



# San Joaquin Geological Society

**\*VIRTUAL MEETING Optional\***

**Date: Tuesday, May 10th, 2022**

**Time: 6:00 PM Social Hour**

**7:00 PM Dinner (Zoom link open)**

**7:30 PM Lecture**

**PSAAPG Members**

**\$30 with reservation**

**\$35 without reservation**

**Non PSAAPG Members**

**\$35 with reservation**

**Full-time Students with ID:**

**\$15**

**Place: American Legion Hall (Zoom link to follow)**

**2020 H Street, Bakersfield, CA 93302**

**\* RSVP \***

**By: noon Monday,  
May 9th, 2022**

Register online:

<http://www.SanJoaquinGeologicalSociety.org>

Pay online *or* at the door

**Our virtual lecture will  
be held via Zoom.**

**Meeting link and  
access code to follow!**

## **SJGS WEBSITE**

<http://www.SanJoaquinGeologicalSociety.org>

[eologicalSociety.org/](http://www.SanJoaquinGeologicalSociety.org)

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## *Understanding hydrocarbon accumulation and production in Bio-Siliceous rock; a view from pore geometry*

**Bryan Bell**

Over the years there has been substantial discussion about the many types of reservoirs found in the Upper Monterey. A clear understanding however has been elusive. This presentation will be an attempt to provide clarity or at least supply added information to further muddy the water. Although the Lower Monterey is the primary source for California hydrocarbon accumulations the Upper Monterey is not. It is often incorrectly considered as a primary source or as a potential self-sourcing reservoir. All commercial Upper Monterey reservoirs have been conventionally charged from Lower Monterey somewhere deeper in the basin. Regardless of the silica phase present, there are only two types of reservoirs found; matrix supported and intensely fractured (pseudo matrix).

Pore geometry controls reservoir performance. The diagenetic process is important, because it controls pore geometry. Decades old assumptions about the diagenetic process do not fit the hard data. Although temperature is generally thought to be the principal factor in silica phase transformation it is not. A new phase diagram is proposed that better represents the hard data across all the southern California basins. Pore geometry and capillary pressure as it relates to hydrocarbon accumulation and production will be presented for all phases of bio-siliceous rock. Understanding Pc and Pore geometry will lead to improved economics and lower risk in the exploitation of these reservoirs.

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Bryan Bell is the owner of Best Core Services. He has over 40 years of experience providing core analysis expertise to the California petroleum industry. Bryan formerly owned and operated Goode Core Analysis Service. He was also a regional manager for CoreLab before becoming a petrophysical consultant for OXY and CRC. Best Core Services was opened October of 2016

