CALL TO ORDER
The meeting was called to order by Rich DeLong at 9:01 AM

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

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PLEDGE OF ALLEGIANCE

COMMENTS BY THE GENERAL PUBLIC

Tyson Faulk: Nevada Mineral Exploration Coalition, wanted to say that they are in support of the regulations as they are written.

I. PUBLIC HEARING

For the purposes of receiving public comment from all interested persons, the Commission on Mineral Resources will hold a public hearing regarding the adoption of regulations in chapter 534B of Nevada Administrative Code for dissolved mineral resource exploration, enabled under Assembly Bill 52 of the 2017 Nevada Legislature. The proposed regulations sets forth certain restrictions for drilling boreholes, permitting and construction of dissolved mineral resource exploration wells and plugging of boreholes and wells. The proposed regulations also set the fee required to accompany an application for a permit to drill a dissolved mineral resource exploration well.

Rich Perry: Gave a brief overview of the regulations. Gave thanks to the cooperation of Tim Wilson, Bruce Holmgren, Jason King, and Greg Lovato. Based on comments received this week from industry, and review of the March 9 revised
proposed draft, the regulation development team recommends the Commission adopt the changes listed below. All of these changes were discussed with LCB and considered non-substantive.

Section 20.1: Add the words “or well”, to read: Except as otherwise provided in subsection 2, any drilling or plugging of a dissolved mineral resource exploration borehole or well within a dissolved mineral resource exploration project is subject to this chapter. (corrects an omission).
Section 24.1(b) eliminate “at http://data.ndom.opendate.arcgis.com/pages/dmre” (references to an address of a website not controlled by the Division are not appropriate for regulations). The website of the Division will link to the appropriate site.
Section 25.4(a) Eliminate (a) In the same manner required for plugging a dissolved mineral resource well pursuant to section 35 of this regulation; or
(from Industry comment, to make it more clear how a borehole is plugged)
Sec. 28.2: Eliminate “at http//data.ndom.opendate.arcgis.com/pages/dmre” (references to an address of a website not controlled by the Division are not appropriate for regulations)
Sec. 34.1(d) Re-word this to read: “Ensure the total withdrawal of water pumped from wells in the dissolved mineral resource exploration project does not exceed 5 acre-feet”. (clarifies the provision)
Section 35.5: Eliminate: “of the dissolved mineral resource exploration well”. (wells don’t have a surface, the intent is to restore the surface around where the well was drilled)
Section 36.3: add the word “permit” to read…any provision of this chapter, permit, or an order of the Division (since conditions of approval are in permits, the term permit was added to what can constitute a violation)

