

SAN DIEGO ASSOCIATION OF GEOLOGISTS

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SDAG MEETING ANNOUNCEMENT

WEDNESDAY, APRIL 21st, 2010

New Insight from Old Friends: U-Pb and Geochemistry of Volcanic Clasts in Conglomerates of the Cabrillo Formation and Poway-La Jolla Groups, San Diego County, California

Presented by

John Abeid

Department of Geological Sciences
San Diego State University

Where: **Emiliano's Mexican Restaurant** (Overlooking Admiral Baker Golf Course)
6690 Mission Gorge Road, San Diego, CA 92120
(619) 284-2460

When: 5:30 pm – Social Hour
6:30 pm – Dinner
7:15 pm – Program

Dinner: Mexicano fantastico. Beverage station. Cash bar.

Cost: \$25 per person, \$5 discount for members, STUDENTS: \$15. Add \$5 if you did not make a reservation

Reservations: Make your reservation **online** at www.sandiegoeologists.org **no later than noon, Monday, April 19th.**

**RESERVATIONS CANNOT BE ACCEPTED AFTER MONDAY AT 12 NOON.
IF YOU DO NOT MAKE A RESERVATION, WE CANNOT GUARANTEE YOU A MEAL.**



2010 SDAG MEETING SCHEDULE - Mark your Calendars!

Meetings are usually on the 3rd Wednesday of the month but may change to accommodate speaker and meeting place schedules. Check here for updates!

May 19	John Izbicki, USGS
June 7 (Monday)	Joint meeting with the South Coast Geological Society (SCGS), at the El Adobe in San Juan Capistrano.
July 16	Monte Marshall: tales of Antarctica and the Southern Seas.

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SPEAKER BIO

John Abeid

"I'm San Diego native currently finishing my Master's degree in geology at San Diego State University expecting to graduate this May, working with Dave Kimbrough (advisor) and Pat Abbott (committee). I graduated with my B.S. in geology from SDSU in 2007 also working with Dave Kimbrough on quartzite clasts within the Cabrillo Formation. I was the 2008-2009 vice-president of SDSU-AAPG student chapter and use my mechanical skills to assist within the geology department. I've worked maintaining and fueling yachts just shy of a decade in San Diego while studying for my degrees. I'm currently pursuing a career within the petroleum industry and have been offered to work in Oklahoma City. My ultimate geologically oriented goal is to encourage California to drill offshore San Diego because it is environmentally safer than other parts of the world, therefore so I can become a petroleum geologist based out of southern California."

SPEAKER ABSTRACT

“U-Pb and Geochemistry of Volcanic Clasts in Conglomerates of the Cabrillo Formation and Poway-La Jolla Groups, San Diego County, California”

The Late Cretaceous Cabrillo Formation records a major pulse of forearc sedimentation derived from rapid unroofing of the adjacent Peninsular Ranges batholith (PRB) and contains an abundance of silicic volcanic clasts. Unconformably overlying the Cabrillo Fm., fluvial-deltaic strata of late Paleocene to latest-middle Eocene age also contain abundant conglomerate with silicic volcanic clasts, but additionally include the distinctive "Poway-type" clasts that have been recognized by southern California geologists for over a century that have been matched to Jurassic bedrock

sequences in Sonora, Mexico. Despite distinctions based on hand specimens, the Cretaceous and Eocene volcanic clasts are all similar in terms of whole rock major and trace element geochemistry as determined by XRF. However, zircon U-Pb ages for Cretaceous vs. Eocene-clast suites are clearly distinct. The Cabrillo Fm. rhyolites may represent supracrustal volcanic cover of the eastern PRB (90-100 Ma) which have been completely eroded away, although the high K calc-alkaline chemical affinities and low Sr characteristics of the clasts are not a good match for the eastern PRB. The Eocene clasts are clearly extra-regional and can be matched to Jurassic volcanic bedrock of the Sonoran region as proposed by previous workers.

PRESIDENTS CORNER, APRIL 2010

On Easter Sunday, April 4, we were all once again reminded of how dynamic our third rock from the Sun can be! I have been getting inquiries from friends and relatives who wonder why the Earth has suddenly turned so irritable lately? I have to remind them that we take the long view, that these earthquakes are normal from a tectonic and plate margin perspective. Nevertheless, people are naturally concerned and anxious, and unfortunately, we geologists can provide no definitive answer to the question: "When and where will the next Big Earthquake happen?" Glazing eyes and a slow leak of attentiveness seem to be the general response from most when we (I) start going on about tectonics, probable earthquakes, recurrence intervals, strike slip v subduction, building codes, etc..... Hey, but at least folks remember that geologists exist when seismic events happen, right?

