

Hello SDAG Members!

I hope you are all happy and healthy!

Well, we had a packed house last month at Casa Guadalajara. A very big thank you to Monte Marshall, who once again delivered a presentation that had everyone rapt! Tho, I have a feeling we would all watch him in the same way if he were to present on the details of watching paint dry. We also had a few newbies show up this month who came of their own volition – very cool. Keep the outreach alive!

This month we welcome Thomas to the SDAG stage! His talk is titled: "Natural Gas - Underexplored in Bangladesh? Increasing demand and decreasing supply; energy poverty and the impact of the energy transition".

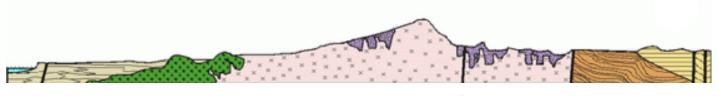
Thom is a professional geologist and has taken his profession across the globe. Boasting

positions in the US, Columbia, Venezuela, Mexico, Bangladesh, and Pakian Thom has practiced structural geology and, oft its counterpart, oil and gas exploration.

Please do not forget to register early! As prices for venues continue to rise we will not be able to be as flexible with attendance.

Don't forget to fill out and send in your membership forms (and sponsorship forms, too)!

Cheers, Luke Weidman President, 2023





DATE: Wednesday April 26th

TIME:

6:00 PM - HAPPY HOUR

6:45 PM - DINNER - ITALIAN BUFFET

7:45 PM - ANNOUNCEMENTS

8:00 PM - MEETING BEGINS

9:00 PM - QUESTIONS

9:30 PM - MEETING ADJOURNS

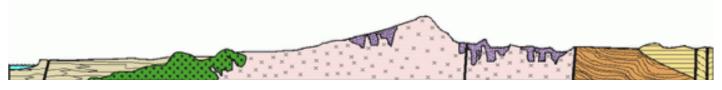
LOCATION: FILIPPI'S GROTTO - KEARNY MESA

5353 KEARNY VILLA RD. SAN DIEGO, CA. 92123



IMPORTANT:

- **REGISTRATION** will **CLOSE** on Monday 4/24 so that we can give the restaurant our final count by TUESDAY at 10 AM.
- WALK- INS are still welcome but it might not be possible to add you to the food count.
- **CANCELLATIONS:** If you would like to cancel, pls do so by Monday 4/26. Please keep in mind that we still need to pay for confirmed no shows.
- **LATE CANCELLATIONS** I will try my best to sell it to a walk-in (assuming we have any) but this is not guaranteed. *If we are unable to transfer, we ask that you still pay for your reservation so it does not come out of SDAG Funds.*







Speaker:

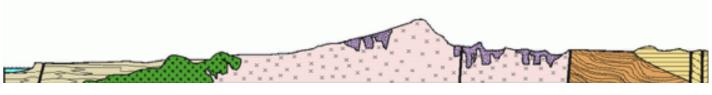
Thomas L Davis CA-PG #4171, PhD www.thomasldavisgeologist.com

Dr. Badrul Imam PhD University of Dhaka, Bangladesh -<u>LinkedIn</u>

Bio:

Thomas L. Davis is a California State registered geologist (#4171) and owner of Thomas L. Davis, PhD Geologist. Davis' work deals with structural geology, mapping, oil & Exploration and field development. More recent work has expanded to include the energy transition, and carbon and hydrogen storage in depleted oil fields. Geographic focus is the hydrocarbon basins of central and southern California, Nevada, Colombia, Venezuela, Mexico, and South Asia (Bangladesh, Pakistan, Sri Lanka, and Myanmar-aka Burma). Davis is also the founder and CEO of the nonprofit Geologic Maps Foundation, Inc. Education: BS-UCLA, PhD-UCSB and leads Geo-hikes on Meetup:

https://www.meetup.com/https-www-meetup-com-geo-hikes/





Natural Gas – Underexplored in Bangladesh? Increasing demand and decreasing supply; energy poverty* and the impact of the energy transition**

Abstract

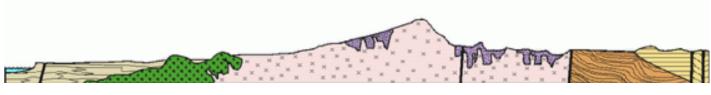
Natural gas (NG) is the principal fuel for electrical generation in Bangladesh and the foundation for the nation's rapid economic growth during the last two decades (World Bank, 2020). During this period NG supply grew through the further development of pre-2000 field discoveries. Abundant supply encouraged growth and was the parent of strong economic expansion (~4.5% GDP since 2004). Concurrently, Bangladesh has successfully managed economic development and climate change adaptation with its NG cornerstone (Roy, 2021). Since late 2018, Bangladesh has imported LNG (liquified natural gas) to supplement NG supply to meet increasing demand. The declining supply from presently operated local gas fields means that the share of expensive imported LNG will increase in the future as expected from the present 4 MMTPA (million metric ton per annum) to 21 MMPTA in 2030 (Wood Mackenzie, 2021). In-country gas fields with reserves of about 12 TCF (trillion cubic feet) and more expensive LNG imports should provide the energy for moderate- to high-growth until 2030; if demand remains below about 2.5-3.0 TCF/yr. However, the recent price hike in the LNG spot market from less than \$10 to more than \$35 per mmbtu (metric million British Thermal Unit) means that Bangladesh must bear added pressure on its economy and must survive on the price uncertainties of LNG in the international market. After 2030 the energy supply and dependent economic growth will become even more precarious.





