

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

SDAG MEETING ANNOUNCEMENT

*WEDNESDAY
September 29th 2021*

6:30 PM - Happy Hour
7:00 PM - Meeting Begins

***** VIRTUAL MEETING *****

Join Zoom Meeting

[https://us02web.zoom.us/j/
85798184239?
pwd=SHI4S3FIRTVV1hQM0pJekZ
1MUxZdz09](https://us02web.zoom.us/j/85798184239?pwd=SHI4S3FIRTVV1hQM0pJekZ1MUxZdz09)

Meeting ID: 857 9818 4239
Passcode: 461844

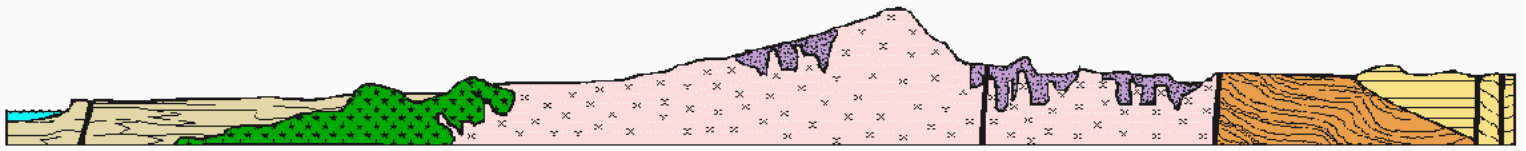
TITLE:

Status of Research:
"Evidence of the Cretaceous-Paleogene
Impact in California"

GUEST SPEAKER:

Larry Busch





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ABSTRACT

For more info in this paper, please visit
The Geological Society of America

[CLICK HERE](#)

Empirical evidence and modeling indicate that the following events occurred as a result of the K-Pg impact at Chicxulub, Mexico: Impact blast, ejecta fallout, tsunami sequences, acidic aerosol generation and rain-out. We theorize that evidence of these events is preserved in the sedimentary record in California.

Paired clay-rich "ejecta" and Iridium-rich "fireball" layers occur globally. Impact-tsunami deposits are documented in the Gulf of Mexico. Elsewhere, tsunamis would likely be generated by seismically induced submarine landslides (Atlantic and Pacific coasts), and possibly by antipodal geoid displacement (southeast Asia).

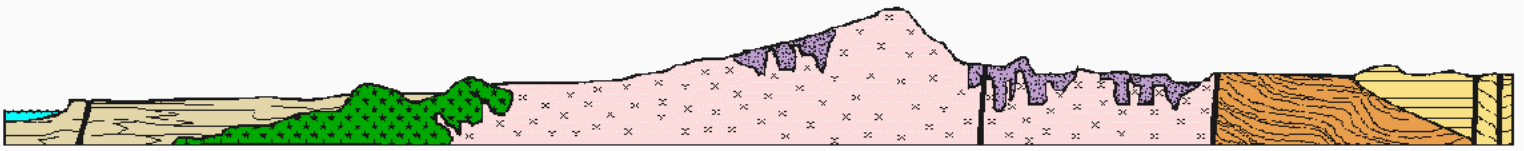
Researchers have quantified a volumetric-range for acidic aerosols generated by the K-Pg impact into Yucatan's anhydrite target rocks. The estimated volume of acid is deemed sufficient to have produced, via enhanced weathering, the "spike" in sea-water strontium isotope values across the K-Pg boundary. These acidic solutions would likely reside in basins and lagoons until neutralized.

In California (and elsewhere), Paleocene rocks are characterized by kaolinite. Examples include: the Paleocene Simi Conglomerate, Silverado, and Goler Formations; and basal units of the "Eocene" Lone, Walker, and Maniobra Formations. Features common to these formations include laterization, pisolitic claystone, kaolinitized sediment and basement (saprolite), and lignite.

The classical interpretation is that these lateritic "paleosols" result from an extended period of weathering in a warm, humid environment. However, the laterite-bearing Silverado Formation and Simi Conglomerate are bracketed between Danian and Maastrichtian marine strata, which suggests a period of lowered sea level — and a cooler, drier climate.

