

GEOLOGIC MAPPING SUBCOMMITTEE  
of the  
STATE MAPPING ADVISORY COMMITTEE

MEETING NOTES

1:00 to 3:00 p.m., Tuesday, August 13, 2002  
Nevada Bureau of Mines and Geology (NBMG) Conference Room  
Scrugham Engineering Mines Building, Room 401  
University of Nevada, Reno Campus

1:00 p.m. Welcome and Introductions by Jon Price, Director/State Geologist,  
Nevada Bureau of Mines and Geology.

In 1992, with passage of the National Geologic Mapping Act and formation of the National Cooperative Geologic Mapping Program, the Nevada State Mapping Advisory Committee (SMAC) established a Geologic Mapping Subcommittee. This committee, which meets when necessary, advises the Nevada Bureau of Mines and Geology on priorities for geologic mapping.

Members of the Advisory Committee for the Nevada Bureau of Mines and Geology are encouraged to participate in the Geologic Mapping Subcommittee, whose membership is open to anyone interested in geologic mapping in Nevada.

The purpose of this meeting is to discuss NBMG's geologic mapping priorities, particularly those that will be presented for funding assistance through the Statemap portion of the U.S. Geologic Survey's National Cooperative Geologic Mapping Program.

NBMG ongoing and recently completed Statemap geologic mapping projects were reviewed. A summary sheet of the Statemap geologic mapping program in Nevada was handed out. An information page on the National Cooperative Geologic Mapping Program (NCGMP) was also handed out.

The general areas in Nevada that have been the focus of Statemap proposals in the past were discussed. These areas include: the Las Vegas area, which needs geologic mapping in support of rapid urban growth, sand and gravel resources, industrial minerals, and water and environmental resources; the Reno urban corridor, which needs additional geologic mapping for the same reasons; and the Humboldt Basin and northeastern Nevada for mining and mineral exploration and long-term climate change analysis.

Discussion by Chris Henry and Jim Faulds about the need for more detailed geologic

mapping to better understand the fault dynamics and earthquake potential within the Walker Lane area. The Reno-Carson City urban area is in the northern portion of this area. The National Science Foundation (NSF) is currently funding a project to unravel the tectonics of the Walker Lane and it ties into several ongoing and previous Statemap projects.

Current work indicates that there is 6 kilometers of right lateral displacement on the Warm Springs fault zone northeast of Reno. This equates to 2 mm of slip per year, which is far more than formerly thought. Only through more detailed geologic mapping will we be able to determine the actual dynamics of this zone and accurately define the potential earthquake hazard that it poses to the Reno area.

1:24,000-scale mapping in Northwestern Nevada is also allowing the development of a better understanding of the volcanic stratigraphy in the area. Many ash flows and basalts that once were considered broad sheets are turning out to be channel fills from events some distance to the east of Reno.

The subcommittee discussed previously established priorities for new geologic quadrangle maps in Nevada. Copies of the existing priority map were handed out. Another page size map that showed existing 1:24,000 scale geologic maps in Nevada was also handed out. Ron Hess gave an overview of the various criteria layers that went into formulating the final priority map. The subcommittee retained the previously established priorities.

Various ideas about the purpose, location, and type of mapping that should be developed included:

Large-scale mapping across the state in corridors that would allow the development of geologic transect maps across Nevada. This project could tie into a high-resolution GPS network. Mapping for a Northeast transect across the state was suggested.

Continued interest in the Humboldt Basin and Carlin areas.

100,000-scale geologic mapping was discussed. NBMG has continued to focus on 1:24,000-scale mapping but at some future date we may produce additional 100,000-scale geologic maps in selected areas based on need.

Need to focus on regional controls of mineral deposits.

Jim Faulds stated that the DOE geothermal program is funding the geologic

mapping of a transect across the Hot Spring Mountains in the area around Brady Hot Spring and Desert Peak. Chris Henry spoke of the association between northeast-trending faults and the production of geothermal fluids in northwest Nevada.

Could more mapping be produced if some of the work is contracted out? Some mapping in the Virginia City area, southwest Nevada, and the Tuscarora area was done by co-authors that were under contract. Due to the stringent Statemap delivery requirements it is extremely difficult to propose projects where NBMG would not have good control of the delivery schedule. If any of the projects fail to make delivery, funding for all Nevada Statemap projects would be put in jeopardy.

Geologic mapping is needed along the proposed Yucca Mountain rail routes to assess the risk of potential geologic hazards along these corridors.

New maps to be proposed for Statemap grants in federal fiscal year 2003 were discussed. They include:

A series of quadrangles in Ivanpah Valley in southern Nevada.

Mt. Manchester Quadrangle in the Laughlin area.

Digital conversion of several maps that are being published in a new NBMG bulletin on the Carlin trend.

Digital conversion of seven map panels from some geologic mapping of the northern Carlin area produced by Stan Keith.

Scanning and georeferencing of the NBMG 1:250,000-scale county geologic maps.

(Pah Rah Mountain Quadrangle was added during discussions at the end of the proposal process.)

Discussion of future priorities for geologic mapping. The following two areas were mentioned as future areas for growth.

Ongoing development in the Virgin Valley area.

Eldorado Valley water resource study.

3:10 p.m. Adjourn

For more information contact Jon Price (email: [jprice@unr.edu](mailto:jprice@unr.edu)), Chris Henry (email: [chenry@unr.edu](mailto:chenry@unr.edu)), or Ron Hess (email: [rhess@unr.edu](mailto:rhess@unr.edu)) at the Nevada Bureau of Mines

and Geology, (775) 784-6691.

### List of Attendees

Jon Price	Nevada Bureau of Mines and Geology
Ron Hess	Nevada Bureau of Mines and Geology
Robert A. Levich	U.S. Dept. of Energy
Ronald Parratt	Independent
Lew Gustafson	Independent
Doug Cook	Cook Ventures Inc.
Dave Donovan	Southern Nevada Water Authority
Jeff Doebrich	U.S. Geologic Survey
Jim Faulds	Nevada Bureau of Mines and Geology
Ron Lynn	Clark County Building Department
Chris Henry	Nevada Bureau of Mines and Geology

Ron Hess 9/16/02 (final)