

Pacific Petroleum Geology



Pacific Section • American Association of Petroleum Geologists

November & December 2020

Black Gold Oil Exhibit, Kern County Museum



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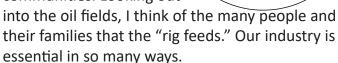
Hello Pacific Section Geoscientists,

Happy Holidays! We've made it to December; in just a few weeks we can finally say, "Hindsight is 2020."

There are many new terms, sayings, or things that have been normalized over the last 10 months. One increasingly significant term used is "essential." Various professions have been deemed "essential," and thus, allowed to continue through the various phases or economic shuttering, in hopes of curbing the virus, flattening the curve, and minimizing the effect of Covid-19. We have also been urged to stay home, except for essential errands, or trips. So... what is essential to you?

We recently bought a new truck, a giant F-250 4x4. My husband is a carpenter, and a truck is vital to our family. This beast of a truck is quite a contrast to our EV Chevy Bolt. We've had fun going out for drives exploring new (to us and previously out of range) backroads of CA. We took a BLM road from Apple Valley up to Fawnskin (Big Bear) a few weeks ago. There were spectacular granite boulders that made me yearn for my roadside geology books. I need to just leave them in the truck! We also took a drive out through Hwy 33 and 166. Driving through the oilfields made me think about what is "essential". Our industry is having and has had a rough couple of years. However, it is hard to imagine how much more difficult life would be without our industry. I often think back to commercials when I was younger, specifically the campaign, "plastic makes it possible." Plastics and other petroleum products are found everywhere. This is especially true this year with the logarithmic increase in PPE as the world battles Covid-19. I look around my house and realize that we have been moving away from single-use plastics, opting instead for shampoo bars, or refillable cleaning products. There is a big push to move away from fossil fuels, but the argument is short-sided. There are many changes we can make in our individual lives that will make larger impacts on our communities, both locally and worldwide. Here

in California, we have some of the most stringent environmental regulations in the world. I am so proud of our industry's dedication to working safely and living in our communities. Looking out





In our world, we have become accustomed to traveling. All our family lives outside the San Joaquin Valley, on the other side of Los Angeles. We haven't been down to Long Beach since the beginning of February, a record for us. Pre-Covid we traveled one to two times a month to visit with family and friends. These days we are grateful that technology keeps us in touch. This year has afforded us the opportunity to be selfish with our time, and I'm not all that mad about it. My many walks along the Kern River Parkway gifted me the opportunity to watch the brown thin-wintered trees and bushes give way to tiny optimistic buds of greenery as we moved into Spring. There is also something wonderful that happens here in the Central Valley, as we shift from Summer into Fall. You walk outside and are not assaulted with a wall of heat. We did have several weeks of harsh air quality, a result of the record-breaking fire season here in California. But, watching and feeling the seasons here in the valley has been calming and very centering. We stayed home for Thanksgiving for the first time this year. We missed our families, but admit it was nice not having to traverse to LA, through the web of red blaring Google Maps. Instead, we did a 5k Turkey Trot with neighborhood friends (all masked-up). I hope you all were able to find ways to be grateful, even if it meant new Thanksgiving traditions this year.

continued next page

As we finish off the year, I hope you too can embrace the slowdown. Try taking your time putting up holiday decorations, watching movies, sitting by the fire/gas insert, and making time to catch up with friends and family. Whether you connect through snail mail (support USPS), phone or the wide array of video chatting platforms, take this opportunity and figure out what is essential to you. For me, it's being able to see my family and friends, even if it's through a screen or both of us masked and standing more than 6 feet apart. It's being able to work from home, all while wearing sweats and not missing a beat. But, most of all its being able to embrace the extra time I have found in my days. From our Pacific Section family to yours, we hope you and your family stay safe, healthy and happy through the end of the year. Be sure to get outside and while you are there go see some rocks!

Until next time,

Becca Schempp, President - Pacific Section AAPG

A Request from the Hopps Family

Our Dear friend, Tom Hopps, passed away on April 24, 2020. The Hopps Family is requesting the Geological community and Tom's friends to share any stories and photos, or memories, however brief, about their relationship and time spent with him.

Please forward your notes, photos and stories to Lydia Hopps and Vaughn Thompson (Lydia. Hopps@gmail.com and geologistvaughn@gmail.com).

PSAAPG Membership Directory

The PSAAPG website will have a members-only password-protected membership directory available as of March 1, 2018

Please email SKChehal2@aeraenergy.com if you do not want your name listed. There will also be a checkbox for this on the PSAAPG membership renewal form that goes out before the end of this year.



PSAAPG Student Scholarship Awards

Presented by the Coast Geological Society Compiled by Renee Richards

Student: Adam Brackman

University: California State University Northridge

PSAAPG Undergraduate Student Award

Nominated by: Joshua Schwartz

Adam holds two A.S. degrees (Earth Sciences and Natural Sciences) and will be graduating with his B.S. this year from CSU Northridge. He will be staying at Northridge to complete a Master's degree as the department's Hanna Graduate Fellow. Adam's research interests focus on projects related to igneous petrology, geochronology, mineralogy, and planetary science that will enrich our understanding of rock, mineral and planet forming processes. His interests also extend to mineral and gem formation and he has an endless fascination with the many under explained and minimally researched rock types that are only seen



in the jewelry industry – even going so far as to start his own lapidary business. Adam's undergraduate thesis research into the significance of the Sr/Y geochemical signature in "adakitic" bulk-rock data and its validity as a proxy for crustal thickness taught him to conduct in-situ single-mineral studies using laser-ablation inductively-coupled mass spectrometry (LA-ICPMS) and electron microprobe analysis (EMPA). He was invited to present the initial results of this research orally at the 2019 annual Geological Society of America (GSA) meeting. Adam has also interned at the Southern California Earthquake Center conducting geochronology of ductile shear zones, and at NASA's Jet Propulsion Laboratory working on remote sensing technologies.

Student: Khalil Droubi

University: University of California Santa Barbara

PSAAPG Undergraduate Student Award

Nominated by: Matthew Rioux

Khalil is a top student in the Department of Earth Science at UC Santa Barbara. He routinely excels in undergraduate Earth Science courses and stands out for his intellectual curiosity, his ability to think critically, and his depth of understanding. He is interested in how the Earth works and how we can study it, beyond the requirements for any specific assignment or class. Khalil is graduating this year and plans to pursue a Master's degree next year at the University of Wisconsin, Madison, combining petrology, isotope geochemistry, and geochronology.



