

## MEETING NOTES

### GEOLOGIC MAPPING SUBCOMMITTEE of the STATE MAPPING ADVISORY COMMITTEE

Wednesday, August 15, 2007  
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, State Geologist and Director, Nevada Bureau of Mines and Geology.

Jim Faulds gave a review of mapping currently being done in Clark County. In May 2007, Jim Faulds and Kyle House received a \$984,883 grant from the Bureau of Land Management to complete five new, fully digital geologic maps, five legacy, fully digital geologic maps (ones for which the vast majority of the work has already been completed, but for which no final map has been published), and to convert five published geologic maps into digital format.

Jon Price commented that NBMG has had some discussion with the U.S. Forest Service regarding mapping in the Spring Mountains area. They are interested in having the Quaternary geology and flash-flood hazards mapped.

Jim also gave an update on mapping he is doing in the Fernley area. In the mapping Jim and Kyle have done over the past few years, they've found that there could be a linkage between the faults in the Fernley area and Hawthorne, crossing through the Carson Sink.

John Muntean reported that he has received a grant from Queenstake Mining Company, supplementing funding from the USGS from the STATEMAP portion of the National Cooperative Geologic Mapping Program, to produce a geologic map of the Jerritt Canyon area (north of Elko, NV). In researching available maps, John and Chris Henry discovered that there were major issues and errors with company-produced maps in the area, thereby necessitating more effort on their part to produce a high-quality geologic map.

Chris Henry reported that John Caskey (with San Francisco State University), John Bell, and Kyle House are mapping the Lahontan Mountains Quadrangle and a plan to follow up that mapping by mapping the Grimes Point Quadrangle. Chris is mapping the Stockton Flat Well Quadrangle (south of the Fernley) as part of the STATEMAP program. He is proposing to map in the Caitano Caldera in Eureka County, near the Cortez Hills and Pipeline gold deposits in Lander and Eureka Counties.

Jon Price reported that NBMG has been working on completing digital conversions of published NBMG geologic maps. NBMG received STATEMAP funding for digitizing 17 quads in 2006 and 37 quads in 2007.

Jon Price distributed a list (see below) of projects that NBMG proposes to submit for funding under the STATEMAP 2008 program.

The Committee unanimously approved submitting these projects as the 2008 STATEMAP proposal. Joe Laravie mentioned that he would like to see two recent geologic maps published by NBMG and authored by USGS geologists, Santa Renia Fields and Cooper Peak, included in the digitizing/GIS conversion part of the STATEMAP proposal. Liz Crouse reported that Christine Arritt has just completed the cartography of Cooper Peak Quadrangle, but it is in Adobe Illustrator format. These two quads, will be added to the digitizing/GIS conversion part of the STATEMAP proposal.

Jon Price asked for suggestions for future geologic mapping. He reported that one NBMG Advisory Committee member suggested that we continue mapping in the urban areas because of population growth. Joe Laravie suggested that we continue to map where the mineral resources and mining activity are most concentrated. Lew Gustafson suggested that an announcement be sent out, through the Geological Society of Nevada (GSN), requesting suggestions for future geologic mapping projects. John Muntean reported that he was planning to make such an announcement at one of the winter GSN meetings.

Jon Price reported that NBMG is working on completing a 1:500,000 geologic map of Nevada using Liz Crafford-Jones' 2007 revision in GIS of the 1978 Stewart and Carlson geologic map. He noted that Liz's map needs cartographic work for production as a printed map. NBMG is also planning on producing a highway geologic map that is geared toward travelers.