Mike Visher: Explained the “Areas with Limitations” map. This map is to define areas of concern with other fluid mineral resources as well as safety concerns. Due to high heat flow, someone might be drilling a borehole and not understand why they are encountering high temperature fluid and similarly with a well drilling even deeper in these basins. We’ve added all the current active leases issued by the BLM, and we’ve updated this three times now since the first draft version last fall. Those are the shaded gray areas. Each permitted oil well has a ½ mile radius buffer around it. Those are wells that are active and permitted by us. This was also to provide some method of review in the application process, to make sure the construction of the well would be done in a manner not to interact with an existing resource to a well. And then we did the same thing for geothermal. Active permitted geothermal wells. TG wells are not included, because by definition they are not allowed to penetrate the resource.
Bryan Stockton: Could you define TG for the record please.
Mike Visher: Thermal Gradient Well. Lastly, in concern for drilling in the middle of a playa where they may encounter higher than normal temperature gradients, we took publically available information from Mark Coolbaugh (NBMG) Which included thermal gradient wells and probes throughout the state and we gleaned the data to determine at what depth a borehole might encounter 125 degree Fahrenheit water. That’s the depth that the BLM and OSHA have concerns about scalding. That turned out to be 1500 feet for a borehole. And for the blowout prevention, if you are expected to experience 200 degree Fahrenheit water you need to install blowout prevention equipment. The same data was used and it comes to 3000 feet for a well. Those are the hydrogeological basins in blue where the temperature gradients were sufficient to reach 125 degree water at 1500 feet and 200 degree water at 3000 feet. This is just a basis for review, this doesn’t disable the ability for the applicant to drill, it requires them to do additional research and explain why they think an exception should be made. They make that request to the Administrator. This allows us to learn more about the basins and modify the map. The map is meant to be dynamic as more information becomes available as well as new leases are authorized by the BLM. You’ll see dates on the map that are current, also on the map in hatch form is the current active inferred placer claims for lithium brine exploration that was just done in February. We anticipate doing these pulls (from LR2000) on a quarterly basis. To make this process easier for the applicant, they need to understand if their well is in an area with limitations. We have, on our Open Data Site, an interactive map that allows the applicant to go through that process.
Rich DeLong: you mentioned permitted wells, are there any grandfathered oil and gas or geothermal wells that are still outside the program?
Mike Visher: no, those are not incorporated.
Courtney Brailo: She went through how to access the Open Data Site from the Division of Minerals’ Website. And then demonstrated how the map works and all the functions that it will easily do. http://data-ndom.opendata.arcgis.com/
*Nigel Bain has joined the commission at 9:30 am
Rich DeLong: Asked for any questions from the commission.
Dave Parker: Wanted to know if there is a date on the interactive map.
Courtney Brailo: Yes.
Rich DeLong: we would like to move to public comments now.
Brian Amme: Deputy State Director for the Bureau of Land Management, Nevada State Office. He wanted to speak in support of the regulation. He felt that this regulation helps resolve a lot of potential conflicts. Safety was one of the issues we were looking at and the lack of blow out prevention, casing and everything that could possibly happen or go wrong. We feel this is a very good thing for the safety of exploration and we think that the regulations help lithium exploration throughout the state, which is always a positive economic factor. Indicated that he heard some concerns about linking the notices, whether or not an operator can put a bunch of notices out there and gain more than the accumulatively 5 acre per notice. Our regulations of 3809.21B do not allow the aggregation of notices of public lands and basic rules of thumb are that projects have to be distanced for at least a mile of separation or in separate basins. He really liked the interactive map and liked that NDOM used the BLM’s LR2000 data to create it.
Greg Lovato: Administrator for the Division of Environment Protection. Beside him is Bruce Holmgren, Chief of NDEP-Water Pollution Control previously he was Chief of Bureau of Mining Regulation and Reclamation at NDEP. He is part of the technical working group that formed these regulations. In accordance to section 20 of AB52, NDEP participated in the development of these regulations with, NDOM, DWR, DCNR, the Governor’s Office, industry and interested stakeholders. He wanted to clarify how NDEP is going to interact with exploration projects going forward. As required by Sec. 16 and 17 of the legislation, Sec. 27 of the proposed regulation requires that an application for an exploration well include a plan for management of fluids generated in accordance with existing water pollution and control requirements administered by NDEP. This would typically require a temporary permit from NDEP requiring control of pumped fluids to prevent potential impact to water quality. This may only be a sump to contain fluids or in cases where ground water is shallow or exploration in near surface, a disposal option may be required. NDEP would like to stress that operators of exploration projects that have potential of conversion of boreholes into wells need to anticipate and plan for such conversions in advance to prevent delays in the field. NDEP is committed to working with all involved and encourage project proponents to submit the required application ahead of time if there is potential to convert a borehole into a well. The existing NDEP regulations related to mine exploration for production are not affected by these regulations. We support the existing regulations with the updates submitted today.
Jason King: State Engineer and the Administrator of the Division of Water Resources. Sitting beside him is Tim Wilson-head of Well Drilling and Adjudication Section. Mr. King wanted to thank him for all his hard work on the development regulation team. Nevada’s regulatory agencies are very familiar with mining explorations when it comes to hard rock minerals. However, dissolved mineral exploration is new and very different; in hard rock mining exploration water is needed primarily to support the drilling of the exploration core hole. In exploration for dissolved minerals, lithium in this case, mineral is in the very water or brine that the exploration companies are drilling wells to access. The drilling of the boreholes and exploration wells for dissolved minerals could be thousands of feet deep and are similar to geothermal exploration. Geothermal exploration in Nevada is regulated by the Division of Minerals due to their extensive experience with geothermal fluids and deep exploration well design. Our office believes that these regulations which are rooted in Section 16 of AB52 and will have clarity to the exploration process while keeping the production process within the established protocol, including managing the need for production water within the purview of our office, the State Engineer’s office. There are four issues I’d like to get on the record:
1.) Any withdrawal of water in excess of 5 acre-feet needed in the exploration of a dissolved mineral resource will require the mining company to obtain sufficient water rights pursuant to established Nevada water law.
2.) Pursuant to Sec. 20 2b, it is clear that if an exploration company has secured a valid water right for dissolved mineral mining and milling prior to January 1, 2018 that company does not have to apply to the Division of Minerals for permitting of wells. If an exploration company files a water right change application, post January 1, 2018 of a valid water right that pre-dates January 1, 2018, that exploration company is still exempt from NDOM permitting because the base right of that change pre-dates the January 1, 2018 date.
3.) Moving forward, the State Engineer’s office will consult with NDOM on well construction issues on all future water right application for dissolved minerals, mining or milling water rights, so their expertise can be used.
4.) Throughout the process leading up to these regulations, there was discussion and desire from the exploration companies that if a water right was secured through our office, which would only occur after consultation with NDOM on well construction, the exploration companies would not have to go through the permitting outlined in these regulations. Subsequent to those discussions, the regulation development team included that exemption in the draft regulation submitted to the Legislative Counsel Bureau. After the legal review by LCB, they determined that this type of proposed exception in regulations was inconsistent with the Statutory language found in Section 16 sub 1 in AB52 which says that a person may not drill a dissolved mineral resource exploration well without first obtaining a permit from the Administrator of the Division of Minerals and complying with the conditions of the permit.
Thomas Gallagher: Nevada Water Solutions, LLC, consulting engineer in Reno. He is currently representing 3 lithium prospects pursuing water rights applications necessary for production. He is also assisting legal counsel at Pure Energy. He
is also the President of the Nevada Groundwater Association. For clarification; sec 12 AB52 defines dissolved minerals exploration borehole is made for sampling or obtain water which cannot be pumped as a well. As he sees the distinction between the two is that one can be pumped and the other cannot. Would like clarification on how statute defines a borehole and defines a well. He also has a question regarding why a permit is required for a well but not a borehole, however you have to file a notice of intent and get approval for a borehole which is essentially a permit. And this regulation we have to live with the 5 acre-feet, not per well but per project, is that correct?

