



BRIAN SANDOVAL
Governor

STATE OF NEVADA
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RICHARD PERRY
Administrator

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COMMISSION ON MINERAL RESOURCES
Legislative Counsel Bureau
401 South Carson St. Room #1214 Carson City, NV 89701

Tuesday, February 20, 2018

9:00 A.M.

AGENDA

CALL TO ORDER

The Agenda for this meeting of the Commission on Mineral Resources has been properly posted for this date and time in accordance with NRS requirement.

ROLL CALL

PLEDGE OF ALLEGIANCE

COMMENTS BY THE GENERAL PUBLIC

Pursuant to N.R.S. 241, this time is devoted to comments by the public, if any, and discussion of those comments. No action may be taken upon a matter raised under this item on the agenda until the matter itself has been specifically included on a successive agenda and identified as an item for possible action. All public comments will be limited to 5 minutes for each person. **ACTION WILL NOT BE TAKEN**

I. MINUTES

- A. Approval of the November 30, 2017 meeting minutes

FOR POSSIBLE ACTION

II. NEW BUSINESS

- A. NBMG Mineral Industry Report for 2016

This report is compiled annually by the NBMG, with assistance from NDOM. The report is funded annually by the Commission. John Muntean will provide a summary of the report, which was published on-time for last year's AEMA annual convention.

FOR DISCUSSION ONLY

- B. UNR-MSM annual \$2 claim fee approval consideration.

Under the current 5-year agreement with the University, the Division designated in annual claim fees to support activities at the Mackay School. This is the last and final payment under the 5-year extension of this agreement, which was approved by the CMR in 2013. The Division has sufficient reserves to cover this item. A letter to the Dean of the College of Science has been prepared informing UNR that the agreement has been fulfilled.

FOR POSSIBLE ACTION

- C. Election by Commission of a Chairman for the next biennium.

The Commission adopted a practice to choose a Chairman every two years at the first quarter meeting in even years.

FOR POSSIBLE ACTION

D. Planning for a Nevada trade booth at PDAC.

FOR DISCUSSION ONLY

The 2018-19 budget included \$35,000 for a Nevada trade booth and presence at the Prospectors and Developers Assn of Canada annual trade show in Toronto on March 4-7, 2018. The scope of the project includes a professionally-designed trade booth that could be used by Nevada State agencies and trade Associations, and travel expenses for two NDOM employees to attend. Garrett Wake is the project manager for this effort, and has been meeting with representatives from NMA, GOED, NMEC, GSN, NBMG and BLM in designing the booth and coordinating efforts. Garrett Wake will update CMR on the current plan.

III. OLD BUSINESS

A. DMRE Regulations Task Force update

FOR DISCUSSION ONLY

A task force was formed by the Commission at the August 24, 2017 CMR meeting to review and provide input as the DMRE regulations progress towards an adoption hearing before the CMR. The task force met on January 30, 2018 and will provide an update.

B. AML work planned for 2018 and Arden Mine closure project

FOR DISCUSSION ONLY

At the August 24, 2017 Commission meeting, the CMR instructed Division staff to increase AML hard closure projects by an additional \$100,000 in 2018. The Division is partnering with Clark County on a hard closure project at the Arden Mine near Las Vegas, and has other projects planned in addition to the summer intern work plan. Rob Ghiglieri will report on the 2018 AML work plan.

C. Land Withdrawals update

FOR DISCUSSION ONLY

Mike Visser will provide an update on Federal land withdrawal activity in Nevada.

D. NDOM Administrator evaluation plan

FOR POSSIBLE ACTION

At the CMR meeting on November 30, 2017, the Commission discussed conducting a biennial evaluation of the Administrator at the 2Q meeting in even years. Commissioners Korpi and Henderson volunteered to help develop the evaluation form and procedure for the first evaluation, which would be at the May, 2018 meeting.

IV. STAFF REPORTS

- 1) Oil, Gas, Geothermal and Dissolved Minerals (OGGDM) drilling Permitting and Activity – Lowell Price
- 2) Mining and Reclamation Bond Pool – Mike Visser
- 3) Administrator Report and correspondence

COMMISSION BUSINESS

- A. Determination of time and place of next CMR meeting

COMMENTS BY THE GENERAL PUBLIC

Pursuant to N.R.S. 241, this time is devoted to comments by the public, if any, and discussion of those comments. No action may be taken upon a matter raised under this item on the agenda until the matter itself has been specifically included on a successive agenda and identified as an item for possible action. All public comments will be limited to 5 minutes for each person. **ACTION WILL NOT BE TAKEN**

ADJOURNMENT

NOTICE TO PERSONS WITH DISABILITIES

Members of the public who are disabled and require special accommodations or assistance at the meeting are requested to notify the Division of Minerals, 400 W. King Street, suite 106, Carson City, NV 89701 or contact Valerie Kneefel at (775) 684-7043 or Email Vkneefel@minerals.nv.gov

I. MINUTES



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401 South Carson St. Room #4100 Carson City, NV 89701

Thursday, November 30, 2017

1:00 P.M.

MINUTES

CALL TO ORDER

1:00 PM by Rich DeLong-Chairman

The Agenda for this meeting of the Commission on Mineral Resources has been properly posted for this date and time in accordance with NRS requirement.

ROLL CALL

Commission	NDOM Staff
Rich DeLong	Rich Perry
Dave Parker	Mike Visher
John Snow	Bryan Stockton
Art Henderson	Rob Ghiglieri
Nigel Bain	Courtney Brailo
Mary Korpi	Lowell Price
	Valerie Kneefel
Dennis Bryan is not present	Lucia Patterson

PLEDGE OF ALLEGIANCE

COMMENTS BY THE GENERAL PUBLIC

No comments at this time by the public

I. MINUTES

A. Approval of the August 24, 2017 meeting minutes

Minutes approved by Nigel Bain

Seconded by Mary Korpi

Unanimously passed

Rich DeLong: Stated that the agenda may be taken out of order to accommodate NDOM staff.

II. NEW BUSINESS

A. Updating of Geothermal regulations

The Division is seeking direction from the Commission to begin the process of updating parts of the geothermal regulations contained in NAC 534A. Portions of regulations of the State Engineer which are

contained in NAC are obsolete and other parts of the geothermal regulations need updating to reflect current technology and practices.

Lowell Price: Proposed update to Geothermal chapter regulations, NAC 534A:

Most of NAC 534A, except for fee portion, has not been updated since 1992. The original chapter was adopted in 1985. Some parts that need updating are:

1. Regulations of State Engineer requiring licensed water well drillers for all geothermal well drilling. Was valid then, but industrial and commercial wells drilled now utilize large rigs that operate 24/7 with skilled professionals on-site.
2. Domestic geothermal wells still need licensed water well drillers.
3. Require drilling rig License to Operate through State Contractor's Board (currently in NAC 534A.110).
4. Five year confidentiality in NDOM regulations (currently in State Engineer)
5. Provide the Administrator the ability to provide a Waiver of Provisions. Specific 'exception' (waiver) authority in NDOM regulations

Administrator enforcement authority needed in certain circumstances, such as the ability to order an operator to plug and abandon a well, terminating the drilling of a well due to unsafe conditions or danger to the environment, and monetary penalties for failure to adequately satisfy an order issued by the Administrator.

Proposed changes and additions to geothermal regulations:

Eliminate provision in NAC 534A.300 that 'all' geothermal wells 'must' be logged with an electrical well log or neutron-gamma ray or similar log below surface casing. Temperature gradient, and possibly some observation wells, should not be required to run electric logs, for the expense of logging could be cost prohibitive during initial exploration drilling. Request usage of well names based on the Kettleman numbering system for all geothermal wells, except domestic and commercial (NAC 534A.330.1) Provide five years of confidential status for data submitted through NAC 534A.350, NAC 534A.360, and NAC 534A.400.

An operator must file logs with the Division within 60 days of a well's completion according to NAC 534A.350. However, NAC 534A.550 requires the operator to file logs within 30 days of the well's completion. It is recommended that NAC 534A.550 be changed to 60 days.

An issue that should be resolved in the regulations:

Are geothermal permits to be issued by the Administrator for wells proposed to be drilled in a non-geothermal resource, such as cold fresh water aquifers (commonly 55 to 65° F) where the fluid is being utilized by a heat exchanger for supplemental cooling and heating? Should a minimum proposed temperature be established for the issuance of geothermal permits? Other language will be updated as necessary.

Procedure to begin updating NAC 534A:

Form a regulation update team and prepare a draft for public workshops.

Nigel Bain: Regarding the low temperature wells, is the water returned to the aquifer? If so, then it would seem you would want to keep that in your records that someone has reinjected.

Lowell Price: Yes. We have been permitting them but not sure if they truly fall under geothermal.

Rich DeLong: on the same topic is the licensed water well driller required?

Lowell Price: Yes.

John Snow: ground source heat pumps and the domestic wells, the current policy of the Commission that has been set by resolution for domestic wells that are associated with an anomalous heat source to be within the scope of the division for permitting and those non-anomalous would not be. We definitely need to address the space heating wells that result from use of colder wells.

Lowell Price: we've interpreted that to mean that if they are using a closed loop or a trombone type system then we do not permit that type of drilling.

John Snow: we have a resolution and the closed loop ground source heat pumps default back to the county building department and or the State Engineer if they are truly going to consume any water or they are truly closed. The trombone systems are for anomalous heat systems. The other point to make a note of is the pump and dump systems in Southwest Reno. That needs to be taken a look at.

Lowell Price: most of those wells that are using pump and dump systems aren't even permitted through NDOM, they preceded the Division by some time and have never been brought into our system.

Art Henderson: on your idea of not making an electric log in the wells; I think it would be good to have electric logs on any well that's drilled. You would have a point of reference.

Lowell Price: My only concern on that is on temperature gradient wells. A lot of them might even be drilled by a small track mounted rig, just so they aren't impacting the environment on a federal lease. To bring in a logging truck and all would be quite difficult and BLM might even prohibit it. The other aspect of that is the electric logs aren't cheap and it might actually deter exploration if they have to go through that expense per well. I can see why the logging would be beneficial but I'm concerned that it would cut down on exploration activity if we enforce that.

Art Henderson: instead of eliminating, is it possible to keep the electric log and make a clause that allows people not to have to do it under mitigating circumstances. I think what information we have to gain is potentially very valuable

Lowell Price: we can operate under that, assuming that the Administrator would have the authority to waive the requirement. We could incorporate that into the revisions.

Motion to move forward with modifying the Geothermal regulations by John Snow

Seconded by Art Henderson

Unanimously Approved

B. NDOM AML drone

The Division purchased a DJI Phantom 4 Pro drone in August, 2017, and has been testing it to survey AML features in both northern and southern Nevada.

