rob held a meeting with OEPC and Interstate Mining Compact Commission regarding the plans and

funding for FY23. Rob asked Director Steven Tryon why the lack of funding, and everyone agreed that there was no representative at the DC level that was pushing for it. During meeting with OEPC, the funding opportunities for states will be the combination of the last 2 fiscal years funding.

D. Review and Status of CMR-Approved NBMG Projects

Jim Faulds, Director of Nevada Bureau Mines and Geology provided a presentation (attached). Jim gave an overview of the existing CMR-Approved NBMG Contracts and their current completion status. The Lithium Project is having problems with their USGS contact who was going to work on the project. The Soda Lake Project will start after fiscal year 2023.

Art Henderson: I am not in favor of this 8% overhead, NDOM gave money for specific projects. My opinion is to push back. We should try.

Jim Faulds: This is a requirement for all State agencies, we have a separate award from Governor's Office, the percent was required too.

Art Henderson: We've been generous with our support to you, if they were to have nothing, instead of taking 8%, that may be the way I vote in the future.

Jim Faulds: Funds don't go directly to the University they have to cycle through the Sponsored Projects Office. The standard is 46%, it's lower than that, fellow State agencies would also be charged.

Art Henderson: How would you fund your projects if we weren't to give the 8%, where are you getting it from?

Jim Faulds: We would not get that 8%, we'd have to lower the expectations of the project by that percent. It does cover the salary of certain people.

Art Henderson: We can send them a letter telling them we've been very generous and pay for salaries. I don't think we should pay that 8%.

Randy Griffin: 8% is going to a State Agency?

Art Henderson: No UNR overhead. What is that going into?

Jim Faulds: Most of it goes to the Vice President for research. The College of Science gets 7%. Bureau will get the 3.5% of the 8%.

Art Henderson: When did this start happening?

Jim Faulds: They implemented this about two years ago.

Rob Ghiglieri: There was an all-agency memo that said anything with Nevada System of Higher Education will require or authorize an 8% indirect cost.

Jim Faulds: Other State agencies they go to 10%.

Josh Nordquist: Request I hear is to send letter to reach out and ask for a better explanation of this? Sounds like we have a referenced memorandum.

Nigel Bain: Timing for discussion is right, with a new Governor.

Art Henderson: We need to investigate more at a later time.

Presentation Continued.

Bob Felder: If we give you a grant, starting now with the 8%, will the USGS take your overhead?

Jim Faulds: No. they don't.

Presentation Continued.

Bob Felder: What about the Soda Lake Project?

Jim Faulds: Has not started yet. Isn't slated to begin until July 2023.

III. NEW BUSINESS (moved to end during agenda change at beginning of meeting.)

D. Request for Financial Assistance for Equipment at the GBSSRL

Jim Faulds, Director of Nevada Bureau Mines and Geology provided a proposal for NDOM's support to purchase equipment for the NBMG Great Basin Science Sample and Records Library (GBSSRL) (presentation attached).

Mary Korpi: Since this is a match for equipment, will there be an 8% indirect cost rate?

Jim Faulds: Since it is for equipment, I do not believe there will be an 8% indirect cost rate.

Art Henderson: Just to confirm, you are requesting the full \$61,679.00.

Jim Faulds: Yes, we are requesting the full \$61,679.00 but any money would help, and we would then prioritize the equipment at that point.

Stephanie Hallinan: Will this funding for storage be able to meet all NBMG's space needs?

Jim Faulds: No, but it will be able to buy a couple years.

Stephanie Hallinan: Will that storage portion be completed in FY23?

Jim Faulds: No, we anticipate it to be completed in calendar 2023, but in FY24.

Motion to approve the NBMG request for \$61,679.00 for the matching funds, made by: Art Henderson

Seconded by: Bob Felder

Randy Griffin amended the motion to state that the Commission approves the NBMG request of \$61,679.00 matching funds so long as none of the funds are allocated to the fiscal and administrative fees of UNR typically charged at 8%.

Seconded by: Mary Korpi

Unanimously approved.

V. COMMISSION BUSINESS

A. Review of staff monthly activity reports for November and December.

No questions were asked.

B. Set date for next Commission meeting.

Administrator Visher proposed to have next CMR in either Reno or Carson due to the Legislative Session. Tentatively set for Thursday May 4 at 10:30 am at the Gold Building (GBSSRL) conference room.

COMMENTS BY THE GENERAL PUBLIC

There were no public comments.

ADJOURNMENT

3:47pm

EXECUTIVE ORDER 2023-003

Order Freezing the Issuance of New Regulations and Requiring a Review of Existing Regulations by All Executive Branch Agencies, Departments, Boards and Commissions

WHEREAS, state regulations should protect workers, consumers and the environment, while promoting entrepreneurship and economic growth; and

WHEREAS, state regulations can become outdated, result in unintended consequences, create conflicts or impose an unnecessary burden on citizens, businesses or government entities; and

WHEREAS, it is in the best interest of the state of Nevada that its regulatory environment be concise, transparent, stable, balanced, predictable and thoughtfully constructed; and

WHEREAS, Nevada's current regulatory structure is too often unfocused and inefficient, contains regulations that are obsolete and includes regulations that are unnecessarily onerous, thereby limiting the economic potential of the State; and

WHEREAS, Article 5, Section 1 of the Nevada Constitution provides that, "The Supreme Executive Power of this State shall be vested in a Chief Magistrate who shall be Governor of the State of Nevada;

NOW, THEREFORE, by the authority vested in me as Governor by the Constitution and laws of the State of Nevada, it is hereby ordered as follows:

SECTION 1

Every executive branch department, agency, board and commission shall undertake a comprehensive review of the regulations subject to its enforcement. On or before, May 1, 2023 each department, agency, board and commission shall provide a report to the Governor's office detailing how the regulation subject to its enforcement can be streamlined, clarified, reduced or otherwise improved to ensure those regulations provide for the general welfare of the State without unnecessarily inhibiting economic growth.

SECTION 2:

As part of its report, every executive branch department, agency, board and commission shall provide a list of not less than ten (10) regulations recommended for removal, ranking them in descending order of priority.

SECTION 3:

Prior to submitting their respective reports, every executive branch department, agency, board and commission shall hold a public hearing, after having provided reasonable notice consistent with Chapter 233B of the Nevada Revised Statutes, to key industry stakeholders, to: (i) vet their recommended changes; (ii) solicit input as to the merits of those changes and (iii) identify other regulatory changes stakeholders feel are worthy of consideration. Stakeholder input shall be reflected in the summary of findings and recommendations included in each submitted report.

SECTION 4:

Unless specifically exempt from this Executive Order as set forth in Section 5, no new regulations shall be proposed, approved or acted on by any executive branch agency, department, board or commission until such time as this Executive Order is rescinded.

SECTION 5:

The following regulations are not subject to the suspension set forth in Section 4:

- (a) Regulations that affect public health;

- (b) Regulations that affect public safety and security;
- (c) Regulations that are necessary in the pursuit of federal funds and certifications;
- (d) Regulations that affect the application of powers, functions and duties essential to the operation of the executive branch agency, department, board or commission at issue;
- (e) Regulations that affect pending judicial deadlines; and
- (f) Regulations necessary to comply with federal law.

Until the suspension of this Executive Order, each executive branch department, agency, board and commission that intends to continue with the enactment of a proposed regulation under an exception to the freeze set forth in Section 4 shall submit a report to the Governor's office identifying which exemption the proposed regulation falls within and detailing the problem the regulation addresses or the value to the public of the regulation, how the regulation addresses the problem or the benefits provided by the regulation, why alternate forms of regulation are insufficient to address the problem and whether other regulations currently address the problem.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Nevada to be affixed at the State Capitol in Carson City, this 12th day of January, in the year two thousand twenty-three.