Student: Alison Franco

University: California State University Northridge

PSAAPG Graduate Student Award Nominated by: Kathie Marsaglia

Alison Franco is a product of Ventura County. She grew up in Camarillo and then worked in Ventura after obtaining her BS from UC Santa Cruz, and before entering the MS program at CSUN. Her many accomplishments include a near-perfect CSUN GPA, several research awards (e.g., GSA Research Grant, Hanna Summer Research Fellowship), several awards that funded travel for her fieldwork and meeting attendance in New Zealand, and award-winning presentations at the AAPG Student Expo and CSUN Symposium. Her thesis is a source-to-sink sand provenance study of likely earthquake-generated turbidites cored in the Hikurangi Channel off North



Island, New Zealand on IODP Expeditions 372 and 375. Alison is the Treasurer of Southern California Association of Engineering and Environmental Geologists (AEG). She has been a teaching assistant at CSUN for various lab courses as well as summer field. This summer, Alison will be an intern at Chevron in Bakersfield and plans to graduate in the 2020/2021 academic year.

Student: Richard Sanderson

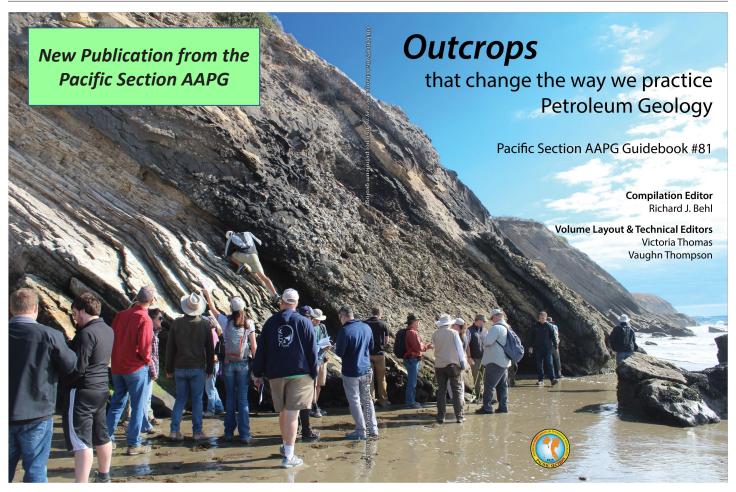
University: University of California Santa Barbara

PSAAPG Graduate Student Award Nominated by: Robin Matoza

Sanderson's primary research project is on quantifying explosive volcanism in Alaska using seismo-acoustic wavefields recorded by USArray. The goal of this project is to capitalize on the unprecedented seismo-acoustic dataset newly available from the transportable array (TA) regional seismic and acoustic network (85 km spacing) as it records Alaska's routine explosive volcanism with dense spatial wavefield sampling. This work is advancing the capability of acoustic early warning systems of volcanic eruptions for aviation safety and will assess the potential contribution of large sensor networks such as the TA to volcano monitoring. Sanderson is also working on a pilot experiment on



lahar detection at Mount Adams, WA and on characterizing acoustic explosion signatures at Popocatépetl, Mexico. Sanderson has accumulated a great deal of field experience and has applied this skillset to his PhD studies with enthusiasm, determination, and professionalism. His work is meticulous and the systems he has built have proven to be robust and reliable in a range of challenging field environments. Sanderson is highly self-motivated, hard-working, and dedicated to research. We are pleased to recognize his achievements with a Coast Geological Society Scholarship.



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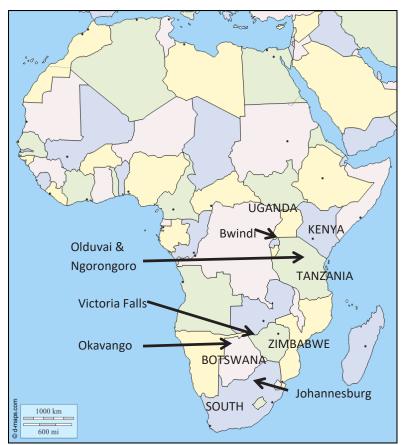
SANDE OIL FIELD GEOLOGY

Continuation of our series on member's travel experiences...

Cynthia Huggins and Dan Schwartz Trip to Africa Part 3: Travel to Victoria Falls in Zimbabwe

After two nights in Ngorongoro, we travelled to Zimbabwe to see Victoria Falls. To get there, we took four airplane flights through Tanzania, Kenya, South Africa and finally to Zimbabwe.

Victoria Falls is on the Zambezi River that forms the border between Zambia and Zimbabwe. The Zambezi flows northeastward toward the Indian Ocean via the Great Rift Valley.





The Zambezi River upstream of Victoria Falls looks pretty quiet as it flows on flood basalt.

There are places on the Zambezi River where animals can rest, like this Nile crocodile hiding in rocks.





And an Ibis flew low over the calm waters.



Sunset on the Zambezi is very peaceful.

The next morning, the adventure continued.



At the entrance to the Victoria Falls National Park. We found the notch in the map of Zimbabwe showing where Victoria Falls sits (Cynthia's finger). After a short walk in the rainforest at the edge of the gorge, we found the beginning of the falls at the Cataract, complete with rainbows.



A bit further along the falls. We found a double rainbow across from Livingston Island.



While the falls look impressive, at the time of our visit there was a persistent drought that dropped the flow of the Zambezi. This was very evident as we walked along the pathway on the Zimbabwe side of the river looking back at the Zambia side.



The falls are barely visible in areas normally at full cascade and masked in mist. Here the fault bounded channel is easily visible with only minimal flow over the basalt.

Later that morning, we decided to see the falls from the air.



What a view. The Zambezi crashes over the edge of flood basalts that form the walls of the gorge. The basalt is extensively faulted downstream of the falls. The Zambezi is confined within the basalt gorge for tens of miles before exiting the basalt on its way to the Indian Ocean.



After seeing Victoria Falls, we drove out of the town of Victoria Falls, and across the border into Botswana. From there, we flew across Botswana to reach the first of two Camps we stayed in while visiting the Okavango Delta.