Abstract - Continued

Preventing economic decline will require a combination of new NG discoveries and reservegrowth in existing fields, or expansion of other reliable and resilient base-load energy sources such as carbon-intensive coal or development of carbon-free nuclear power. As noted by in-country experts, Shetol et al. (2019): "The possibility of natural gas being exhausted within a decade and half worries us all....Bangladesh is likely to exhaust its gas reserve by about 2030." Imam (2021), "....Bangladesh's gas exploration has apparently been stalled because of a lack of dynamic vision." NG exploration needs to dramatically increase over the next few years to avoid severe economic contraction after 2030. *An example of energy poverty: "Roughly 3.3 billion people on the planet live in what Robert Bryce (Bryce, 2020) calls the "unplugged" world — countries where per capita electricity use is less than 1,000 kilowatt-hours per year. That means that roughly 44.6% of the world's population subside on less electricity per year than the average American family uses to keep their refrigerator running. About one billion people of this 3.3 billion have no access to electricity." ** The International Renewable Energy Agency (IRENA) define energy transition "...as a pathway toward transformation of the global energy sector from fossil-based to zero-carbon by the second half of this century. At its heart is the need to reduce energy-related CO2 emissions to limit climate change." It is a near certainty that Bangladesh will continue to increase its use of fossils fuels to pull its people up from energy poverty while adopting adaptation strategies to meet the impacts of climate change.







Mark your Calendar!

Our next meeting will be **IN PERSON** and will take place on: **WEDNESDAY, MAY 17th** at **CASA MACHADO. TOPIC -** ICELAND!

Executive Commitee

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2023 MEMBERSHIPS



PLEASE RENIEW YOUR MEMBERSHIPS!

We ask that you take the time to renew your membership for 2023 and if you have not renewed it in a while, this is a great time to resume!

We have made it even easier for you to renew! - now you can fill the form on our website and submit payment electronically! So, if you are anything like me (hardly ever make it to the mailbox) this just makes it so convenient!

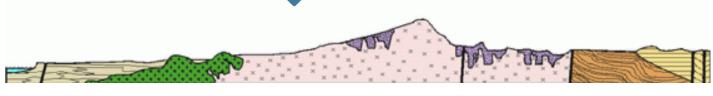
If you prefer to to renew with a check, there are 2 ways:

- 1. We will have forms at the check in table at our next meeting.
- 2. You can download the form using the link below and mail it or bring it to the meeting.

Your membership dues help fund scholarships, publications and, on occasion, cover some of the cost of the meetings. Your contributions are so important to us! PLEASE RENEW.

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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, and finally up to the San Diego's Back Country in 2022.

The papers 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:

SEARCH BY AUTHOR

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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.

<u>www.sandiegogeologists.org</u>



SDAG PUBLICATIONS



We many wonderful publications available for sale!

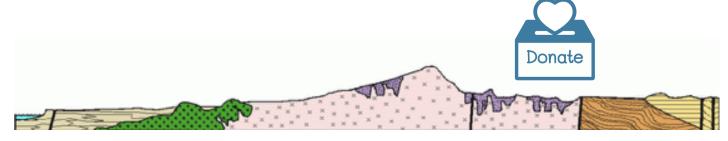
Please visit the **SDAG WEBSITE** for more details.

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Your donation will further the SDGS mission to promote geology and related fields in the greater San Diego region, operating through the San Diego Association of Geologists (SDAG), a committee of SDGS. To achieve our primary educational objective, we organize frequent field trips and maintain a program of monthly meetings featuring speakers on current geological topics. We also publish field trip guidebooks and other publications related to geology and natural history. We encourage scholarship and research by awarding scholarships from the elementary through graduate levels.



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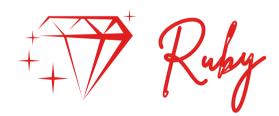








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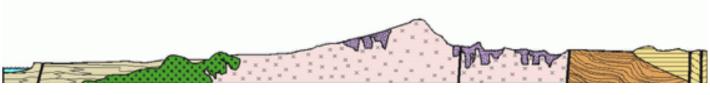
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Thank You