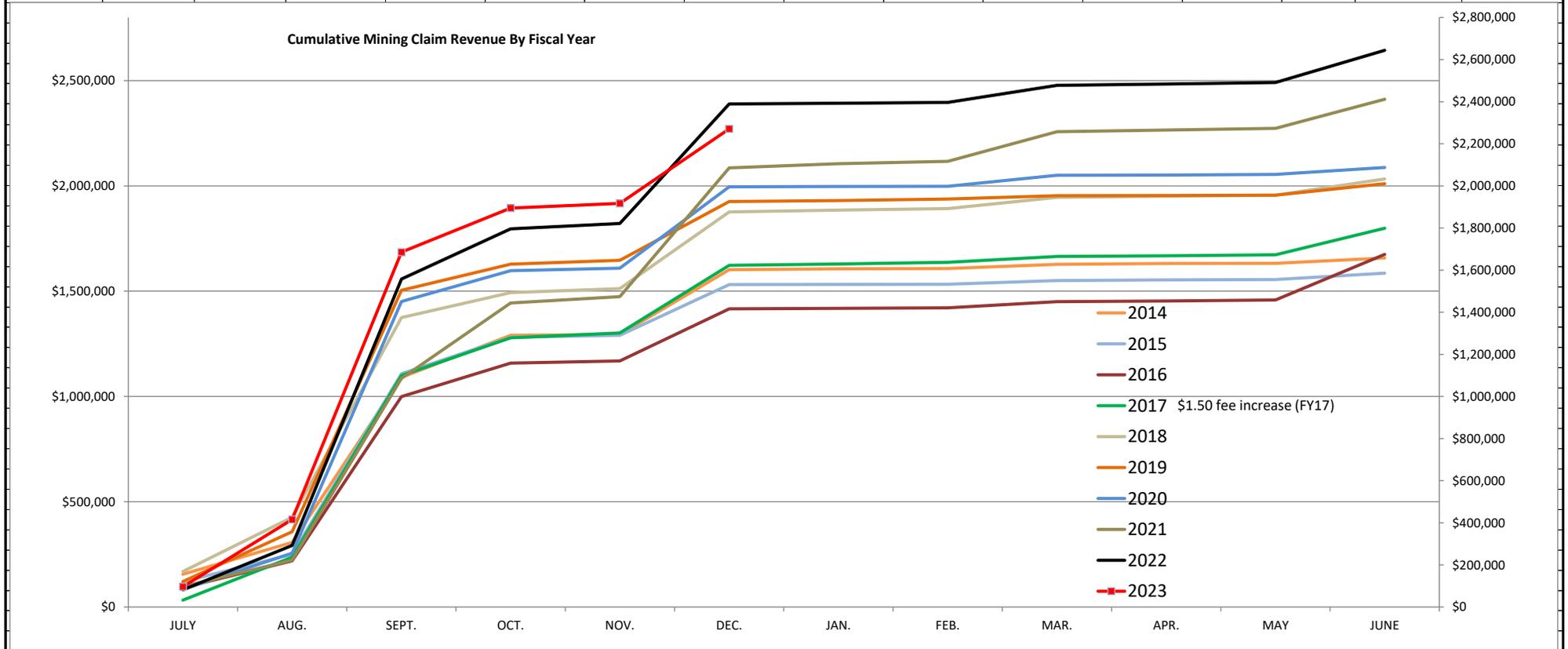
Governor

Secretary of State

Deputy

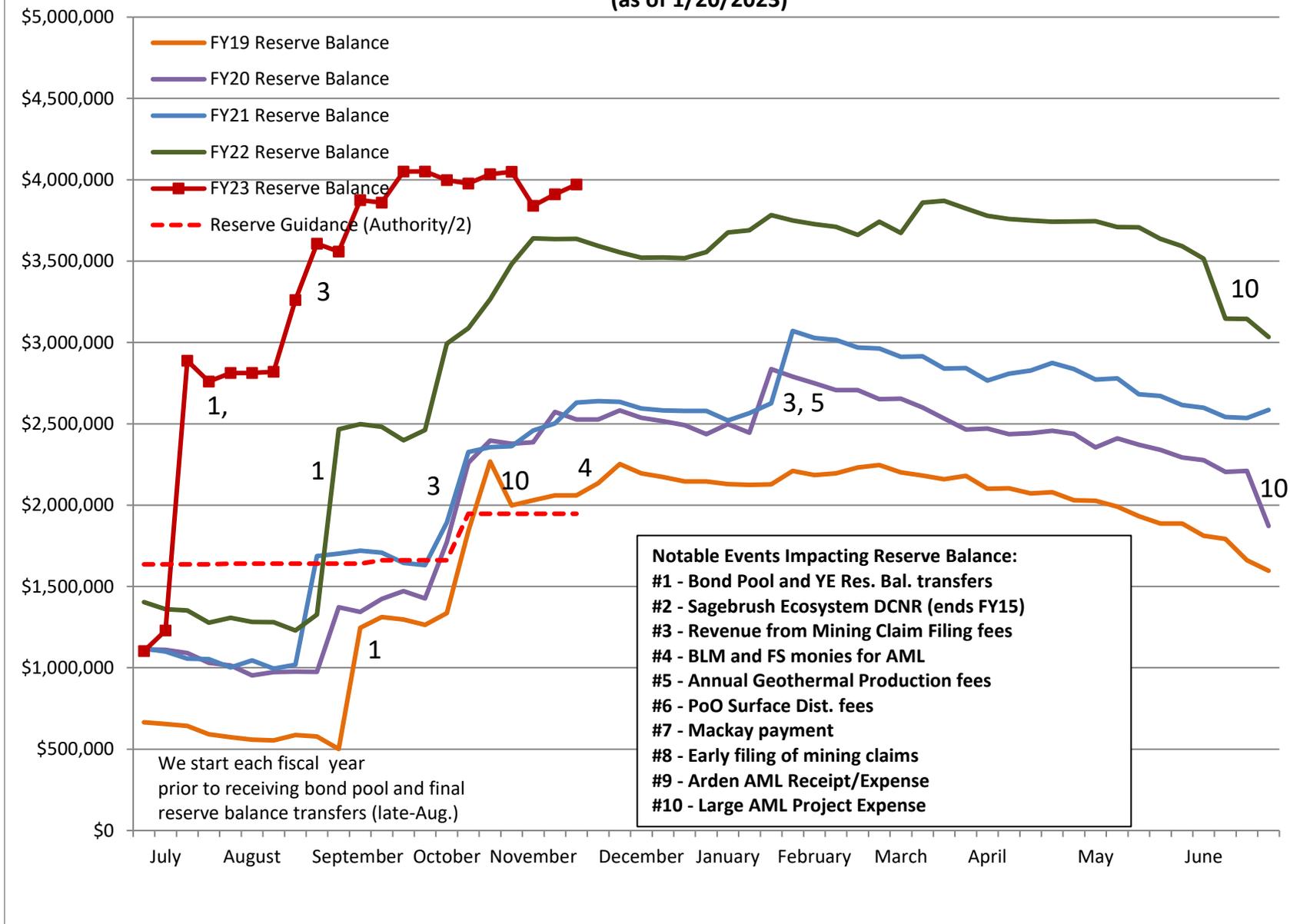
Fiscal Year Cumulative Mining Claim Revenue By Month

Fiscal Year	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	\$ YOY	Total Claim Filings
2023	\$96,380	\$415,580	\$1,685,420	\$1,894,890	\$1,916,910	\$2,270,590								
2022	\$81,700	\$292,160	\$1,557,970	\$1,796,170	\$1,821,730	\$2,389,380	\$2,392,810	\$2,396,650	\$2,477,620	\$2,483,930	\$2,491,520	\$2,644,120	9.6%	264,412
2021	\$97,190	\$222,510	\$1,085,820	\$1,443,520	\$1,474,160	\$2,085,310	\$2,105,650	\$2,116,960	\$2,257,030	\$2,265,460	\$2,273,190	\$2,411,530	15.5%	241,153
2020	\$83,720	\$256,070	\$1,450,980	\$1,597,760	\$1,609,370	\$1,995,430	\$1,997,180	\$1,997,950	\$2,050,880	\$2,051,660	\$2,054,840	\$2,087,470	3.7%	208,747
2019	\$121,080	\$357,900	\$1,504,660	\$1,628,710	\$1,646,750	\$1,926,020	\$1,930,460	\$1,937,910	\$1,953,500	\$1,954,140	\$1,955,820	\$2,010,510	-1.1%	201,051
2018	\$168,630	\$425,870	\$1,374,840	\$1,493,090	\$1,512,540	\$1,876,580	\$1,885,390	\$1,892,210	\$1,945,520	\$1,951,080	\$1,955,670	\$2,032,980	13.0%	203,298
2017	\$32,650	\$236,939	\$1,099,584	\$1,278,775	\$1,301,335	\$1,622,635	\$1,629,225	\$1,636,885	\$1,664,685	\$1,668,165	\$1,672,765	\$1,799,065	7.4%	179,935
2016	\$92,072	\$219,020	\$999,082	\$1,158,219	\$1,168,827	\$1,415,769	\$1,418,574	\$1,420,520	\$1,450,134	\$1,453,118	\$1,458,388	\$1,674,866	5.6%	197,043
2015	\$120,352	\$250,079	\$1,108,417	\$1,280,687	\$1,290,241	\$1,531,683	\$1,532,431	\$1,533,349	\$1,550,247	\$1,553,571	\$1,555,211	\$1,585,539	-4.4%	186,534
2014	\$155,703	\$306,646	\$1,090,754	\$1,290,496	\$1,294,661	\$1,602,233	\$1,606,177	\$1,607,656	\$1,627,283	\$1,631,235	\$1,632,417	\$1,657,789	-10.7%	195,034
FY23 data as of 1/20/2023 Pending: CC, DO, LI, NY, and WP														
12 Counties pay quarterly: CC, CH, DO, ES, HU, LA, LI, LY, NY, PE, ST and WP														
*Claim payments in June 2016 are skewed due to early payments ahead of \$2 fee increase														



NDOM Reserve Balance by Week for FY19 - FY23

(as of 1/20/2023)



CMR-Division of Minerals - 2021-2025 Budgets and Forecasts (as of 1/20/2023)