We flew along the Chobe River that forms the border between Botswana and Namibia. It is a wide fluvial plain with channels and islands. The Chobe enters the Zambezi River upstream of Victoria Falls.

The Okavango Delta is fed from the northwest by waters draining the Angolan highlands and flowing across Namibia's Caprivi Strip by the Cubango River, into the Kalahari Desert. The Delta is the largest intact inland delta in the world. It is ephemeral in nature, forming during the wet season and drying up in the hot summer months. It supports an amazing variety of wildlife, including a large pack of wild dog. We stayed at Abu Camp near one of the distributary channels to see ponds and streams and to accompany their elephant family out on a 45 minute walk to start their day. We flew to Chief's Camp that sits on a large island within the Moremi Game Reserve in the center of the Delta. They have a wide variety of animals in a brushy setting.



The first animal we met was Kathy, an elephant that lives at Abu Camp.



Kathy has several sisters with two male babies.



Being up close with the elephants is an amazing experience.



Seeing the interaction of the mother and baby elephants is a wonderful experience.

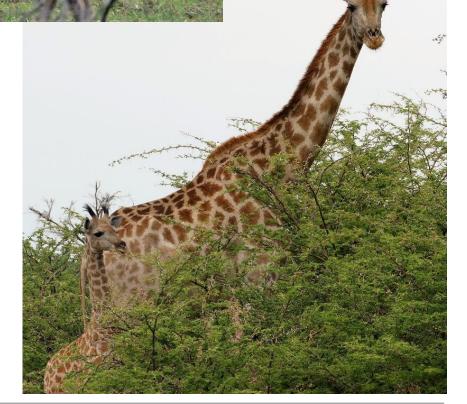


They took a walk around Abu camp not far from our room...



...and the baby elephant got to chase baby Warthogs.

Close by the camp we saw giraffe.



That evening we had a spot of tea with the elephants.





The diversity of animals was amazing.

Leopard,





Wild dogs,



White Rhinos,



Kudu, and





The delta also has several lion prides. These sisters are preparing for a night-time hunt.



Boston is a male lion that has one blue eye and one golden eye. He patrols the lion home range all night long.



Boston's cousins are Golden....





and Brownie.

Brownie has two cubs that stay with their mom.





The cubs love to play, but.....



...it is very apparent that they are learning to be



We had a wonderful time in Africa!

From the Bakersfield Californian

RICHARD HOWARD VAUGHAN

November 28, 1926 - November 2, 2020

Richard Vaughan 93, of Bakersfield, California passed away peacefully in Carmel, CA in the presence of his family.

"Dick" was born in Alhambra, CA as an only child to Thelma Grace and Howard Vaughan who both met while attending Stanford University. Howard worked in the oil business and the family spent time in Bakersfield and Alhambra. Dick ran track in High school and enlisted in the Navy after graduation, deploying in the Pacific Fleet. After the war he attended



Stanford University where he ran track and attained a Bachelors and Master's Degree in Geology. He met and married his wife of 64 years, Mary "Polly" Mintzer while at Stanford.

Dick worked briefly in the mining industry but switched to the oil business where his first job was field mapping the entire 1000-mile long Coast Range for Standard Oil. He soon joined Franco Western Oil Company in Bakersfield but took a winger on a start-up oil company called Occidental Petroleum as their first and only geologist in 1959. After some success at drilling gas wells in Sacramento he began hiring his geologist and engineer friends to come live and work in Bakersfield for the fledgling OXY. The entrepreneurial financier side of OXY, Dr. Armand Hammer asked Dick if he could explore for oil anywhere in the world where would it be? Dick said "Libya" and was quickly deployed from the tiny Bakersfield OXY to Libya with his great friend and geologist Jim Blom. Through grit and smarts, they won concessions against the major oil companies and went on to discover what would turn out to be 4.5 billion barrels of oil in Libya. OXY catapulted to become the eighth largest oil company in the US behind the "seven sisters" major companies. Dick treasured his time at OXY where his coworkers became his best friends who went on to discover 9 billion barrels of oil through his 25 years working there as chief geologist. Dick was active as a geologist until very recently and thoroughly loved fishing on his boat in San Diego and Mexico and fly fishing in Wilson, WY.

Dick is survived by his wife Polly, daughter Carolyn Vaughan and husband John Massuco, son Jeff and wife Jenny Vaughan, and their grandchildren Ali and Jackson Vaughan. In lieu of a service, the family asks that you raise a glass to Dick for a life well lived.

Published in Bakersfield Californian from Nov. 6 to Nov. 8, 2020.

GLENN GREGORY September 19, 1950 - December 15, 2020

Glenn Gregory passed away peacefully on December 15, 2020 in Bakersfield, California with his family close by, succumbing to complications due to COVID-19. He is survived by his loving and steadfast wife, Corinne Gregory; his two sons, David (Theresa) Hatcher and Christopher Hatcher; and his three nieces, Jayna (Nathan) Gregory, Taryn (Gregory) Gregory, and Kendra Gregory.

Glenn was born on September 19, 1950 in Los Angeles, California. His father George Gregory (deceased 2005) and mother Geraldine "Gerry" Gregory (deceased 2019), both of Russian-Jewish descent, eventually settled in the San Fernando Valley neighborhood of Encino, where they raised Glenn along with his two younger brothers Gordon Gregory and Alex Gregory (both deceased).



Glenn attended Birmingham High School and had early aspirations of becoming an electrical engineer before realizing math was not his strongest suit - he quickly shifted his interests to geology. He went on to earn an undergraduate degree in Geology from UC Santa Barbara, and a master's degree in Geology from CSU Los Angeles. He began his professional career with Chanslor-Western Oil & Development before an 18-year tenure with the Santa Fe Energy Company. Glenn continued his successful career in the private sector as an Independent Petroleum Geologist for 25 years until his passing. He was a published author and a licensed CA Professional Geologist since 1981.

In 1986, while living in Orange County, Glenn met the love of his life, Corinne, whom he affectionately called "Kuckla" (Russian for "baby doll"). Corinne, in turn, lovingly called Glenn "Huggy Bear." They married two years later, after an adventurous courtship, and Glenn became a supportive and caring father to Corinne's two sons, David and Christopher. Family was the bedrock of Glenn's life and he took on the role of husband and father with unwavering dedication. In 1992, the family moved to Bakersfield. California, where Glenn lived for the remainder of his life.

