

# San Joaquin Geological Society

Date: Tuesday, Oct 8th, 2024

Time: 6:00 PM Social Hour

6:30 PM Dinner 7:00 PM Lecture

Place: American Legion Hall

2020 H Street, Bakersfield, CA 93302

**PSAAPG Members** 

\$35 with reservation \$40 without reservation

Non PSAAPG Members \$40 with reservation

Full-time Students with ID

FREE!

### \* RSVP \*

By: noon Monday, Oct 7<sup>th</sup>, 2024

Register online: http://www.SanJoaquinGeological Society.org/

Pay online <u>or</u> cash/check at the door

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## Exploration History and Remaining Potential of the Los Angeles Basin: 1880-1976

Presented by: Dan Steward

**Abstract:** Over a 96-year exploration period within the Los Angeles Basin (LAB), 7 exploration trends emerged with the discovery of 66 oil fields with 142 new pool discoveries that have a combined cumulative production of 9.03 billion barrels of oil as of 2020. The trends, in order of their discovery: Whittier Fault Zone-Fullerton Embayment (1880), Santa Monica Thrust (1890), Newport-Inglewood Fault Zone (1920), Schist Ridge (1929), Wilmington Graben (1932), Capistrano Embayment (1959), Palos Verdes Fault Zone (1976). Leading the group of trends in recovered resource is the Newport-Inglewood Fault Zone with 3.242 billion bbls.; 2<sup>nd</sup> is the Wilmington Graben, dominated by the Wilmington field, with 2.981 billion bbls.; 3<sup>rd</sup> is the Whittier Fault Zone/Fullerton Embayment with 1.997 billion barrels. Five oil fields among the group of 66 account for 67% of the cumulative production. Over 1 billion bbls. were discovered simply by drilling on or near oil seeps in the LAB's first 9 discoveries, 1880 – 1909.

Despite the success of locating and successfully discovering and developing the rich oil resource of the LAB, its full potential is far from realized. Several trends, particularly those with potential extensions offshore, are truncated in terms of potential remaining resource. Using an analogy from the deepwater Gulf of Mexico amplitude trend, field sizes typically decline over time as the imagination and technological resources are exhausted. To cite one example, the offshore Beta oil field, with over 1 billion bbls. of original oil in place, and perhaps 200 million bbls. recoverable, is the solitary discovery in the Palos Verdes Fault Zone trend – a feature that is tens of miles long and extends through two LAB sub-basins. A "what-if" scenario will be considered for the LAB as regards future assessment and the potential for additional discoveries.

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