

**MEETING NOTES**  
**GEOLOGIC MAPPING SUBCOMMITTEE**  
**of the**  
**STATE MAPPING ADVISORY COMMITTEE**

**Wednesday, August 11, 2004**  
**Nevada Bureau of Mines and Geology (NBMG) Conference Room**  
**Scrugham Engineering Mines Building, Room 401**  
**University of Nevada, Reno Campus**

**1:30 p.m.** Welcome and Introductions by Jon Price, Director/State Geologist, Nevada Bureau of Mines and Geology.

Jon Price reviewed the history of the State Mapping Advisory Committee and the Geologic Mapping Subcommittee. He spoke about the early topographic map coordination program, development of the annual State GIS conference, and the Keck Data Depository Web site.

Review of current mapping projects.

Chris Henry passed out three lists entitled: NBMG geologic map bibliography since 1992; NBMG Statemap projects; and NBMG-GSN Quadrangle Mapping Program. He explained the information contained on the lists and went into detail about the NBMG-GSN Quadrangle Mapping Program. He also noted that the large number of USGS maps published in 2003 was due to the ending of a publication contract that NBMG had with the USGS to publish those maps.

Larry Garside discussed some of his mapping projects including Olinghouse, Wadsworth, Moses Rock, and the Virginia City Quadrangles. He outlined NBMG's current technology for print-on-demand maps, which help cut map production cost. In the past, maps had to be published in lots of 250, 500, or 1000 and then stored until sold, but print-on-demand maps have changed that. Many NBMG maps are now available on-line at no cost to the user.

Steve Castor reviewed his activity on the Virginia City and west half of the Flowery Peak Quadrangles outlining the complexities of the various volcanic units being mapped in the area. He will be submitting the east half of the Flowery Peak Quadrangle for funding under this upcoming Statemap call for proposals.

Jon Price presented an update for Kyle House who is managing the Ivanpah Valley mapping project in Clark County. This is a three-year project that is being funded by Statemap, NBMG, the Clark County Regional Flood Control District, and NASA. It covers the Quaternary portions of nine quadrangles in an area of Clark County that will soon see commercial and urban development.

Jim Faulds has been mapping, as part of several different projects, an area 30 miles north and northeast of Reno and west of Pyramid Lake, in the northerly extension of the Walker Lane, a zone of northwest-striking faults. Some of the mapping in this area has been funded by Statemap, Edmap, National Science Foundation (NSF), and NBMG. He and Chris Henry are interested in better defining the age and location of the various Miocene ash flow tuffs that are present in the paleochannels in this region. The paleochannels form piercing points for determining displacements along strike-slip faults in the Walker Lane. Jim has also been working with an undergraduate student who has been supported by the Association of American State Geologists through the NSF student mentor program.

Ron Hess reviewed and discussed previously established priorities for new geologic quadrangle maps in Nevada and handed out a summary map showing approximately 20% of Nevada currently mapped with good-quality 1:24,000-scale geologic maps.

New geologic mapping to be proposed for Statemap grants in federal fiscal year 2005 include:

Jerritt Canyon Mining District, John Muntean in collaboration with Queenstake Mining Company. The completed project will take between 2 and 3 years.

North half of the Fernley West Quadrangle, Jim Faulds. This is an extension of his current work on the Fernley East Quadrangle.

Searchlight Quadrangle, Jim Faulds in collaboration with the USGS. The rocks in this area, including the mineral deposits at Searchlight, are tilted approximately 90 degrees, thereby providing exceptional exposure into an intrusive and hydrothermal system.

North half of the Seven Lakes Mountain Quadrangle, Chris Henry. This is a continuation of previous work in the northern end of the Walker Lane and also an area that is becoming of some significance to the Reno urban area for potential water resources.

East half of the Flowery Peak Quadrangle, Steve Castor. This will be a continuation of his current project on the west half of Flowery Peak and the Virginia City Quadrangles.

NBMG will also propose digital conversion of 13 existing 1:24,000-scale geologic Quadrangle maps to full GIS products:

Frazier Flat/west half of Moses Rock, Nelson SW, Mule Canyon, Fire Mountain, Callville Bay, Government Wash, Hiller Mountain, Beaver Peak, Willow Creek Reservoir, Willow Creek Reservoir SE, Bobs Flat, Verdi Peak, and Big Bald Mountain.