Glenn was a larger-than-life figure in his local hiking community, serving as a hiking leader for the Kern River Valley Hiking Club and Southern Sierra Hiking Club. His friends and fellow hikers often describe him as a gentle giant whose heart was bigger than his stature. Hiking was Glenn's passion and he was always planning his next adventure; his expeditions would take him across the US and Canada. He loved being in nature, stopping to admire wildflowers, and waxing poetic about the geology he observed on each trail. He was not the fastest hiker - it was never a race with Glenn - he was a proud member of what he spiritedly called the Sloth Hiking Team. One would often find Glenn trailing in the back of the group, wearing his trademark Tilley hat, encouraging everyone to keep going, making sure no one was ever left behind.

Glenn will be remembered for his playful spirit, his genuine good nature, his leadership, his generosity, his endless storytelling, and his endearing sense of humor. He will be missed profoundly. A celebration of Glenn's life and a memorial hike will be held at future dates.

Published in Bakersfield Californian from Dec. 19 to Dec. 20, 2020.



Glenn at Mt. Rainier National Park, Summer 2020.

From Maia Davis, President of the SJGS:

Dear friends,

As some of you may have heard, our friend Glenn Gregory passed away due to COVID-19-related complications on Tuesday, 15 December. SJGS is deeply saddened at Glenn's loss.

Glenn was a giant in presence, voice, enthusiasm, good energy, and friendship. His absence is even bigger, and we will certainly miss him in our meetings. He was an active member in the community – always engaged, coordinating trips, asking questions, and eager to connect with other members. Our hearts and thoughts are with Glenn and his family.

We understand that Glenn's family does not want to be contacted at this time – they are requesting space to grieve and figure out next steps. As SJGS hears more from the family, we will certainly pass it along.

Gregg Wilkerson has dedicated his CSUB Winter Semester continuing education class "Geology and Hollywood" to Glenn this year, and is inviting an SJGS member to attend any of his Zoom sessions for the class as his guest. Please contact SJGS for more information.

We hope folks stay safe out there. Take care of yourselves and each other.

Yours.

The San Joaquin Geological Society

Robert Horton and Robert Negrini Named to CSUB Faculty Hall of Fame

The CSUB Faculty Hall of Fame's Distinguished Faculty Award honors the school's greatest professors. For 2020, Doctors Robert Horton and Robert Negrini, Emeritus Professors of Geology in the Department of Geological Sciences, were presented Distinguished Faculty Awards. Department Chair Dr. Anthony Rathburn's letters of nomination follow.

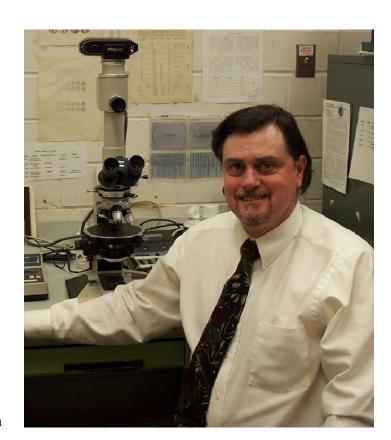
Dr. Robert Horton

Nominated by Dr. Anthony Rathburn

This letter is written in nomination of Dr. Robert Horton for CSUB Faculty Hall of Fame status. After a remarkable 32-year career as a faculty member at CSUB, Bob is currently an active Professor Emeritus. Bob was initially hired as a lecturer in 1984, then became a tenure-track faculty member at CSUB in 1985. During his long career at CSUB, Bob served the University in many different ways. He was also very active in research and contributed significantly to the community and his profession. An account of Bob's many accomplishments is included in the accompanying C.V. Significant highlights include:

Teaching

 During his career Bob taught more than 20 different courses in geology and science. As a testament to his skills as an educator, he received the Outstanding Educator Award from the Pacific Section—American Association



- of Petroleum Geologists, the CSUB-El Paso Natural Gas Award for Excellence in Teaching, and was named CSUB Outstanding Professor. He also received the CSUB Bautzer Faculty Award for University Advancement and two CSUB Meritorious Performance and Professional Promise Awards.
- In addition to his work in the classroom, Bob mentored a number of students in applied research. As evidence of Bob's success with student researchers, his students co-authored thirteen publications with him and over forty presentations at national, international, and regional geological conferences. As an Emeritus Professor, Bob continues to publish with students. His most recent publication (print version available in 2018) is with two former students, with one student as first author, in the Geological Society of London, Special Publications.

Research

• Bob has been very successful obtaining research support as PI or co-PI of 28 successful proposals, totaling over \$8 million. These funds supported research and the acquisition of state-of-the-art research equipment from such diverse sources as the National Science Foundation (four grants), the U.S. Department of Defense (two grants), the State of California/Kern Water Bank Authority (two grants), the U.S. Department of Agriculture, and grants from local industries including Chevron, Oxy, Aera Energy, Texaco, Unocal, ARCO, and the Kern Valley Hospital.

• Throughout his career at CSUB Bob has maintained an active, applied research program in areas of interest to local petroleum industries and groundwater agencies. His research resulted in twenty papers (and counting), and he gave fifty-five presentations at national, international, and regional conferences. In addition, he has given invited presentations to local organizations including the San Joaquin Geological Society (six times), Bakersfield Rotary Club, and Kern County Prospectors' Association, as well as Chevron Oil Field Research Center in La Habra and The Royal School of Mines in London. These invitations testify to the relevance and importance of his work. In recognition of his presentation skills, Bob received the A. I. Levorsen Memorial Award from the American Association of Petroleum Geologists for the best presentation at a regional meeting.