We propose a model in which the observed intensive corrosion and kaolinitization of sediment and basement resulted when impact-generated acidic solutions collected in and saturated sediment-filled fluvial channels, basins, and lagoonal environments.

In this model, economic clay deposits in the Alberhill area represent sediment and basement variably altered by ponded acidic run-off. The Claymont Clay Bed, which consists exclusively of kaolinite and angular sub-mm quartz, may represent a deposit from a down-range ray of the clay-rich K-Pg impact "ejecta layer."



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SPEAKER BIO

**Lawrence Busch, California Professional Geologist
PG - lic. no. 6440 (1995)**

1998-2018, Engineering Geologist - California Geological Survey: Under the Surface Mining and Reclamation Act (SMARA), researched and produced Mineral Land Classification reports (Mineral Resource Evaluations) for use by the public, local and regional agencies for land use planning purposes. Regional Geologic Mapping Program, co-produced the Ramona and San Pasqual 7.5' minute geologic maps. (Retired 2018)

1996-1997, Engineering Geologist - North Coast Regional Water Quality Control Board (Santa Rosa, CA): Managed caseload of sites with histories of chlorinated solvent and/or severe hydrocarbon contamination. NPL: Performed preliminary assessment and site investigation evaluating and testing for chromium-, copper-, and pentachlorophenol-based wood preservative contamination on a site impacted by the 1964 Crescent City Tsunami with eventual placement on the National Priority List.

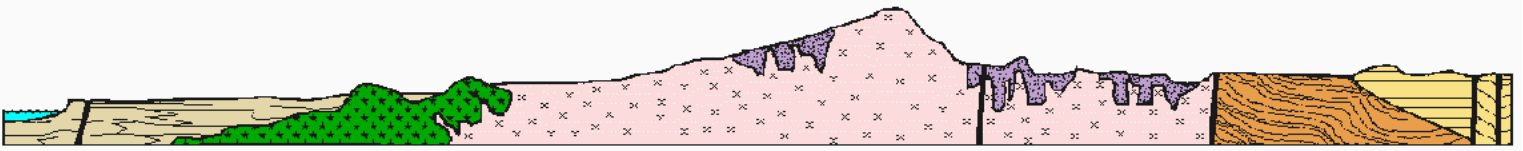
1991-1995, Geologist, - Environmental, Geotechnical Consulting (San Diego): Solid Waste Assessment Testing, Subsurface hydrocarbon and chlorinated solvent assessment, characterization, and remediation. Geologic and Geotechnical investigations.

1990 – USGS, Visiting Scientist: Geophysical survey for the collection of multi-channel seismic reflection, gravity, and seismic refraction data over the California Continental Borderland aboard the research vessel R/V S.P. Lee.

1990 – Pro Bono Geologic Consulting: Provided pro bono geological services to opponents of the Blue Canyon proposed North San Diego County landfill project. Successfully challenged accuracy and adequacy of the EIR/EIS regarding evidence of faulting within the landfill footprint. Provided written reports, testimony in a workshop before the SDRWQCB, and testimony in public hearings before the San Diego County Planning Commission and Board of Supervisors.

1988-1989 – Exploration geologist, St. Joe/Bond Gold Exploration: Managed regional stream sediment sampling program for gold mineralization with projects in California, Arizona, Nevada, Oregon, Montana, Colorado, and New Mexico.

1987 – Exploration Geologist, Westmont Mining Company: Gold exploration activities/drilling, Mt. Hamilton, White Pine County, Nevada.



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NEXT MEETING

WEDNESDAY NOVEMBER 17th

Virtual??? In Person???

We are still unsure....

But will let you know as soon as we know!

PRESIDENT'S CORNER

Hello SDAG Members!

Many thanks to everybody that attended last month's meeting! A special thank you to Markles Johnson for his fascinating presentation. Apologies again Markles, and all, for my brief tardiness, but it was great to see everybody's smiling faces after a long day.

