Testimony before the Senate Natural Resources Committee
Alan R. Coyner, Administrator, Nevada Division of Minerals, April 9, 2013

The Nevada Division of Minerals (NDOM) is neutral on SB 390, but wishes to bring forward the following for consideration by the Senate Committee on Natural Resources:

1. NDOM has sufficient authority in NRS 522 and NAC 522 to regulate the hydraulic fracturing process as it pertains to the design, engineering, and implementation of oil and gas drilling programs. Wellbore integrity through proper engineering and inspection is the primary means to prevent impacts to groundwater. NDOM is currently processing a drilling permit which includes the hydraulic fracturing process. Among the conditions of approval being required are:
   a) Appropriate setback requirements for each individual well site
   b) Disclosure of all the possible chemicals to be used in the proposed hydraulic fracturing process
   c) Cement bond log approval to ensure wellbore integrity prior to commencing the hydraulic fracturing process
   d) Requirements concerning the proper containment and disposal of fluids flowed back to the surface

Exhibit A – Wellbore Schematic

2. The Commission on Mineral Resources (CMR) has directed NDOM to require the following as a condition of approval for all oil and gas drilling permits and sundry notices that include the hydraulic fracturing process: “The amount and type of chemicals used in a hydraulic fracturing operation shall be reported to www.fracfocus.org within 60 days of hydraulic fracturing completion for public disclosure.”

Exhibit B – CMR Resolution

3. The proposed amendment of NRS 522 poses several challenges for NDOM. A fiscal note has been submitted by NDOM that explains the costs associated with the amendment as follows:
   a) Requires promulgation of regulations under NRS 522 by the Commission on Minerals Resources for the hydraulic fracturing permits issued by the Nevada Division of Environmental Protection (NDEP). The rulemaking process incurs costs including costs associated with coordination between Division of Minerals (NDOM) and NDEP.
b) Inclusion of NDEP into NRS 522 Section 9 will require the NDOM deputy attorney general to be party to lawsuits brought against operators “on behalf of persons affected by the violation” due to supposed violations of NDEP regulations. A significant number of lawsuits, frivolous or otherwise, are expected to be brought by anti-fracking environmental groups.

c) Additional field inspection and enforcement by NDOM and NDEP regulations is expected to require two additional field inspectors and associated costs.

Exhibit C – NDOM Fiscal Note

4. NDOM maintains a series of links on our web site to provide unbiased information about hydraulic fracturing from government sources.

Exhibit D – Hydraulic Fracturing Information

5. According to IHS, an information service to government and industry, there were over 45,000 wells hydraulically fractured in the United States during 2012. Nearly one million oil and gas wells have been hydraulically fractured in the United States since the first well was fracked in 1947 in Kansas (United States Geological Survey, personal communication).

Exhibit E – Number and Type of Wells Drilled Annually in U.S. (2003-2012)

6. The North American shale plays cover an extensive area in the United States, Canada, and Mexico. Although not shown on the accompanying map, there are a number of geologic formations in Nevada which are being considered by industry for potential exploration and development utilizing the hydraulic fracturing process.

Exhibit F – North American Shale Plays Map

7. Hydraulic fracturing is currently being permitted and regulated in 25 states.

Exhibit G – Hydraulic Fracturing National Map
EXHIBIT B

COMMISSION ON MINERAL RESOURCES
RESOLUTION CONCERNING HYDRAULIC FRACTURING

February 22, 2013

On February 21, 2012 the Commission on Mineral Resource met at their quarterly public meeting and passed a resolution concerning hydraulic fracturing. The Commission directed the Division of Minerals to require the following as a condition of approval for all oil and gas drilling permits and sundry notices that include the hydraulic fracturing process:

“The amount and type of chemicals used in a hydraulic fracturing operation shall be reported to www.fracfocus.org within 60 days of hydraulic fracturing completion for public disclosure.”

The State of Nevada is a member state of the Interstate Oil and Gas Compact Commission (IOGCC). The IOGCC has partnered with the Ground Water Protection Council (GWPC) to sponsor the FracFocus chemical registry disclosure website. FracFocus is quickly becoming the national standard for reporting oil and gas drilling operations that include the hydraulic fracturing process. Nevada is the tenth state to require FracFocus as part of their regulation of oil and gas drilling operations.