Rob Ghiglieri- presented a PowerPoint presentation:

Background

- USACE demonstration project in 2016
 - Flown using fixed wing UAV
 - Great results for NDEP, not cost affective for NDOM
 - Did not have live view
- NDOM purchased a DJI Phantom 4 pro+ August, 2017
 - Has live view and is affordable
- Anticipated to reduce time in inventory efforts, mainly non-hazards.

– Helps in ability to completely inventory an area

He played a video from drone use in the the Hazen area, and showed the before and after shots to demonstrate the un-inventoried AML.

He also reviewed the new Walker River State Park and the current state of AML hazards:

- Areas surrounding SP includes inventoried and undiscovered hazards
- Backfilled, Bat-compatible closures, fenced & unsecured hazards

Future Projects-

- Drone use for public relations photos and videos of closure work
- Already identified nearly 50 topo quads in 13 separate projects that need drone investigations
- Drone use to help with intern work

Next Steps

- NDOM AML staff need to receive Remote Pilot Certification
 - Certificate is good for 2 years
 - Study guide and sample test
 - Take exam January or February
- Develop drone SOP for staff
 - Incorporate drone use while staff is working with interns
- Possibly purchase second drone for LV office

Rich DeLong: My recollection is that for the non-hazard sites not inventoried currently, that using these drones has the potential to survey a remote area to be able to keep that non-hazard inventory up.

Rob Ghiglieri: yes. As we are going through and surveying, one person is using the Mesa unit and entering the information as we are going. The drone will be taking photos which are geotagged as well. We can now get photos of every site. This is the next step in inventorying an entire area instead of having it partially done.

Rich DeLong: I just want to make sure we aren't compromising any of the past work we have already done.

Rob Ghiglieri: no, not at all.

Dave Parker: how do you save the video information when you get it?

Rob Ghiglieri: Because of the large files size generated by the video, we aren't planning to take many videos

out in the field. We will mostly use the photo capability. The video's we have now will be stored on our work drive.

Nigel Bain: how much will a second drone cost for Las Vegas?

Rob Ghiglieri: with the extra batteries and all about \$2,200.

Rich DeLong: the agenda will be taken out of order at this time to accommodate 2 staff members. We ask Lowell Price and then Courtney Brailo for their staff reports.

III. OLD BUSINESS

- A. Task Force recommendations for a possible \$1 claim fee decrease or alternative to do additional AML hard closure activities in 2018 and 2019. At the August CMR meeting, Chairman DeLong formed a task force to solicit comments from industry.

Rich Perry: went through his PowerPoint presentation:

Task force formed at August 24th CMR meeting

– Dave Parker, Nigel Bain, Rich Perry

- Task force had two conference calls to discuss reaching out to industry and claim holders for input

- Options discussed were:

- Reduce claim fee from \$10 to \$9 per claim for 2019 assessment year (Sept 2018 – Aug 2019)

- Do not reduce claim fees, leave at \$10/claim, and use funds above what is needed in budget to accomplish additional AML hard-closure work. \$1 = appx \$180,000/yr.

- Nigel Bain queried major producers and NVMA

- Rich Perry queried NMEC president Dave Shaddrick

- Dennis Bryan discussed at NMEC board meeting on 11/20.

Nigel Bain: The large scale companies support leaving the claim fee as is and take that money and put it toward the Abandoned Mine Lands program.

Dave Shaddrick (NMEC): My initial reaction was to support reducing the claim fee. Not too long ago, the Division was asking to increase the fee. I think it would be a good idea to give some of that money back for the next year. Claim fees impact explorers. Part of my job at NMEC is to promote exploration of Nevada, and it can be the hardest to do because of the costs. If in fact, there is a cost to the Division of Minerals to reduce the fee for only a year, then we shouldn't do it. But, if it can be done at a reasonable price, then it would be a good thing for exploration in Nevada.

Art Henderson: How long will it take to enact this dollar reduction to move forward with workshops and regulation changes?

Rich Perry: This is relatively simple to change the number, however it would require a public workshop, hearing and regulation change. About a 6 month process.

Art Henderson: what kind of time do we have before we see diminishing returns?

Rich Perry: Mike Visser has done a spreadsheet to show the reduction impact.

Nigel Bain: for the record the large scale mining community recognized that we infuriated the small scale miners when we raised those claim fees during hard times. We are happy to make a compromise.

Richard DeLong: Appreciates what Dave had to say about the PR portion of trying to say that Nevada has lower land costs, however the reality is that the largest portion is the holding costs from BLM fees. The \$1 dollar reduction is 1/2 of 1% per claim, it might actually get lost in the rounding. I do appreciate where you are coming from.

Mike Visser: presented the details of the options for additional AML hard closure work. He went through a spreadsheet. Explained forecasting, these are best guess and predictions. We showing stability of mining claim numbers for a year, then a slight decline and then we are stable again. If we decrease the \$1 claim fee, we will be looking at increasing the fee again in 2020-2025 timeframe. In the scenario 3, we show increased AML hard closures only. These are closure projects that have been priced out and are ready to go.

Rich DeLong: opened up the floor to the public.

Elizabeth Zbinden: had a question regarding the projection of the claim fees going up again in 2020-2025 timeframe.

Mike Visser: yes, that is the estimate if we reduce the fee in FY19 then we should have enough for a year.

Elizabeth Zbinden: if we did not reduce it then will you need an increase later.

Mike Visser: no, we don't think so. We don't want to have more than what our budgeted reserve is set for.

Dave Parker: the problem I'm seeing in reducing the fee, is that we will be going back and forth to the legislation time and time again. It doesn't show much credibility. We should wait until we know more.

Art Henderson: in Tonopah at our last meeting, we talked about this at length, we discussed giving this some time to see where we are at in a couple of years. I think we should increase the guidance. I'm in favor of keeping the fee and putting it toward AML hard closures. We should think of public safety, I think of the hard closures as saving lives.

Mary Korpi: I agree with Commissioner Henderson and the uncertainty of the future. This industry can fluctuate a lot. In regards to the AML side, I think we are discovering more areas that need closures and we will need more funds to do this. It's important to the safety of individuals and to the State.

Mike Visser: there has already been a Commission-approved closure recommendation for Arden that is not included in the spreadsheet costs. We are looking at high recreation areas, such as Sand Mountain and the close proximity to camping sites 10 minutes down the road. These hard closures require a full NEPA assessment, during which you have to have the biological assessment. We are fortunate to have contracts in place and we have the Department of Wildlife doing these without any additional cost to the program. And the cultural has to be done as well. Only after these assessments are done will you know how you are going to do these closures. These have already been done, and we now know what exactly need to be done to close, we are just waiting for funding.

Rob Ghiglieri: I was with the BLM yesterday and this past week and they are planning for a 56% cut to the entire BLM/AML program nationwide. We have relied on the BLM for the past 4 to 5 years for additional AML funding and also from the Forest Service. The Forest Service is looking at cuts up to 60% of their AML program funding.

John Snow: would like to see the fee money be used for AML hard closures.

Rich DeLong: I would like to echo Henderson and Korpi's comments on public safety and saving lives, this is the Division's social license for AML and we don't want to lose sight of that.

Nigel Bain: The Nevada Mining Association would support public safety and putting the fee toward AML hard closures.

Elizabeth Zbinden: is there an end in sight for AML closures?

Mike Visser: 60 years to inventory all the features. Fencing is only a temporary fix and I don't think you can project how long it would take to permanently close all the estimated 50,000 features out there.

Rich DeLong: looking at high hazards and hard closures, is there a possibility to project a shorter timeframe on that?

Mike Visser: we could project that and it would be shorter. However, it's not an efficient way to do it because if you just close the high hazard features then you are returning to that site at a later time and closing the other features next to it.

Art Henderson: I think we should keep an eye on the reserve and keep everything the way it is. My recommendation is to do nothing to change the current claim fee amounts.

Motion made to keep the \$1 claim fee as is and put any additional revenue toward AML closures By David Parker

Seconded by Mary Korpi

Unanimously approved

B. Update on Mineral Withdrawal and Land bills

Mike Visser: Went through page from Amodei website. HR1107 presented early this year but no action has been taken yet. This is the template for Washoe County. When this was first put forth Harry Reid was still in office and he said no lands bill would move forward unless there was a wilderness component to it. That still seems to be the case. He showed a few detailed maps. Wilderness Inventory Units were only supposed to be used for the Ruby Pipeline EIS to assist management decisions during actual pipeline construction not as potential wilderness areas as intimated by Friends of Nevada Wilderness. They have a map that shows these but there are no shapefiles available. Pershing County will become the template for further land bills. Getting these boundaries is really important and is the best way to communicate this issue to the legislature and county commissioners.

Rich DeLong: there is a red boundary noted on the maps, is the brown colored area within the red boundary BLM land proposed to be transferred?

Mike Visser: yes.

John Snow: on those transfers, I've heard the BLM would have the right to retain the mineral estate and sell the surface estate.

Mike Visser: this has been problematic with the BLM before and how they got into the problem with Arden.

- C. Update on Dissolved Mineral Resource Exploration regulations, including Task Force review of draft regulations. At the August CMR meeting, Chairman DeLong formed a task force to review the draft of the dissolved mineral resource exploration regulations for comment and input.

Rich Perry: CMR formed task force at August 24th meeting

– John Snow, Art Henderson, Dave Parker, Rich Perry

• Task Force met on Sept 7th, 2016.

– Reviewed the draft and made edits to produce next draft

• Successive drafts were sent to Task Force members for comments.

• June 9, 2017: A.B. 52 signed by Governor

• July 7, 2017: Regulation working group from NDWR, NDEP, NDOM began meeting weekly

• July 14, 2017: site visit to Silver Peak to witness and discuss exploration drilling.

• Aug 23, 2017: Stakeholder meeting to discuss first draft and collect input. *Stakeholders = those who testified during legislative session*

• Aug 25, 2017: Site visit to see and discuss exploration drilling in Columbus Salt Marsh

• Sep 5, 2017: 2nd draft completed

• Sep 8, 2017: 2nd stakeholder meeting for input

• Sept 27, 2017: 3rd draft completed by regulation working group and submitted to LCB for legal review

• Nov 22, 2017: LCB returns draft

• Nov 27, 2017: Request to operators and explorers sent via email to assist with small business impact study

• Public Workshop: planned for Dec. 21st 9 – noon in Carson City

Additional edits to LCB draft may be made after public workshop

• Regulation hearing for adoption of regulations before CMR tentatively planned for Feb, 2018. 30-day notice required for hearing

• Final step is adoption by Interim Legislative Commission (March, 2018?)