Thomas Gallagher: then I’m stating my opinion on the plain text. Sec. 25 paragraph 3 implies that a temporary casing can be set and any pipe or tubing used for ground control or sampling must be removed for the well, so that implies temporary casing can be set in a borehole. What I believe needs to be addressed is the plugging of a well. Some of it was addressed this morning, but I’m looking for some clarity. In Sec. 25 the plugging of a borehole goes into some good detail, however in Sec. 35 it does not. I would like to see more detail in plugging requirements put into Sec. 35. In Sec. 31 the construction of a well, there is no specification on a steel casing. In Sec. 31 it goes over surface casing; provide a minimum of 2 inch annular space. Is that to the sealing depth annular space or is that to the depth of the well? That needs clarification. In Sec 33 asked that the phrase “flowing at the surface” be deleted.

Art Henderson: asked what kind of participation have you had in the development of these regulations? Have you been involved or is today your first time coming forward with any comments?

Thomas Gallagher: stated he came to the workshop in December.

John Snow: asked if he could reiterate his point on the artesian flow at the surface versus penetrating a confined layer, and why you feel that doesn’t meet the intent.

Thomas Gallagher: he stated that he thinks it misses the intent.

Carolyn McIntosh: Attorney on behalf of Albemarle Corporation and Albemarle US Inc. Albemarle is the owner and operator of Silver Peak lithium project. They are the only lithium producer in Nevada and in the United States. Albemarle and Dajin Resources Inc. submitted written comments jointly. *(Please see written comments attached). She indicated that her comments today are consistent to the written comments already submitted. She appreciated being involved in the process and has seen development, changes and improvements as things have gone along. The comments are pretty narrow due to the concerns we had which have been addressed along the way in the process.

Chris Mahannah: Consulting Engineer, licensed water rights surveyor from the Division of Water Resources. He is here on behalf of Dajin Resources. *(Please see written comments attached). His concern was regarding dual permitting.