Revenue									
GL #	Description	FY21 Actuals	FY22 Actuals	FY23 Authority	FY23 YTD	FY23 Forecast	FY24 Forecast	FY25 Forecast	Remarks
2511	Balance Forward Previous Year	1,871,712	2,624,665	3,031,285	3,031,285	3,031,285	2,529,148	2,475,830	
3578	BLM Grant	202,473	200,000	200,000	144,201	200,000	200,000	200,000	BLM grant funding AML work. \$200k grant awarded 9/6/21, anticipate similar amount thru FY25
3580	USFS Assistance Agreement	28,039	80,349	150,000	0	80,000	80,000	80,000	USFS assistance funding AML work
3584	NPS Grant		77,787			0	0	0	National Park Service funding for AML work (unknown future funding)
3654	Oil Production Fee	20,508	22,668	37,907	17,916	36,000	36,000	36,000	\$0.15 per bbl fee for oil production annually (\$0.05 from 12/20 - 10/21)
3717	Oil Permit Fees	2,500	4,400	3,300	1,000	2,000	2,000	2,000	Permit fees for new oil and gas wells
3718 & 3727	Mining Claim Fees	2,411,550	2,644,100	2,114,150	2,119,930	2,750,000	2,640,000	2,534,400	Mining Claim fees @ \$10/claim filing, forecast for FY23, -4% for FY24, -4% for FY25
3736	Geothermal Fees	143,850	156,550	160,800	19,400	164,000	164,000	164,000	Annual fee and permit fees for geothermal wells and permitting
3740	Dissolved Mineral Resource Fees	0	8,000	2,000	4,000	8,000	8,000	8,000	Permit fees for DMR (lithium brine) well permits
3770	Surface Disturbance Fee (AML)	102,180	92,080	81,740	10,960	92,080	92,080	92,080	\$20 per acre fee for new mine surface disturbance, FY23=12-year avg.
4011	Copy Machines - Sales to Public	15	0	27	0	0	0	0	Copying charge for Public Records Request
4027	Publication Sales (AML signs)	1,556	2,937	1,210	3,196	4,000	4,000	4,000	AML signs sold at office
4218	Credit Card Rebate		294			294	294	294	
4311	Medallion Royalty Fee	788	253	1,304	0	253	253	253	Fee for minting of medallions with State seal remitted to NDOM
4326	Treasurer's Interest	12,998	24,971	40,990	11,156	24,971	24,971	24,971	Interest we receive for money deposited with Treasurer
4620	Transfer from Recl. Bond Pool	63,695	58,057	80,793	0	58,057	58,057	58,057	Fee from Bond Pool for NDOM Management
4669	CARES Act Reimbursement	10,320	0			0	0	0	Federal funds used to offset pandemic related expenditures
	REVENUE TOTAL	\$4,872,185	\$5,997,111	\$5,905,506	\$5,363,044	\$6,450,940	\$5,838,804	\$5,679,886	
Expenditures									
CAT #	Description	FY21 Actuals	FY22 Actuals	FY23 Authority	FY23 YTD	FY23 Forecast	FY24 Forecast	FY25 Forecast	Remarks
01	Personnel (Sal.,WC, PERS,OT)	1,156,212	1,183,314	1,315,261	593,873	1,342,893	1,519,797	1,608,225	FY22/23 is as in Leg-Approved Budget plus \$40k (OT), 1% COLA (FY23), 8% COLA in FY24, 4% COLA in FY25, plus \$30k retirement payout ('23), FY24 +86k new GIS (9
02	Out-of-State Travel (Staff, CMR)	0	16,381	21,228	9,576	21,228	33,642	38,357	FY23 as in budget, FY24/25 as proposed
03	In-State Travel (Non-AML)	2,084	11,966	12,900	5,039	12,900	15,425	15,425	Travel, lodging and per-diem within State, as in budgets
04	Carson Operating Expenses	95,031	105,272	113,134	51,676	113,134	122,992	122,992	Rent, Operating supplies, as in budgets
05	Equipment	0	1,210	1,706	860	1,706	3,960	3,999	Desks, chairs, as in budget
08	CMR Travel (In-State)	422	1,712	7,128	0	7,128	7,128	7,128	As in Budget
09	Special Projects (Mackay, NBMG)	209,936	152,016	539,207	146,841	539,207	187,400	144,200	FY23 \$97.2k (NBMG-base contract), \$75.6k (FY23 NBMG-Lithium and RRV), \$27k (PDAC), \$5k (AME), \$15k (NvMA Ed), \$15k (McCaw), \$38.2k (NBMG Mining District Files Scanning); FY24-\$97.2k (NBMG base), , \$43.2k (NBMG Soda Lake Geo), \$47k (PDAC/AME/NvMA Ed); FY25-\$97.2k (NBMG base), \$47k (PDAC/AME/NvMA Ed)
14	Las Vegas Operating Expenses	32,667	41,420	46,442	30,256	46,442	41,552	42,479	As in budgets
17	Fluid Minerals	7,583	12,986	11,983	8,597	11,983	18,955	18,955	Field expenses for OGG and DMRE, as submitted in State Budget
18	AML Support (per diem, trucks, fuel, AML supplies and travel, SOSA supplies)	146,764	134,367	239,174	77,440	239,174	263,091	263,091	Up to 8 summer interns and 4 winters FY23-25; includes one new truck each year
25	CARES Act Expenditures	10,320	0			0	0	0	
26 & 82	Computer and IT	43,754	34,411	30,429	10,215	30,429	45,113	24,132	Computer hardware/replacements; EITS services and support
30	Training	4,721	5,075	6,764		6,764	8,225	8,225	ESRI and other training
39	AML Enhancements(contracts, equip.)	481,463	1,133,857	1,076,806	418,108	1,076,806	1,005,000	955,000	\$800k/yr contracted AML closure and related work. \$50k/yr CL Cty revisits (thru 24), \$30k LV UTV (FY23), \$50k/yr geo analysis, \$75k/yr cultural surveys, \$10k/yr helicopter surveys, \$20k/yr billboards, \$120k digital media campaign (FY23)
42	Public Agency AML Securing			400,000	0	400,000	0	0	Any unspent funds from FY23 would be transferred to FY24
87 & 88 & 89	Cost Allocations (State, Purchasing, AG)	96,085	90,693	71,998	39,191	71,998	90,693	90,693	Purchasing assessment, AG cost allocation, State cost allocation
	EXPENDITURE TOTAL	\$2,287,042	\$2,924,679			\$3,921,792	\$3,362,974	\$3,342,901	
86	Reserve - Balance Forward to Next Year	\$2,624,665	\$3,072,432			\$2,529,148	\$2,475,830	\$2,336,984	
			\$1,467,809			\$568,252	\$794,343	\$665,534	Reserve Amount in excess of "50% of Expenditures" guidance



REQUEST FOR MATCHING FUNDS FOR GBSSRL EQUIPMENT ON NGGDPP GRANT

JAMES FAULDS, DIRECTOR AND STATE GEOLOGIST

UNIVERSITY OF NEVADA, RENO

COMMISSION ON MINERAL RESOURCES

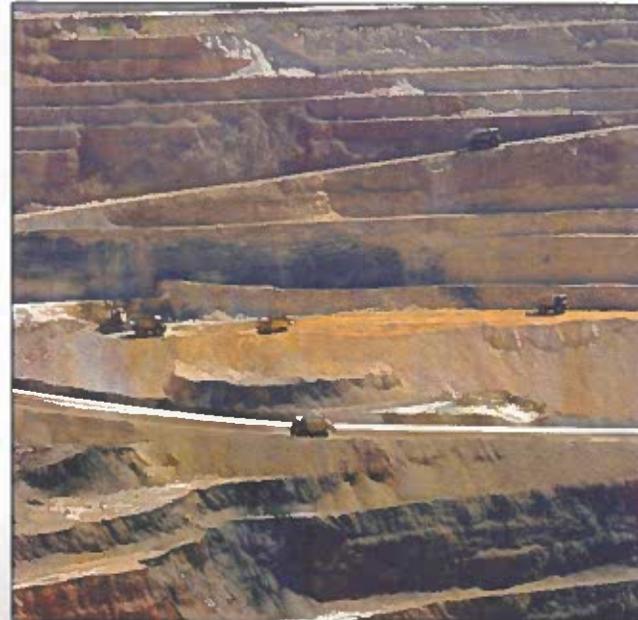
FEBRUARY 1, 2023

NGGDPP GRANT – REQUEST FOR MATCHING FUNDS

- National Geological and Geophysical Data Preservation Program administered by the USGS
- Purpose of NGGDPP
 - Data preservation
 - Data digitizing
 - Data rescue
 - Data organization and dissemination
- Requires 1:1 match
- Funding in recent years has increased significantly with major enhancement through FY25 thanks to Bipartisan Infrastructure Law:
 - \$8.7M in FY22 and \$5M/year to FY25 compared to \$1.3M base funding
- Grants to state surveys have grown from ~\$30k per year to \$100-\$300+k
- Equipment purchases now permitted
- Match requirement difficult for small to moderate sized state geological surveys, such as NBMG
- NBMG 2023 Proposal: \$260,661 requested
- Lacking match for equipment part of request
- Equipment request focused on enhancing GBSSRL and expanding storage capacity in Stead:
 - **Stereo microscope with computer and LCD display** to facilitate education and analyses of rock samples, cuttings, and core; **\$6,300**
 - **Handheld Laser Induced Breakdown Spectroscopy Analyzer (LIBS)** for analysis of critical mineral elements, including lithium, in core, cuttings, and rock samples; **\$41,375**
 - **Storage containers and construction** at Stead to house core, cuttings, and documents that cannot be stored at GBSSRL, which is near capacity; **\$102,804**
 - **Digital storage and infrastructure** (dedicated network attached storage): Server to house tens of terabytes of data; **\$7,516**
 - **Total = \$157,995**
- Lacking **\$61,679** in match

MINE WASTE PROGRAM (NEW NATIONAL PROGRAM)

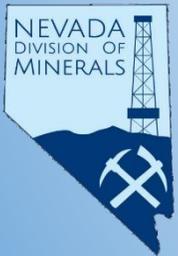
- Funded by Bipartisan Infrastructure Law as part of EarthMRI program
- Administered by the USGS
- Program announcement will be released by next week
- Funding for state geological surveys to catalogue and characterize mine wastes
- Opportunity for NDOM and NBMG collaboration



McCaw School of Mines

Projector System Update

**Commission on Mineral
Resources Meeting**
February 1st, 2023



Garrett Wake
Nevada Division of Minerals
702-486-4344
gwake@minerals.nv.gov
minerals.nv.gov



Overview

1. May 2022 CMR Proposal
2. Video Production/Donation
3. Location and Design
4. Equipment List
5. Questions

1. McCaw School of Mines – May 2022 Proposal

- McCaw School of Mines Foundation requested \$15,000 in hardware and \$35,000 - \$60,000 for production services to create a video-projection based modern mining exhibit during the May 2022 CMR meeting.
- CMR approved up to \$15,000 for hardware contingent upon receiving outside funding for video production services by December 2022.



May 5, 2022

Nevada Commission on Mineral Resources
Attn: Chairperson Josh Nordquist
400 W. King St., Suite 106,
Carson City, Nev. 89703

To the Nevada Commission on Mineral Resources,

The McCaw School of Mines Foundation respectfully requests the Nevada Commission on Mineral Resources' approval to allocate funding for the creation of a modern mining multi-media projection exhibit. Educating the public on the diversity of career paths, including technical trades and college degrees, the safety methods used to protect miners, and the environmentally considerate yet effective processes are some of our goals of this exhibit.