Service

- Bob has an equally impressive record in service. He served ten years as Department Chair and two-and-a-half years as Interim AVP for Grants, Research, and Sponsored Programs. During his tenure as GRaSP VP the annual average for new funding doubled. For 21 years Bob also served as Director of the California Well Sample Repository on campus. In addition, Bob was instrumental in developing the geology graduate program, including the initial proposal to the CSU Chancellor's Office. He continues to help train students and faculty on the technical equipment he acquired.
- Bob has served on many CSUB campus- and school-wide committees including: University Review Committee (including Committee Chair), GWAR Test Development Committee, Research Council of the University, Merit Award Scholarship Committee, Grievance Review Panel, Committee on Professional Responsibility, Dean Search Committees, Ad Hoc Committee on Enrollment Management, A&S Ad Hoc Science Education Committee, NSM Ad Hoc Liberal Studies Committee, NSME Ad Hoc RPT Criteria Development Committee, and A&S/NSME Library, Equipment, and Curriculum Committees.
- Locally he served on the Kern County Science Foundation Board of Directors, the California Well Sample Repository Board of Governors, as Secretary, Vice President, and President of the San Joaquin Geological Society, as Vice President of the Pacific Section—Society of Economic Paleontologists and Mineralogists, and he is currently President of the Pacific Section—American Association of Petroleum Geologists. As a member of the American Association of Petroleum Geologists House of Delegates, he served on that organization's Rules, Credentials, Core Preservation, and Distinguished Lecturer Committees, and he was a Session Convener at their Annual Conventions in Long Beach and Denver. He has appeared on local television and radio numerous times following earthquakes and he has made many presentations at local schools and to groups such as the Cub Scouts.

Summary

Few faculty have shown as much dedication and made as many lasting contributions to CSUB, his profession and the community as Bob has. For over 30 years Bob has represented the Department, the University and the community with distinction. He sincerely deserves Faculty Hall of Fame status.



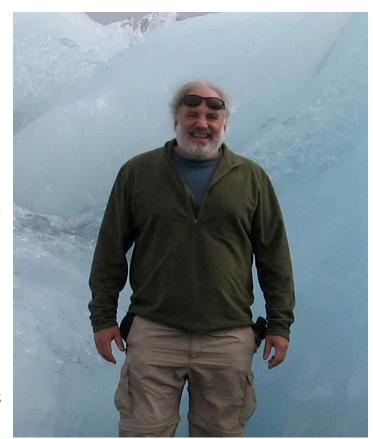
Dr. Robert Negrini

Nominated by Dr. Anthony Rathburn

This letter is written in nomination of Dr. Robert Negrini for CSUB Faculty Hall of Fame status. Rob arrived at CSUB in 1985, and after a distinguished 30-year career as a faculty member at CSUB, is currently an active Professor Emeritus. At CSUB, Rob was an exemplary professor, excelling as a teacher, mentor, scholar, and in his service to the University and community. The accompanying C.V. provides a history of Rob's accomplishments which are far too numerous to list in this nomination. Notable highlights include:

Teaching

In recognition of his dedication and excellence in teaching, Rob received a number of teaching awards, including the Distinguished Educator Award from the Pacific Section of the American Association of Petroleum Geologists; the "Hall of Fame" Award for Outstanding Teaching from the Kern County Alliance of



Business; and CSUB Outstanding Professor. These achievements are all the more noteworthy because Rob taught a wide range of Geology and Physics courses, from introductory courses for non-majors to graduate courses.

• Rob's teaching excellence extended beyond the classroom. He has a remarkable record of mentoring students and involving them in high quality research. Most of his >100 research presentations at professional meetings included student co-authors (and students were the first-author in an appreciable number). In addition, Rob has a strong record of publishing with students. For example, since 2014 Rob has published research papers with 8 student co-authors in several highly–regarded, international, peer-reviewed journals. Mentoring undergraduate and graduate students in research takes sincere commitment, and enabling students to bring their research efforts to full fruition through publication in a top science journal requires a very special level of dedication. Rob continues to publish with students as an Emeritus. His latest publication (2018) includes a recent Masters Degree student as first author.

Research

- One of the most difficult aspects of science is obtaining research funding, and especially maintaining external support for research over decades. During his career at CSUB Rob obtained over \$12 million in external funds. This is a truly extraordinary accomplishment, and one that most research institution scientists would envy.
- Rob established the on-going CSUB Center for Research Excellence in Science and Technology (CREST) for which he procured over \$10 million in funding through two successive 5-year grants from the National Science Foundation.
- Rob's scholarly productivity throughout his career is remarkable. He continues to publish in top journals on topics as diverse as paleoclimate and variations of the Earth's magnetic field. His research includes both local research and international field work (that involved students), and a wide range of collaborators.

Service

- Rob's service to the University included his leadership as founding Director of the CSUB California Energy Research Center, as well as establishment and founding Director of CREST at CSUB.
- Rob was also Vice-Chair of the Academic Senate at CSUB
- He served as both Vice-President and President of the San Joaquin Geological Society, and has also been an active member of the Pacific Cell of the Friends of the Pleistocene.
- His community contributions were recognized in awards from Kern County School Administrators, The Kern County Alliance of Businesses, and the regional chapter of AAPG.
- Rob voluntarily contributed to at least seven field trip guides designed to provide information about geological features in the region.

Summary

In summary, Dr. Negrini has made many impactful contributions to CSUB, its students and the community. He continues his long record of making important research contributions to science with student co-authors. With his 30+ years of devotion to CSUB and the community, and his transformative influence on the lives and education of students, it is difficult to imagine a more worthy candidate for the CSUB Faculty Hall of Fame than Dr. Robert M. Negrini.

NOW AVAILABLE

Anomalies Pioneering Women in Petroleum Geology: 1917-2017

To be released April 1, 2017, *Anomalies* represents a deep foraging into the unrealized and near lost history of women that began in 1917 their 100 year journey as petroleum geologists.

Robbie Gries and her contributors have created a remarkable account of early women in petroleum geology. The book represents a "deep dive" into the lives, accomplishments, triumphs, and, even, terrors, of early women professionals. It displays impressive scholarship, and reflects four years' efforts to source histories of these largely forgotten women professionals.

An astounding network of women professionals, formed by need, strengthened by time, constituting an amazing support system. Robbie has done an amazing, multi-year research effort in uncovering hundreds of early petroleum geologists, active in many countries, whose early efforts are now recorded for our belated appreciation. A delightful, hopeful, sense of progress is conveyed by the book, as the intense survival stories of early women geologists, give way to a prideful modern

survival stories of early women geologists, give way to a prideful modern acknowledgement of the importance of women petroleum geoscientists in our modern petroleum industry.

