School of Geosciences stationed for success

Imagine learning to play baseball by simply reading a book about the sport – never having the chance to don a fielder’s mitt, swing a bat or face all the twists and turns that unexpectedly occur. There is no substitute for hands-on experience. That’s why USF School of Geosciences Chair Mark Rains, Ph.D., envisions a world-class field station in the rugged, geologically rich terrain of Idaho.

It would be a field of dreams for our students, a place to pursue their passion for the subject and truly master the fundamentals of their profession in real life conditions.

“You might understand the rules of baseball by reading, but you won’t really know how to play the game,” he says. “It’s the same with geology. We can teach the roles and strategies, but the synthesis of all that has to happen in the field.”

That analogy underlies the USF College of Arts and Sciences new campaign to raise money for the School of Geosciences to construct a fully functioning field station in the western United States. Successful completion will give students the chance to deal with the challenges and enjoy the rewards of being a working geologist.

Without question, field school represents the ultimate experience for USF geology students. Furthermore, surveys have consistently shown that prospective employers rank field experiences among the top criteria for workplace success and prefer recent graduates who have mastered field skills. These are just some of the reasons why USF set a goal to raise $400,000 during a two-year campaign from the fall of 2016 until the fall of 2018. This amount – which includes a pledge from the College of Arts and Sciences to match up to $150,000 – will make the USF School of Geosciences Field Station a reality. The timeline is to purchase land by fall 2018 and to be ready to begin an all-new game in the field by summer 2019.

Why It Is Best to Go West

Field studies and summer field camps are essential in teaching geology. To give USF students a meaningful field experience, we provide our students the opportunity to go beyond the classrooms in Florida. We have to go west to find the proper rocks, fault lines and geological formations – which is precisely what we have been doing since 2004.

Each summer, USF Geology has taken students into the field, teaching in two-week increments at rented field stations, often staying at local camp grounds. These have been rewarding and highly valuable experiences for USF students and staff despite the hurdles of uncontrolled costs and limited research time. Building a permanent USF Geosciences Field Station in Idaho will allow us to overcome these hurdles and provide continuity that will enhance the learning experience.

Benefits of a USF Geosciences Field Station

There are many reasons why establishing a USF physical footprint in Idaho make sense. This is a wonderful way to grow the undergraduate program, keep costs in check for

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From the Editor

Two years ago, Into the Field interviewed Paul Wetmore, Associate Professor of Geology, in an article highlighting the structure mapping section of USF Geology’s Field School. In it, Wetmore articulated the need for the School to establish its own permanent field station facility in Idaho, where three of the five Field School sessions take place, to address the rising costs and mounting logistical issues associated with renting both storage space for equipment and teaching/accommodation space for 30-40 students each year. It seemed like such a pie-in-the-sky dream then.

And yet here we are, kicking off a fundraising campaign two years in the making, to do precisely that. The School of Geosciences Chair Mark Rains and Geology Professor Chuck Connor will both tell you it was a long, trailblazing journey to arrive at this milestone. Purchase of out-of-state property alone, much less construction and management of a facility on it, had never been done in USF history, requiring substantial collaboration with the Board of Trustees and legal branches of the University to identify a path to make it happen. However, with the backing of Geosciences faculty, the Geology Alumni Society (GAS) and the College of Arts & Sciences, the path was identified and the project was green- (and gold-) lighted, with great enthusiasm and support by the University.

It’s inspiring to witness the devotion of the School of Geosciences and GAS to its students—most of whom will never appreciate the fierce and tireless advocacy led on their behalf to ensure their success post-graduation. It’s also an exciting time to root for our program as alumni and play a role in continuing its success. On behalf of both the School of Geosciences and GAS, we invite you to kick back, enjoy this issue, and raise a glass of your favorite brew this holiday season in a nation-wide group toast to our achievements and to what I’m sure will be even more amazing progress two years from now.

Go Bulls,
Dorien McGee, Ph.D.
Class of 2010

By the Numbers

41
Number of students enrolled in the 2016 Field School consisting of five sessions: Hydrogeology, Structure Mapping, Coastal Geology, Geophysics, and Volcano Mapping

3
Number of non-USF students admitted from University of New Orleans and University of New Mexico

$75,222
Total cost of running the 2016 Field School sessions, a 29 percent increase from 2015, due to increasing enrollment, staffing and logistics

$4,267
In-state USF tuition & fees for completing 3 sessions required for a B.S. in Geology ($6,900 for out-of-state USF students, $7,350 for out-of-state, non-USF students)

$13,000
Funding provided by USF College of Arts and Sciences to defray student expenses

$111*
2016 Field school tuition/fee offset provided by the Sam Upchurch Field School Operating Fund ($4,057 total) per student completing the three-session Field School requirement

$41,330*
October 2016 balance of the Field School Endowment, a 23 percent rise from year-end 2015.