- audio support system
- Support hardware systems
- 3-D video footage with accompanying audio tracks
- Red/Blue 3-D participant glasses (reusable)

The initial video content would showcase on-site modern mining techniques in the areas of drilling, blasting, mucking, ground support, milling/processing and reclamation.

The location for the first multi-media projection unit would be in one of our existing rooms inside our simulated underground mine as shown below. These walls can accommodate a video screen of up to 9 feet.



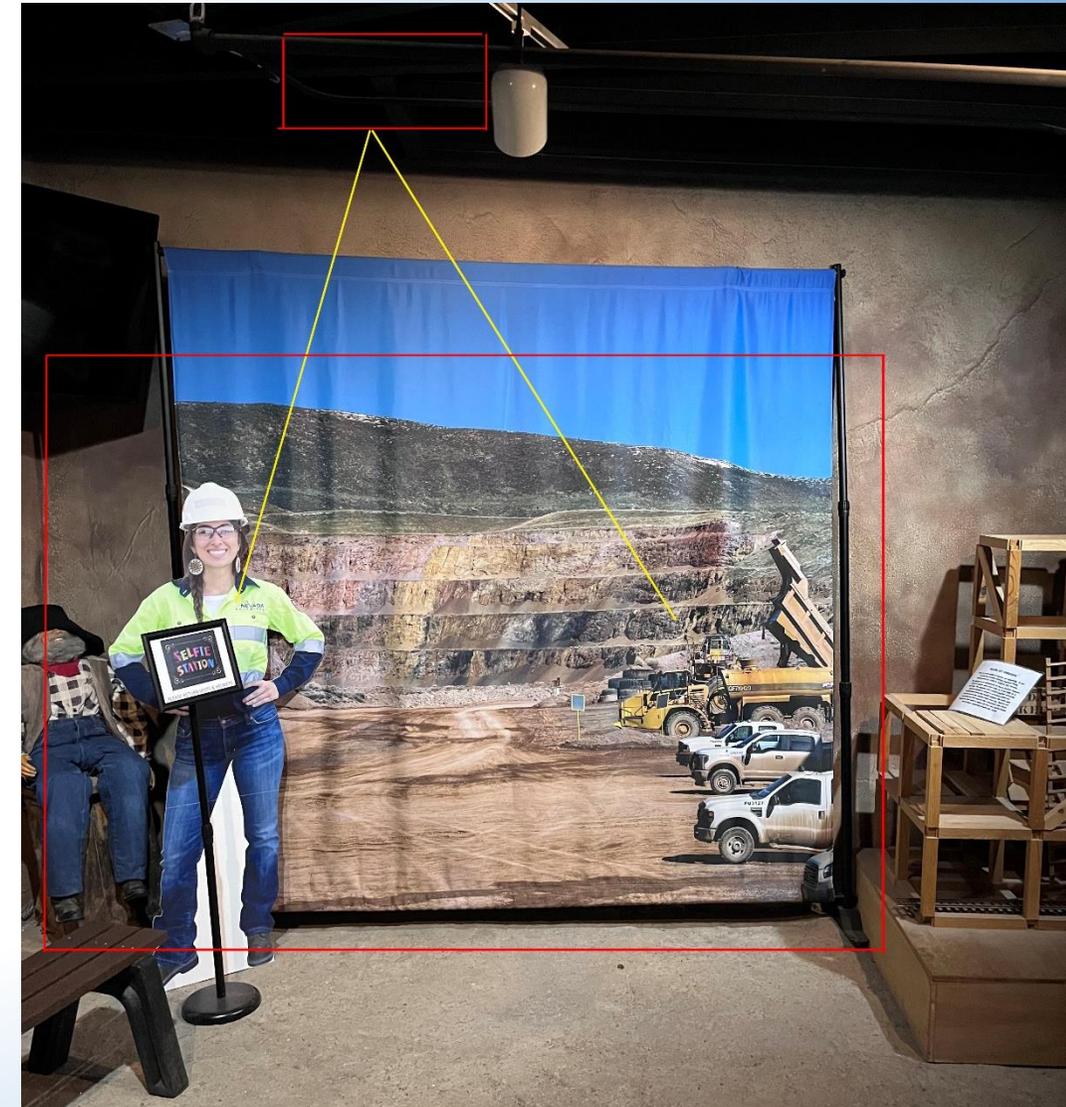
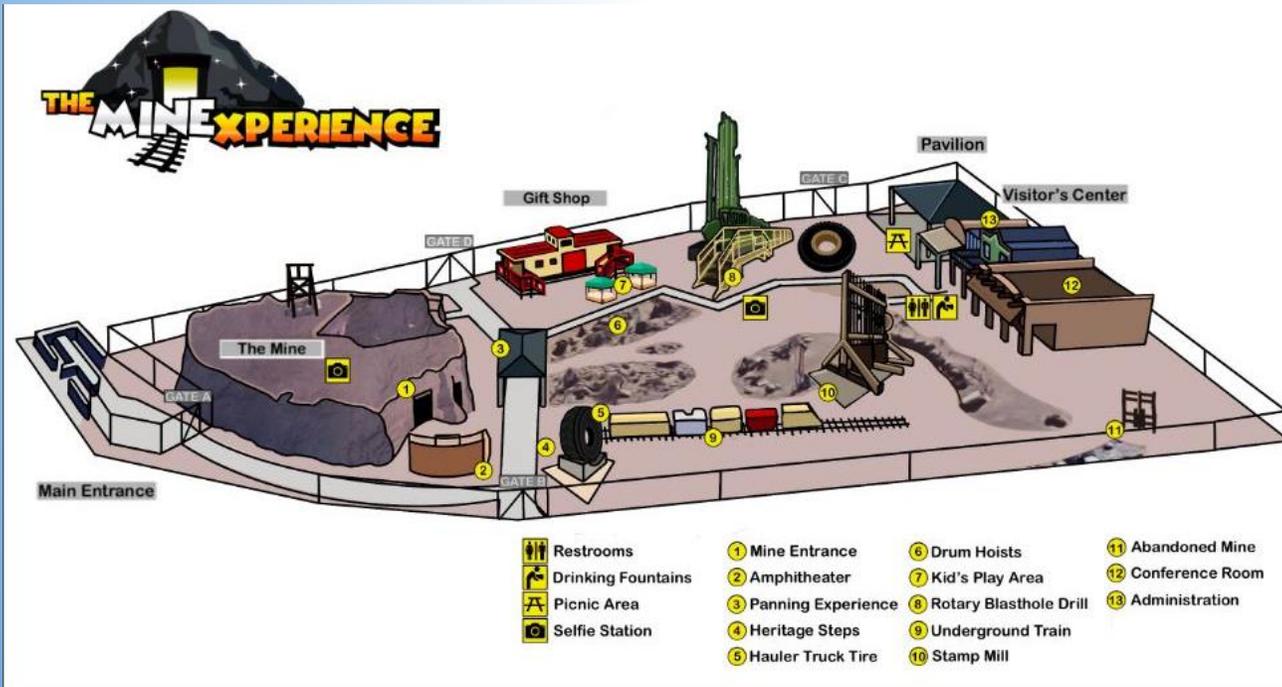
2. Video Production / Donations

- McCaw reached out to Nevada Gold Mines, Coeur Rochester and Kinross Gold Corp. to request high-resolution video footage to be used for a life-size video exhibit at the Mine.
 - All three companies expressed interest in the project. NGM and Kinross forwarded contact information to their respective video production contractors.
 - Kinross did have recent footage, but not recorded at a resolution higher than 1080p.
 - NGM had recent footage shot at 4k resolution and shared ~11 minutes of edited video.
- Currently working on editing the supplied footage into one 3-5 minute video to be used in the Mine.
 - Concurrently developing a voiceover script to be used in the final cut of the first video for display.
- McCaw has secured the necessary video content to display a life-sized video of modern mining showing entry, drilling, blasting (prep), mucking, ground support, milling and pouring Dore.



3. Location and Design of Exhibit

- Several locations are suitable for the exhibit, each meets the necessary requirements (ceiling mounting, space, ceiling power, etc.)
- Board of Directors meeting on 1/27/2023 to discuss location and allocation of Foundation funds for installation.



4. Equipment List

• BenQ LU935ST Short-Throw Laser DLP Projector.....	\$3,999.00
• Yamaha 5.1-Channel Home Theater System	\$669.95
• BrightSign HD Video Player.....	\$510.00
Museum quality video player for push-button content	
• Museum Tech 4-Button Interface.....	\$265.00
• Elite Screens MaxWhite 135“ 4K Projector Screen.....	\$217.00
• Museum Tech Illuminated Pushbutton (\$31 ea. x 4).....	\$124.00
• HDMI Cables (\$35 ea. x 2).....	\$70.00
• Sandisk 256GB MicroSDXC Memory Card.....	\$36.99
Total.....	\$5,763.93