For more information concerning FracFocus and hydraulic fracturing see the FracFocus website at www.fracfocus.org and the Division of Minerals website at minerals.state.nv.us

If you have any questions regarding FracFocus or hydraulic fracturing please contact:

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EXECUTIVE AGENCY
FISCAL NOTE

AGENCY'S ESTIMATES

Agency Submitting: Division of Minerals

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Explanation

(Use Additional Sheets of Attachments, if required)

1) Requires promulgation of regulations under NRS 522 by the Commission on Mineral Resources for the hydraulic fracturing permits issued by the Nevada Division of Environmental Protection (NDEP). The rulemaking process incurs costs including costs associated with coordination between the Division of Minerals (NDOM) and NDEP.

2) Inclusion of NDEP into NRS 522 Section 9 will require the NDOM deputy attorney general to be party to lawsuits brought against operators "on behalf of persons affected by the violation" due to supposed violations of NDEP regulations. A significant number of lawsuits, frivolous or otherwise, are expected to be brought by anti-fracking environmental groups. The total cost to NDOM is unknown but estimated at $200,000 per year.

3) Additional field inspection and enforcement by NDOM of the NDEP regulations is expected to require two additional field inspectors and associated costs.

Name  Alan R. Coyner
Title   Administrator

DEPARTMENT OF ADMINISTRATION'S COMMENTS

The agency's response appears reasonable.

Name  Jeff Mohlenkamp
Title   Director

Date   Wednesday, March 27, 2013

FN 8669
The links below present factual information concerning the hydraulic fracturing process:

**Links Related to State Government**

- Commission on Mineral Resources Resolution on Hydraulic Fracturing: [http://www.minerals.state.nv.us/forms/ogg/COMMISSION_ON_MINERAL_RESOURCES_RESOLUTION.pdf](http://www.minerals.state.nv.us/forms/ogg/COMMISSION_ON_MINERAL_RESOURCES_RESOLUTION.pdf)
- Frac Focus Chemical Disclosure Registry: [http://fracfocus.org/](http://fracfocus.org/)
- Frac Focus (Chemical Use): [http://fracfocus.org/chemical-use](http://fracfocus.org/chemical-use)
- Frac Focus (Frequent Questions): [http://fracfocus.org/faq](http://fracfocus.org/faq)
- Groundwater Protection Council (GWPC – developed Frac Focus Chemical Disclosure Registry with the IOGCC): [http://www.gwpc.org/](http://www.gwpc.org/)
- Interstate Oil and Gas Compact Commission (IOGCC – an organization comprised of producing states oil and gas regulators): [http://www.iogcc.state.ok.us/](http://www.iogcc.state.ok.us/)
- IOGCC (Hydraulic Fracturing): [http://www.iogcc.state.ok.us/hydraulic-fracturing](http://www.iogcc.state.ok.us/hydraulic-fracturing)
- Michigan Department of Environmental Quality (Questions and answers about hydraulic fracturing in Michigan): [http://www.michigan.gov/deq/0,4561,7-135-3311_4111_4231-262172--,00.html](http://www.michigan.gov/deq/0,4561,7-135-3311_4111_4231-262172--,00.html)

**Links Related to Federal Government**

- United States Energy Information Administration (What is shale gas and why is it important?): [http://www.eia.gov/energy_in_brief/article/about_shale_gas.cfm](http://www.eia.gov/energy_in_brief/article/about_shale_gas.cfm)
- United States Environmental Protection Agency (Natural Gas Extraction - Hydraulic Fracturing): [http://www.epa.gov/hydraulicfracturing/#improving](http://www.epa.gov/hydraulicfracturing/#improving)
Number and Type of Wells Drilled Annually in U.S. (2003-2012)

Source: IHS

EXHIBIT E
North American shale plays (as of May 2011)

Source: U.S. Energy Information Administration based on data from various published studies. Canada and Mexico plays from ARI.
Updated: May 9, 2011

* Mixed shale & chalk play
** Mixed shale & limestone play
*** Mixed shale & tight dolostone-siltstone-sandstone play

- Current shale plays
- Stacked plays
  - Shallowest / youngest
  - Intermediate depth / age
  - Deepest / oldest
- Prospective shale plays
- Basins
States Permitting and Regulating Hydraulic Fracturing

Sources: NBC News, U.S. Energy Information Administration, IHS | Credit: NBC News