The book should be read by every petroleum geologist, geophysicist, and petroleum engineer; partly for the pleasure of the sprightly told adventures, partly for a sense of history, and, significantly, because it engenders a proper respect towards all women professionals, forging their unique way in a "man's world".

Buy this book! It will renew your pride in being a petroleum geologist, and it will enlighten you on the struggles of our wonderful women associates as they followed

their professional dreams. ??

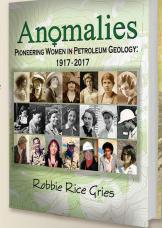
– Marlan Downey, Past President of AAPG, CEO Roxanna Petroleum

**Anomalies celebrates the inspiring achievements of an intrepid group of pioneering women that have laid the groundwork for female geoscientists today. Robbie Gries provides an entertaining and informative narrative of 100 years of trailblazers that is enriched by excepts from diaries, letters and interviews. The women in these

pages were true scientific contributors and innovators at a time when women were just emerging into the growing field of petroleum geology. This is a must read for any historian of the oil patch, as it provides the only comprehensive record of the hidden history of these ground-breaking women. ??

 Allyson Anderson Book,
 Executive Director - American Geosciences Institute

Once released, the book can be ordered from the AAPG Store for \$50 plus shipping and handling. Please e-mail publications@ aapg.org expressing your interest and we will contact you as soon as the book is available. Don't want to wait? Visit the AAPG Center at the 2017 ACE meeting to purchase Your copy



History of the "Black Gold" Oil Exhibit Kern County Museum

Kay Pitts and Dan Tuttle

In the early 90's the Kern County Museum decided to use the Petroleum building which had exhibits donated and curated by the Petroleum Production Pioneers (PPP) for the planned Dinamation traveling exhibit at the museum. This required that everything in the building be removed. With the building cleared, the Museum and the PPP talked about modernizing the exhibits to appeal more to the public and youth after the traveling exhibit moved on. The PPP exhibits had primarily been cabinets containing oilfield artifacts. Within a couple of years, the scope of the project and the committee grew, representing several oil industry companies and organizations. It was recognized that money was needed to make a substantial improvement. During the first three years of active work on fundraising the committee generated about \$120,000 in sponsorships. Major support was provided by WSPA and major oil companies with offices in Bakersfield.

The committee contacted Museum Arts, a Dallas company with experience creating energy museums around the world to provide ideas. The vision was for a modern, interactive energy exhibit that would tell the story of petroleum – upstream, and downstream to the consumer. It was to focus would provide learning opportunities to youth, the community, and tourists.



Outside exhibits including a wooden walking beam pump and plaques noting donors and notable groups and individuals in the petroleum industry. Plaques include California geologist honored by the SJGS. Photo by Larry Knauer.

After ten years in the planning the committee was really ready to start to work on raising \$4 million. Success seemed a long way away. Fortunately, California Senator Chuck Poochigian offered to include \$3.5 million in Proposition 12, a \$2.1 billion bond proposal titled the "Safe Neighborhood Parks, Clean Water, Clean Air and Coastal Protection Bond Act of 2000". When the bond passed, the committee negotiated with Museum Arts to scale back the exhibit so work could proceed. Among other challenges, the original Petroleum building would not support the infrastructure the exhibit required. A new building was needed. The building was ultimately erected on the site of the old Petroleum building. Museum Arts was awarded the contract for production and installation of the exhibit. Construction began in 2001 and was completed in 2002.

Simultaneously, the outdoor exhibits were upgraded and refurbished. Most of the manual labor for this was supplied by the oil committee, volunteers, and friends. The outdoor exhibit work included:

- Installing the metal building to protect and cover the jack plant.
- Repairing the four jack line pumps and adding two other jack line pumps (one wood and one metal pump) and connecting them to the jack plant.
- Adding two large wooden walking beam pumps. One came from Chevron Research in La Habra and the other come from Taft.
- Reorganizing the outdoor cable tool exhibit.
- Creating a donor plaza with the sucker rod fencing around a working wooden walking beam pump.
- Adding a second working pump jack.
- Adding sucker rod fencing around pump jacks.

With the completion of the Black Gold Oil Exhibit, thousands of students have been guided on tours by oil industry volunteers and retirees.

It is still getting rave reviews on "Trip Advisor" and "Facebook". A teacher's guide to the exhibit can be found at https://www.jsg.utexas.edu/sjvrocks/files/Kern-County-Museum-Black-Gold-Exhibit-LearningGuide.pdf



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SJGS Honorees

Larry Knauer



SJGS Honorees	
Row 1	
Vic Church	2002
Hy Seiden	2002
Jean Senteur De Boue	2002
Nat MacKevett	2003
George Laperle	2004
Al Almgren	2005
Henry Walrond	2006

SJGS decided in 2002 when the exhibit was completed to put names of the SJGS members on the granite plaques to recognize its members and support the Black Gold Oil Exhibit.

The SJGS executive committee planned to select a member each year to honor. Due to changes in officers and budgets the plan varied.

Currently, All the names in Row One and Row Two have passed away.

Row Three has one survivor in it: Stan Eschner. Stan is the most recent member to be honored, with the plaque added to the exhibit in 2020.



Row 2
Russ Simonson 2007
Wes Bruer 2008
Rufus Cook 2009
Ed Stinemeyer 2010
Bill Rintoul 2011
Glenn Ferguson 2012

Row Four, I am glad to say, contains, no names of any one who has passed away.

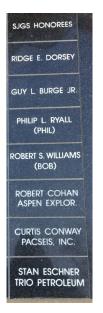
One other bit of information, Al Almgren in Row One turned 100 years old in February 2020 and passed away in May 2020.

Photo by Brian Pitts

Joe Dunwoody

Photo by Brian Pitts

The SJGS is planning to continue this tradition to honor its members and support the Black Gold Oil Exhibit.



