



**34th Annual Field Conference
Tobacco Root Geological Society
Geology of the Philipsburg area
Philipsburg, Montana—July 30—August 2, 2009**

FINAL ANNOUNCEMENT, LOGISTICS AND REGISTRATION

The 34th annual field conference of the Tobacco Root Geological Society (<http://trgs.org/>) will be held Thursday evening through Sunday afternoon, July 30—August 2, 2009 at Philipsburg, Montana. Philipsburg is surrounded by geology that has been the subject of pioneering work by the USGS, MBMG, and economic geologists working for dozens of mining companies over more than 100 years.

Field trips during this conference will examine the rocks in the area adjoining Philipsburg and extending to sites southward toward the Pintlar Wilderness and northward toward the Garrison area.

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) at the address on the Registration Form. Please register **by July 15** as we need to provide headcounts for meals prior to the conference. We are encouraging TRGS conference participants to make use of the meal services that we are having provided by a local service group, in addition to the traditional and unmatched TRGS Barbeque. Motels and restaurants are available in Philipsburg, Drummond, and at Georgetown Lake, and were covered in some detail in the first announcement. Contact Ted Antonioli tedanton@montana.com if you need a list of accommodations. There are also US Forest Service campgrounds in the area, especially at Flint Creek and Georgetown Lake. Direct any questions about the field conference to one of the conference organizers – Ted Antonioli, Bruce Cox, or Katie McDonald.

Our primary venue is Granite County High School. Posters or maps are welcome and may be put up beginning Thursday evening. Breakfast Friday will be at 7 AM followed by a short business meeting and session of technical talks at 8 AM Friday morning. Friday's field trips will leave from the High School when talks are concluded, estimated to be between 10 and 11 AM. Field trips Saturday and Sunday leave from the High School at 8:00 a.m. **For logistical reasons, Dick Berg's all-day trips to the Rock Creek Sapphire deposit will be conducted both Saturday and Sunday and each day will be limited to 20 participants. Registration is on a first-come, first-serve basis until filled.**

The field trips are all day trips so you should select at most one Friday trip, one Saturday trip and one Sunday trip.

FIELDTRIPS

Fieldtrip #1

Philipsburg Mining District

Date: Friday July 31

Leader: Ted Antonioli, Contact Mining Company

This trip will focus on the economic geology of the Philipsburg Mining District, with stops at the famed Granite-Bimetallic Mine, Coyle-Treetop manganese replacements in Silver Hill skarn, the Hope mine, and Stewart Gulch porphyry. Philipsburg has several episodes of faulting (“pre-ore N-S striking reverse faults, “post-ore” N-S striking normal faults, and “post-ore” bedding plane faults, and two main intrusive episodes, which have created a complex zoned district.

Fieldtrip #2

Precambrian and Cambrian Stratigraphy of the Boulder Creek area

Date: Friday, July 31

Leader: Katie McDonald

This field trip will examine superb exposures of the upper part of the Belt Supergroup and overlying Cambrian rocks in the Maxville-Boulder Creek area north of Philipsburg, and consider the stratigraphic problems of the section in that area.

Fieldtrip #3

Engineering Geology of the Willow Creek Reservoir and Vicinity, Hall, Montana

Date: Friday, July 31

Leaders: Mike Garverich and Marie Marshall-Garsjo

This trip will examine the engineering geology of the Lower Willow Creek Reservoir area west of Hall, Montana and will show how a recent seepage mitigation project was designed and implemented. Field trip stops also include examination of the McNamara formation and Tertiary rhyolites.

Fieldtrip #4

Rock Creek Sapphire mine

Date: Saturday, August 1

Leader: Dick Berg

Dick Berg will lead a trip to examine the geology of the world-famous sapphire mines of Rock Creek, which are the most productive sapphire mines in Montana. We will examine geology in the southwest part of the Rock Creek Sapphire District, visit historic and current operations and suspect sapphire-bearing source rocks. A prize is offered for the first discovery of a sapphire in rock matrix.