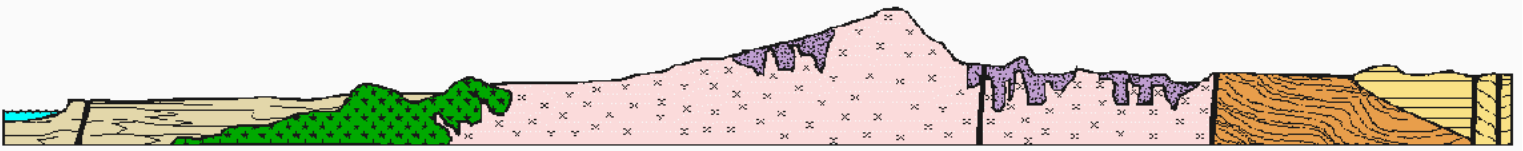
As always, a brief reminder to fill out and send in your 2021 memberships and, if you have the reserves, 2021 sponsorships. The sign up for this year's field trip on October 23-24 will be available very soon. As you know, we will be revisiting the Temecula Valley this year with a real field trip complete with camping, dinner, and beer!

For the meeting this month we are gearing up for the field trip and are excited to welcome Larry Busch! For the new edition of the Temecula Valley book, available for sale now, we included two papers authored by Larry and Russell Miller that look at clays in the Albert Hill area that are rich with impact lapilli and could very well be evidence of the K-T meteor impact. Larry was a stop speaker at the end of last year's road rally and we are excited to make his work with Russ a more prominent part of the field trip this year. Please join us!

In-person meetings remain in-flux, apologies. I know we are all eager to get back to that. Keep an eye on your emails!

Cheers,

Luke Weidman



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CALL FOR ARTICLES

SDAG invites members to submit articles on their current research or an interesting project they are working on for publication in the monthly newsletter. The article should be no more than 1 page in length. Photos are welcomed; too. Please submit articles to the SDAG secretary via email.

SDAG RESEARCH TOOL

A comprehensive listing of all papers published by SDAG, whether as annual field trip guidebooks or special publications, is available on our website. Entries are sorted by primary author, or chronologically by date of publication, starting with our first guidebook in 1972, out to Calico and the Mojave Desert in 2018, and finally up to the Temecula wine country for a return visit in 2020. These can be accessed or downloaded as .pdf files. They are fully searchable in Adobe Reader or Acrobat, so if you are researching a topic, "oikocryst" for example, you can search for that keyword. This listing will be updated as new books are published.

Thanks to Greg Cranham and Hargis + Associates, Inc., for making this possible. See the links below:

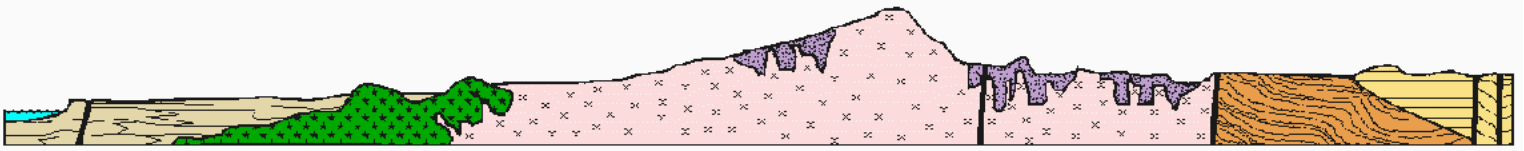
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CALL FOR JOB POSTINGS

Please Submit Job Postings to:
secretary@sandiegogeologists.org

For Updated Job Postings, please Visit:
<http://www.sandiegogeologists.org/Jobs.html>



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2021
FIELDTRIP!

SAVE THE DATE !

Our 2021 Fieldtrip will be taking place **October 22-24.**

We'll be exploring the Alber hill clays:

- Lu pisoolitic clay deposits
- Paloma ring complex in the timescale valley

Details will be sent out soon!

SUPPORT SDAG
WHILE YOU SHOP!

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What is AmazonSmile?

AmazonSmile is an automatic way for you to support the "San Diego Geological Society" (SDGS) SDAG's 501(c)(3) as your favorite public charitable organization every time you shop on Amazon at no cost to you at smile.amazon.com.