Row 3	
Ridge E Dorsey	2014
Guy L Burge Jr	2014
Philip L. Ryall (Phil)	2015
Robert S. Williams (Bob)	2015
Robert Cohan	
Aspen Explor	2016
Curtis Conway	
Pacseis, Inc	2016
Stan Eschner	
Trio Petroleum	2020

Photo by Larry Knauer

2016	
2016	MARK
2020	LARRY
	LAURA
	BILL

SJGS HONOREES

CYNTHIA HUGGINS

DAN SCHWARTZ

A. (TONY) REID

L. WILSON

C. KNAUER

BAZELEY

AZELEY

2013

Row 4	
Cynthia Huggins	2017
Dan Schwartz	2017
S A (Tony) Reid	2018
Mark L. Wilson	2018
Larry C. Knauer	2018
Laura Bazeley	2019
Bill Bazeley	2019
-	

Photo by Larry Knauer

CalGEM NTO: Licensed Professionals for Water Disposal Applications

Editor's Note: Many California Professional Geologists have signed off on various DOGGR and CalGEM applications, including water disposal. This new NTO now requires Professional Civil Engineers to sign off on civil engineering plans, calculations, specifications, and reports. Whether a Professional Civil Engineer supplements or replaces a PG for a water disposal application is not clear from the NTO.

NOTICE TO OPERATORS

NTO 2020-09

December 7, 2020

LICENSED PROFESSIONAL SIGNATURE AND STAMP REQUIREMENTS

Please be advised that all Underground Injection Control (UIC) water disposal projects are required to be stamped by a licensed Civil engineer and submitted to the California Geologic Energy Management Division (CalGEM) to satisfy California Code of Regulations 1724.7.

The following sections of the Business and Professions Code (BPC) and the California Code of Regulations (CCR) are relevant:

CCR § 1724.7 (d) - All data required under this section shall be submitted to the Division with a cover page including a statement that appropriate licensed professionals, whose signatures and stamps appear at the bottom of the page, are responsible for all data, if any, subject to the requirements of Business and Professions Code sections 6735, 7835, or 7835.1. If the operator determines that the submission does not include material subject to the requirements of Business and Professions Code sections 6735, 7835, or 7835.1, the cover page shall so indicate, and shall provide the name(s) and signature(s) of the individual(s) responsible for preparing the submission.

BPC § 6735 - All civil (including structural and geotechnical) engineering plans, calculations, specifications, and reports (hereinafter referred to as "documents") shall be prepared by, or under the responsible charge of, a licensed civil engineer....

BPC § 6731 - Civil engineering embraces the following studies or activities in connection with fixed works for irrigation, drainage, waterpower, water supply, flood control, inland waterways, harbors, municipal improvements, railroads, highways, tunnels, airports and airways, purification of water, sewerage, refuse disposal, foundations, grading, framed and homogeneous structures, buildings, or bridges....

CalGEM has discussed this interpretation with BPELSG and this guidance comes from BPELSG. CalGEM is not the agency enforcing this requirement. CalGEM is following BPELSG's guidelines. If Operator has further questions about their interpretation, they can submit questions to BPELSG directly and BPELSG staff have emphasized to us that they welcome inquiries from the regulated community.

https://www.bpelsg.ca.gov/about_us/contact.shtml

Questions about the Professional Engineers Act, the Professional Land Surveyors' Act, and the Geologist and Geophysicist Act, and the associated regulations, should be directed to the Board's Enforcement Unit at 1-866-780-5370 (Toll Free) or BPELSG.Enforcement.Information@dca.ca.gov

Uduak-Joe Ntuk State Oil and Gas Supervisor

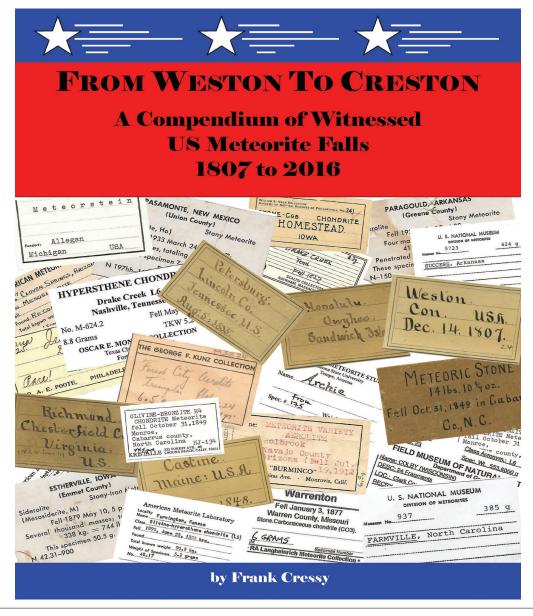
New Publication

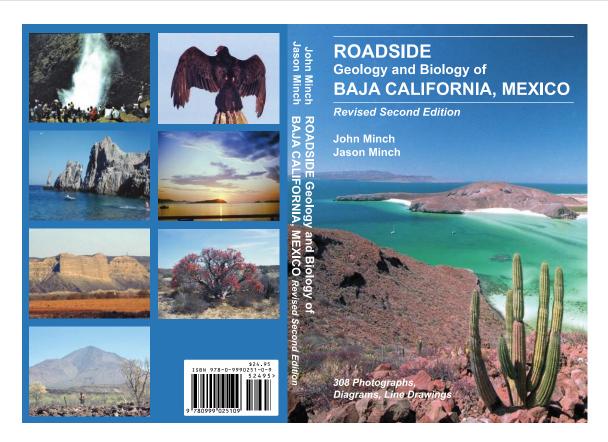
"FROM WESTON TO CRESTON – A Compendium of Witnessed US Meteorite Falls – 1807 to 2016"

by Frank Cressy

The violent display of blazing light and explosive sounds ending with meteorites crashing to the ground is an unforgettable event to those who witness it firsthand. This book summarizes the fall histories of nearly 170 witnessed meteorite falls that have occurred in the United States since the first documented fall at Weston, Connecticut in 1807. It is written not only for the collector of these rare objects, but also for those interested in the history and the growth of the branch of science known as Meteoritics. The accounts of the fall phenomena and recoveries associated with these extraordinary events are the focus of the book. However, the book is more. The reader will learn about those individuals responsible for the growth of the science and their contributions, together with interesting facts and coincidences about these visitors from space; 257 pages with over 300 color photos plus maps, figures and illustrations.

