

**Minutes of the Meeting**  
**MINING OVERSIGHT & ACCOUNTABILITY COMMISSION**  
**March 14, 2014, 10:00 am**

The meeting was held at the Nevada Legislative Building Room 2134, located at 401 S. Carson Street, Carson City, Nevada, and by video conference to the Grant Sawyer Office Building, 555 E. Washington Avenue Room 4412 E, Las Vegas, Nevada

**MINING OVERSIGHT & ACCOUNTABILITY**  
**MEMBERS PRESENT:**

John Restrepo, Chairman  
    Attending from Las Vegas location  
Kyle Davis, Vice Chairman  
Douglas Roger Bremner, Member  
Senator Greg Brower, Member  
Robert Campbell, Member  
Dennis Neilander, Member  
    Attending from Las Vegas location

**MEMBERS ABSENT:**

None

**COUNSEL TO THE COMMISSION PRESENT:**

Henna Rasul, Sr. Deputy Attorney General

**DEPT OF TAXATION STAFF PRESENT:**

Terry Rubald, Deputy Executive Director,  
    Department of Taxation  
Jeffrey Mitchell, Coordinator of Assessment Standards  
    Department of Taxation  
Anita Moore, Program Officer,  
    Boards & Commissions,  
    Division of Local Government Services,  
    Department of Taxation

**MEMBERS OF THE PUBLIC PRESENT:**

Carson City:  
Stacey Shinn, PLAN  
Rich Perry, NDOM  
Coleen Cripps, NDEP  
Susan Juetten, GBRW  
Jim Faulds, NV Bureau Mines & Geology  
Jeff Bixler, MSATS  
Rod Neils, MSATS  
Don Soderberg, Division Industrial Relations  
Allen Biaggi, NV Mining Association  
Joseph Riley, NV Mining Association

**1. Roll Call and Opening Remarks**

Chairman Restrepo called the meeting to order and asked for the roll call. Terry Rubald called roll. All members were present.

**2. Public Comment**

Chairman Restrepo then asked for public comment.

Susan Juetten introduced herself. She represented Great Basin Resource Watch and read the comments from the executive director, John Hadder.

Ms. Juetten provided a letter to the Committee and a handout. She stated that GBRW routinely reviews new and renewal applications for Water Pollution Control Permits for mining operations. These permits are renewed every five years and currently the Lone Tree Gold Mine Permit is up for renewal. GBRW has submitted comments on this permit renewal. She continued to say the Commission should be aware of the actions of Newmont Mining at their site in Humboldt County. She said Newmont did with full knowledge contaminate groundwater by pumping on a former dewatering well, WW-27, which resulted in drawing highly contaminated pit lake water into the water table.

In the view of GBRW Nevada Department of Environmental Protection should not have allowed continued use of this well as a water supply. She said Newmont has pumped from this well on two occasions for extended purpose periods after the date when Newmont was presented with a contractor report that pumping on this well will draw water from the pit lake and thus degrade groundwater.

Ms. Juetten said that all reports after the June 2010 quarterly monitoring reports show the water quality decreasing to below standards in violation of Nevada state law. She continued to say Newmont is no longer pumping on Well 27 as a result of a directive from NDEP and GBRW has been assured that Newmont will not use that well again for a water supply. After several months of discontinued pumping on that well, the water quality observed from sampling water from 27 has returned to normal groundwater quality.

The Lone Tree Mine is in partial closure so this site is no longer highly profitable. GBRW encourages the Commission to note this conduct and be aware of the potential for illegal activities of mining operations that are in closure and no longer profitable.

GBRW appreciates the Commission's efforts to seek a funding mechanism to further advance the understanding of potential impacts of fugitive mercury emissions from precious metal mines.

Vice Chairman Davis asked how it is that GBRW was made aware that this was happening. Ms. Juetten answered they routinely monitor the reports. Vice Chairman Davis asked if this type of data came in on the reports that Newmont is required to file or keep up to date with NDEP. Ms. Juetten replied that was correct.

Chairman Restrepo thanked Ms. Juetten and asked that the record show that Commissioner Neilander had arrived in the Las Vegas location.

There was no further public comment.

