



32nd Annual Field Conference Tobacco Root Geological Society Geology of Southwest Montana Dillon, Montana—August 2–5, 2007

FINAL ANNOUNCEMENT, LOGISTICS AND REGISTRATION

The 32nd Annual Field Conference of the Tobacco Root Geological Society will be held Thursday evening through Sunday afternoon, August 2-5, 2007 at the Birch Creek Center, northwest of Dillon, Montana. The Birch Creek Center is nestled in the East Pioneer Mountains, close to some of the classic examples of geologic structure that brings student and professional geologists to southwest Montana every field season.

The field trips, posters, technical sessions and guidebook will provide a review of southwest Montana geology, from Precambrian rocks to the latest earthquake, including:

- Precambrian “basement” and Belt rocks
- Precambrian talc formation
- Paleozoic and Mesozoic stratigraphy
- Fold and thrust belt structure
- Mesozoic intrusives
- Tertiary extension and volcanics
- Pleistocene glaciation
- Pleistocene mammals
- Mining history
- Recent seismicity

This announcement provides information on the meeting schedule and events, lodging, and meals. The attached registration form should be completed and mailed to the Tobacco Root Geological Society (TRGS) Attn: Ted Antonioli. Please register **by July 13** as we need to provide the Birch Creek Center with lodging and meal information two weeks prior to the conference. We are encouraging TRGS conference participants to make use of the meal and lodging services provided by the Birch Creek Center. Motels and restaurants are available for participants wishing to stay in Dillon. There are also US Forest Service campgrounds in the area.

Overviews of the regional geology and field trips will be given at the Thursday evening Poster Session and Friday morning Technical Session. Field trips will include two consecutive trips Friday afternoon, two half-day trips on Saturday, and two half-day trips on Sunday. None of the field trips run concurrently so everybody can participate in all trips.

The North Central Section of the National Association of Geoscience Teachers (NAGT) is meeting at Birch Creek immediately before TRGS. If you might be interested in attending that

meeting too, please check it out at: <http://www.nagt.org/nagt/organization/north-central/announcement.html>

FIELD TRIPS

Trip #1: Half-day trip on Friday late morning-early afternoon.

Pleistocene Glaciation in the Pioneer Mountains

Organizers: Larry Smith, Sheila Roberts, Robert C. Thomas

Description: This trip will leave the Birch Creek Center following the morning technical sessions on Friday and include a lunch stop at an overview of the high peaks of the East Pioneer Mountains and a review of relative age-dating techniques used on glacial deposits in the Kelley Reservoir area near Argenta.

Trip #2: Half-day trip on Friday late afternoon.

Geology and mineralization of the Bannack Area

Organizer: Larry Johnson

Description: This trip will cover the structure and mineralization in the Bannack area. This area was the site of one of the first gold strikes in Montana and was the territorial capital of Montana in the mid 1860s.

Trip #3: Half-day trip on Saturday morning.

Sandy Hollow Gulch Fold and Thrust Belt Structure

Organizer: Richard I. Gibson

Description: This trip will visit the spectacular fold and thrust belt structure in the Sandy Hollow area north of the Big Hole River east of Glen, Montana. This area has been mapped by generations of geology field camps and includes some of the most spectacular thin-skinned tectonic features in Montana.

Trip #4: Half-day trip on Saturday afternoon.

Elk Gulch Vermiculite Deposits

Organizer: Michael Garverich

Description: This trip will focus on the vermiculite deposit and ultramafic rocks in the Elk Gulch area east of Dillon, Montana. In addition, stops at the Regal talc mine, Carter Creek iron deposits, Dillon Granite Gneiss, and possible nickel silicate veinlets may be included in the trip.

Trip #5: Half-day trip on Sunday morning.

Quartzite of Argenta: Part of the Neihart Quartzite Blanket?

Organizers: James Sears and Paul Link

Description: The field trip will contrast the supermature Quartzite of Argenta with the feldspathic quartzite of the Belt Supergroup. The trip crosses the Kelly thrust, the local name of the major fault bounding the Grasshopper thrust plate or allochthon. It is the local equivalent of the Lewis thrust of Glacier Park. We will see some of the deformation associated with the thrust, such as footwall folding into the overturned Red Butte syncline, and associated copper mineralization.