Note: NDOM will begin to regulate dissolved mineral resource exploration on 1/1/2018 by statute. Forms and database will be in place, web site set up.

Bryan Stockton: Spoke to how the regulations will be administered before they are done with the adoption process. January 1 NDOM has the responsibility to regulate the dissolved mineral exploration in Nevada. The Division will have to regulate based on the Statute until the regulations are adopted.

Rich Perry: The State Engineer has ceased issuing mining and milling waivers several weeks ago. So, there is already some backed up demand. We have inquiries about the new process. We will meet with Water Resources. All the mining and milling exploration waivers for wells that were being issued will expire as of about midyear next year, we will be in a transition period for about 6 months. Then we will bring our new process into action. We do have the forms already developed.

Rich DeLong: are the forms on the website?

Rich Perry: there is a draft on the website. In the next week the web-fillable forms will be available.

- D. Toll Processing and Smelting study update. At the CMR meeting in August, the Commission chose this topic for a special report in Fiscal year 2018. The Division discussed this with the NBMG and will present the plan to complete this study.

Rich Perry: Went through the scope of work.

Ore and Concentrate Tolling study for Nevada

Working draft updated 11/30/17

Final product: A publication through the NBMG

Purpose: To determine if there is a need for toll ore and concentrate smelting in Nevada

1. Research and prepare a list of the processing facilities in Nevada and their capacities if applicable and if capacities are available. (For example, capacity of a dump leach may not be applicable.) This would be the “as is”, or current case.
 - a. Precious metals
 - i. Refractory – whole ore roasters, autoclaves, thiosulfate circuits
 - ii. Non-refractory or oxide – Merrill-Crowe, oxide milling, oxide heap leach

- b. Base metals
 - i. Concentrates
 - 1. Where are they being shipped to now, at what transportation cost?
 - 2. Where are the smelters that accept toll concentrates located now?
 - a. Arizona/NM, Canada, Mexico, Asia
 - ii. SX-EW circuits
- 2. Prepare a list of the known resources within the State that might benefit from ore or concentrate tolling and production.
 - a. Precious metals
 - i. Example: higher grade resources that can pay for shipping by truck or rail
 - b. Base metals
 - i. Example: copper, Mo deposits that might be economic if they could ship to an in-state processing facility by truck or rail
- 3. Evaluate the potential for a toll ore or concentrate facility in Nevada based on #2 above. Address at a high level the following:
 - a. Is there a need for toll precious metals processing?
 - b. Is there a need for a concentrate processing in NV?
 - i. Would this be a smelter, or some other type of circuit such as autoclaving following by SX-EW?
 - ii. Is there a type of circuit that might process both precious metals and base metal concentrates and ores?
- 4. Summary and Conclusions
 - a. If a base metal concentrate processing facility is feasible, what types of downstream industries might locate near it?
 - b. What infrastructure would be required for
 - i. Precious metals ore tolling
 - ii. Base metals processing
 - iii. These would include such things as power, water, rail, natural gas, etc.
 - c. Conclusions – should ore tolling or smelting be pursued further?
 - i. What entities might be interested in pursuing this further?

Deliverables:

Task 1 – List of processing facilities.

Task 2 – List of resources.

Task 3 – Evaluation of potential for toll milling and concentrate processing.

Task 4 – Summary and Conclusions.

Mary Korpi: Knows Tom DeMull and he is absolutely qualified to do this job. Also, with this survey coming out, it would be good to get out in front of the Nevada Mining Association Board and let them know what's behind it so they are looking for it and willing to see and provide the information to everybody.

Rich Perry: I will get with Tom and meet with NvMA.

John Snow: does the PE Exclusion for the RFP also negate having to go to interim finance? It's over \$25,000.

Mike Visser: No we don't have to go to IFC, it's already an approved budget item.

- E. Update on information available and public use of open-data website
 - Lucia Patterson: Went through a PowerPoint and then brought up the internet to show the open-data web site. NDOM has been gathering active claim data from LR2000 at the end of October for the last four years. The purpose of this graph is to show claims data and statistics from the same snapshot in time. There have been a few changes to the website to accommodate topics and data sets available on the open-data site. These include lithium claims, public land withdrawals, FRTC, and sage grouse habitat. We're seeing increasing interest and use of this site.

IV. STAFF REPORTS

1) Oil, Gas and Geothermal drilling Permitting and Activity – Lowell Price

Lowell reviewed general OGG permitting and activities. Oil exploration activity is slow but we are seeing some renewed interest in Nevada. Geothermal exploration activity is stable with some permitting by USG at San Emidio and Ormat's McGinness Hills is expanding with a Phase 3 addition with 4 new production wells.

John Snow: on the McGinness Hills Phase 3 is that incremental 74 megawatts from 4 wells?

Lowell Price: that's correct. They permitted 4 wells that are dedicated to Phase 3.

John Snow: can you verify that?

2) Mining and Reclamation Bond Pool – Mike Visser

3) NDOM at AEMA – activities and new trade show exhibit- Courtney Brailo

Courtney Brailo: Went through the new trade show display and activities planned at AEMA.

COMMISSION BUSINESS

A. Determination of time and place of next CMR meeting.

February 20, 2018 (Tuesday). Hearing in the morning and CMR meeting in the afternoon. No tour the next day.

B. Next Commission vote on Chairman: Q1 meeting, 2018

Rich DeLong: Wants to initiate a biennial vote on the Chairman. Would like to do the vote next meeting.

C. Biennial evaluation of Administrator by Commission: Q2 meeting, 2018

Rich Perry: Suggested the Administrator be evaluated by the Commission starting at the meeting in May. He will come up with a couple of forms but will need a couple of Commissioners to take a look at them. How I've seen these work in the past is that each form has a few questions on them that are filled out by the Commission before the meeting so there is some sort of framework. Biannual evaluation would be good to make this standard practice.

Art Henderson: volunteered to help with the forms.

Mary Korpi: also volunteered to help with the forms.

Rich DeLong: I think the HR person at the Division should compile the comments.

COMMENTS BY THE GENERAL PUBLIC

There were no comments made by the public.

ADJOURNMENT

3:49 pm.

II. NEW BUSINESS

II. A NBMG Mineral Industry Report for

2016

THIS SECTION IS INTENTIONALLY LEFT BLANK.
HAND OUTS AND PRESENTATION WILL BE GIVEN AT THE
MEETING.

II. B UNR-MSM annual \$2 claim fee
approval consideration



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RICHARD PERRY
Administrator

February 20, 2018

Dean Jeff Thompson
Mackay School of Earth Science and Engineering
College of Science
University of Nevada, Reno

Dear Jeff:

For the past ten years the Commission on Mineral Resources has collected mining claim fees to support the Mackay School of Earth Science and Engineering. During the period 2008 through 2018, the total collected and remitted to the University under the inter-local contract between public agencies totaled \$3,992,906.00. As we know, these monies were critical in getting the School through difficult budget years when enrollment was low. We are happy to see that University budgets were largely restored during the last two legislative sessions and enrollment in Mackay programs has increased and stabilized. These monies were used wisely to rescue some programs at the Mackay School.

The 5-year renewal of the inter-local contract for support to the Mackay School of Earth Science and Engineering, approved by the Commission in 2013 has expired. The 2018 final payment will be \$359,870. Under the terms of the inter-local contract, we are notifying the University that the contract is now terminated.

Since this contract was executed in 2008, Nevada State agencies have been directed to have specific deliverables when contracts with educational and research entities are made. With this in mind, last year the Commission negotiated a new two-year contract with the Nevada Bureau of Mines and Geology which funds two designated reports each year and assistance in curating geothermal and oil well cuttings housed at the NBMG Gold Building. This two-year contract provides funding of \$85,000 per year and has specific delivery dates and measurable progress reports.

We hope that the good faith of the last ten years, and the NBMG contract will enable the University to continue directing a portion of the Marigold royalty to permanent endowments at the Mackay School.

Sincerely,

Richard DeLong
Chairman, Nevada Commission on Mineral Resources

MINING CLAIM PAYMENT TO BOARD OF REGENTS

FY 2009	PV DOC #	DATE PAID	AMOUNT
	PV 5000000851249	1/22/2009	\$180,500.00
	PV 5000000889339	6/8/2009	\$243,922.00
FY 2010	PV 5000000981971	5/10/2010	\$391,302.00
FY 2011	PV 5000000103300	11/10/2010	\$379,554.00
FY 2012	PV 5000000116538	4/24/2012	\$394,178.00
FY 2013	PV 5000000123857	2/26/2013	\$449,544.00
FY 2014	PV 5000000133008	3/19/2014	\$436,814.00
FY 2015	PV 5000000140398	2/25/2015	\$390,068.00
FY 2016	PV 5000000148024	2/25/2016	\$373,068.00
FY 2017	PV 5000000156277	3/14/2017	\$394,086.00
FY 2018			\$359,870.00
TOTAL			\$3,992,906.00

For FY 18

claims 179,935

Final payment \$359,870.00

II. C Election by Commission of a Chairman for the next biennium

NRS 513.011 Definitions. As used in this chapter, unless the context requires otherwise:

1. "Administrator" means the Administrator of the Division.
2. "Commission" means the Commission on Mineral Resources.
3. "Division" means the Division of Minerals of the Commission.

(Added to NRS by [1977, 1148](#); A [1983, 2070](#); [1993, 1681](#); [1999, 3627](#))

NRS 513.023 Creation; appointment of members; terms of office.

1. The Commission on Mineral Resources, composed of seven members appointed by the Governor, is hereby created.
2. The Governor shall appoint:
 - (a) Two persons who are familiar with large-scale mining;
 - (b) One person who is familiar with the production of oil and gas;
 - (c) One person who is familiar with exploration for and development of minerals;
 - (d) One person who is familiar with the situations unique to small-scale mining and prospecting;
 - (e) One person who is familiar with the development of geothermal resources; and
 - (f) One member to represent the general public.
3. The members of the Commission shall serve terms of 4 years, except when appointed to fill unexpired terms.

(Added to NRS by [1983, 2067](#))

NRS 513.025 Composition. The Commission consists of:

1. The members of the Commission appointed pursuant to [NRS 513.023](#); and
2. The Division.

(Added to NRS by [1999, 3626](#))

NRS 513.033 Compensation of members.

1. Each member of the Commission is entitled to receive a salary of not more than \$80, as fixed by the Commission, for each day while engaged in the business of the Commission.
2. While engaged in the business of the Commission, each member and employee of the Commission is entitled to receive the per diem allowance and travel expenses provided for state officers and employees generally.