*note: several items listed as “sale” price as of 1/14/2023

Questions

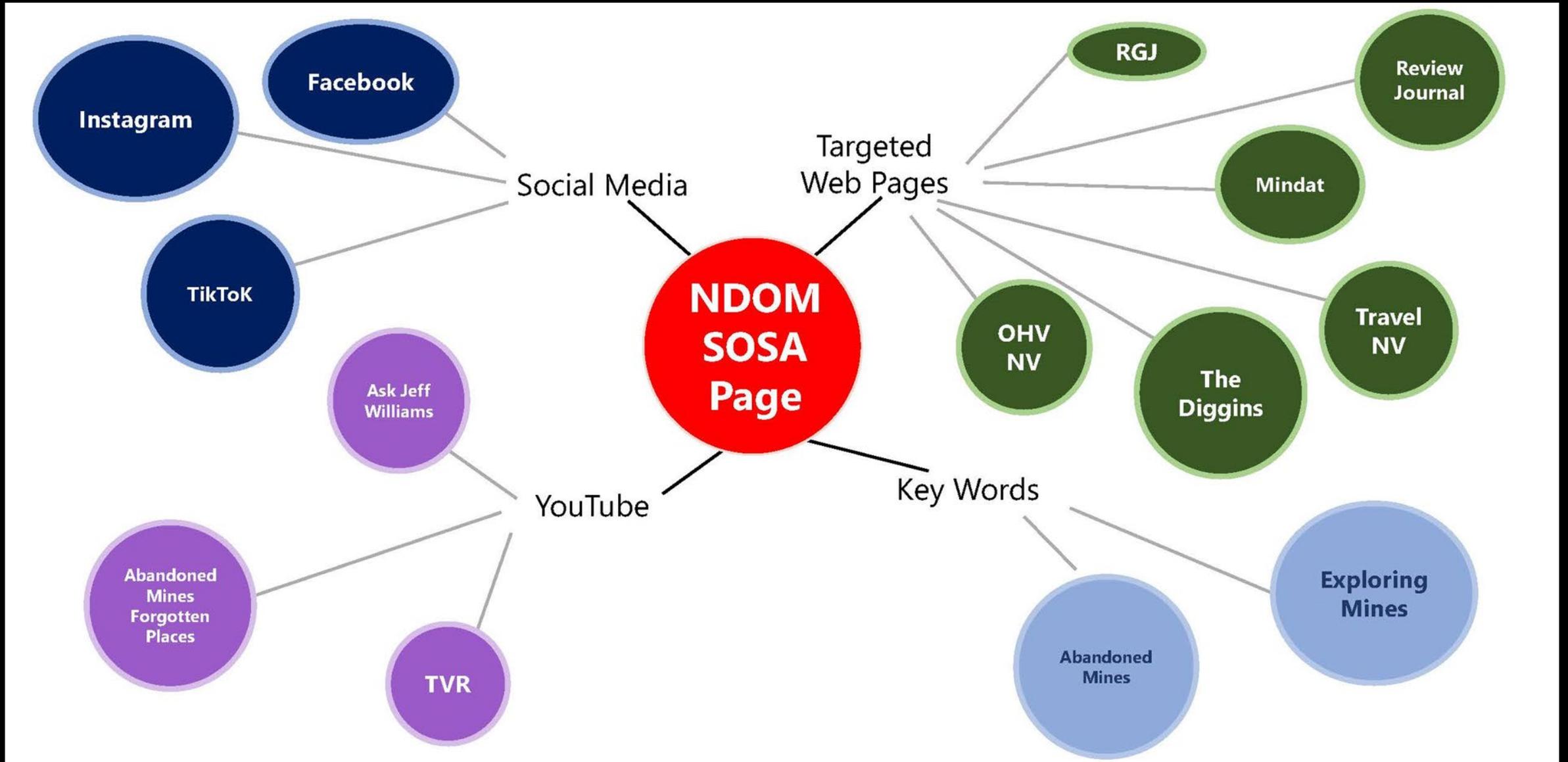
**STAY OUT STAY
ALIVE
DIGITAL
MARKETTING
CAMPAIGN
UPDATE**

**COMMISSION ON
MINERAL
RESOURCES**

FEBRUARY 1, 2023



CAMPAIGN OUTLINE



A man wearing a grey hoodie and orange-tinted sunglasses is climbing a rock face. He is holding a rope and looking down. The background is a textured rock wall.

YOUTUBE

**310,000+ Video Views
Generated Total**

**King of Bad Ideas Full Video (1:09) –
24,000 Views**

The Hitchhiker (0:16) – 97,000 Views

Electric Fence (0:16) – 86,000 Views

Bridge Out (0:16) – 104,000 Views

1,772,414 Impression Served on YOUTUBE



TARGETED WEB PAGES

**1,975,400 Video Views
Generated Total**

10,000 New Users to NDOM Webpages

1,600,000 Viewed to Completion

4,200,000 Impression Served

**HITCHHIKING
PROHIBITED**

Social Media

25,000% Increase in Page Visitations

NDOM Content reached 1500 User

Content Reposted by state (other states) and federal AML programs

AVG of 5 new follows daily

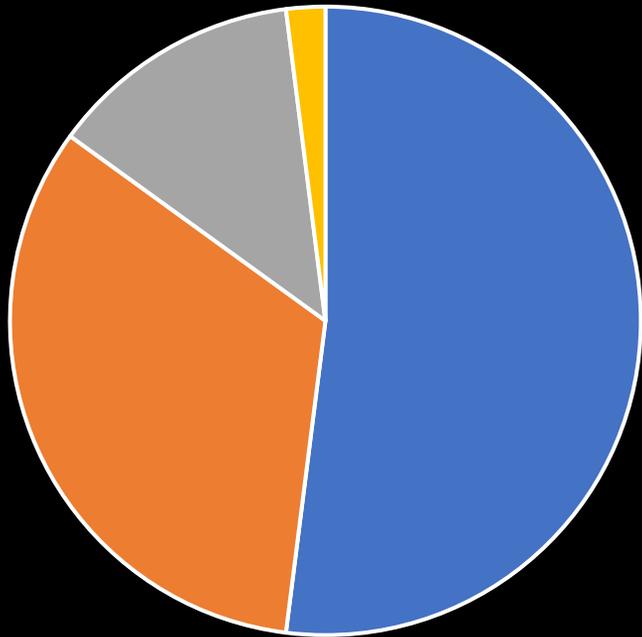
A person wearing orange overalls stands next to a white pickup truck on a gravel road. In the foreground, a large sign on two metal posts reads "HITCHHIKING PROHIBITED". The background shows a desert landscape with mountains under a clear blue sky.

**HITCHHIKING
PROHIBITED**

Demographics and Geographics

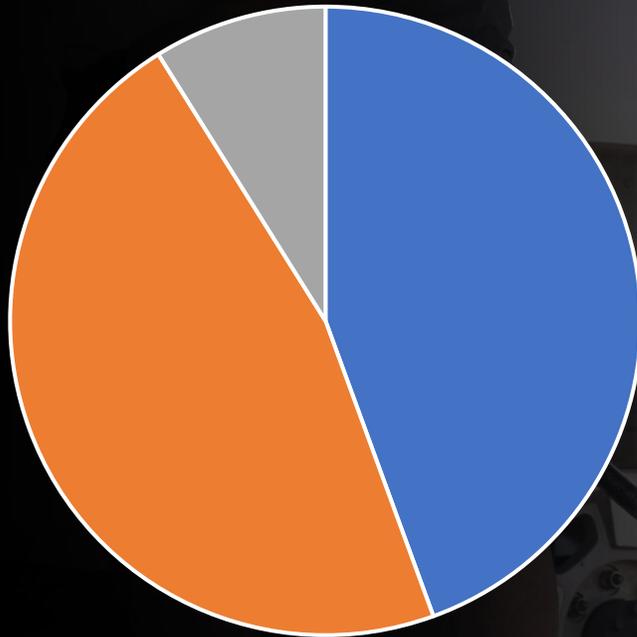
2.3 Million Views TOTAL

Interactions by Device



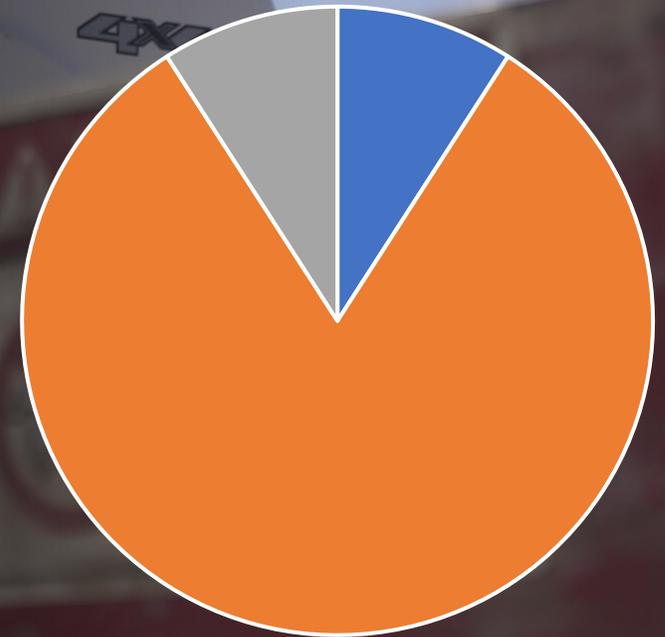
■ Mobile ■ Computers ■ Tablets ■ TV Screens

Interactions by Age



■ 18 - 24 ■ 25 - 34 ■ 34 - 44

Locations



■ NV ■ CA ■ UT

JIMMYKING.NET

Recommendations

Continue Current Engagement

Annual Digital Campaign

Long-term Content Development





NEVADA BUREAU OF MINES AND GEOLOGY: UPDATE ON PROJECTS SUPPORTED BY CMR-NDOM



JAMES FAULDS, DIRECTOR AND STATE GEOLOGIST

UNIVERSITY OF NEVADA, RENO

COMMISSION ON MINERAL RESOURCES

FEBRUARY 1, 2023

SUMMARY OF PROJECTS – FY 22 & FY23

- Commission has 2-year contract with NBMG to produce:
 - Mineral Industry Reports
 - Archive well logs and cuttings
 - Conduct special projects
- Major FY22-23 projects:
 - Mineral industry reports and sample curation - \$37,800
 - Sample curation and related activities at GBSSRL - \$21,600
 - Scanning and updating of oil, gas, and geothermal well logs
 - Archiving of oil, gas, and geothermal cuttings
 - Special projects in FY22/23
 - Lithium Report
 - Railroad Valley project
 - Exploration Survey
 - Mining District Files

FY22 Projects	Award	Expenditures	Remaining
MI Reports	\$37,800	\$37,800	0
Sample Curation	\$21,600	\$21,600	0
Lithium Report*	\$37,800	\$10,666	\$27,134
Railroad Valley Report**	\$37,800	\$7,805	\$29,995