*Alumni-supported initiatives. Many thanks to Sam Upchurch and numerous Geology Alumni Society donors for making this another great year!
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USF students, and offer a vastly improved facility to ensure program stability – with location and lesson plans the same from year to year. In addition, because so few universities have their own field station, this will allow us to attract top students from out of state, both at the undergraduate and graduate level.

There is another value to this investment as well. “The field work experience is the bridge that allows students to bring together all the concepts they’ve learned and see them at work in an actual setting – and within a mentored, small-group atmosphere,” says USF College of Arts and Sciences Dean Eric Eisenberg. “This is a pivotal moment when they see the connection between what they are interested in and the way it works in real life.”

For students and staff, the project affords a wide range of logistical advantages – including shelter from bad weather, which can be a frequent challenge in the field. A USF building would offer protection for laptops and loads of expensive equipment carried by the students and teachers, eliminating the worry of leaving those items vulnerable to theft or rain damage. And it would reduce travel time and productivity - hindering distractions for students, who must currently traverse from site to site.

“One of our students have never seen a mountain, let alone folding fault systems or active geological concepts,” says junior Jonathan Valentine, president of the USF Geology Club. “Being able to work and study in the field, especially in the structured setting of our field station, would be amazing.”

A new facility will put USF well ahead of universities that utilize aging field stations. “Many of the older stations are stuck in the past,” says USF volcanology professor Chuck Connor, whose wife Laura Connor also does volcano research in the School of Geosciences. Both are leadership-level donors for the field station as well.

“We’re able to develop the right classroom experience, the right field experience and with the right instruments,” he continues. “That’s what modern geologists do. You absolutely have to go west to do meaningful field work, and this station will guarantee the best learning experience possible.”

Field School highlights from 2016

The Coastal Field School spent 4 days in the Tampa area along the Pinellas County coast and Peace River area, observing sediment transport, conducting survey & mapping exercises, and core sampling. The school ended with a four-day trip along the Atlantic Coast from Matanzas Inlet, Fla., to Hilton Head Island to study coastal influences. This marked the first year the school utilized buses instead of vans to improve transportation safety.

The Hydrology Field School began at the USF GeoPark on campus collecting well data to produce hydro maps & reports, followed by two days in the USF Eco Area and on the Hillsborough River observing wetlands and measuring salt water intrusion. Students then transited from Kissimmee to the Everglades on a tour of the Florida water supply system.

The Volcanology, Structural Mapping, and Geophysics Field Schools each met students in Salt Lake City prior to driving to King Mountain Ranch outside Mackay, Idaho to begin activities. Before arriving at King Mountain Ranch, the Volcanology school spent four days at the Blackfoot Reservoir and Yellowstone National Park to map basalt fields and learn about regional volcanics. The remainder of the school was spent in Custer County and Craters of the Moon National Monument observing and mapping volcanic features. During Structural Mapping, students learned traditional geologic mapping techniques in the Lost River Valley and Pioneer Mountains. Finally, the Geophysics Field School surveyed along the Borah Peak fault scarp and along the Lost River Valley before heading to the Sawtooth Mountains and Sunbeam Hot Springs.

Logistic improvements at schools held in Idaho included hiring a camp manager/cook to keep the home fires burning, allowing to the students/faculty more time in the field. The King Mountain Ranch was also reserved for the entirety of the three camps’ duration to provide accommodation for students staying between schools.

USF: A Top Research Institution

The University of South Florida is a global research university dedicated to student success. With your help, USF will continue to move to the forefront in university field research by building this facility.

Your support will help make the USF field station a reality. We respectfully ask you to be a part of our team to help pave the way by making a pledge today. Your donation will directly impact the education of our students and our geology program in a profound way. Thank you for making a difference, and for putting our geology students in the field – as key players in their future profession.

For more information about the USF Geosciences Field Station Campaign or to make a gift, please contact Director of Development Kelly Addington at kaddington@usf.edu or (813) 974-5764.
Alumni Insight: Tom Scott shares mentoring lessons

I have heard so many geologists say how important and fun their field camp was! I’ve always been a bit envious of their experiences—I did not get the chance to attend a field camp when I was an undergraduate at USF. At the time, USF Geology only offered a BA and did not have a field camp or the requirement to attend one.