Nevertheless, as geology professionals we all want to and should do our part whenever possible to patiently inform and instruct the public, our students, and our loved ones on practical measures we can all take before, during and after large earthquakes. I certainly had to prepare to field questions from my students this week, and knew I had to prepare by consulting USGS and other websites (the newspaper and CNN, not so much). And a timely reminder to non-geologists always helps, I believe; that every time we go through one of these events, we geologists of course gather significant data, and learn more. Some of our members have already done their part for the public on the airwaves: Pat Abbott, Chuck Houser and others. We are all looking forward to reports from the epicenter by those teams of geologists fortunate enough to inspect fault rupture and other features in Mexico.

Our thoughts are also with the victims of these earthquakes, and with those who work in the coal mines of West Virginia, who have perished and/or are possibly awaiting rescue. We geologists are certainly aware of the sudden hazards associated with mining operations, and the obvious significance of safe mining practices.

Some of us were privileged to be led last Saturday April 3 on a One Stop Wonder by Dave Bloom to inspect outcrops of the Los Pinos gabbro pluton. We saw peridotites, olivine crystals, many weathered and with white plagioclase rims; also big prismatic amphibole crystals, comb structures etc. It was a beautiful morning, so thanks to Dave and to Dr. Walawender who did the original work on the pluton.

We are pleased to welcome John Abeid, an SDSU grad student working with Dr. Dave Kimbrough. This will be a sort of a follow up talk from a short presentation John and Dr. Kimbrough gave at Torrey Pines Beach February 20th.

Bryan

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Note the new nomenclature for 2010: Sponsors, Corporate Sponsors, and Patrons provide a significant portion of SDGS's and SDAG's operating and scholarship budgets. By making your payments to SDGS (a 501(c)3 public benefit nonprofit educational corporation) you may be able to claim a tax deduction. In addition to monthly recognition for your contribution, you are entitled to additional benefits as listed on the Sponsorship Form included in this newsletter.

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ANNOUNCEMENTS

April 4, 2010 Baja Quake: Where Were You?

I queried SDAG members as to their whereabouts and experiences during the Easter Quake. A few responded, including some great photos. For me, I was driving on the I-5 and was oblivious to any shaking, although my ukulele fell off the shelf at home (if a ukulele falls and no one is around to hear it, does it make a sound?). Todd

Kip Hering was forwarded these photos and caption:



“Brothers traveling during Sunday’s deadly quake photographed a surreal sight: the power of the quake lifting a layer of dust of the mountain range. The pictures show the area around La Rumorosa, the highest point in Tecate.”

“...we felt the quake at our house which is located just north of the Bird Rock area of La Jolla and probably within 100 yards of the coast. It was different from the earthquakes we’ve felt in the past, in that it lasted much longer, I think maybe 30 seconds or so. I describe it as a “rolling” quake because it gave the sensation of “rolling” through. A couple of times we thought it was finished, then it would pick up again. We have not found any damage nor anything that fell off walls or shelves. All in all it was a pretty benign experience.”
Marty Bloom

“... I was hanging on the side of a cliff at Mission Gorge when it happened. My wife was belying me and she felt the rock she was sitting on rocking a bit and suspected we had an earthquake. The only interesting part about it was that I think it confirms that it is better to have your house on rock, because I did not feel it at all.” Patrick Lehrmann

Ali Sadr contributed these photos from Mexico:



From Mexicali



El Rio Nuevo

"The seismic event was experienced while on a geologic fieldtrip looking at outcrops of Otay Fm. capped by San Diego Fm and Linda Vista Fm with Dr. Norrie Robbins, biogeologist with SDSU. The quake was clocked in on Sunday April 4 at 3:40PM shortly after parking our car. A heavy chain hanging on a steel gatepost nearby was noted to swing and strike the gatepost. At the same time, the ground underfoot moved and shifted enough to cause loss of balance. Shortly afterward, Norrie's mother, sitting in the parked car while we were looking at an outcrop, noted a strong aftershock perhaps 30 minutes later (plus or minus 10 min.). We did not feel the aftershock walking to and from the outcrop, but Norrie's mother sitting in the car did feel it. The quake was felt on (old) Heritage Road, Thomas Bros. page 1331, grid C-7. The event was felt where the car was parked not far off old Heritage road in a tributary canyon-bottom. It is likely some alluvial or artificial fill exists in the canyon bottom where the quake was felt." George Copenhaver, Jr.