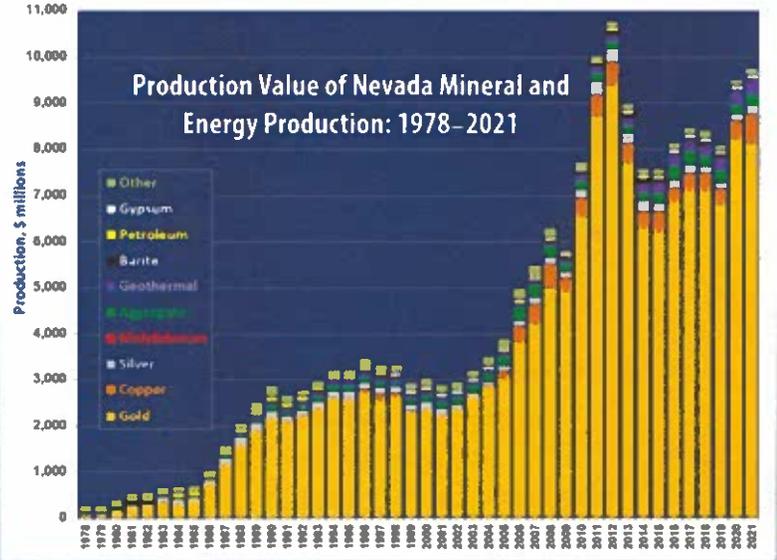
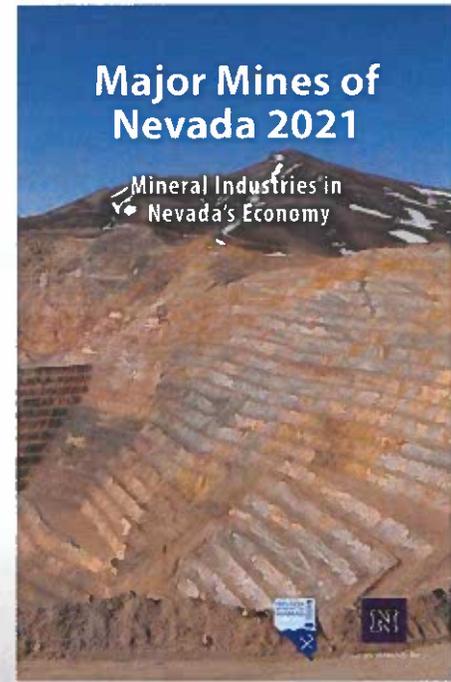
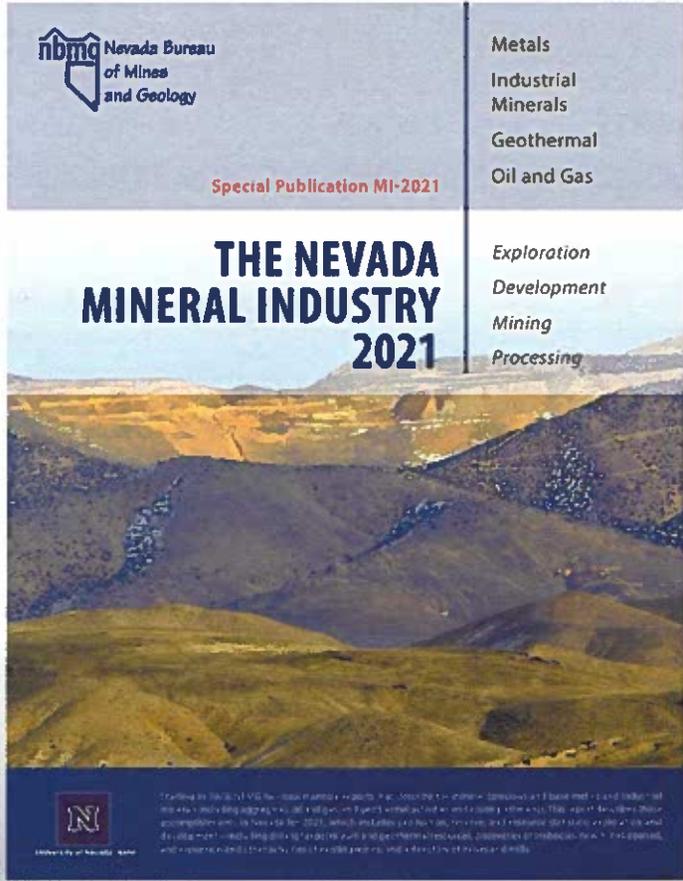
*No-cost extension through June 2023

**Most work scheduled for FY23

FY23 Projects	Award	Expenditures	Remaining
MI Reports	\$37,800	\$37,800	0
Sample Curation	\$21,600	~\$5,000	\$16,600
Exploration Survey	\$37,800	~\$4,502	\$33,298
Mining District Files	\$38,232	\$15,642	\$22,590

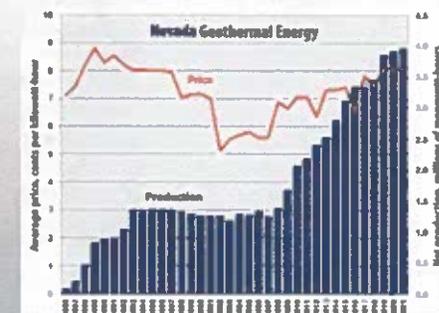
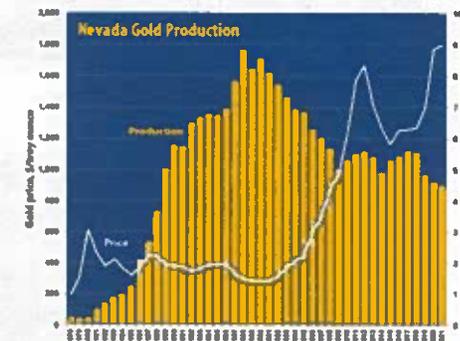
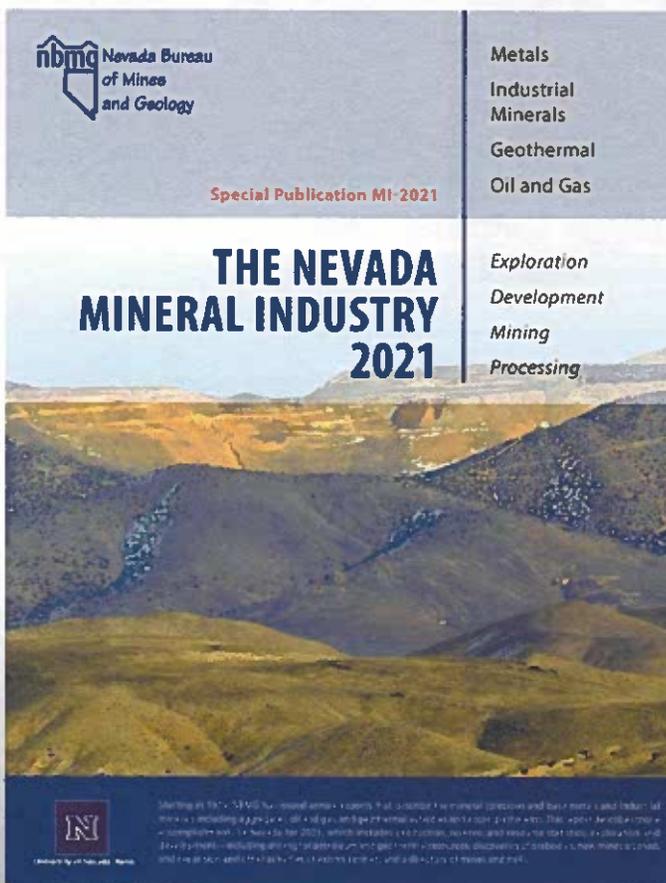
MINERAL INDUSTRY REPORTS

- \$37.8k allocated and expended
- Expended on staff and publications
- Completed and released 2021 Major Mines of Nevada.
- Completed and released 2021 MI report.



MINERAL INDUSTRY REPORT – 2021 HIGHLIGHTS

- Value of mineral and energy production - \$9.35B
- Second in nation in nonfuel production
- Gold – 4.5M ounces down 2.8% from 2020
 - \$8.10B
 - 4.6% of world's gold in 2021
 - Nevada makes U.S. 5th largest producer in world
 - 42 year long gold boom
- Nevada led nation in barite production (\$27.3M)
- Only state producing lithium (\$41.7M)
- Other major producers:
 - Copper - \$687M
 - Aggregate - \$235M
 - Geothermal - \$319M
 - Silver - \$156M
- Diatomite (\$51M) – 1st in nation (36%)
- Geothermal energy – 2nd in nation



SAMPLE CURATION JULY '21 TO JUNE '22 ACTIVITIES

• Staffing

- Manager: Emily O'Dean
- Publication Sales Manager: Charlotte Stock
- Retired Geologic Information Specialist (October '21): David Davis
- New Geologic Information Specialist: Rachel Micander
- New Administrative Assistant (July '22): Gabriela Villar
- 2021-22 Student Workers: Mads Miller, Tim Watts, Katie Nicholes, Michael Knobloch, and Camdyn Newcomb

• Oil and gas

- 1 new permit received and scanned
- 8 boxes of cuttings received

• Geothermal

- 27 new permits received
- 128 boxes of cuttings received
- New geothermal mineralization display in lobby

• Data Donations and Acquisitions

- 53 boxes of miscellaneous data rescued from the State Mine Inspector's office with the help of NDOM
- Various donations received from retired exploration geologists
- 20 boxes of maps and 10 boxes of Nevada records rescued from Gold Royalty Inc.
- All donations now organized into new GBSSRL Accession Management System



GBSSRL DIGITAL CURATION

• Digitization and database development

• Core inventory and photography project began in 2021

- 1,200 boxes of core have been inventoried, bar coded, and photographed
- Tables added to NBMG subsurface relational database
- Web application to be developed in 2022
- Pilot core scanning project with TerraCore in 2022