### **3. AGENCY REPORTS; CONSIDERATION AND POSSIBLE ADOPTION OF RECOMMENDATIONS AND ORDERS**

#### **(a) For Possible Action: Department of Conservation and Natural Resources-Division of Environmental Protection**

##### **Response to MOAC request for ideas and strategies for funding plan for the fugitive mercury emissions**

Ms. Colleen Cripps, Administrator from the Division of Environmental Protection, introduced herself and began by saying she had been asked to talk to the commission about ideas and strategies for funding for fugitive mercury emissions research. She said there was a proposal that was vetted two years ago for additional research on fugitive mercury emissions. NDEP did take a look at that proposal. The estimated budget for that proposal was about \$200,000. Currently there is no funding available through the NDEP to support that research. She said they also did not feel this was a priority for the agency, particularly because at the time EPA was developing its federal rules and made a determination, they did not feel that fugitives were important and needed to be included in their rule making. She suggested that if the Commission wanted to make a recommendation to the legislature to provide general funds to support this research, this would be an option. Ms. Cripps also said she was

under the understanding there is a researcher that will be coming to UNR late this summer to work through the fall on some aspect of fugitive mercury emissions.

Chairman Restrepo asked if there was any way that NDEP could do any reallocation of their current budget to move some funds into the mercury fund. Ms. Cripps said they don't have the resources to be able to do that. He then asked Henna Rasul, Deputy Attorney General, if it was possible for the Commission to request this for consideration by the legislature - to allocate these funds in the coming legislative year. Ms. Rasul said she did not have an answer but she would look into it. Chairman Restrepo then requested she look into that and let the Commission know as soon as she could. He felt it was an important thing for them to do.

Vice Chairman Davis asked if Ms. Cripps could give him a little more detail in terms of EPA not considering fugitives much of a priority. He asked if and why that was the case. Ms. Cripps said when they were developing the federal match for gold mining, they did look at fugitive mercury emissions and it was not included in the final rule making. Vice Chairman also asked what Ms. Cripps initial thoughts were regarding the statement by GBRW during public comment. Ms. Cripps said she was just seeing a copy of this statement for the first time. She said she would be happy to take a look at the statement and provide the Commission with some written response back. Vice Chairman Davis stated he was most curious in terms of what that process is. Is it a case where we have ongoing monitoring? Or is it a case where they present that water quality information when they apply for the five year renewal of the permit? Ms. Cripps said she would get that information back to the Commission.

#### **(b) For Possible Action: Mine Safety and Training Section – informational presentation**

**Jeff Bixler, Chief Administrative Officer  
Division of Industrial Relations, Department of Business and Industry  
Mine Safety and Training Section**

Mr. Jeff Bixler, Chief of Mine Safety and Training for the Division of Industrial Relations, Department of Business and Industry, presented to the Commission with a Power Point program. He began by introducing himself. He said their section was established in 1909, and the purpose of that was to ensure the safety and health of Nevada's miners. This is done in three basic parts: through compliance inspections, through training, and through technical assistance/consultations.

They work with a staff of 14 people and are spread out over the state through Carson City, Elko, Winnemucca and an office in Henderson. They are in the process of training new inspectors. Mr. Bixler continued by saying that income is a constant problem and a constant concern. The Nevada Mining Association, on their website, state that an average wage for mining in the State of Nevada is \$89,000 per year and they start their inspectors off at \$49,000 per year so it is tough to bring inspectors in and keep them in. Once they get out in the field and start working with the mining industries, they are bought up and taken away.

Last year NMST conducted 306 mine inspections to include underground, surface, exploration drilling and sand, gravel operations. They have not changed much since last year. He feels they are on the right track. Last year, they issued a number of orders, notices and conditions corrected. Orders are basically an imminent danger type of a situation and a notice is a health and safety violation but not necessarily an imminent danger. Conditions corrected are just that. They are a health and safety violation that that is noticed on the mine site and corrected on the spot. It is corrected before NMST leaves the site. NMST is proud that with their notice of orders, they work with the mine operators and the miners to ensure that violations are corrected and abated. They do not just write a citation and walk away. All of the orders and notices have been abated.

Mr. Bixler said that last year was a great year for them. They did more technical assistance consultations than any other year previously. This is an area they are proud of in that they have built a trust with the mining operators and the miners; when the miners come to them asking for help to fix health and safety violations they have identified on their mine sites, they receive assistance. In the past

5-7 years, NMST's number of technical assistance consultations was 6 to 800 and now they are almost 4,000. This shows that they are building a good trust and working relationship with the mining section.