(Added to NRS by [1983, 2068](#); A [1985, 434](#); [1989, 1717](#))

NRS 513.043 Officers.

1. The members of the Commission shall select a Chair from among their number who shall serve at the pleasure of the Commission.
2. The Administrator shall serve as Secretary of the Commission and shall keep the minutes and audio recordings or transcripts of its proceedings.

(Added to NRS by [1983, 2068](#); A [1993, 1682](#); [2005, 1414](#))

NRS 513.053 Meetings; quorum; minutes, audio recordings and transcripts.

1. The Commission shall meet at such times and at such places as is specified by the call of the Chair or a majority of the Commission, but a meeting of the Commission must be held at least once every 4 months. In case of emergency, special meetings may be called by the Chair or by the Administrator.
2. Four members of the Commission constitute a quorum for transacting the business of the Commission.
3. The minutes and audio recordings or transcripts of each meeting of the Commission must be filed with the Division.

(Added to NRS by [1983, 2068](#); A [1993, 1682](#); [2005, 1414](#))

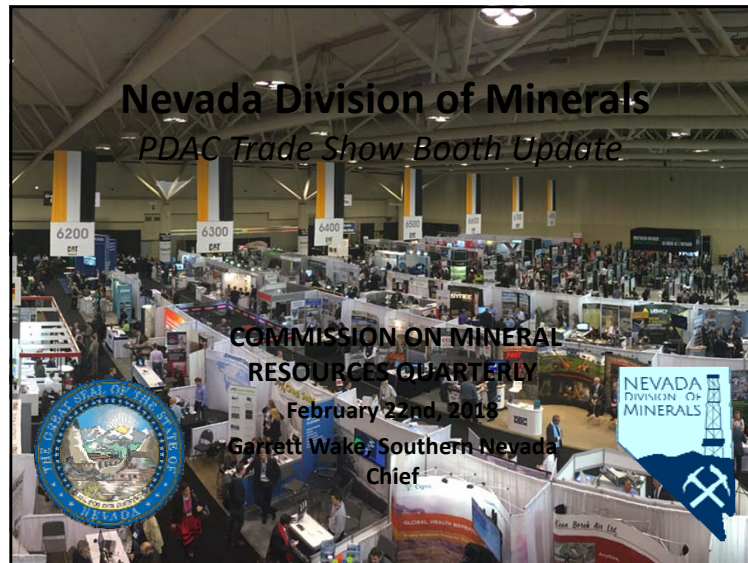
NRS 513.063 Duties. The Commission shall:

1. Keep itself informed of and interested in the entire field of legislation and administration charged to the Division.
2. Report to the Governor, the Mining Oversight and Accountability Commission created by [NRS 514A.040](#) and the Legislature on all matters which it may deem pertinent to the Division, and concerning any specific matters previously requested by the Governor or the Mining Oversight and Accountability Commission.
3. Advise and make recommendations to the Governor, the Mining Oversight and Accountability Commission and the Legislature concerning the policy of this State relating to minerals.
4. Formulate the administrative policies of the Division.
5. Adopt regulations necessary for carrying out the duties of the Commission and the Division.

(Added to NRS by [1983, 2068](#); A [1999, 3627](#); [2011, 2698](#))

II. D Planning for a Nevada trade booth at

PDAC

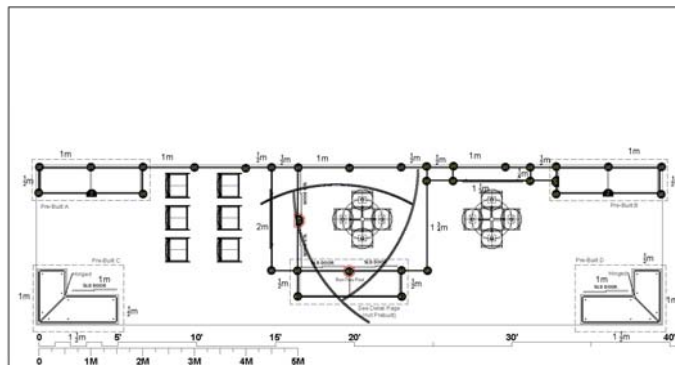


Increasing Nevada's Presence

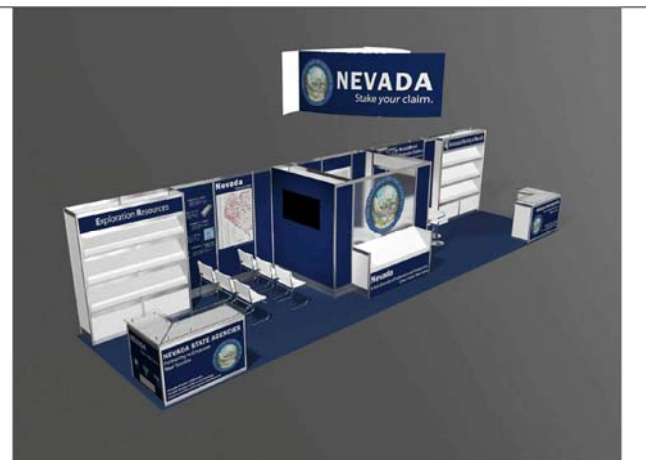
- **Mission Statement:** *To encourage and assist in the responsible exploration for and the production of minerals, oil, gas, and geothermal energy which are economically beneficial to the State.*
- Nevada booth offers a “one-stop shop” for individuals and companies looking for information on exploring and producing minerals within the State.
- Several partnering organizations: NDOM, NBMG, BLM, NMA, GSN, NMEC, GoEd.
- This approach sets our state apart from many of the other states, provinces and countries in attendance – we have industry experts from several areas of expertise, not just government.
- More than 22,000 attendees from 100+ countries.



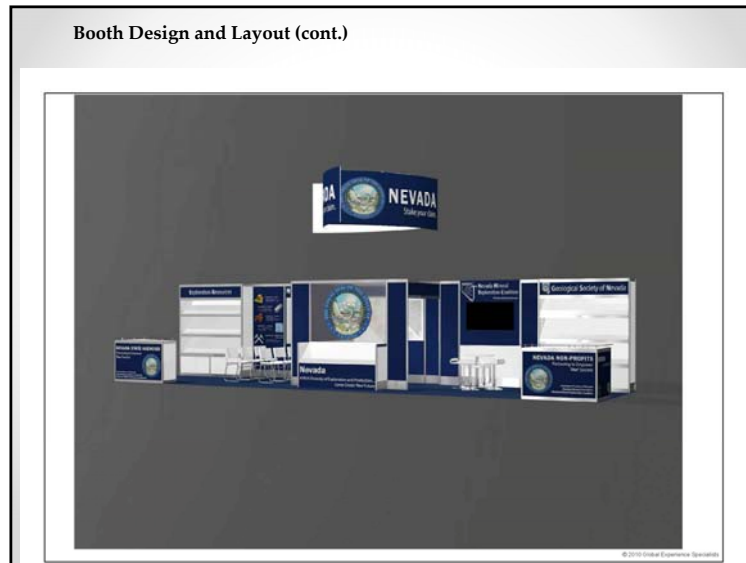
Booth Design and Layout



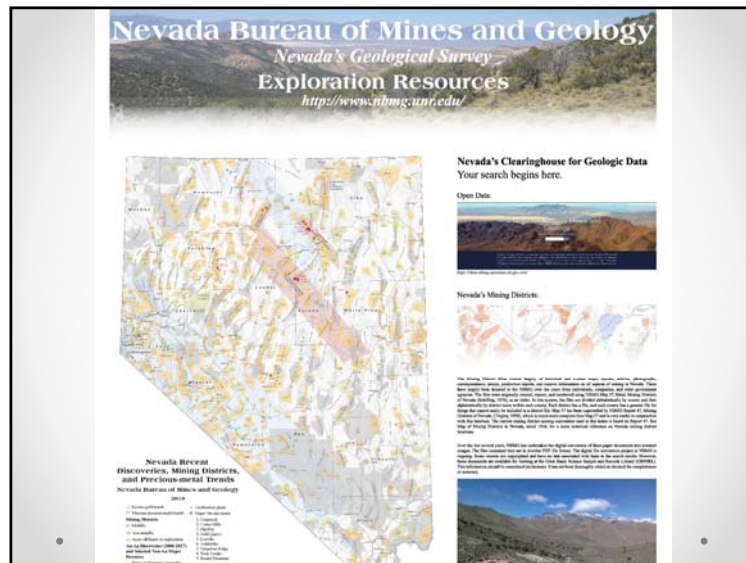
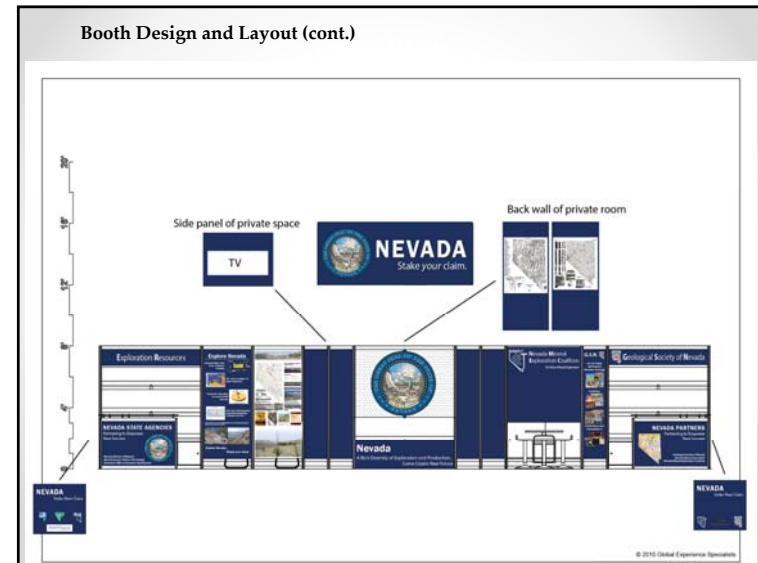
Booth Design and Layout (cont.)