• Ongoing Mining District File digitization

- 300 new files added to the GBSSRL online collections
- With collaboration with digital services, ~20,000 files will be added in 2022-23

• Well log digitization

- 200 temperature and geophysical logs digitized and added to the NBMG databases

• Develop, maintain, and enhance web applications

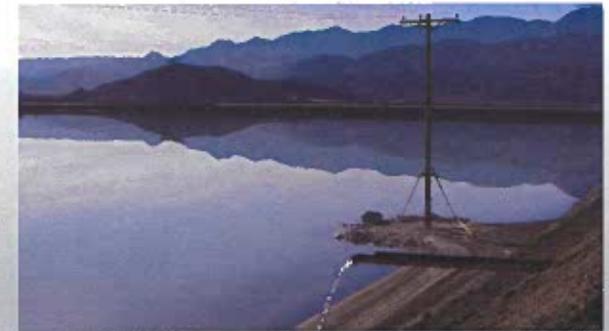
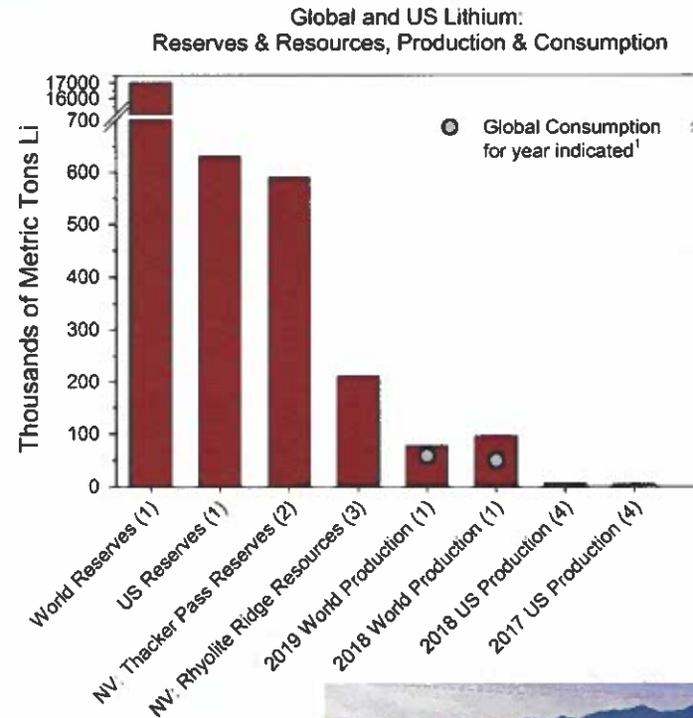
• Updated web applications include:

- Geothermal clearinghouse updates with newly digitized logs
- Nevada Mineral Explorer updated with new data from NDOM and NBMG
- GBSSRL Collections System updated with Mining District Files scanned in 2021
- GIS web services and interactive web maps available for much GBSSRL data – more being added continuously



LITHIUM REPORT PROJECT

- Lithium one of 35 critical minerals – *non-fuel minerals or mineral material essential to the economic and national security of the U.S.*
 - Rechargeable batteries for electric autos and power storage
 - Aluminum-Lithium alloys for aerospace industry
- U.S. has only a fraction of Li global reserves
- Global production has increased 142% since 2014
- Nevada plays critical role
 - Two deposits could double U.S. reserves
 - Only U.S. production from Clayton Valley Li brine operation (Albemarle)
 - ~5,000 metric tons annual production from Clayton Valley
 - Tesla factory uses 24,500 metric tons annually
 - U.S. relies heavily on imports



LITHIUM REPORT PROJECT

• **Proposal** – In response to growing interest, USGS and NBMG will produce Lithium in Nevada General Interest Report – Led by Lisa Stillings of the USGS

• **Objectives:**

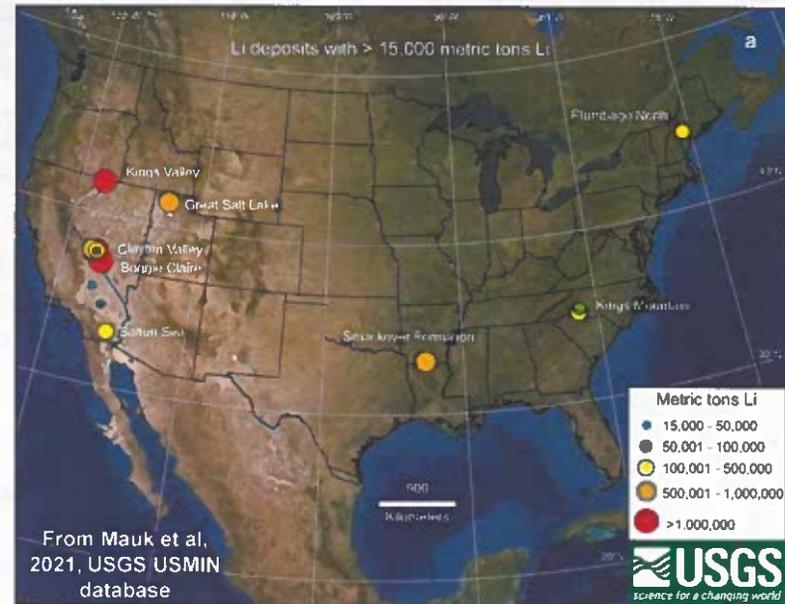
- Describe global geochemical cycle of Li and its geological occurrences in Nevada and the Great Basin.
- Describe geological models for processes of lithium deposition
- Describe types of mineral resources that host Li globally, with a focus on deposits found in NV and the Great Basin (i.e., Li brines and clays).
- Compare and contrast characteristics of Nevada Li resources to others in the U.S. and globally
- Nevada-centric scientific understanding of Li mineral resources
- Engage general-science reader by offering interesting photos, graphics, field trip suggestions

• **Report information sourced from:**

- NBMG MI Reports
- NDOM and NBMG open data websites
- USGS databases and reports
- Industry Technical Reports (e.g. N143-101)
- Published literature

• **Budget (\$37,800):**

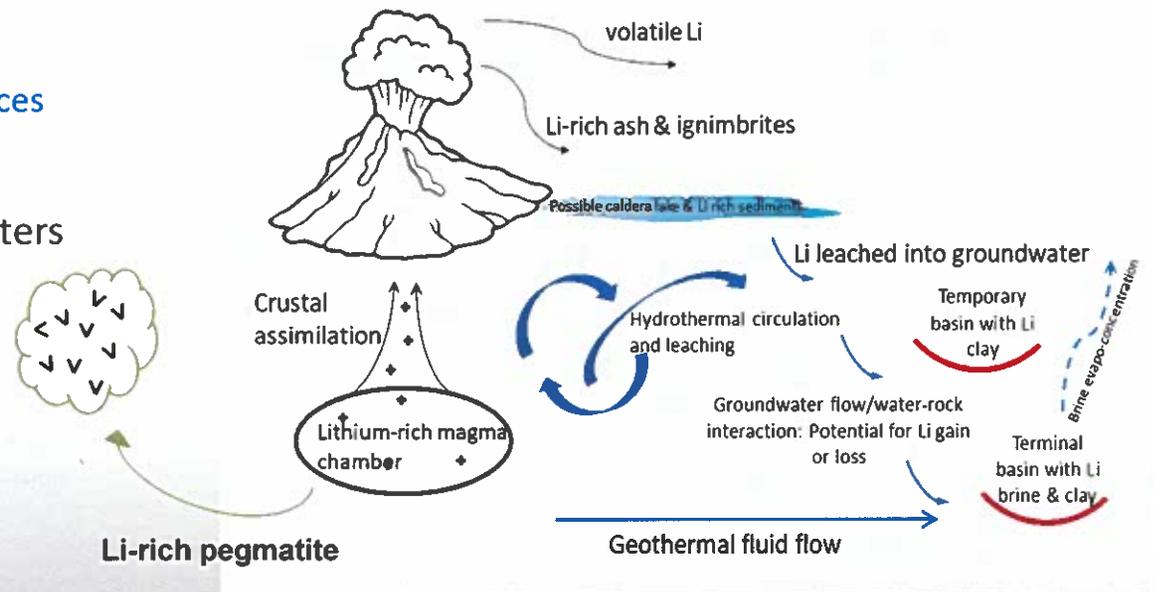
- NBMG staff assisting in data organization
- NBMG cartography for digitizing datasets and preparation of figures, maps, and report



LITHIUM REPORT – ORGANIZING STRUCTURE

- Conceptual model of lithium geochemical cycle with focus on Nevada resources
- Nevada resources:
 - Clays and evaporites in sedimentary sequences
 - Basin brines
- Li in volcanic materials and geothermal waters are source of Nevada’s lithium deposits