"I was lying in bed channel surfing, when I came across a program that featured nice looking girls in very small swim suits in a women's volleyball tournament, and so, I watched the show. Every so often the camera

panned to a man in the shadows palming a knife. When the game was over, the crowd rushed into the court to celebrate. The man rushed out also and stabbed one of the players. That is when the bed began to shake and it took me a few seconds to realize that the shaking was not part of the plot. I went out to the living room to tell Lore about my experience, only to find her on the phone speaking to her friend in Phoenix. She had just told her friend of the earthquake shaking here and then the friend said it was just then shaking there. So I presumed the epicenter was closer to San Diego than to Phoenix. I thought of Laguna Salada, Cerro Prieto, Imperial, San Andreas. Isn't science fun!" Charlie Lough (Lore, please tell Charlie no more afternoon TV!)

"I found it interesting that Pat Abbott mentioned that it was possible that there were two quakes that compounded to make the big quake. I definitely felt two distinct surges at my home in Mission Hills San Diego. I am waiting to see what the data say." Carole Ziegler

Wes Danskin of the USGS contributed this tidbit on how local USGS wells reacted to the quake:
"USGS real-time monitoring wells in San Diego, Temecula, and San Bernardino responded to the recent earthquakes in ways that may aid in understanding geologic and hydrogeologic connections.

Cursory, general impressions from the wells:

1. All wells that responded seem to show a water-level rise which would infer compression.
2. Responses range from about 0.2 to 1.5 feet.
3. Most responses occur in the deeper wells, not the shallow ones generally less than 200 feet deep.
4. Some of the water-level rise appears to be increasing in some San Bern wells.
5. Wells in San Diego "on the continent" (near I-15 and I-805 responded; wells along the Bay did not. Except for Otay Trolley (SDOT), which infers it is somehow more connected to the continent?

These impressions come from about a 10-minute scan of the websites below. So don't run too far with these impressions; check them out yourselves. Perhaps you can find connections that are helpful or enlightening. I know the San Diego project folks will be using them to aid in constructing our concepts of the subsurface geology and hydrogeology. Got our own regional aquifer test. And, if nothing else, it is pretty cool to see the earth stretch."

<http://ca.water.usgs.gov/sandiego/wells/summary.html>

<http://ca.water.usgs.gov/temecula/wells/summary.html>

<http://ca.water.usgs.gov/sanbern/wells/summary.html>



Call for Papers: Peninsular Ranges Batholith Deadline for manuscript submission: **June 2010.**

A GSA volume on the Peninsular Ranges batholith, Baja and southern California, is currently in the early stages of preparation. The volume will address both the Jurassic and Cretaceous batholiths and related extrusives. Plans are for a series of overview papers; a number of trans-batholith transects; topical papers dealing with isotopic, chemical, structural, and geophysical aspects of the batholith; as well as structural effects recorded in prebatholithic rocks during the evolution of the batholith. Also to be included are studies of individual plutons, ranging from gabbro to pegmatites, that characterize various elements of the batholith. A section is planned for geologic problems, such as Tertiary fault history, that have been solved through the analysis of batholithic data.

If you would like to submit a paper, or if you know of someone who might be interested, please contact one of the editors: Doug Morton, douglasmmorton@gmail.com; Scott Johnson, johnsons@maine.edu; Dave Kimbrough, dkimbrough@geology.sdsu.edu; Scott Paterson, paterson@usc.edu; Keegan Schmidt, klschmidt@lcsc.edu; Vicki Todd, vtodd2@comcast.net; or Paul Wetmore, pwetmore@cas.usf.edu.



2010 Joint GSA Cordilleran Section and AAPG Pacific Section Meeting: Anaheim, May 27-29

Deadline for Early Registration: 26 April 2010.