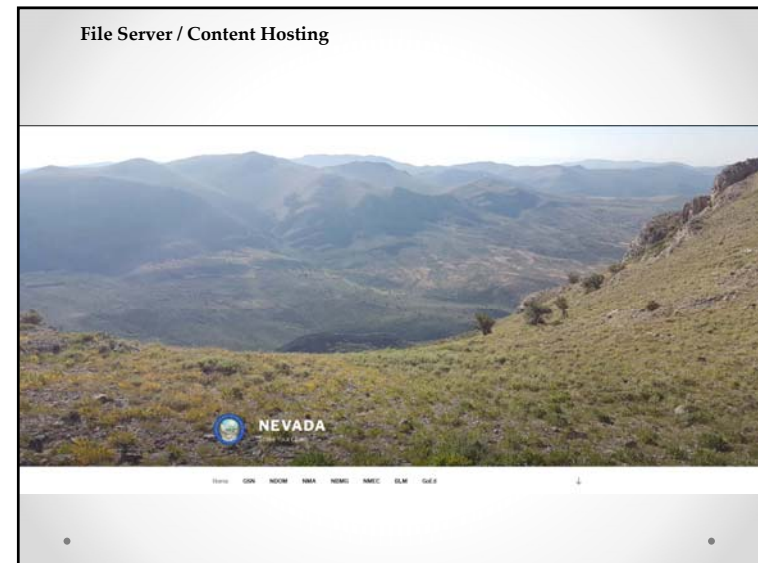
Booth Design and Layout (cont.)



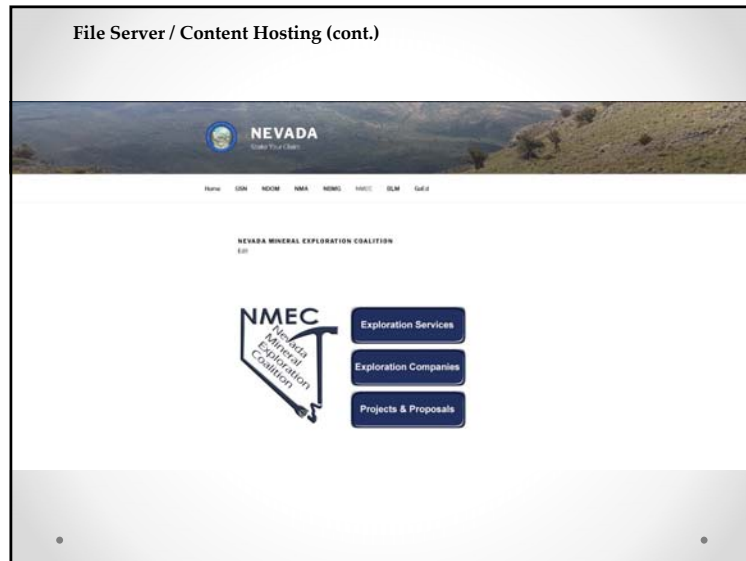
Booth Design and Layout (cont.)



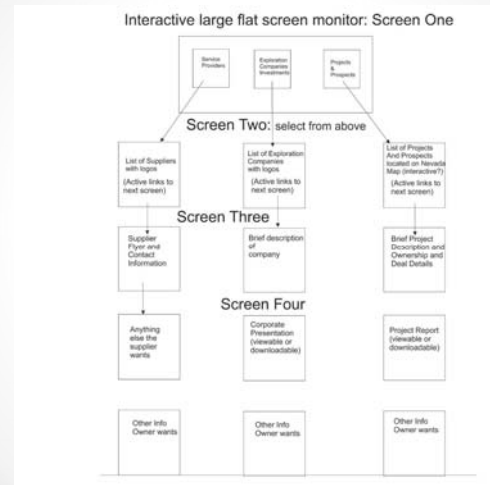
File Server / Content Hosting



File Server / Content Hosting (cont.)



File Server / Content Hosting (cont.)



File Server / Content Hosting

- Allows organizations immediate access to important documents.
- Professional, effective content hosting requiring only a laptop, monitor and thumb disk.
- Each organization will have their own sub-page to reference information they feel is important.
- Using "Wordpress" site building software
 - Free, easy to manipulate, can make changes on the fly.
- NDOM/NMA patterning to create platform
- Draft version available, though NMA is making substantial improvements
 - Second draft available by mid-February

USB Disk



USB Disk

- Important resources will be preloaded on USB disks
 - Organization websites, information relating to exploration and production, other information TBD.
- Data from file server or web can be transferred to these USB disks and given to potential investors
 - Affords us the opportunity to provide interested parties with the specific data they're looking for in a one-on-one setting.
 - Follows up conversation with specific information they're looking for.
- Functional and promotional – better chance of being held on to by end user

Nevada Division of Minerals

PDAC Trade Show Booth Update

Questions



COMMISSION ON MINERAL RESOURCES QUARTERLY

February 22nd, 2018
Garrett Wake, Southern Nevada
Chief

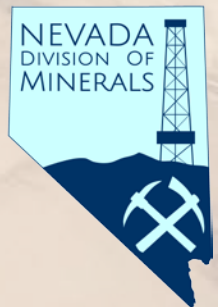


III. OLD BUSINESS

III. A DMRE Regulations Task Force update

Task Force - Dissolved Mineral Resource Exploration Regulations

- CMR formed task force at August 24th meeting
 - John Snow, Art Henderson, Dave Parker, Rich Perry
- Task Force met on 9/7/17 to review and comment on draft
- LCB draft returned 11/29/17
- Public Workshop held Dec. 21, 2017
- Comments accepted through 12/31/17
 - 5 oral and 5 written commenters



DMRE Regulation development



- Regulations development team (NDOM, NDEP, DWR) met January 3rd and made some substantive changes to address comments
- Re-submitted to LCB for legal review 1/8/18
- CMR task force met again on 1/30 to review
- List of comments and responses is complete
- When LCB returns final draft, will post for CMR adoption hearing

DMRE Regulation development

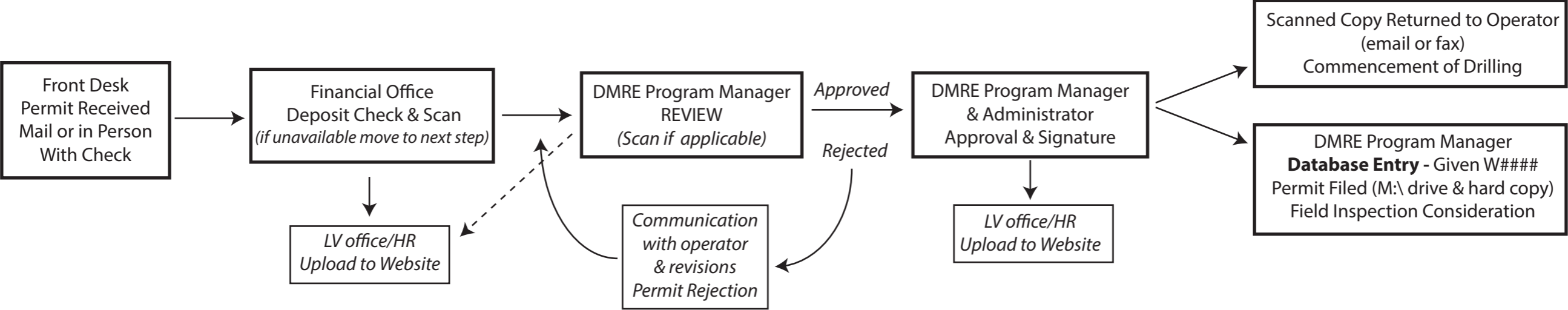
- 30-day notice required for adoption hearings
 - Public hearing, comments, recorded
 - CMR can adopt, modify or send back for editing
- Timing likely in March, depends on return of draft from LCB legal review
- NDOM began regulating program 1/1/2018
 - Web site up and running, forms, interactive map
 - 2 well permits issued Jan 16 (4 business days)
 - First borehole NOI approved Feb. 2, 2018
 - Permits and approved NOI's posted on web site



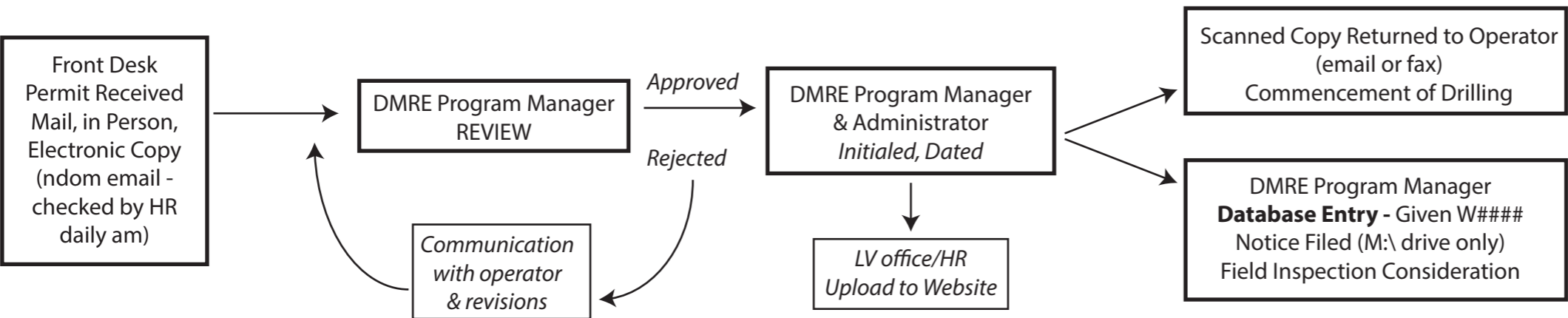
DMRE Regulation development

- Communications Plan
 - Developed a one-page communications document, posted on web site
 - Communications letter on new program sent to GSN, NWRA, NPGS for their member newsletters
 - Presentation at NPGS meeting on 2/5 = Lowell
 - Presentation on program at NMA Environmental Committee meeting on 2/8/18 = Rich
 - Lithium regulation panel at NWRA conference in LV on 2/27/18 - Rich
- Once CMR has adopted, final step is adoption by Interim Legislative Commission date tbd