Fieldtrip #5

Late Cretaceous Extension and its Relation to the Thin Stratigraphic Section in the Philipsburg Region: A Field Trip to Carpp Ridge

Date: Saturday, August 1

Leaders: Jeff Lonn and Reed Lewis

This all day field trip will take us on a strenuous 8-mile-round-trip hike with approximately 2200 feet of elevation gain, topping out at an elevation of 9400 feet on the northwest flank of the Pintler Mountains. The rewards are many, though: a well-exposed section of Mesoproterozoic Wallace through Cambrian Silver Hill Formations, spectacular views of the surrounding rugged mountains, and escape from the oppressive August heat of the valley bottoms. We will walk through the thin Missoula Group section characteristic of the Georgetown thrust footwall, discuss the reasons for its thinness, and examine the disconformable contact between the Mesoproterozoic Missoula Group and the Cambrian Flathead Sandstone in the area of Emmons and Calkins (1913) famous photograph of a profound angular unconformity.

Fieldtrip #6

Rock Creek Sapphire mine

Date: Sunday, August 2

Leader: Dick Berg

This will be a repeat of Fieldtrip #4.

Fieldtrip #7

Laccoliths along Lewis and Clark Line, Garrison, Montana

Date: Sunday, August 2

Leader: Jim Sears

Jim Sears will lead a trip that focuses on deformed inliers of the Montana Alkalic Province along the Lewis and Clark Line in the Garrison area. Folded laccoliths and some serious arm waving about the Lewis and Clark line will be featured.

MEETING SCHEDULE

July 30, Thursday: Arrive at Philipsburg, registration and poster session.
4 p.m. to Evening: Registration and poster set-up.
Participants should make their own dinner arrangements.

July 31, Friday: Field Trips 1, 2, and 3

7:30 a.m.: Breakfast

“Fixings” for sack lunches will be provided for all field trip participants as part of the field trip fee.

8 a.m. to 8:30 AM, Welcome and Business meeting

8:30 p.m. Technical talks

10:30 AM, Depart on Field Trips

Dinner at the High School, 6:30 pm.

August 1, Saturday: Field Trips 4 and 5

7:30 a.m.: Breakfast, fixings for sack lunches provided for field trip participants

8 a.m. to 5 p.m.: Field Trip 4 and 5

6:30 p.m.: TRGS BBQ at Philipsburg town park, 0.2 miles south of the High School on the same side of the road.

August 2, Sunday: Field Trips 6 and 7.

7:30 a.m.: Breakfast, sack lunches

8 a.m. to 5 p.m.: Field Trips 6 and 7

DRIVING DIRECTIONS

Philipsburg is between Butte and Missoula along Montana Highway 1, which is accessed from I-90 at either Drummond or Anaconda, depending on whether you are arriving from the west or east respectively. Turn off Highway 1 onto a “business loop” at either end of Philipsburg. The “business loop” leads directly into downtown Philipsburg. There is one stop light, at the Club Bar (one of four to serve the thirsty) and the High School is located about 2 blocks south of the stop light.

REGISTRATION

Please complete the enclosed registration form and mail it **no later than July 15**. All field trip participants must register for the conference. Fieldtrip registration includes a lunch.

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)	\$
Meals:	
Breakfast Friday 8/1: _____ × \$6.00 =	
Dinner Friday 8/1: _____ × \$12.00 =	
Breakfast Saturday 8/2: _____ × \$6.00 =	
BBQ Dinner Saturday Night: _____ × \$15.00 =	
Breakfast Sunday 8/3: _____ × \$6.00 =	
Note: Sack lunches are included in the cost of field trips	
Field Trip 1: \$15 Friday, Philipsburg	\$
Field Trip 2: \$15 Friday, Boulder Creek	\$
Field Trip 3: \$15 Friday, Willow Creek	\$
Field Trip 4: \$15 Saturday, Sapphires	\$
Field Trip 5: \$15 Saturday, Pintler	\$
Field Trip 6: \$15 Sunday, Sapphires	\$
Field Trip 7: \$15 Sunday, Garrison	\$

TOTAL

Use this space ONLY if you are NOT registering for the 2009 conference but want to renew your TRGS dues and receive this year's Guidebook volume of <i>Northwest Geology</i> .	
2009 Annual membership dues ONLY (professional) \$25	\$
2009 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