Regarding training, last year NMST trained about 800 new miners. They provided annual refresher training for a little over 1,500 miners and a variety of specialty mining classes. They taught 2,500 students last year. To go along with their training, NMST receives a state grant from the Federal Mine Safety and Health Administration, MSHA, and have received this grant for near 20 years of \$250,000. Two years ago, MSHA attempted to eliminate that grant and in the first year, they reduced the grant money from \$240,000 to \$89,000. The second year, which is the current year, they tried to eliminate it completely. Congress stepped in and mandated they reinstate the grant and NMST has just received notice that they will receive \$240,000. However, looking through MSHA's upcoming budget for 2015, they are attempting to remove that grant again, so there is an ongoing battle with MSHA trying to keep the grant with the State.

Vice Chairman Davis asked why Mr. Bixler thought they were trying to eliminate the grant. Mr. Bixler said that MSHA does not make any money on training. They make money with enforcement. They go to the mine sites, issue citations (sometimes very large dollar citations) and walk away from that site and come back three to six months later and do it again. They do it over and over and over and they want to take that money that's been allocated for state grants and hire more enforcement people.

Mr. Bixler said that there are a lot of new mining startups happening around the state. There are two new barite operations in Northumberland, one in Candelaria. They will employ about 45 people. Mostly the operations are in fairly rural areas around Nevada. Midway Gold has three new operations starting up, the first in the Eureka area. The second will be between Eureka and Austin and a third will be in the Tonopah area. They will employ about 150 people each.

Mr. Bixler continued to say that Pumpkin Hollow Mine outside of Yerington copper mine is working on seeking a shaft to about the 2,000 foot level where their prime orebody is. They are about 500 feet currently. They employ 40-45 people. They are looking at increasing that to 200. Their intention is to employ about 1,000. Metallic Ventures in the Goldfield area consists of three mines. Their Gemfield Mine is the first startup. That is scheduled to employ about 150 people. The Rawhide Mine is east of Fallon and has a potential to employ 120; Lincoln Gold is also east of Fallon and has a potential to employ 65.

AU Gold is in the Manhattan area, a Placer mine. Mr. Bixler said they have been finding some super fantastic gold out there. He said most of the gold in Nevada is not visible and this is very visible placer gold. They will employ 60-100 people. Scorpio Gold actually has two mine operations. They have one in Manhattan and one in Silver Peak. The one in Manhattan is the newest startup and should employ about 30.

Mr. Bixler stated that NMST's accomplishments are achieved through compliance inspections, and through training and technical assistance consultations. Mining activity in Nevada is on an increase. If the potential employees were added up there are about 1,800-2,000 new employees. If one should view the Nevada Mining Association website and average \$89,000 per year per miner, those are good wages and good money for those rural areas. That is not including contractors, subcontractors that will be working on the mine sites to build roads, buildings etc. This is a good boost to Nevada's rural areas. Mr. Bixler said NMST supports and encourages mining in Nevada with the understanding that the mines operate responsibly and safely.

Member Campbell asked Mr. Bixler if his agency got involved in any fracking operations. Mr. Bixler said no.

Vice Chairman Davis asked whose responsibility it is in terms of worker's safety on oil and gas operations. Mr. Bixler answered that he believed it is the mineral section, Division of Minerals. He said there may be an OSHA for worker's safety, but it is not NMST. Vice Chairman Davis then referred to his earlier question on a potential of eliminating grants. He asked why is it that there should be resources put into training rather than enforcement? Why wouldn't it be the responsibility of the operators to follow the law and the responsibility of the regulators to ensure compliance rather than

teach compliance? Mr. Bixler said they put a person through a training class so they can actually go out and apply for a job; he said it is more of a qualifying them to become employed. Vice Chairman Davis restated that essentially, we receive a federal grant in order to do a job training here in the state to prepare people to go work for the mining industry? Mr. Bixler said that was correct.

Member Bremner asked Mr. Bixler if there was activity underway at the Gemfield Mine near Goldfield. Mr. Bixler replied yes, it is actively underway. Member Bremner asked if they were going to move the highway and Mr. Bixler said that is in the future, but yes, it is in the works today.

#### **4. AGENCY BRIEFINGS**

**(a) For Possible Action: Pursuant to NRS 513.093(3)(a) and (b), Division of Minerals briefing on the activities of the Division, to include accounting of any fees or fines imposed or collected and the current condition of mining and of exploration for and production of oil and gas.**

Rich Perry, Administrator of the Division of Minerals introduced himself. He gave some information about his agency. They have 11 employees in the State, nine in Carson and two in Las Vegas, they are defined by several chapters in the Nevada Revised Statutes: NRS513, and the Commission is appointed by seven members who are appointed by the governor and they appoint the administrator are representatives in different areas that have knowledge of mining oil, gas and geothermal and one member at large.