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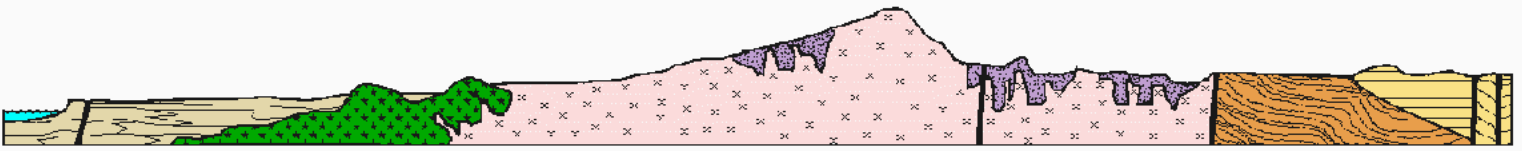
On your first visit to AmazonSmile smile.amazon.com, you need to select a charitable organization to receive donations from eligible purchases before you begin shopping. Please select the San Diego Geological Society. Amazon will remember your selection, and then every eligible purchase you make at smile.amazon.com will result in a donation to SDGS (SDAG).

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Please see complete AmazonSmile program details.



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**CALL FOR
PHOTOS**

We Would Love To See What You Are Up To!

Please Send Photos to

secretary@sandiegogeologists.org
petishu@gmail.com

**REQUEST FROM
TODD WIRTHS**

Hi, this is Todd Wirths, I'm doing some geology research and I'm wondering if anyone has these original references.

Please contact me at todd@wirths.com if you can share, thank you!

CAN YOU HELP?

Kennedy, Michael P., 1969, Preliminary geologic maps of portions of San Diego City, California, Calif. Div. Mines and Geol., Open File Reports 69-1 (DelMar sheet), 68-10 (Del Mar-La Jolla sheet), 69-13 (La Jolla-Point Loma sheet), 69-14 (Point Loma sheet).

JOHN TEASLY

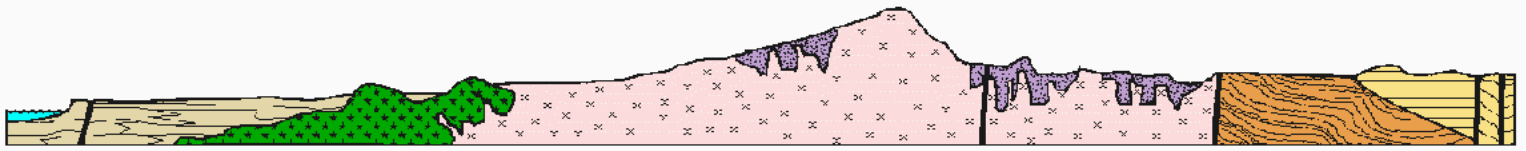
**APRG
DESERT RATS FIELD TRIP**

JUNE 5-9

**HWY 49 GOLD RUSH
COUNTRY**

MINE TOUR





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JOHN TEASLY

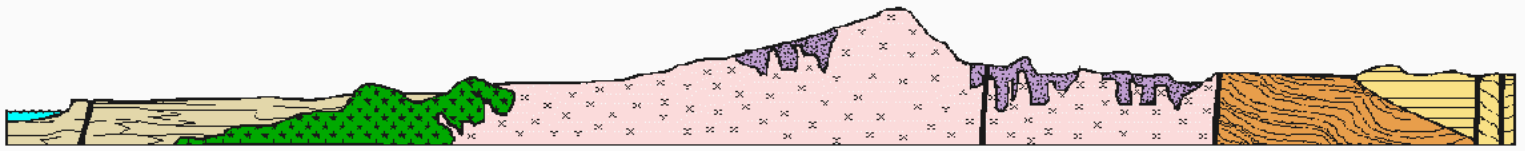
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MINE TOUR





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- [Dr. Vic Camp](#)
- Joe Coronas
- Greg Cranham - Consulting Geologist
- Dr. Margaret R. Eggers, CHG - [Eggers Environmental, Inc.](#)
- Karen Evans for Jim Evans (deceased)
- Phil Farquharson - [Geology Guy](#)
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