Walter Weinig: Hydrogeologist-Vice President for projects and permitting for Pure Energy Minerals. *(Written comments were submitted). He wanted to clarify an instrumentation borehole. When that kind of borehole is drilled, it is a borehole and under the Division of Water Resources regulations permitted it is allowed as a borehole. When you abandon that borehole, you grout it up and you can leave some instruments behind. Particular for dissolved mineral resource exploration, it would be useful to leave vibrating wire piezometers behind. They are very small instruments; they are grouted into the hole, with a couple of wires left sticking out of the surface so you can read the instruments periodically. These are not open boreholes or open wells, standpipe wells, that would need to be permitted as a monitoring well or permitted as a dissolved mineral resource exploration well. It is a grouted borehole at the end of the process. We have a comment in Sec. 20 about the exclusion for existing wells that were installed and sampled under valid MM waivers prior to January 1, 2018. We have two of those wells in Clayton Valley, obtained MM waivers from the Division of Water Resources. We have drilled the wells, conducted the sampling-testing and during that process we extracted approximately 0.7 acre feet out of the 5 acre-feet total allowed under the MM waiver. We applied for an extension of that waiver because the results indicated we should do additional testing, particularly in the deep portion of the Clayton Valley aquifer. We wanted to apply the extension under the new regulations, we aren’t trying to go beyond the 5 acre-feet but we want to test them completely consistent under the new DMRE regulations. The issue is that these wells are already installed. As far as I know our wells are the only ones that fall under this category. So, the intent of this comment is to bring these small number of wells into the new regulations understanding the reason for a clean break between the old and the new. We don’t want to have to impose a new burden of drilling new wells. We disagree on a couple of previous comments made, Sec. 35-1 the language would be modified so that only a water right appropriation could be used to allow that well to continue in existence. The waiver process is outside the appropriation process, that’s not typically the way in terms of day to day operations. There are a variety of waivers that can be issued by the Division of Water Resources; we consider that to be a part of the appropriation process. We like the language the way it is. The other suggestion earlier was in Sec. 34-1a it was suggested the clause for the purpose of testing and sampling the well be removed in terms of installing a water meter. In general I don’t see a problem with that with one exception of well construction versus the use of a well for testing and sampling. We think the language is fairly precise the way it is.
Walter Weinig: No, those are 2 separate wells. Instrumentation well doesn’t need to be pumped.

John Snow: I understood your point on the vibrating water piezometers, that if you applied in the abandonment of the borehole to leave the piezometer in and was actually grouted not bentonite that would be allowed and some flexibility in the regulations to be allowed to do so.

Walter Weinig: that’s allowable in the DWR regulations now.

Tim Donahoe: Hydrogeologist representing 3 Lithium companies who have projects in Columbus Salt Marsh Valley, Clayton Valley and Alkali Spring Valley. He has been involved in obtaining permits and waivers for Lithium exploration under the previous regulatory system and the new regulatory system. It is his opinion that the new regulations are necessary and appropriate and the authority with NDOM is properly vested and believes its working well. He had one question: what is the purpose of the 2-inch annular requirement, is it mainly to have enough space in the borehole to fit a tremie pipe or are there other reasons?

Thomas Gallagher: Wanted clarification on the transition between permitting under DWR and the new permitting under the new regulation. Mr. Weinig pointed out had previously had test wells permitted under a waiver through DWR and since it has expired and DWR has taken the position that when asked if the waiver to be extended has denied the request. Where does that leave the wells that were once permitted by DWR? If it was expired, or cancelled are they going to be grandfathered in under the DWR process or do they have to follow the new regulations? Also, does the water right have to be in place, is it clear in the regulation that an approved water right or the application for permitting water rights have begun before 2018 will that also be considered that the applicant pursuing the water right application good faith under the existing law at the time, do they then flip over to Minerals’ new regulation? During this transition period will anything be extended or granted?

Rich DeLong: I’ll respond to one of your questions, as it relates to DWR we have no jurisdiction over DWR regulations.

Rich DeLong: asked for Rich Perry, Jason King and Greg Lovato to respond, as they felt appropriate, to any of the public comments. Also to respond to any questions that the Commissioners may have about what has transpired so far during the public hearing.

Art Henderson: he asked a question to Bryan Stockton. Is it not reasonable for me to believe that when we come here today to potentially approve regulations, that the LCB confirms that the regulations meet the statute?

Bryan Stockton: Senior Deputy Attorney General, in the legal profession the standard answer is that it depends. But, the short answer is yes, and the long answer is that if LCB’s opinion is reasonable under that law, I think they are entitled to not really, you don’t have to defer to them but since they are the legislative branch then they are entitled to some deference to their interpretation of the law. An example is that you’ve heard a lot of testimony regarding the dual permitting provisions, that the new draft in some instances will require dual permitting and the legislative counsel bureau’s logic behind that was the reading that Mr. King read in Sec 16.1 of AB52 says a person may not drill a dissolved mineral resource exploration well without a permit from the Division of Minerals. The law in Nevada is, if the statute is clear then you cannot even look at the legislative history if the language is clear then you stop with the statute. That is one instance where LCB made this change based on Nevada law and I think they are correct in this instance. That’s why we ended up with possible dual permitting in some instances because the statute is pretty clear. But, if you feel what LCB has written is in conflict with your duty then you can make changes. Does that answer your question?

Art Henderson: I was just concerned when I heard some testimony today indicating that the regulations did not match the statute. Thank you for clarifying that.