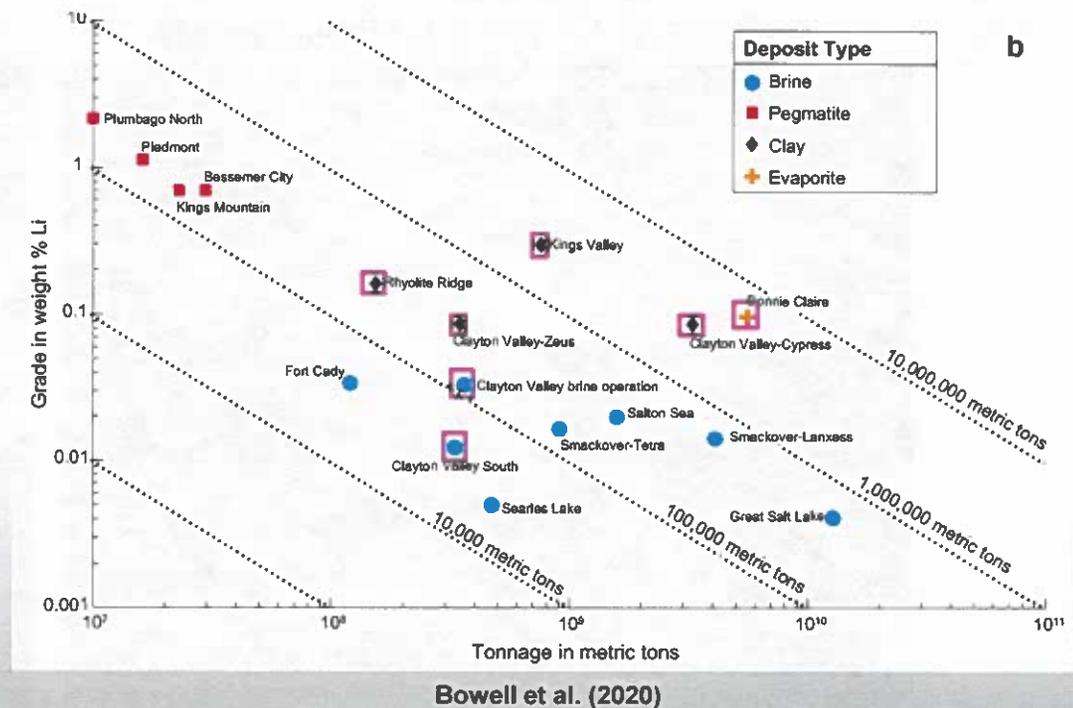
Li Deposit Pathways



LITHIUM REPORT – PROGRESS TO DATE (OUTLINE)

- I. General intro, Li as a critical mineral and economic uses
- II. Geochemical cycle of Li—source of Li to the crust, where found at the Earth's surface., Li mobility in groundwater
- III. Li in NV and Great Basin
 - A. Volcanic rocks
 - B. Stream sediments? (using the new NURE-HSSR data)
 - C. Soils
 - D. groundwater
 - E. geothermal water
 - F. Importance of structural setting
- IV. Li resources in Nevada & Great Basin
 - A. Clayton Valley
 - B. Clay resources – McDermitt, Rhyolite Ridge, Clayton Valley
 - C. other (Bonnie Claire evaporites)
- V. Comparison of Li resources in NV to other resources, globally

Currently working to update Li resource estimates for NV deposits in relation to other US deposits:



Travel in May 2022 to Clayton Valley, Rhyolite Ridge, and Tonopah for drone photography



Li clay, Esmeralda Formation, Clayton Valley



Li clay-Searlesite (boron) layer, Cave Spring Formation, Rhyolite Ridge

RAILROAD VALLEY PROJECT

- Geologic map and cross sections compiled by **Don French and Jerry Walker**
- Represents decades of work
- Layers included in map:
 - Geology at 1:63,360 scale
 - Gravity data
 - Oil and gas wells
 - Few seismic reflection profiles
 - Soil-gas surveys
 - Interpretation of geology at ~25 Ma
 - Isopach map of Neogene basalt
- Database of 300 wells
 - Location
 - Formation tops
 - Formation-test data
 - Select well log data
 - Source-rock analyses
 - Core descriptions
 - Paleontology reports
 - Monthly production reports
- Supplemented by strat column, well log evaluations of reservoir quality, and graphs showing geothermal regime
- Most comprehensive subsurface datasets for any basin in Nevada
- Detailed update provided 01/23; now working with NBMG cartography group to provide maps and other features to generate GIS database



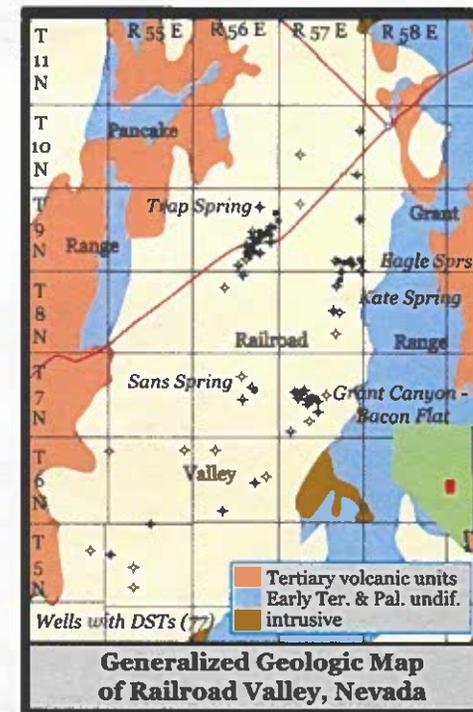
RAILROAD VALLEY PROJECT

- **Major Objective:** Publish geologic map, select cross sections, and report
- **Benefits:**
 - Oil and gas exploration in Great Basin region aided by documentation of an analogue for areas with less data.
 - Extensive subsurface dataset will improve basic geologic understanding of similar basins in region.
 - Map and report will provide basis for assessing the potential of analogous areas in Nevada when land-use policy is under consideration.
 - Archival function for some data that would otherwise be lost.
- **Budget (\$37,800):**
 - NBMG staff assisting in data organization
 - NBMG cartography for digitizing datasets and preparation of figures, maps, cross sections, and report
 - Small amount of compensation for Don French and Jerry Walker



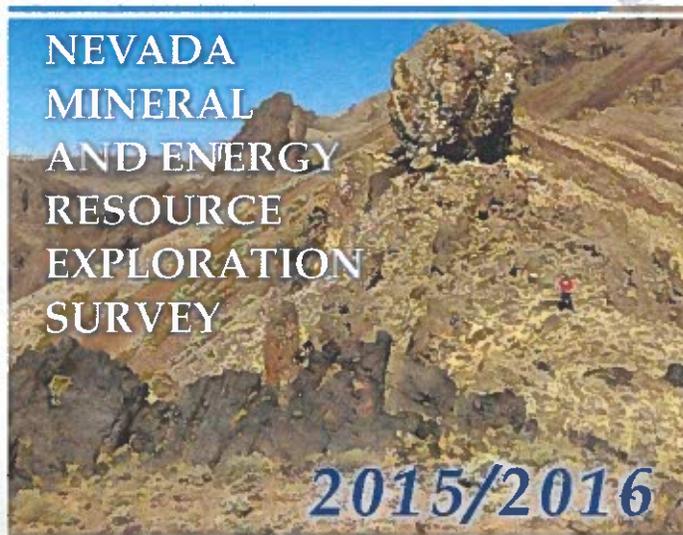
RAILROAD VALLEY PROJECT – PROGRESS TO DATE

- Initial work on main E-W cross section – one of most labor intensive parts of project
- Compilation of temperature logs to establish thermal regime of basin
 - 77 wells with drill-stem tests
 - 58 wells with wireline logs
 - Preliminary plots prepared
- Compilation of age dates nearly complete
- Search for available datasets
 - Seismic lines – some located but may be proprietary
 - Best gravity data – regional USGS
 - Soil-gas data – agreement reached
- Geologic maps from area will be modified to for this project (e.g., USGS map of Grant Range to east)



EXPLORATION SURVEY (IN PROGRESS)

NEVADA BUREAU OF MINES AND GEOLOGY



MICHAEL W. RESSEL AND DAVID A. DAVIS

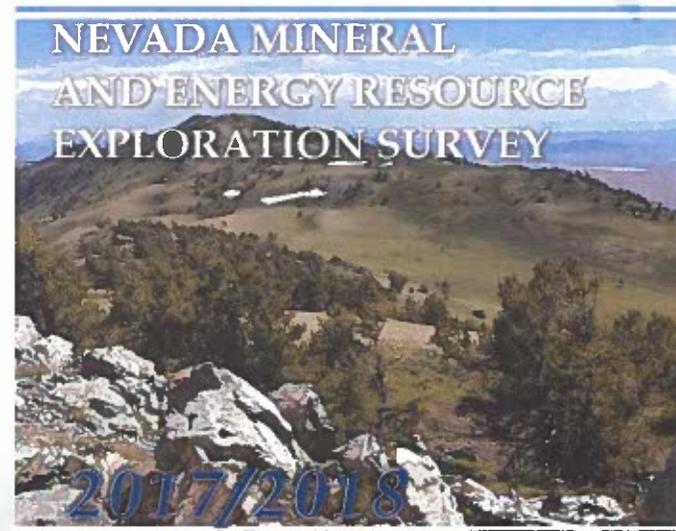
RELEASED FEBRUARY 2017



Nevada Commission on Mineral Resources
Division of Minerals



NEVADA BUREAU OF MINES AND GEOLOGY



MICHAEL W. RESSEL

RELEASED APRIL 2018



MINING DISTRICT FILES PROJECT: DIGITIZING FOR UNIVERSAL ACCESS

- Each year, NBMG receives donations of maps, reports, articles, photographs, assays, productions reports, and information of all aspects of mining in Nevada.
- GBSSRL accessions into its Mining District Files of Nevada Collection.
- Digitally preserves these documents:
 - Reading and evaluating each document
 - Creating searchable standardized digital metadata
 - Scanning the materials
 - Making each digital object accessible
 - Making the data available on internet via web applications.
 - Documents commonly accessed by industry professionals, researchers, and members of the public.
- Backlog of ~300 boxes of donated files not digitized.
- Utilizing the Digital Services unit of UNR at Knowledge Center to scan documents.
- Students and staff at the GBSSRL accessioning, prioritizing, enter metadata, making documents accessible, and updating web applications.
- Hiring soft-funded Letter of Appointment in FY23 to assist with various data preservation activities.
- Anticipate digitizing >100,000 pages.
- August 1, 2023 to June 30, 2024. \$38,232

MINING DISTRICT FILES PROJECT: DIGITIZING FOR UNIVERSAL ACCESS

- Progress to date:

- 13 boxes (roughly banker-sized) were delivered to the Knowledge Center (KC) for scanning in late October.
- The KC has hired two students to work on this project who will work ~15 hours a week each, totaling 30 hours/week.
- The KC has estimated they can scan 3 boxes per week, but first round has been slower due to training students.
- A file share has been set up for completed scanned documents.
- Anticipate prioritizing documents rescued from the State Mine Inspector for next round of scanning.