NDOM revenues vary greatly because they are all fee-based revenues that are derived from mining claims, oil, gas and geothermal fees – these go up and down every year so their budget has a lot of variability in it in contracting work from abandoned mine land work. As per Chapter 513 they are here to encourage and assist in the exploration for and production of oil, gas and geothermal energy and minerals within the State. Within Chapter 513, there are several things by statute that NDOM is responsible for: Minerals education to the public schools, civic organizations and government agencies. They are the keeper of the statistics for mining-related production in the state, be it gold, oil, gas or geothermal. Every year, they gather those statistics and produce a publication for the public and industry. They operate an abandoned mine lands program which was started in 1987.

NDOM is also the primary permitting agency for oil, gas and geothermal drilling, and operate a small reclamation bond pool which was started a number of years ago under Chapter 519A.290. This allows for exploration companies to bond at a hundred percent for notice-level exploration on federal ground. They are also the keepers of Chapter 517 which is the definitions of mining claims, mill sites and tunnel rights for the State of Nevada.

Mr. Perry said Mining claim fees are their primary source of income. \$8.50 per mining claim in the State is collected by the county treasurers and is remitted to NDOM. Claims are renewed by claim owners. Geothermal fees are a different structure. It is an annual fee on industrial geothermal wells that NDOM assesses. Abandoned mine securing fees are related to new mines that come into the state. NDOM has a \$20 per acre assessment fee for new mines.

With regard to field inspections on oil, gas and geothermal wells, last July NDOM initiated a complete inspection of all the oil, gas and geothermal wells and this is now complete for the year. They have inspected all but one oil well and done a physical inspection on 410 of Nevada's 426 permitted geothermal wells.

On signage-related issues, there is a requirement for an oil, gas or geothermal well to have, within a hundred feet of it, a sign listing its API number and its designation, its public land survey system location and who the owner of the well is. NDOM found ten housekeeping items around the wellheads that they wrote letters to operators on and have not issued any fines. NDOM attempts to achieve compliance through discussions with the operators.

One of the metrics that NDOM looks at every year is active claims in Nevada. This was just updated recently. It is a measure of what kind of activity is in exploration in the state. The active claims

declined for the last few years with the price of gold. The graph Mr. Perry displayed related to the numbers that NDOM collects from registered operators every year. This is mainly done at the beginning of the year and updated when operators report their production statistics, how many people they employ and the metal they produce. This work is done in conjunction with the Nevada Bureau of Mines and Geology. What is significant is the actual production in revenue from the various different metals commodities and geothermal energy that has produced in the State of Nevada which amounts to in 2012 a little over \$10 million. What is also significant is the ratio of how much of that is gold to the other commodities; it is a large number.

Showing another slide, Mr. Perry said geothermal energy has been a very bright spot for the State of Nevada in the last few years. There has been a steady increase in the net production of power in megawatt hours that are produced by the geothermal plants and NDOM has seen a steady increase by several major operators who continue to drill and find geothermal fields including plants. Nevada tops two and a half million megawatt hours of power produced. The average family in Nevada uses 10.9 megawatts per year. What is produced is 235,000 households. This business is steadily increasing.

Nevada started producing oil in 1954 when the first find was made in Railroad Valley in Nye County and production peaked, 4 million barrels, in 1990, then began a steady decline. There has not been much exploration until the last year and there is no new production. Total production for last year was 335,000 barrels of oil. The one refinery in Railroad Valley is operating at half capacity.

Mr. Perry spoke about the abandoned mine lands program. In 1987 the legislature gave direction through statute to NDOM to develop an abandoned mine land program because of several hazards. There were several fatalities that occurred, mainly people recreating in these areas and motorcyclists and ATVs falling into shafts. NDOM now has the most comprehensive database of abandoned mine lands in the west and their database is used by other agencies.

Mr. Perry said NDOM works closely with the BLM and the forest service. They must work together to get these abandoned mine closures done. The BLM assists as much as they can but there are a number of things that NDOM has to go through, including state historic preservation and wildlife issues. NDOM has interviewed at UNLV in the geology department for interns and will be hiring eight of them. This will give these young people a chance to go out and do field work, to learn to safely operate a 4 wheel drive vehicle, learn to survey and do GPS. They do closures related to fencing, put up signs and physical closures. They hire contractors to do fill-ins where actual equipment is needed.