Rich Perry: He started clarifying and answering some of Mr. Gallagher’s questions. Regarding the sampling of boreholes, we have actually seen this because it has actually occurred with bailers, packer tests, hydro-sleeves and air-lifting and none of those are pumping, those are sampling. With the plugging detail in Sec. 25 and 35 I had recommended an edit to detach those earlier than those that you have before you, and I think it’s clear how to plug a borehole and it’s clear how to plug a well. And yes there are sometimes collars and tubing put into boreholes to hold them open, that’s very common in exploration. The language there is pretty clear. With regards to well construction specification, we did not put specific construction specifications because these exploration wells could be 100 foot wells that have thermoplastic casing that are 2 inch diameter plastic or they could be 4000 foot wells. As a group we decided that it would be impossible to determine the specifications like you would a geothermal or oil well. We would allow the applicant to choose to select and submit what they choose they want to build. In answer to question of whether exploratory wells can have an open-hole component, yes, for some period of time they can. Section 33, on artesian conditions, we use a slightly different definition than the State Engineer but we feel it is appropriate. Regarding drilling of borehole, it depends on when you received the water right, if you had a water right prior to 1/1/2018, you don’t need to permit through us, but you do if you got your water right after 1/1/2018. Regarding dual permitting, I look at it simply, what we’re really doing is exchanging the State Engineer’s water
well drilling manual with the dissolved mineral resource exploration drilling procedures before you today. Even when an entity wants to get a water right and explore for dissolved minerals, which manual do you want them to use. He gave an overall comment and appreciates all the time Carolyn and Chris put into this; they were very helpful throughout the whole process that started last year. Most of the issues that were brought up that we did address in the regulations that the team accepted and we moved through and were legally reviewed by LCB are in these regulations now. Most of what we heard today (from Ms. McIntosh and Mr. Mahannah) was rejected by the regulation development team and LCB in their legal review. You can’t write a regulation to undue the statute. In regards to Mr. Weinig’s concerns (on instrumented boreholes), we will take a look into that and see if there is a way to allow for that. Having worked for the State Engineer for many years we used to allow for that in boreholes and the language for instrumentation boreholes was added later for clarity so that may be possible to do without any changes in the regulations. For the final comment from Mr. Donahoe, the 2-inch annular space, which there was quite a bit of discussion, is necessary and is something that you always find in a geothermal or in an oil well because you have to be able to go behind the casing and put cement in order to seal the annular area.

**John Snow:** shouldn't over regulate this. The rest of the exploration industry with minimal permitting in regards to drilling. The brine needed clarification and we

**Rich Perry:** to abandon and re-drill the wells? They have an asset in the ground, is there a system to preserve that asset if they choose to go forward? Or would they have

**Bryan Stockton:** Read NRS 513.113 into the record.

NRS 513.113 Assistance from state agencies. The Division may request assistance from the Bureau of Mines and Geology of the State of Nevada and the State Engineer and cooperate with them in carrying out the purposes of this chapter.

**Rich DeLong:** has a couple of items as it relates to the two wells that were completed under waivers and have expired. They have an asset in the ground, is there a system to preserve that asset if they choose to go forward? Or would they have to abandon and re-drill the wells?

**Rich Perry:** with regards to the new regulations we did not put in an ability to re-permit an existing well as a DMRE well.

**Jason King:** stated he didn’t have an answer for that, unless they had a water right.

**Nigel Bain:** With regards to the dual permitting, I didn’t hear anyone say that it was so onerous, that it would drive them away. Is that correct?
Rich Perry: You’re correct, we have not heard that. Rather that the explorationists desired a pathway to explore without going through the process of acquiring a water right. The $1,000 fee for the permit is more expensive than the mining/milling waiver but certainly much less than a water right.

Rich DeLong: Brought forth it was time if anyone needed to do disclosures before voting. Disclosed that the firm he works for has been involved in lithium exploration permitting, but others do it, and it would not hinder his ability to provide judgement for the best interest of the State.

Dennis Bryan: disclosed that he was VP of Lithium America for nearly 10 years, but retired last year and has no financial involvement in any lithium concerns.

John Snow: Partner in McGinley and Associates, has three clients that have interest in lithium exploration, Blue Mountain Energy is a company owned by himself and his wife which has geothermal and oil leases which also would include lithium, zinc, etc. provisions.

Rich DeLong: Asked if Commission wanted to have discussion or make changes in the regulations.

Dave Parker: Motion to approve changes in regulation language recommended by Rich Perry that were read.

Mary Korpi: Seconded the Motion

Unanimously approved

Dave Parker: Motion to proceed with acceptance of regulations.

Mary Korpi: Seconded the Motion

Unanimously approved

COMMENTS BY THE GENERAL PUBLIC

There were no comments.

Meeting Adjourned at 12:20 pm