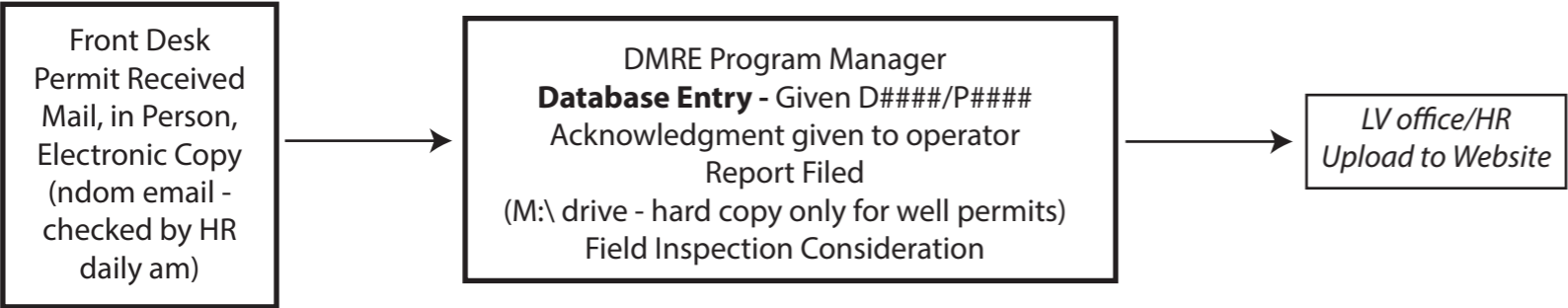
DMRE Well Permit Flow Chart



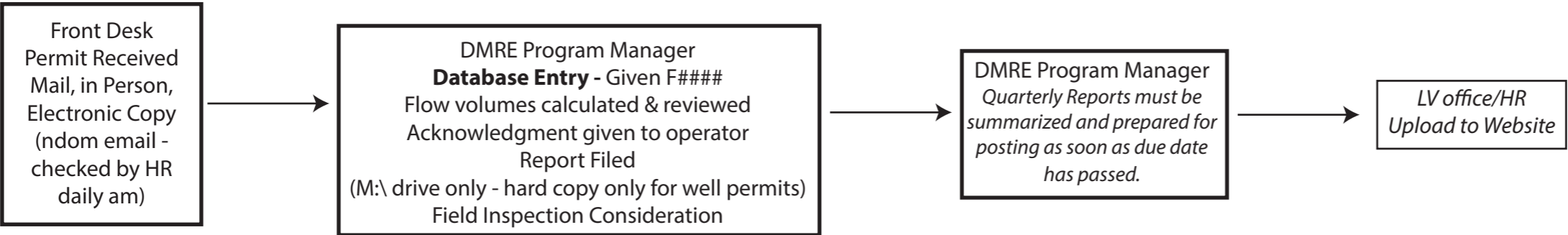
DMRE Borehole Notice of Intent



DMRE Drillers or Plugging Report



DMRE Quarterly Report of Monthly Flow



III. B AML work planned for 2018 and
Arden Mine closure project



Commission on Mineral Resources Arden Update

February 20th, 2018

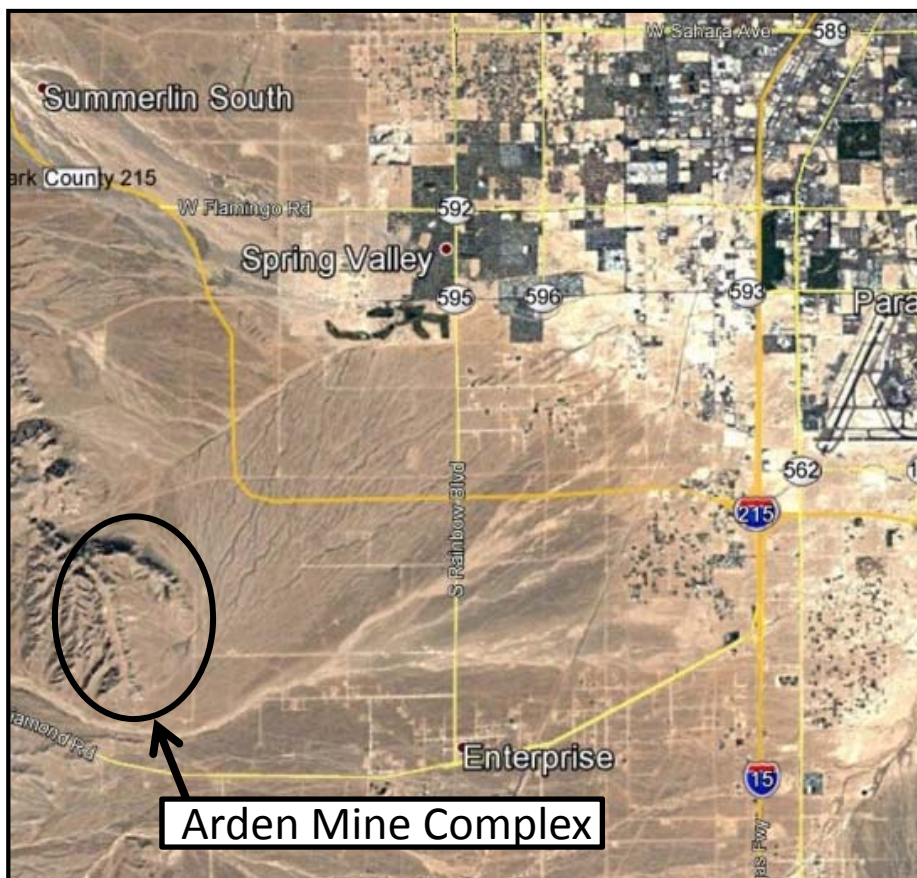
Rob Ghiglieri



History of the Project

- The historic gypsum mining left over 55 abandoned mines in the Arden area.
- 46 of the abandoned mines are located on land that is owned and maintained by the County, which under NRS 455.010 has the responsibility to safeguard against danger to person and animals.
- 40 abandoned mines are still open to the public on County land.
- NDOM has constructed fencing in front of abandoned mine opening nearly 70 times in the last 4 years.
 - Fencing has been deemed ineffective and backfilling of the portals is recommended as mitigation of these abandoned mine hazards.
 - Public safety hazards, no known environmental hazards
 - Wildlife surveys have been completed by NDOW and no habitat was determined.
- CMR authorized \$100,000 towards the closures of these hazards in fiscal year 2018
- Clark County has verbally approved \$150,000 funding towards the backfilling of the hazards

Las Vegas 1984



Las Vegas 2017



ARDEN MINE COMPLEX CLOSURE PROJECT
Clark County, Nevada



- 40 hazards
- Estimate of up to 39 acres of disturbance
 - Includes access road and road between sites
- 10' thickness of backfill material required at the apex of the portal
- Access hazards from Fort Apache road
- On site security
- 20-25 working days to complete project





Current Status

- Interlocal contract
 - February 20th Clark County Commission is voting on the approval of the \$150,000 funding towards the backfills
 - BLM approval
 - BOE approval
- Permits needed
- Water Source
- Wildlife issues
- April 2nd, start of construction
 - Timing of construction



Questions?

III. C Land Withdrawals update

Washoe County Public Lands Bill

This is a comprehensive federal lands bill being proposed for Washoe County, which also goes by Washoe County Economic Development and Conservation Act. The bill includes three distinct components:

- The two draft maps of the greater Reno/Sparks area.
- Names and maps of existing Wilderness Study areas on federal lands in the northern portion of Washoe County that are being discussed for potential Wilderness designation.
- The actual bill language that accompanies these maps.

Washoe County hosted two open house events for the public to learn more about the Public Lands Bill in Sept. 2016. There was also a [Public Lands Open Forum](#) in Nov. 2016. Staff is planning the next public meeting opportunities for early 2018. We will update this webpage when those meetings are scheduled.

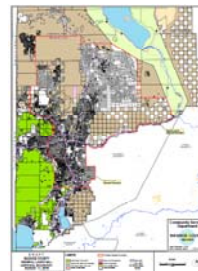
For any questions or information please contact Jamie Rodriguez our Government Affairs staff by email at JARodriguez@washoecounty.us or by phone (775) 328-2010.

Component No. 1 of Washoe County Public Lands Bill (Maps updated October 2016)

The two maps that that you see here are drafts. When something gets changed on the map and they are updated the date on the lower left corner will change. The maps are not self-explanatory so some background information is important.

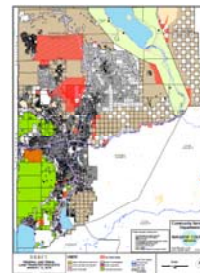
Map #1 - Federal Lands Disposal Boundary ([Download map here](#)).

The red boundary line surrounding the greater Reno-Sparks area will function as a local government control boundary. When the draft legislation is successfully passed these lands would have the potential to leave federal control in the future to be used for conservation purposes, recreational activities, public infrastructure needs and when appropriate sold or exchanged for economic development purposes.



The majority of federal lands inside of this boundary are tan colored Bureau of Land Management (BLM) lands and the much smaller amount of the bright green colored United States Forest Service (USFS) land.

Map #2 - Land Transfer Requests ([Download map here](#)). The hatched (darker) areas seen on both BLM and USFS lands depict areas that a local jurisdiction such as Sparks, the County or public entities such as the Washoe County School District or the Truckee Meadows Water Authority have requested to be transferred from federal ownership to their ownership for a variety of public purposes. The scale of this map does not allow for each area to be labeled with the entity that is requesting it but there is a list in the bottom right hand corner of this map.



Component No. 2

Existing Wilderness Study Area maps of federal lands in northern Washoe County that are being discussed for potential Wilderness designation or potential release can be seen here. (Download Maps Here: [North Washoe County](#), [Central Washoe County](#), [Southern Washoe County](#))

Component No. 3

The text of the draft federal lands bill is not available yet but will be placed on this site as soon as it is. Many of the same parameters found in federal lands bills from other Nevada counties will also be included in the Washoe County bill language.

- The federal government shall coordinate land sales with the unit of local government in whose jurisdiction the lands are located and land sales shall be consistent with local government master planning and regulatory zoning requirements.
- Before finalizing any sale of federal land the County shall require a certification that qualified bidders have signed a binding agreement to comply with any master plan for the area approved by the local government and local government zoning ordinances.
- The sale of any federal lands within the federal lands disposal boundary shall be through a competitive bidding process and for not less than fair market value.
- The exchange of any federal lands within the "boundary" will be for other lands that the BLM or USFS have included in a "management priority area" on a "value for value" exchange basis.

- The disposition of the proceeds from the sale of federal lands will be specifically spelled out in the legislation. The majority of the proceeds being used by the federal government for Sage Grouse habitat conservation and restoration projects; projects to address drought in Washoe County; wildfire presuppression and restoration activities in the County; acquisition of environmentally sensitive land in the county; Lake Tahoe restoration projects, and reimbursement of costs to the federal agencies involved with implementing the lands bill.
- Smaller amounts of the proceeds from the sale of federal lands are proposed to be divided among the State of Nevada and Washoe County for educational purposes and a separate amount going to the County for general budgeting purposes.
- Details on the wilderness portion of the lands bill will include specifics on how these areas are to be managed by the BLM, including any existing uses that are still allowed and the release of “Wilderness Study Areas” that have not been designated as wilderness.