Mr. Perry displayed a slide showing abandoned mine hazards by county. He said there are a number of counties that have many of these abandoned mines: Clark, Esmeralda and Nye have high numbers which have been logged into their database. NDOM tries to secure 70 percent of the mines in the year they were actually fined. They come up with a plan for closing the others in the future. They rate these according to high, low, or medium hazard, and much of that has to do with its proximity to cities and population centers.

Since 1987 NDOM has secured 14,296 sites out of 17,861. Mr. Perry showed several slides with photographs of closed portals to abandoned mines.

Vice Chairman Davis asked if NDOM knew what might be under the ground in Elko. Mr. Perry replied that NDOM believes that the Elko Formation is buried underneath the basins out there. There are remnants of it that sit up on sides of hills, however it's very difficult geologically to determine the extent of it because there's not a lot of it exposed. Mr. Perry then replied that in regards to what other types of resources there are, he is unsure. There are historic projections and a map from the Bureau of Mines indicating everywhere in the State of Nevada where an oil well exploration well was drilled. There are hundreds of them however there are only 110 of them that actually are permitted producing wells. The rest would be exploration plays which never played out. Two wells were finished drilling. The second one was completed in January. Sundry notice was filed to perform hydraulic fracturing on one of them in Elko County. This is pending approval based on what type of chemicals is used and procedures being conducted. NDOM is learning as we go. Mr. Perry then stated that they often talk to other states about their experience as there are a lot of other states with far more experience. He is

uncertain as to how big it is, but is sure they're hoping it is an economic resource because considerable funds were spent to drill.

Vice Chairman Davis then asked Mr. Perry if he knew if it is all done through OSHA in other states. Mr. Perry stated that he technically cannot speak for other states; however OSHA would be responsible for anything that is not on a federal mine site. OSHA is a program that is regulated and operated by the state.

Vice Chairman Davis stated that as Mr. Perry mentioned in his slide show, well inspections have not been conducted or tracked however it appears that NDOM is starting to do them again. Vice Chairman Davis asked Mr. Perry if he had any there or is it maintained anywhere in terms of geothermal or oil and gas well failures which might have happened and what well failures might have occurred in the past.

Mr. Perry responded that a definition of a well failure would be required. He asked if it is an indication that there was a casing problem in the well or a cement problem. He also stated that when you inspect oil, gas or geothermal wells, you are looking at a wellhead when you get there. Vice Chairman Davis agreed.

Mr. Perry stated that there are certain regulations that state you have to have a sign which is clean and has no leaks. There's steam or water or oil that might come out. Geothermal and oil wells are deep. They go through various different geologic formations. NDOM looks at each one as an individual exercise. They look at the depth where they want to set casing. They ensure that there is, according to their regulations, cement behind the casing, particularly in the surface areas where there could be potential groundwater aquifers because they want to ensure that there's at least two protection seals in the casing for that. If there are events during the drilling of the well, cement is not put in right, NDOM catches it and they have to go back and fix it. Mr. Perry stated that so much of the work that NDOM does impacts the risk of a well being a bad well occurs during the drilling of a well and they are required at certain times to go visually see certain things. In their new HF regulations, they added to that because of the use of hydraulic fracturing different than any conventional. They put a lot of pressure on the casing when they do the hydraulic fracturing and they want to make sure that there are multiple layers of protection there for the protection of groundwater and fresh water.

Vice Chairman Davis asked that in terms of the example that was stated, if the information was tracked. He also asked if there are any lists or repository of any types of the incidents similar that may have occurred in the past. Mr. Perry stated yes, you would find that in our file. Vice Chairman Davis inquired as to where he would access that information. Mr. Perry responded that he did not think it was online, however is in historical files that NDOM has possession of.

Vice Chairman Davis inquired for the reason for the Division of Minerals being a part of the Nevada Mining Association. Why are both associations needed? Mr. Perry responded that the Nevada Mining Association is a trade association and also a lobbyist organization. NRS 513 states that NDOM is to "Encourage and assist in the exploration for the production of oil, gas, geothermal energy and minerals within the state." And also within there is a component that requires us to educate the public, so it's really by statute that we do that. Vice Chairman Davis replied thank you and that he had no further questions. Chairman Restrepo thanked Mr. Davis and turned the floor over to Commissioner Neilander.

Mr. Neilander directed Mr. Perry back to the slide on the oil production and that a few of the slides have overlays that show the price of the resource as it comes to the consumer and it looks like in the early '90's the oil production really boomed. He asked that if you were to overlay the price of oil, would that correspond with the production. Is it actually plentiful but dependent upon the price?