Soft Cover books \$36.00; for ordering, contact: fcressy@prodigy.net





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Member Society News

Alaska Geological Society www.alaskageology.org

P. O . Box 101288 Anchorage, AK 99510

Virtual meetings are planned for 11:45 am to 1 pm. Check the AGS website for details on how to attend. The next meeting is:

January 21, 2021, Thursday, 11:45 Alaska Time - Anchorage

Speaker: Michael West, Alaska Earthquake Center,

Topic: "The 2020 M7.8 Simeonof Earthquake and the end(?) of the Shumagin Islands Seismic Gap"

President: Andy Dewhurst Andrew.Dewhurst@conocophillips.com

President-Elect: Laura Gregersen Vice-President: Tom Homza Secretary: Heather Beat

Secretary: Heather Beat Heather.a.beat@gmail.com
Treasurer: Corey Ramstad cramstad@hilcorp.com

Past-President: Steve Carhart steve.carhart@alaskageology.org

Coast Geological Society
www.coastgeologicalsociety.org

P. O. Box 3055 Ventura, CA 93006

Virtual meetings continue to be planned. Meetings are the third Tuesday of the month and start at 6 pm.

January 19, 2021, Tuesday at 6:30pm

Speaker: Brenna Quigley Topic: "Geology of Wine"

President:Renee Richardssecretary@coastgeologicalsociety.orgPast President:Eric Whitepresident@coastgeologicalsociety.orgVice President:Eric Heatonmembership@coastgeologicalsociety.orgSecretary:Luis Navarrosecretary@coastgeologicalsociety.org

Treasurer: Blake Foreshee

Membership chair: John Abeid treasurer@coastgeologicalsociety.org

Los Angeles Basin Geological Society

www.labgs.org

Check the LABGS website for information on upcoming virtual meetings

President: Scott Prior figmo7@gte.net

Vice PresidentNate BuschNBusch@marathonpetroleum.comTreasurer:Francine CasonFrancine.Cason@student.csulb.edu

Secretary: Joseph Landeros landerosjd@gmail.com

Scholarships: Karla Tucker ktkr2@aol.com

Webmaster Joseph Landeros landerosjd@gmail.com
Past-President: Bert Vogler hvogler@kleinfelder.com

(Continued on next page)

Northern California Geological Society

www.ncgeolsoc.org

803 Orion #2

Hercules, CA 94547-1938

Monthly meeting will be held via ZOOM until the county health department permits in-person meetings. Check the society website for information on attending the ZOOM meetings. Upcoming Meetings:

January 27, 2021 7:00 pm

Dr. Christie Rowe, McGill University

Understanding Earthquake Cycles from Exhumed Faults and Shear Zones

February 24, 2021 7:00 pm

Dr. Tiziana Vanorio, Stanford University Cementing Roman Concrete to a Caldera

President: Tom MacKinnon tom.mackinnon@comcast.net President-elect: Noelle Schoellkopf NoellePrince @ sbcglobal.net Past President: **Greg Bartow** gregbartow@yahoo.com Don Medwedeff Treasurer: donmedwedeff@gmail.com Acting Recording Secretary: Grea Bartow gregbartow@yahoo.com Membership Chair: Tom Barry tomasbarry@aol.com Mark Petrofsky mpetrof@hotmail.com Outreach Chair: Newsletter Editor: Mark Sorensen msorensen@gilbaneco.com Will Schweller willschweller@yahoo.com Field Trip Coordinator: K-12 Program Co-Chairs: drphenshaw@comcast.net Paul Henshaw K-12 Program Co-Chairs: Pamela Polite Fisco pampolite@gmail.com Scholarships: Phil Garbutt plgarbutt@comcast.net

Program Director: Jim O'Brient

Website Editor: Andrew Alden geology @ andrewalden.com

Northwest Energy Association www.nwenergy.us

P. O. Box 6679 Portland, OR 97228 Contact: Jim Jackson or John Armentrout

No activities are planned at this time. Check the website for the latest information.

President Chris May c.law.may@gmail.com

Vice-President Steve Pappajohn

Treasurer Barb Portwood bbportwood@gmail.com
Co-Treasurer Jim Jackson jackson.js@comcast.net
Secretary Clark Niewendorp clark.niewendorp@state.or.us

Sacramento Petroleum Association

P. O. Box 1844 Folsom, CA 95630 Contact: Pam Ceccarelli 916-439-0400

No activities are planned at this time.

President: Jerry Reedy JWR5532@aol.com
Vice-President: Scott Hector Scott.Hector@gmail.com
Secretary Derek Jones djones@gasbiz.com
Editor/Treasurer Pam Ceccarelli pc626@comcast.net

San Joaquin Geological Society www.sanjoaquingeologicalsociety.org

P. O. Box 1056 Bakersfield, CA 93302 Contact: Jennifer Prosser jprosser@envirotechteam.com

Virtual meetings are held on the second Tuesday of the month. See the SJGS website for the next scheduled meeting.

Next meeting: Tuesday, January 12, 2021; check website for the time.

Speaker: Dr. Glenn Sharman

Topic: "Rivers of Sand: Sea Level Control on Sediment Dispersal and Provenance since the Last Glacial Maximum,

Southern California, USA"

President: Maia Davis Maia.Davis@crc.com

Past President: Jeff Kimber Jeff.kimber@conservation.ca.gov
President-Elect: Kevin Weberling Kevin.Weberling@crc.com

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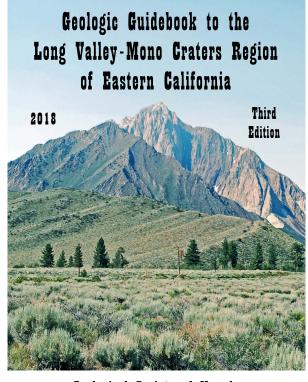
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Be a part of the bi-monthly newsletter by sending in your technical articles to:

editor@psaapg.org

Articles for the newsletter should be no more than 7 pages in total. Any figures or images (graphics, photos, and scans) must be at least 300 dpi resolution. Scanned photos, illustrations (line art) should preferably be submitted as a .tif, .gif, or .bmp; .jpeg format and should include titles and captions.



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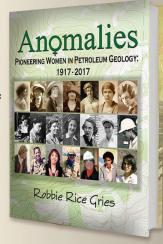
- Marlan Downey, Past President of AAPG, CEO Roxanna Petroleum

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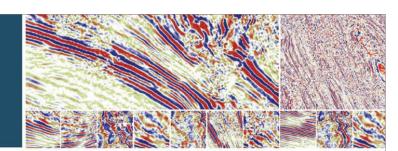
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Allyson Anderson Book,
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 Institute

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