Resolutions from local entities

- [Washoe County](#)
- [Washoe County School District](#)
- [Reno City Council](#)
- [Sparks City Council](#)



H.R.1107 - Pershing County Economic Development and Conservation Act

115th Congress (2017-2018) | [Get alerts](#)

Sponsor: [Rep. Amodei, Mark E. \[R-NV-2\]](#) (Introduced 02/16/2017)

Committees: House - Natural Resources | Senate - Energy and Natural Resources

Committee Reports: [H. Rept. 115-336](#)

Latest Action: Senate - 01/17/2018 Received in the Senate and Read twice and referred to the Committee on Energy and Natural Resources. ([All Actions](#))

Tracker: Introduced **Passed House** Passed Senate To President Became Law

Summary: H.R.1107 — 115th Congress (2017-2018)

[All Information](#) (Except Text)

Listen to this page

There is one summary for H.R.1107. [Bill summaries](#) are authored by [CRS](#).

Shown Here:

Introduced in House (02/16/2017)

Pershing County Economic Development and Conservation Act

This bill directs the Department of the Interior to conduct sales or exchanges of eligible lands in Pershing County, Nevada, identified as the "Checkerboard Lands Resolution Area."

Interior and the county shall jointly select which parcels of eligible land to offer for sale or acre-for-acre exchange.

For purposes of acre-for-acre exchanges, Interior shall identify management priority areas within the Checkerboard Lands Resolution Area, including those considered to be:

- greater sage-grouse habitat;
- part of an identified wildlife corridor or designated critical habitat;
- of value for outdoor recreation or public access for hunting, fishing, and other recreational purposes;
- of significant cultural, historic, ecological, or scenic value; or
- of value for improving federal land management.

The bill prescribes requirements for the disposition of proceeds from the sales of lands.

Interior shall offer for sale and convey to specified qualified entities, for fair market value, the remaining U.S. right, title, and interest in certain lands and interests in the county.

Interior shall convey to the county, without consideration, Unionville Cemetery.

The bill designates specified federal land in Nevada as components of the National Wilderness Preservation System.

The bill releases specified wilderness study areas from further review for designation as wilderness.

Introduced: **Feb 16, 2017**

Status: **Passed House (Senate next)**
 This bill passed in the House on Feb 16, 2017. This bill is scheduled for the Senate on Feb 7, 2018 10 a.m. — Senate Committee on Public Lands, Forests, and Parks

Prognosis: 39% chance of being enacted

Prognosis Details

This bill has a **39%** chance of being enacted.

Factors considered:

The overall text of the bill increases its chances of being enacted. Although this bill has a low chance of enactment, there is 1 provision within this bill that the provision-level textual analysis considers likely to be enacted. There are often multiple bills with the same legal provisions within them. A companion bill for this bill, s414-115, has not yet been enacted. If you are interested in this bill, you should also see its companion. The bill is assigned to the Senate Energy and Natural Resources committee. There are 0 related bills in Congress. The bill's primary subject is Public lands and natural resources.

(Factors are based on correlations which may not indicate causation.)

Predictions are by [Skopos Labs](#).

History

- JUL 13, 2016** Earlier Version — This activity took place in the House of Representatives.
- FEB 16, 2017** **Introduced**
Bills and resolutions are introduced to the whole chamber.
[Read Text »](#)
- MAY 23, 2017** **Considered by Federal Lands**
A committee held a hearing or business meeting about the bill.
- JUN 22, 2017** **Considered by House Committee on Natural Resources**
A committee held a hearing or business meeting about the bill.
- JUN 27, 2017** **Ordered Reported**
A committee has voted to issue a report to the full chamber recommending that the bill be considered further. Only about 1 in 4 bills are reported out of committee.
[Read Updated Text »](#) [See Changes »](#)
- SEP 28, 2017** **Reported by House Committee on Natural Resources**
A committee issued a report on the bill, which often provides helpful explanatory background on the issue addressed by the bill and the bill's intentions.
[Read Report »](#)
- JAN 12, 2018** **On House Schedule**
The House indicated that this bill would be considered in the week ahead.
- JAN 16, 2018** **Passed House (Senate next)**
The bill was passed in a vote in the House. It goes to the Senate next. The vote was by voice vote so no record of individual votes was made.
[Read Updated Text »](#) [See Changes »](#)

III. D NDOM Administrator evaluation plan

THIS SECTION IS INTENTIONALLY LEFT BLANK.
HAND OUTS AND PRESENTATION WILL BE GIVEN AT THE
MEETING.

IV. STAFF REPORTS

OIL, GAS, AND GEOTHERMAL ACTIVITY

2017 – 2018 Permitting and Drilling Activity (Through February 2, 2018)

Permit Type	Issued 2015	Drilled 2015	Issued 2016	Drilled 2016	Issued 2017	Drilled 2017	Issued 2018	Drilled 2018
Geothermal - Ind Production	10	7	9	10	6	4	1	2
Geothermal - Ind Inj	1	2	3	1	4	4	---	---
Geothermal - Observation	1	1	2	4	3	1	1	1
Geothermal - TG	5	5	---	---	19	15	4	4
Geothermal - Com	---	---	---	---	---	---	---	---
Geothermal - Dom	8	5	---	4	2	2	---	---
Geothermal - Project Area	1	---	---	---	1	---	---	---
Geothermal - Total	26	20	14	19	35	26	6	7
Oil & Gas	4	2	3	1	0	1	3	0

Activity	Geothermal	Ormat Nevada	Ormat has completed drilling three of five production wells permitted for the Phase 3 plant on the 28-10 and 36-10 production pads. A fourth production well is nearing completion, whereas the fifth production well was just permitted. Ormat completed drilling the Carson Lake 84A-31 injection well. Ormat Nevada has permitted the Carson Lake 21-31 observation well (for FORGE), and has set conductor pipe. The Tungsten Mountain Power Plant (37MW) went online in October.
		US Geothermal	US Geothermal Nevada is permitting the 25A-28 production well in the southwest extension of the San Emidio Field. US Geothermal is currently seeking their stockholders approval for Ormat Nevada to acquire the company.
		Homestretch Geothermal	Open Mountain Energy has entered into a partnership with Homestretch Geothermal, where Open Mountain is building a new power plant, and will own it, and Homestretch will supply the plant with geothermal fluid.
		Star Peak Geothermal (subsidiary of Open Mountain Energy)	Star Peak Geothermal has acquired the Rye Patch wells from Presco Energy. Star Peak Geothermal is currently re-entering each well to evaluate the potential use of the field wells. The wells have been logged and are undergoing a series of flow and injection tests. Star Peak Geothermal plans on constructing a binary plant if testing of the wells proves to be successful.
		Nevada Bureau of Mines and Geology	The Nevada Bureau of Mines and Geology completed five TG wells (geoprobe) in Granite Springs Valley in January.
	Oil	True Oil	True Oil drilled the DY Federal 13-31 well in Railroad Valley during December and January. The well was P&A'd.
		Major Oil International	Major Oil International has permitted the Eblana 3 and Eblana 6 wells in Hot Creek Valley, ~60 east of Tonopah.
		Envy Energy	Envy Energy is currently permitting the Black Point 1 well in White Pine County, south of Mt. Hamilton.

Summary of Geothermal and Oil Well Inspections for Fiscal Year 2018

FY 2018 Well Inspections	Total Wells	Wells Needed for FY18	Wells Inspected	% of Total Needed	Wells Remaining
Geothermal (13 Locations)	452	151	153	101.5%	-2
Oil (5 Locations)	119	40	11	28%	29
Totals	571	191	164	86%	26

Recent inspections include the wells located in Ormat Nevada's Wild Rose, McGinness Hills, and Tungsten Mountain geothermal fields during the second week of February. After inspecting Wild Rose, I also inspected the three oil wells drilled in the Gabbs area, along with one geothermal observation well belonging to HRH Resources.

Sundry Notice and Transfer of Permit Activity

Twenty-three geothermal sundry notices were approved during the 4th quarter of 2107. A total of fifty-nine geothermal sundry notices were approved during 2017. Three oil related sundry notices were approved during the 4th quarter of 2017. A total of thirty-four oil related sundry notices were approved during 2017. Ten geothermal sundries have been approved in 2018.

BLM Lease Sales

The BLM Ely District held an oil and gas lease sale on December 12th. A total of 208 parcels were offered. The parcels were protested by Center for Biological Diversity, The Wilderness Society, and WildEarth Guardians NGO's. No parcels were removed from the sale as a result of the protests. The 208 parcels comprised a cumulative total of 388,697.172 acres. The sale had thirteen bidders. Seventeen parcels received bids, putting an additional 33,483.72 acres under lease. Total receipts for the sale were \$119, 931.50. The highest bid per acre was the minimum \$2.00 per acre. The next oil and gas lease sale is scheduled for March 13th, where the Elko, Ely, and Carson City Districts will offer 40 parcels totaling 69,691.640 acres in Elko, Eureka, and Nye Counties. One parcel of 1900.15 acres is being offered by Carson City DO, one parcel of 480 acres is offered by the Ely DO, and the remaining 38 parcels totaling 67,311.49 acres are being offered by the Elko DO.

The BLM held a statewide geothermal lease sale on October 24th. Twenty parcels were offered in Churchill, Elko, Esmeralda, Eureka, Lander, Mineral, and Washoe Counties by the Battle Mountain, Carson City, Elko, and Winnemucca BLM District Offices. None of the parcels were protested. Total cumulative acreage offered for the sale was 38,208.46 acres. There were six bidders attending the sale. Ten parcels totaling 19,208.66 acres were bought at the sale. The highest bid was the minimum of \$2.00 per acre. Receipts for the sale totaled \$78,444.00. The BLM has not set a date for the next annual geothermal lease sale.

Dissolved Minerals Resource Exploration

- Database and web page are in place.
- Sierra Lithium LLC submitted DMRE applications for two exploration wells, CB-1 and CB-2, on January 10th. The exploration wells are to be located in Columbus Salt Marsh. After review of the applications was completed, and additional information was acquired, the applications were posted on the Division's web site on January 12th. Permits were

issued for the CB-1 and CB-2 exploration wells in Columbus Salt Marsh on January 16th, and posted on the Division's web site the same day. The permitted locations are not within an *Area with Limitations*. Sierra Lithium began drilling the CB-1 well on February 3rd.

- Mathers Lithium Corporation submitted a borehole Notice of Intent (NOI) on February 1st. The proposed borehole is not located within an *Area with Limitations*, and will be drilled in the southeastern area of Clayton Valley. The NOI was approved on February 2nd. The proposed total depth of the borehole is 1,000 feet.