Mr. Perry responded that in the case of oil, that it's not the case here. The price actually of course has been higher, inflation adjusted as we've gone into the future and we've had less and less protection. The oil play that Noble Energy is pursuing is a tight shale play. It's the type of play that you read about that's occurring in North Dakota, Oklahoma and Texas that has increased gas and oil production in the country and it's due to a technological change. It's actually been around since the 1940's but has been perfected in the last ten years which allows for an extra step to enhance the

secondary permeability of these shales which are very low permeability and very tightly locked. They have oil in them, but the oil won't flow naturally so they go in and pump a mixture of water and sand under high pressure into the existing structural fabric of the rock and try to open up some permeability in it, and the sand follows the water into that and the sand particles keep the cracks and the rock open and allow for oil to flow into that. When they do one of those within a hundred to 300 feet radius around the casing, some secondary porosity and permeability is created. This infact is what really revolutionized the industry and that's what is being looked at in Elko because conventional oil play had never been in production before. So the short answer is that price has nothing to do with it.

Member Bremner had a question. Mr. Bremner stated that North Dakota was mentioned and that he recently saw an article where North Dakota was having a problem with the disposal of filters that are used in fracking sytems. These filters were becoming highly radioactive and there are not systems set up to properly dispose of them. Apparently they are only good for three or four days and hundreds of thousands of them are being abandoned throughout the state without proper disposal because there is no system set up in North Dakota to properly dispose of them. If these were taken to a normal land site, apparently there was a thousand dollars per filter fee that was being attached for the disposal of the filers.

Mr. Perry stated that the board has been hearing the concerns about the disposing of frack solutions itself. There needs to be something documenting the intent of where the frack solution and anything else in the site are going to go for disposal before they are removed from the drill bit.

Vice Chairman Davis asked a question of counsel. He asked if hydraulic fracturing regulations would come through this committee as well. Ms. Rasul state that she believed so.

Chairman Restrepo stated that he had one request for Mr. Perry. He stated that on his county statistics, there are approximately 3,600 sites that are unsecured. He stated that at this rate of closure, When does he anticipate those being closed or secured? Mr. Perry responded that if you look at how many we do each year, the issue is we also log new ones every year. We estimate there are actually 50,000 of them in the state, so we've found 17,000. It's an ongoing program. He also stated that as we move away from the higher priority areas of high-risk hazards around municipal and populated areas, there's still a lot of these out in the state, but they're getting tougher and tougher to do. He stated that he wished he could answer this, but it's going to be years. Chairman Restrepo stated "okay, it's a known unknown." He made a request to Mr. Perry that if he could redo a few of the slides where he has the black font on the purple background as he is unable to read it. Mr. Perry stated he would do so.

**(b) For Possible Action: Pursuant to NRS 514.035(1), Bureau of Mines and Geology briefing on the activities of the Bureau undertaken since its previous report, to include the current condition of mining and of exploration for and production of oil and gas.**

Mr. Faulds, Director of the Nevada Bureau of Mines and State Geologist played a seven minute informational video that described what the Bureau does. He then stated that he is a part of the Nevada Bureau of Mines and Geology, warehoused at the University of Nevada-Reno. They are a state-wide agency which does the State's geological survey. The statutes that established and govern NBMG are primarily NRS 514. There are several others that are important such as NAC 522 which give the department responsibility to archive samples and records from oil and gas wells and NAC 534-A, to archive samples and records from geothermal wells.

Mr. Faulds stated that the only fee they have which allows them to operate, is the small amount of funds generated from the Nevada Division of Environmental Protection from unreclaimed mining lands. The maximum amount in the legislation is \$100,000 a year and that has been the approximate amount received the past 20 years. In that same legislation, it's required that the Nevada Bureau of Mines and State Geology co-ops with the U.S. Geological Survey on using those funds for research on resources in Nevada. Ultimately the cooperative agreement provides the department with \$70,000 a year and \$30,000 to USGS.

Mr. Faulds stated that they are the bureau of information and exchange on the Nevada mineral industry, mineral resources and geology. They are charged with conduction thorough surveys of mineral resources throughout the state, applying geologic engineering principles to geologic problems in the state and also establishing and maintaining a library and bibliography of all of the literature related to Nevada geology and its resources and natural hazards and collection of samples and then for the dissemination of those, of that information in some kind of facility. Mr. Faulds further stated their agency assists other state agencies, federal agencies, universities in understanding how Nevada works.

Mr. Faulds remarked that his agency fulfills all of these responsibilities with an annual budget of approximately a million dollars a year which comes from the University of Nevada-Reno. This amount is down significantly so we are fulfilling all of those functions today on approximately one million dollars a year plus that \$70,000 that we get in the fees from unreclaimed mining lands.