I thought about attending a field camp on my own but Vietnam was raging, I thought I was going to get drafted, and so could not make plans to attend. Well, I got a deferment and Dr. Ed O’Donnell (my undergraduate mentor) suggested I go to Eastern Kentucky University (EKU) to pursue an MS in Geology. Two USF students were already there, two arrived at the same time I started, and two more came the following year. EKU was a perfect fit--there were seven professors, all involved in the USGS-funded state-wide mapping program. The grad students accompanied the professors and helped with their mapping, and taught me a lot. At EKU, my mentor, Dr. Harry Hoge, recommended I take the field methods course, which helped me understand the geologic concepts that are presented in a traditional field camp.

Upon graduating from EKU, I was fortunate to be hired by the Florida Geological Survey (FGS). There, I advanced my mapping skills by going in the field with quite a number of geologic experts who took me under their wing as mentors. I didn’t know then how lucky I was, but I sure do now. The concepts learned through mapping in Kentucky and guidance from many established geologists was instrumental in my enjoyment of geology and success in my career.

Mentors play a very important role in most geologists’ careers. I was fortunate enough to have two mentors while in school. I didn’t choose them and they didn’t choose me, it just seemed to happen—a natural fit. Drs. Ed O’Donnell and Harry Hoge were there to offer advice and suggest the right direction I might want to take. After becoming employed by the FGS, Muriel Hunter (paleontologist), Joe Banks (petroleum geologist) and Jim Cathcart (USGS, doctor phosphate of the world) mentored me further. Some years later, I was inspired by another geologist to reach out to my mentors and thank them. I tracked down Ed and Harry at a national meeting of GSA, took them to dinner, and expressed my gratitude for all they gave me! In doing so, they told me how they had benefited from mentoring myself and others. They each took great pride in the successes of the young geologists they mentored.

I can now appreciate that myself after having the opportunity to mentor a number of geologists at FGS. As before, I didn’t consciously choose to be their mentor, nor did they choose me. But it was a good fit, and while I was helping them grow as geologists, they were helping me!

The take-away messages I have discovered from a 40+ year geologic career are:
Maintain your love of geology;
Never stop learning;
Mentor others and learn from them;
Pay it forward — your mentors invested in you. You owe it to them and yourself to mentor the next generation of geologists. The next generation of geologists owes it to their mentors to pass it on along!

-- Tom Scott, Fall, 2016

2017 Geology Alumni Society Banquet
February 18, 2017
Gibbons Alumni Center
Tampa, Florida

Registration is open! Visit our website at geology.usf.edu/intothefield/ for more details and to register. For sponsorship and donation information, email Bruce Nocita at bnocita@smeinc.com or Matt Wissler at MWissler@Geosyntec.com, Banquet Co-Chairs.
Though the USF Geology Field Station Fund (cover page) is the newest and highest-priority of the funds supporting the USF Geology Field School today, it takes its place alongside two funds previously-established for the field program:

The Sam Upchurch Fund (Fund 420079) was initiated in the 2000s and officially named for the former USF Geology professor and chair in 2010. This fund was designated as a portal through which alumni and supporters could donate to defray student field school costs for the upcoming field season. Benefits to students varied on an annual basis, dependent on factors such as field school cost, tuition/fees, student attendance, and funds raised by the donor base.

Recognizing the need for a more stable, long-term means of sustainability, GAS initiated the Field School Endowment (Fund 426063) in 2012. Similar in nature to the Richard A. Davis Endowment for graduate scholarships, the Field School Endowment is an invested fund designed to grow in time with alumni donations and accrued interest. Following its initial growth period, this Endowment will pay out its accrued interest annually to the Field School Program, defraying costs in the same manner as the Sam Upchurch Fund, with more financial consistency from one year to the next, particularly as field school costs flatten with the establishment of a permanent field station.

Access to both funds may be found on the USF Foundation site--simply scroll down to the fund number and check its box. To specify and complete your donation, click the “View Your Gift” link in the top-right of the webpage. Alternatively, you may make a donation upon registration to the 2017 GAS Banquet!

From the USF Geology faculty and students to all of their alumni and friends of the field program—we can’t thank you enough for your support and generosity!

**Student Testimonial**

“I do truly mean it when I say that this experience has been a refreshing one. … Being out in the field and exploring areas that had not been surveyed was really a treat - an actual taste of what a career in the field may involve. My mind is spinning with a thousand different ideas and curiosities, I think I may have found something I will enjoy, or at the very least, I will certainly give it a chance and see where life takes me from there.”

-Mary Stanko, Class of 2017

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Photo Credits: We’d like to thank Laura Connor, Judy McIlrath, Evan Moore and Tom Scott for generously providing the photos in this issue.