NBMG may also propose to scan and georeference all 15 county geologic maps from the Nevada series of geology and mineral resource Bulletins (Ron Hess), including:

- B58 Geology and mineral deposits of Mineral County, Nevada: Ross (1961)
- B59 Geology and mineral deposits of Humboldt County, Nevada: Willden (1964)
- B62 Geology and mineral deposits of Clark County, Nevada: Longwell, and others (1965)
- B64 Geology and mineral resources of Eureka County, Nevada: Roberts, Montgomery, and Lehner (1967)
- B70 Geology and mineral deposits of Washoe and Storey Counties, Nevada: Bonham and Papke (1969)
- B73 Geology and mineral deposits of Lincoln County, Nevada: Tschanz and Pampeyan (1970)
- B75 Geology and mineral deposits of Lyon, Douglas, and Ormsby Counties, Nevada: Moore (1969)
- B77 Geology and mineral deposits of southern Nye County, Nevada: Cornwall (1972)
- B78 Geology and mineral deposits of Esmeralda County, Nevada: Albers and Stewart (1972)
- B83 Geology and mineral deposits of Churchill County, Nevada: Willden and Speed (1974)
- B85 Geology and mineral resources of White Pine County, Nevada: Hose, Blake, and Smith (1976)
- B88 Geology and mineral deposits of Lander County, Nevada: Stewart, McKee, and Stager (1977)
- B89 Geology and mineral deposits of Pershing County, Nevada: Johnson (1977)
- B99A Geology of northern Nye County, Nevada: Kleinhampl and Ziony (1985)
- B101 Geology of Elko County, Nevada: Coats (1987).

There was some discussion of these projects and of future priorities for geologic mapping to be taken into account in the proposal process for 2006.

In a written request, Bonnie Akaka-Smith, Tribal Chairperson of the Pyramid Lake Paiute Tribe requested that geologic mapping of the Needles and Pyramid Lake NE Quadrangles be pursued.

Joan Fryxell, Department of Geologic Sciences, California State University San Bernardino, sent in a written proposal to produce the following geologic maps:

Bullwhacker Springs Quadrangle  
Currant Quadrangle  
Callaway Well Quadrangle  
Troy Canyon Quadrangle.

She also indicated interest in a future project involving the following maps:

Adaven Quadrangle  
Horse Spring Hills Quadrangle  
Water Gap NE Quadrangle  
Heath Canyon Quadrangle.

Scott McDonald proposed, in a presentation to the committee and in an earlier email, to provide geologic mapping for the Pogues Station Quadrangle (which he has nearly completed in draft form) and to also supply additional geologic mapping of the Moody Peak, Moody Peak NW, and Bull Fork Quadrangles, which would provide complete coverage of the Moody Mountain 15 minute Quadrangle. In addition to geology, Scott is also interested in the Indian archaeology of the area.

Ron Lynn, Clark County, suggested mapping the Coyote Springs Quadrangle. It is in an area that will be developed in the near future.

Joe Laravie had several comments regarding the geologic mapping products that are being produced by NBMG. First he suggested that more geophysical work, such as gravity, be performed and included in the mapping program. This would assist exploration programs which are now looking for potential mining targets that are concealed under alluvium in valleys. Jon Price agreed with the usefulness of the geophysical data but was concerned that the funding was not available to acquire the geophysical data, which can be expensive. Joe also requested that more alteration mapping be included on NBMG maps. Jon Price announced that NBMG had just acquired a new ASD spectrometer that would allow NBMG mappers to include more alteration information on their maps. Joe's last comment was that NBMG digital GIS geologic maps should depict dikes as area features instead of line features. This would allow for the determination of how a fault crosscuts a dike or vice versa. Ron Hess responded that this could be achieved if the detailed information on the crosscutting relationships associated with the dikes is available.

Jon Price reported that he had spoken with the Utah State Geologist recently and he is interested in a possible joint water resource project along the Utah-Nevada border. This is in an area of significant interest to eastern Nevada and Clark County because of various conflicting groundwater issues.

**4:00 p.m. Adjourn**

For more information please contact Jon Price (Email: [jprice@unr.edu](mailto:jprice@unr.edu)) or Chris Henry (Email: [chenry@unr.edu](mailto:chenry@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
John H. Peck	Consulting Geologist
Joseph Laravie	Consulting Geologist
Anton Ptacek	Professor Emeritus, San Diego State University
Scott McDonald	Visa
Michael Turner	Nevada Department of Transportation
Jim Faulds	Nevada Bureau of Mines and Geology
Bob Levich	US DOE Yucca Mountain Project
Steve Castor	Nevada Bureau of Mines and Geology
Alan Coyner	Nevada Division of Minerals
Art Ehrenberg	Southern Nevada Water Authority
Shawn Gooch	City of Sparks
Chris Henry	Nevada Bureau of Mines and Geology
Lew Gustafson	Consulting Geologist
Ron Lynn	Clark County
Larry Garside	Nevada Bureau of Mines and Geology

R. Hess - 9/7/04