Mr. Faulds said that in a nutshell, their mission as the State's geological survey is that they are responsible for understanding the geologic framework of Nevada, particularly its natural hazards and natural resources and our goals are to enhance public safety in the state, mitigate impacts from natural hazards, and then also to facilitate economic development. Natural hazards in the state are earthquakes. We also do research on flood hazards in the state. To fulfill all of those responsibilities we have several different components within the Bureau. We have a little over seven state funded faculty positions as well as two state funded staff positions. We also have 10 to 11 positions that we fund now on research grants from industry federal government, etcetera. Then our research geologists perform a number of functions and study the natural hazards in the state.

Mr. Faulds mentioned that Nevada is fortunate that it's experienced many mountain building episodes over the past ten, hundreds of millions of years. It makes the geology very challenging and fun but also complex. Due to the complexity the amount of Nevada that's well covered in terms of understanding is only about twenty percent, and that's been through a combination of our efforts, U.S. Geological Survey as well as some of the universities.

Mr. Faulds expressed that his department also has cartographic GIS staff as well as a library to house all of the geologic information in the State as required by Statute. This library is called the Great Basin Science Sample and Records Library or as they affectionately call it, the gold building. The gold building is north of the UNR campus as that is where land was available when funds were available five or six years ago. Major responsibilities of that facility are sample curation and information office for geologic information in Nevada for industry research by university students, etcetera. They also have a publication sales office as well as a core cuttings repository. All oil, gas and geothermal wells drilled within the state have to deposit their cuttings or have to supply their department with cuttings or chips from those wells, and if they're core, they have to supply parts of that core as the department is required to house them. Nevada Bureau of Mines and Geology also has mine collections which they use as an outreach for educational purposes. It has a visitation of about 2,700 people a year who access it for various reasons. Since 2009 there have been over 238,000 visitors to the website and that represents about 92,000 unique visitors. Another source of revenue is the sale of maps and reports totaling about \$70,000 a year.

Mr. Faulds stated that in a nutshell, that his department contributes to natural resources by doing geologic framework studies demonstrating how those deposits form in the state, whether they are mineral deposits, oil and gas, geothermal. They also provide an annual mineral industry report. These reports also include data on oil, gas and geothermal activities within the state. They get a lot of the data for this report from the Nevada Division of Minerals. From these reports we were able to find that Nevada is in the biggest gold boom of the State's history over the past 30 years or so. The State of NV produced 76 percent of the U.S. gold in 2012 and that has been typical of the past years. In 2012, if we were a separate country, we would have been the fourth largest gold producer in the world behind China, Australia and Russia. In 2011 we were the third largest producer in the world. The charts we generate track various commodities. We are actually the second largest producer of geothermal right

now behind California with all studies indicating that we have more potential than any other state in regards to geothermal.

Mr. Faulds stated that we need to keep on top of things in terms of research to facilitate new discoveries, however we are not. Nevada Bureau of Mines and Geology's mission is to sort and track the history, understand those deposits, publish documents on them so that we facilitate development of the state. Of course our department does not partake in the development, but it's important to realize that Nevada is covered by a lot of mountain ranges and basins with young sediments covering older deposits. In addition, there are younger rocks that cover the deposits that might house the mineral deposits etcetera. Geologic studies are needed to facilitate future discoveries. Only twenty percent of the state is well mapped.

Mr. Faulds said that due to cuts, we have had to rein in and focus on priorities over the last couple of years. He stated that he has three primary focus areas in the state now and of course Clark County due to significant growth, potential hazards, flood hazards, earthquake hazards. Understanding soil conditions is important for future development in Southern Nevada. Northeast Nevada is also included because of the expansive mineral deposits which are made up of primarily gold. The third focus area is the Reno/Carson area which includes earthquake hazards, geothermal development etc.

Mr. Faulds then stated that what his agency is trying to do is convert all the data that is being housed by them and make it universally accessible. They have been developing web applications that make accessing mineral resource data, oil and gas data, and geothermal data, etcetera as readily as possible. He then did some demonstrations of the website. Mr. Faulds invited the Commission in a tour of the gold building and offered them an annual calendar. Chairman Restrepo thanked Mr. Faulds and requested a color copy of his presentation.