You are invited to the 2010 annual meetings of the Cordilleran Section of GSA and the Pacific Section of the AAPG at the Marriott Hotel in Anaheim <http://geosociety.org/sectdiv/cord/2010mtg/>. The theme for the meeting is "From Mountains to Main Street," and the local host is the Department of Geological Sciences at California State University-Fullerton. The meeting will take place at the Anaheim Marriott, which is located conveniently in the Anaheim Resort District, just steps away from Disneyland, California Adventure, and Downtown Disney. A few steps in the other direction will take you to the Anaheim Garden Walk, an oasis of outdoor shopping, dining, and entertainment.



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- Office available, just under 500 sq. ft. One and a half blocks from La Jolla Shores beach, and just down the road from Scripps Institute. Fully wired for phone and internet. \$1,500/month.
- Contact Izzy at 858-531-3025 or izzysurfdiva@gmail.com for more information.

SEEKING JOB OPPORTUNITIES!

Todd Wirths, M.S., P.G. #7588: Environmental geologist seeking a senior project manager-level position. I have over twelve years experience conducting environmental subsurface investigations. Responsibilities included project and data management at leaking underground storage tank sites, conducting Phase II Environmental Site Assessments, large-scale remedial soil over-excavations, and risk assessments throughout San Diego County. Experience with over 50 projects associated with assessment and remediation of petroleum hydrocarbon-impacted retail fuel facilities in the San Diego Region and supervised the installation of nearly 500 wells and borings. Read more on my LinkedIn Profile: <http://www.linkedin.com/pub/todd-wirths/10/3b/939>. Better yet, ask for my resume- call 858-337-0098, or email todd@wirths.com.

Jared Warner: I am a graduate of San Diego State where I received both my B.S. and M.S. in geological sciences ('06 and '09). I have experience in multiple fields including production geology, fractured reservoirs, reservoir characterization, basic geologic model building, geophysics, paleontology, sedimentology, oceanography, and teaching. I've recently moved back down to San Diego after working for Occidental Petroleum and looking for immediate employment opportunities. For information on my research, contact information, or a resume please feel free to contact me at jared.j.warner@gmail.com or call me at (661) 972-5332.

Greg Fisch: I have been an Electronic Engineer and Software developer for many years. I originally started out wanting to be a Geologist, but family and friends convinced me to get into electronics and computers instead. So now after 20+ years, it's time to make a career change, get back to my original goal and go back to school to obtain my degrees in Geology. I have been involved with a wide variety of projects including six-legged walking robots, remote telescope/ccd imager/observatory control systems, GPS tracking systems utilizing the Iridium satellite network, GIS mapping and programming, asteroid/comet orbital determination and advanced image processing. I would like to be able to apply my knowledge and skill set in the technology areas to research tasks in the Geoscience area (with a special interest in remote sensing) while I'm continuing my education. Please contact me at (858) 692-2909 (cell) or send email to: gfisch9862@aol.com and I will be happy to send you my current resume.

JOB OPENINGS!

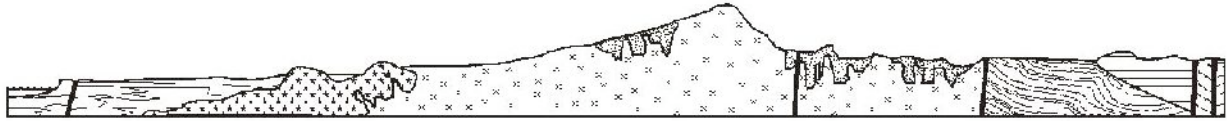
Adjunct Instructor of Geology Needed at NewSchool of Architecture & Design, San Diego:

the Dean of the NewSchool of Architecture & Design in downtown San Diego has announced an urgent, immediate need of an adjunct instructor to teach introductory geology for their spring quarter.

<http://www.newschooarch.edu/index.html> Start date would be Monday, April 12!

Please contact Gilbert Cooke, Dean, at 619-684-8762, or GCooke@newschooarch.edu.





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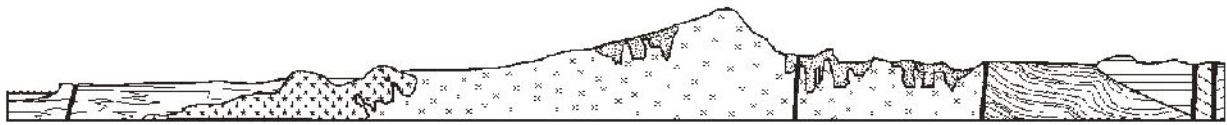
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