Commission on Mineral Resources Quarterly Meeting Oil, Gas, Geothermal, and Dissolved Mineral Update

**Carson City, Nevada
February 20, 2018**

**Lowell Price
Nevada Division of Minerals
400 W. King Street #106
Carson City, NV 89703
minerals.nv.gov**



OIL, GAS, AND GEOTHERMAL ACTIVITY

2017 – 2018 Permitting and Drilling Activity (Through February 2, 2018)

Permit Type	Issued	Drilled	Issued	Drilled	Issued	Drilled	Issued	Drilled
	2015	2015	2016	2016	2017	2017	2018	2018
Geothermal - Ind Prod	10	7	9	10	5	3	1	2
Geothermal - Ind Inj	1	2	3	1	4	4	---	---
Geothermal - Obs	1	1	2	4	3	1	1	1
Geothermal - TG	5	5	---	---	20	15	4	4
Geothermal - Com	---	---	---	---	---	---	---	---
Geothermal - Dom	8	5	---	4	2	2	---	---
Geothermal - Project Area	1	---	---	---	1	---	---	---
Geothermal - Total	26	20	14	19	35	25	6	7
Oil & Gas	4	2	3	1	0	1	3	0

Geothermal Activity

Ormat Nevada

- Completed drilling three of five production wells permitted for the McGinness Hills Phase 3 plant , with fourth production well is nearing completion. A fifth production well for Phase 3 has been permitted.
- Ormat Nevada completed drilling the Carson Lake 84A-31 injection well.
- Ormat Nevada is currently drilling the Carson Lake 21-31 observation well (for FORGE).

US Geothermal

- US Geothermal Nevada is permitting the 25A-28 production well in the southwest extension of the San Emidio Field.
- US Geothermal is currently seeking their stockholders approval for Ormat Nevada to acquire the company.

Homestretch Geothermal

- Utah based Open Mountain Energy has entered into a partnership with Homestretch Geothermal. Open Mountain is building a new power plant at the Wabuska location, and will own it.
- Homestretch Geothermal will supply the plant with geothermal fluid.

Star Peak Geothermal (subsidiary of Open Mountain Energy)

- Star Peak Geothermal has acquired the Rye Patch wells from Presco Energy. Star Peak Geothermal is currently re-entering each well to evaluate the potential use of the field wells. The wells have been logged and are undergoing a series of flow and injection tests.
- Star Peak Geothermal plans on constructing a binary plant if testing of the wells proves to be successful.

Nevada Bureau of Mines and Geology

- The Nevada Bureau of Mines and Geology completed five TG wells (geoprobe) in Granite Springs Valley in January.

Oil Activity

True Oil

- Wyoming based True Oil drilled the well approximately two miles south of the Grant Canyon Field during December and January.
- After logging and testing the DY Federal 13-31, True Oil plugged and abandoned the well.

Major Oil International

- Texas based Major Oil International permitted the Eblana 3 and Eblana 6 exploration wells in January.
- The Eblana 3 and 6 wells will be located in Hot Creek Valley, approximately 60 miles east of Tonopah.
- Major Oil International drilled the Eblana 1 in 2011. The Eblana 1 has never produced.
- Permitted total depth of the Eblana 3 is 12,600 feet.
- Permitted total depth of the Eblana 6 is 12,200 feet
- Major Oil International has not indicated when the Eblana 3 and 6 wells will be drilled.

Envy Energy

- Texas based Envy Energy permitted the Black Point 1 exploration well in February.
- The well is located in White Pine County between Duckwater and Mount Hamilton.
- Permitted total depth of the Black Pint 1 is 7,000 feet
- Envy Energy has not indicated when the Black Point 1 will be drilled.

Summary of Geothermal and Oil Well Inspections for Fiscal Year 2018

FY 2018 Well Inspections	Total Wells	Wells Needed for FY18	Wells Inspected	% of Total Needed	Wells Remaining
Geothermal (13 Locations)	452	151	153	101.5%	-2
Oil (5 Locations)	119	40	11	28%	29
Totals	571	191	164	86%	26

- Recent inspections include the wells located in Ormat Nevada's Wild Rose, McGinness Hills, and Tungsten Mountain geothermal fields during the second full week of February.
- After inspecting Wild Rose, I also inspected the three oil wells drilled in the Gabbs area, along with one geothermal observation well belonging to HRH Resources.

Sundry Notice and Transfer of Permit Activity

- Twenty-three geothermal sundry notices were approved during the 4th quarter of 2107.
- A total of fifty-nine geothermal sundry notices were approved during 2017.
- Ten geothermal sundries have been approved in 2018.
- Three oil related sundry notices were approved during the 4th quarter of 2017.
- A total of thirty-four oil related sundry notices were approved during 2017.

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- After review of the applications was completed, and additional information was acquired, the applications were posted on the Division's web site on January 12th.
- CB-1 is permitted to be drilled to 3,280 feet, and CB-2 is permitted to 2,624 feet.
- Permits were issued for the CB-1 and CB-2 exploration wells in Columbus Salt Marsh on January 16th, and posted on the Division's web site the same day. The permitted locations are not within an *Area with Limitations*. Sierra Lithium LLC began drilling the CB-1 well on February 3rd.
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Reclamation Bond Pool Status Report			Current to:	1/31/2018																																																																																																															
Plan-level Bonds -Company		Project	Entry Date	Bond Amount	% of Pool	Comments	Deposit	Premiums Paid	% Bond Whole	Premium Schedule	Current thru																																																																																																								
Custom Details		Bovie-Lew	11/17/2006	\$24,364.00	0.75%		\$ 12,217.11	\$20,253.32	133.3%	\$182.73 quarterly	3/31/2018																																																																																																								
New Gold Nevada (formerly NV Rae)		Black Rock Canyon	4/15/2005	\$727,087.00	22.37%		\$ 415,856.34	\$321,307.69	101.4%	\$5,453.15 quarterly	3/31/2018																																																																																																								
So. NV Liteweight		Money Pit	5/21/2004	\$430,088.00	13.23%		\$ 233,171.91	\$253,402.90	113.1%	\$3,225.66 quarterly	3/31/2018																																																																																																								
Western Pacific Clay		Fallon Bentonite	12/11/1997	\$209,900.00	6.46%	terminated	\$ 31,485.00	\$185,648.94	103.4%																																																																																																										
Western Mine Dev.		Victorine Mine	5/24/2000	\$45,875.39	1.41%	terminated	\$ -																																																																																																												
Western Mine Dev.		Kingston Mill	5/24/2000	\$100,450.00	3.09%	terminated	\$ -																																																																																																												
Western Mine Dev.		Manhattan Mill	5/24/2000	\$114,288.77	3.52%	terminated	\$ -																																																																																																												
TNT Venture		Big Canyon	1/27/2010	\$78,161.00	2.41%		\$ 39,615.03	\$42,703.17	105.3%	\$586.21 quarterly	12/31/2017																																																																																																								
Dun Glen Mining		Dun Glen	8/11/2014	\$373,981.00	11.51%		\$ 200,648.22	\$117,459.29	85.1%	\$8,780.45 quarterly	12/31/2017																																																																																																								
Statewide Notice-Level		Various	various	\$1,145,658.00	35.25%	84 Notice-level bonds				Premiums due																																																																																																									
Total Bonded Amount				\$3,249,853.16	100.00																																																																																																														
Cash in Pool's Account				\$4,146,207.10																																																																																																															
Unfunded Amount				-\$896,353.94																																																																																																															
Percent funded				127.6%																																																																																																															
				<div>Notice-Level Bond Actions Executed With NDOM</div> <table><caption>Notice-Level Bond Actions Executed With NDOM Data</caption><thead><tr><th>Period</th><th># of New Bonds</th><th># of Bond Increases</th><th># of Bond Reductions</th></tr></thead><tbody><tr><td>FY12 Q1</td><td>24</td><td>0</td><td>21</td></tr><tr><td>FY12 Q2</td><td>16</td><td>0</td><td>14</td></tr><tr><td>FY12 Q3</td><td>5</td><td>2</td><td>8</td></tr><tr><td>FY12 Q4</td><td>8</td><td>7</td><td>10</td></tr><tr><td>FY13 Q1</td><td>4</td><td>7</td><td>11</td></tr><tr><td>FY13 Q2</td><td>2</td><td>3</td><td>7</td></tr><tr><td>FY13 Q3</td><td>0</td><td>0</td><td>13</td></tr><tr><td>FY13 Q4</td><td>6</td><td>4</td><td>18</td></tr><tr><td>FY14 Q1</td><td>0</td><td>2</td><td>22</td></tr><tr><td>FY14 Q2</td><td>2</td><td>1</td><td>8</td></tr><tr><td>FY14 Q3</td><td>0</td><td>3</td><td>8</td></tr><tr><td>FY14 Q4</td><td>3</td><td>0</td><td>7</td></tr><tr><td>FY15 Q1</td><td>2</td><td>0</td><td>9</td></tr><tr><td>FY15 Q2</td><td>3</td><td>3</td><td>9</td></tr><tr><td>FY15 Q3</td><td>1</td><td>1</td><td>12</td></tr><tr><td>FY15 Q4</td><td>1</td><td>1</td><td>8</td></tr><tr><td>FY16 Q1</td><td>4</td><td>2</td><td>16</td></tr><tr><td>FY16 Q2</td><td>0</td><td>1</td><td>12</td></tr><tr><td>FY16 Q3</td><td>1</td><td>0</td><td>2</td></tr><tr><td>FY16 Q4</td><td>6</td><td>1</td><td>8</td></tr><tr><td>FY17 Q1</td><td>3</td><td>1</td><td>10</td></tr><tr><td>FY17 Q2</td><td>9</td><td>4</td><td>19</td></tr><tr><td>FY17 Q3</td><td>0</td><td>2</td><td>5</td></tr><tr><td>FY17 Q4</td><td>5</td><td>3</td><td>13</td></tr><tr><td>FY18 Q1</td><td>4</td><td>0</td><td>3</td></tr></tbody></table>								Period	# of New Bonds	# of Bond Increases	# of Bond Reductions	FY12 Q1	24	0	21	FY12 Q2	16	0	14	FY12 Q3	5	2	8	FY12 Q4	8	7	10	FY13 Q1	4	7	11	FY13 Q2	2	3	7	FY13 Q3	0	0	13	FY13 Q4	6	4	18	FY14 Q1	0	2	22	FY14 Q2	2	1	8	FY14 Q3	0	3	8	FY14 Q4	3	0	7	FY15 Q1	2	0	9	FY15 Q2	3	3	9	FY15 Q3	1	1	12	FY15 Q4	1	1	8	FY16 Q1	4	2	16	FY16 Q2	0	1	12	FY16 Q3	1	0	2	FY16 Q4	6	1	8	FY17 Q1	3	1	10	FY17 Q2	9	4	19	FY17 Q3	0	2	5	FY17 Q4	5	3	13	FY18 Q1	4	0	3
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