Chairman Restrepo asked the Commissioners in the north if they had any questions. Vice Chairman Davis asked Mr. Faulds where the building that was mentioned was located. Mr. Faulds answered that it was on the DRI campus on the outside of the DRI campus just off of 395 on the north side of Reno. Vice Chairman Davis said okay. He also stated that Mr. Faulds had mentioned that his current budget now is about a million a year; however it has been up to 2.3 million. Mr. Faulds stated "2.7 before the recession hit."

Vice Chairman Davis then asked if that's just a portion of the University of Nevada-Reno's overall budget. Mr. Faulds responded that he was correct. Vice Chairman Davis stated that on one of Mr. Fauld's slides, he mentioned that part of what Mr. Faulds does is try to facilitate economic development and collect and create maps for oil and gas deposits. He asked if there is any reason to have this data other than to help the extraction industries find these resources and extract them. Mr. Faulds responded that that would be the primary reason, but there's also sort of a research perspective to having these data out there. Nevada is a world-class sort of geologic venue and people come from all over the world to study its geology, gold deposits, and geothermal activity. He stated that there is a research angle here too and maybe that doesn't net economic development in a couple of years, but that can help us understand these deposits. Mr. Faulds stated that he does what he can; however there are also significant contributions from other groups who are looking at Nevada geology. Vice Chairman Davis stated that this is quite a service that is being provided to the industry at taxpayer expense basically. Mr. Faulds answered yes. It is not atypical for a state geological survey in the country. If I can boast a little bit though, I'd say compared to most states as least, we're a little bit ahead of the game in terms of getting data universally available online.

Vice Chairman Davis responded that he has a question and it may or may not be directed towards Mr. Faulds. It is just something that bugs him. He stated that "we continue to talk about, specifically resources that might be out there and all of these new technologies that are going to continue." He questioned whether there is anyone really taking a look at the other side of the equation. "Are you looking at how easy or hard or what it might take in order to get to some of these resources, but some of the impact that's going to come in continuing to extract oil and continuing to burn and put carbon into the atmosphere? Does that ever enter into the analysis that you guys are doing?"

Mr. Faulds stated that their side of it would be sort of the geologic research side that comes into play. "I'd say at times in our research because if development should lend itself to new discoveries, and if development should follow that, then we also play a role in analyzing the local sort of geologic conditions. For example in Las Vegas our mapping indicates areas where certain soil conditions might preclude the development or the development could proceed and that there aren't any problems with soil conditions. This also applies to mapping out of the earthquake faults, flood hazards and that type of thing. We don't conduct studies, for example, on the CO2 content of the atmosphere and what would be contributed, you know, and how much the increased development and by-products of that, what that would contribute to the environment. So those would be done by other agencies.

Vice Chairman Davis thanked Mr. Faulds and stated that every time he hears of the rosy outlook for oil and gas, one has to look at the negatives as well.

Mr. Faulds responded "Sure and I'd say rosy outlook, I wouldn't say there's a rosy outlook myself, but there's a cautious optimism that there's a fair bit more potential in Nevada. And so what Noble Oil finds in Northeast Nevada will be significant and applying new technologies to Railroad Valley will be significant." "The other side of that, too, is that we've found this on geothermal. On the geothermal side, we've obtained some very large DOE grants to really push that forward and do 3-D modeling of the systems and detailed mapping of the systems to really understand those plumbing systems" "That modern look like that has not been taken of Railroad Valley, for example. And if you had a major oil company, there probably would have, but a couple of small companies, and economically, they simply can't afford to do that. And that's, you know, where our state geological survey can sometimes step in and facilitate understanding and possibly eventually some development."

#### **5. For Possible Action: Approval of Minutes for December 17, 2013**

Commissioner Neilander moved that the Committee approve the minutes dated December 17, 2013 as submitted in materials. Vice Chairman Davis seconds the motion. The minutes were approved.

#### **6. Briefing to and from Staff; Suggestions for Future Agenda Topics and Meeting dates**

Jeffrey Mitchell, Coordinator of Assessment Standards, stated that the Department of Wildlife anticipates being at the June meeting and that the June 25<sup>th</sup> or 26<sup>th</sup> works best for them. It was agreed by all that June 26<sup>th</sup> works for all parties involved. Chairman Restrepo confirmed that Mr. Mitchell would send out a notice.

#### **7. Public Comment**

Chairman Restrepo asked if there was public comment. There was no public comment, however Member Campbell asked to address the commission. Member Campbell stated that he would be stepping down from the Commission due to a change in residence. He said it had been an honor and a privilege to serve on the inaugural mining commission.

#### **8. For Possible Action: ADJOURNMENT**

Meeting was adjourned at 11:47 a.m.