**3:23 p.m. Adjourn**

#### **LIST OF ATTENDEES**

Liz Crouse, Nevada Bureau of Mines and Geology  
James Faulds, Nevada Bureau of Mines and Geology  
Terri Garside, Nevada Bureau of Mines and Geology  
Lewis Gustafson, Piedmont Mining  
Craig Hale, Southern Nevada Water Authority  
Jordan Hastings, Nevada Bureau of Mines and Geology  
Chris Henry, Nevada Bureau of Mines and Geology  
Ron Hood, Division of Emergency Management  
Joe Laravie, Consultant  
Jack Lewis, Bureau of Land Management  
Sam Limerick, Contractor to Energy Information Administration  
Ron Lynn, Clark County Department of Development Services  
Rick Martin, Division of Emergency Management  
John Muntean, Nevada Bureau of Mines and Geology  
Mark O'Brien, Bureau of Land Management  
Jon Price, Nevada Bureau of Mines and Geology  
Jim Werle, Converse Consultants

Respectfully submitted by Terri Garside, 20 August 2007

State Mapping Advisory Committee  
c/o Nevada Bureau of Mines and Geology  
University of Nevada/MS 0178  
Reno, Nevada 89557-0178  
775/784-6691 ext. 5

## STATEMAP PROPOSAL FOR FISCAL YEAR 2008

The Nevada Bureau of Mines and Geology is proposing the following mapping projects:

**First Priority = New geologic mapping in urban and rural areas of northern Nevada** (the equivalent of approximately 2.5 7.5-minute quadrangles):

**Grimes Point** (full 7.5-minute quadrangle) – mapping of the Quaternary geology as a follow-on of mapping in the adjacent Lahontan Mountains Quadrangle, with applications in such areas as earthquake hazards, climate change, and geothermal resources. [John Bell]

**Hazen** (west half of the 7.5-minute quadrangle) – mapping of bedrock and surficial geology as a follow-on of mapping in the Fernley area, with applications to earthquake hazards, industrial mineral resources, potential geothermal resources, and suburban growth. [Jim Faulds and Alan Ramelli]

**Walker River area near Schurz** (south half of the stretch from Weber Reservoir to Walker Lake, approximately the area of one full 7.5-minute quadrangle) – mapping of the Quaternary geology in the Walker River valley, with applications to flood hazards, climate change, earthquake hazards, and agricultural productivity. [Kyle House]

**Second Priority = GIS conversion of previously published geologic maps** – for use of the maps by a broad array of GIS users in land management; land-use planning; urban and suburban development; natural hazards; and exploration, development, and conservation of natural resources, including metals, industrial minerals, water, geothermal, and petroleum.

Individual maps will be prioritized, in case there is insufficient funding to cover all maps, using the same approach as in our STATEMAP proposal for fiscal year 2007. Maps in the greater Las Vegas and Reno urban areas are highest priority. Priorities for maps in rural areas are set by a GIS-based algorithm based on proximity to known mineral and energy resources (producing oil wells, gold and silver resources, and geothermal hot and warm wells and springs). Thirty seven maps will be converted into GIS. [Jordan Hastings and Liz Crouse]

**Third Priority = New geologic mapping in urban and rural areas of northern Nevada** (the equivalent of approximately 1.5 7.5-minute quadrangles):

**Cortez mine area** (for detailed mapping at 1:12,000) – mapping of bedrock and surficial geology in and near part of the Tertiary caldera that occurs near and may be related in time and space to gold mineralization. This is one of the most exciting areas for exploration in Nevada; the Cortez Hills deposit, discovered in 2004, contains at least 7.5 million ounces of relatively high-grade gold ore in Paleozoic strata a few kilometers from the edge of the caldera. [Chris Henry and John Muntean]

**Walker River area near Schurz** (north half of the stretch from Weber Reservoir to Walker Lake, approximately the area of one full 7.5-minute quadrangle) – mapping of the Quaternary geology in the Walker River valley, with applications to flood hazards, climate change, earthquake hazards, and agricultural productivity. [Kyle House]

Although none of these new geologic mapping projects are in southern Nevada, we are pleased to report that the U.S. Bureau of Land Management is providing funding for new geologic mapping by NBMG geologists of five 7.5-minute quadrangles, the completion of five not-yet-published quadrangles completed by the USGS and academia, and the conversion of another five, previously published quadrangles into GIS products.