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March 24, 2011

Dr. Milt Glick President, University of Nevada, Reno 1664 North Virginia Street Reno, NV 89557-0208

Dear Dr. Glick:

The Society for Mining, Metallurgy and Exploration (SME) opposes the proposed cuts in State funding from \$2.1 million to \$1.0 million per year for the Nevada Bureau of Mines and Geology (NBMG) that the University of Nevada, Reno announced on March 7, 2011. We believe this is a tragic mistake that will adversely affect the public safety and the resource development in Nevada resulting in lost revenue, missed economic development opportunities, and failure to protect and serve Nevada's citizens and visitors. The NBMG stimulates economic diversification and development in the State, saves lives, and protects property from natural disasters.

SME is an international society of professionals in the minerals industry. The SME membership is more than 13,000 strong, with members in over 100 countries. There are over 650 SME members in Nevada.

NBMG is the statewide research and public service unit that serves as the State geological survey. NBMG's mission, to provide the State's needs for geological and energy- and mineral-resource information and research, is defined in its enabling legislation. Established by the Nevada Legislature as a department within the public service division of the Nevada System of Higher Education, NBMG is one of the Statewide Programs at UNR. Although NBMG contributes to the educational mission of UNR through support of numerous graduate and undergraduate students on externally funded research and occasional teaching, NBMG's main contributions are accomplished through research and dissemination of results. NBMG is supplementing its State funding with approximately \$4 million per year in external grants. Nevada stands to annually lose \$2 million or more in additional federal grant funding, if NBMG's State funding is cut by \$1.1 million.

NBMG scientists conduct research and publish reports that foster economic development, promote public safety, and improve the quality of life in urban and rural areas of Nevada. Some areas of economic development and risk reduction from natural hazards are listed below. The NBMG website, www.nbmg.unr.edu, has links to NBMG publications and services. The latest NBMG biennial report, www.nbmg.unr.edu/dox/of1014.pdf, provides details on recent accomplishments, and Appendix B of the report lists the statutory mandates for NBMG.

It should also be noted that in the past, when the State and University suffered budget cuts, the cuts to NBMG were generally the same, on a percentage basis, as the cuts to the University (and generally the same as other state agencies). The proposal this year is different. The University is targeting NBMG for a reduction of 53% of its State funding, while the overall cut to the University would be 34%.

NBMG's research and education efforts spur economic development in Nevada and provide a level of public safety in the following areas:

Mining

- NBMG maps, publications, and data sets have played a critical role in Nevada's current gold-mining boom, the largest in the history of the Americas.
- NBMG-supported mapping led to the discovery of the Carlin Gold deposit in 1961. Since then, Nevada has produced over \$230B in gold and silver at today's prices, providing high-paying jobs for tens of thousands of Nevadans.
- Many mineral deposits are still to be found in Nevada, especially under volcanic and gravel cover. These difficult-to-find deposits will rely heavily on data made available by NBMG. Estimates of the value of these deposits range up to \$1.2 trillion.

Geothermal Energy

- NBMG scientists have played a critical role in Nevada's geothermal energy boom.
- NBMG's work on the fault control on locations of geothermal systems, shallow temperature surveys, and water chemistry from springs stimulated companies to find new geothermal resources and develop new power plants.
- NBMG's estimate of Nevada's potential indicates geothermal power can produce >35% of Nevada's energy needs, potentially making the geothermal industry a billion-dollar-a-year business.

Earthquakes

- NBMG scientists helped document the magnitude 6.0 earthquake near Wells and the 4.7 Mogul swarm of earthquakes in West Reno.
- NBMG distributed information on earthquake safety before the largest earthquake in the Mogul swarm, likely saving millions of dollars of damage.
- NBMG's computer simulations of earthquakes indicates a major earthquake in Las Vegas or Reno-Carson City areas, like ones that have occurred in the geological past, could cause hundreds of fatalities and billions of dollars of damage, if we are not prepared.
- NBMG's continued work on locating active faults, mapping areas of potential liquefaction and landslides, measuring stresses with geodetic instruments, and informing the public of geologic hazards will save lives.

Geologic Mapping

- NBMG's geologic maps play critical roles in resource development, hazard mitigation, and urban planning.
- The value of geologic mapping in cost savings to developers and planners is almost 40 times the cost of the mapping itself.
- NBMG estimates that 80% of Nevada lacks modern geologic mapping on a scale sufficient for energy, mineral and urban planning purposes.

Education

- NBMG scientists educate the Nevada public in how geology affects their lives by leading field trips, giving presentations, especially to students, and training teachers.
- NBMG scientists help train Nevada professionals by leading field trips and giving workshops.
- NBMG scientists train UNR students by teaching classes and funding and supervising graduate student research. These students, many of whom are from outside Nevada, get high-paying jobs in Nevada and pay taxes.

The NBMG provides the knowledge, experience, ingenuity, innovation and education to meet Nevada's growing demands for natural resources, environmental quality and resilience from hazards. SME supports NBMG's, as well as all State Geological Survey's efforts to provide objective scientific advice about the critical natural resource issues that face this Nation.

Sincerely,

John N. Murphy, PE 2011 SME President