Trip #6: **Half-day trip on Sunday afternoon.**

Middle Miocene karstified erosional surface and debris flows and neotectonic faults near Clark Canyon Reservoir, southwest Montana.

Organizer: James Sears

Description: This trip will look at some large-boulder debris flow deposits in the basal member of the Six Mile Creek Formation near Clark Canyon Dam in southwest Montana. The Clark Canyon Reservoir area, about 30 km south of Dillon, displays Middle Miocene erosional and depositional features that constrain some of the unusual geological activity that characterized southwestern Montana during the outbreak of the Yellowstone hot spot. These include a karstified erosional surface on the Mississippian Madison limestone, bedrock valley strath terraces, massive debris flows with unusually large clasts derived from tens of km away, and fluvial systems with headwaters in central Idaho. These Miocene features provide structural control for Neogene faults in the area, in particular, the Monument fault.

MEETING SCHEDULE

August 2, Thursday: Arrive at Birch Creek Center, registration and poster session.

4 p.m. to Evening: Registration and poster set-up.

6:30 p.m.: Dinner at the Birch Creek Center. Participants planning to arrive after 6:30 p.m. should make their own dinner arrangements.

7 p.m. to 9 p.m.: Poster presentations

August 3, Friday: Technical Session and Field Trips 1 and 2.

7:30 a.m.: Breakfast

8 a.m. to 10 a.m.: Technical papers and field trip overviews. Posters will stay up during technical session.

10 a.m. to 2 p.m.: Field Trip 1; lunch at stop 3 at Kelly Reservoir

2 to 5 p.m.: Field Trip 2

6:30 p.m.: Dinner

August 4, Saturday: Field Trips 3 and 4.

7:30 a.m.: Breakfast

8 a.m. to Noon: Field Trip 3

Noon to 1 p.m.: Lunch at Notch bottom fishing access

1 to 5 p.m.: Field Trip 4

6:30 p.m.: TRGS BBQ at Aspen picnic site about 1 mile above Birch Creek Center.

August 5, Sunday: Field Trips 5 and 6.

7:30 a.m.: Breakfast

8 a.m. to Noon: Field Trip 5

Noon to 1 p.m.: Lunch at Kelly Reservoir

1 to 4 p.m.: Field Trip 6

Good food and inexpensive lodging are available at the Birch Creek Center. Built as a CCC facility in 1935, the Birch Creek Center is on the Register of Historic Landmarks and currently operated as a field station/conference center by UM Western. Lodging consists of rustic rooms

-----Detach and Mail-----

REGISTRATION FORM

Please send form with check made out to Tobacco Root Geological Society to:

Tobacco Root Geological Society

Attn: Ted Antonioli

P.O. Box 2734

Missoula, MT 59806

Attendee Name: _____

Attendee Address: _____

Phone and email (____) _____

Event/Cost	Amount Paid
Registration (professional \$35) (student \$25)	\$
Lodging and meals at Birch Creek Center:	
Camping/RV spot: \$10/night × ___ nights =	\$
Cabin: \$22/person/night (linen NOT provided) × ___ nights =	\$
Meals:	
Dinner Thursday 8/2: ___ × \$10.00 =	\$
Breakfast Friday 8/3: ___ × \$7.50 =	\$
Dinner Friday 8/3: ___ × \$10.00 =	\$
Breakfast Saturday 8/4: ___ × \$7.50 =	\$
BBQ Dinner Saturday Night: ___ × \$15.00 =	\$
Breakfast Sunday 8/5: ___ × \$7.50 =	\$
Note: Sack lunches are included in the cost of field trips	
Field Trip 1: \$15	\$
Field Trip 2: \$15	\$
Field Trip 3: \$15	\$
Field Trip 4: \$15	\$
Field Trip 5: \$15	\$
Field Trip 6: \$15	\$

TOTAL

Use this space ONLY if you are NOT registering for the 2007 conference but want to renew your TRGS dues and receive this year's Guidebook volume of <i>Northwest Geology</i> .	
2007 Annual membership dues ONLY (professional) \$25	\$
2007 Annual membership dues ONLY (student) \$5	\$

TOTAL

Donation for scholarships and students	\$
TOTAL AMOUNT ENCLOSED	



Tobacco Root Geological Society
P.O. Box 2734
Missoula MT 59806

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Registration Packet

ADDRESS CORRECTION REQUESTED