

August 2020



## LOS ANGELES BASIN GEOLOGICAL SOCIETY

***August 27<sup>th</sup> (Thursday) – 12:00 PM (note time change)***

***This will be a virtual (on-line) meeting. See below for instructions.***

### **Deborah Olson: Water Wells Logs and Water Well Applications for Aquifers, Part 2**

#### **Abstract**

Part 2 of this series shows the application of analysis methodology developed for the oil and gas industry to derive a shale volume curve from the electric logs. The magnitude of the curve response varies greatly in many aquifer sections well to well and sometimes vertically also, due to changes in mud chemistry, logging tool calibration, water salinity, and other factors. By applying interpretive methods, a standardized shale volume curve can be calculated that eliminates these raw-log variations. This shale curve improves the correlation of sand/shale sequences from logs by making it easier to recognize lithologic boundaries. These correlated surfaces can then be mapped using standard contouring techniques, generating grids and contour sets. Grids can be displayed by various programs for 3D rendering of structural models, which are often beneficial for improving the understanding of subsurface geology especially for individuals who do not have geological training. The net thickness of aquifer sands can be estimated from the shale curve by applying oilfield zone summation methods to the digital results. A digital lithology curve is more accurate for summing net sand through an aquifer interval than hand counting from the paper logs or summing the footage above a cutoff from a digital log.

Deborah Olson has almost 40 years of experience in California as a development geologist and log analyst, starting with Getty Oil Company (later Texaco), where she began her training in computer geology and log analysis. She improved her petrophysical skills by working with Rick Berry at his consulting firm Digital Petrophysics, which she joined in 1989. Together, Deborah and Rick conducted numerous petrophysical field studies, taught industry training courses in log analysis, and developed petrophysical software to handle complex problems that exceeded the capability of commercial systems. In 2002, Deborah started PayZone Inc., through which she and her team continue to offer similar services to the oil and gas and, more recently, the water industry, both in California and internationally.

***Please join the LABGS to see Deborah's presentation!***

#### **Speaker's Biography**

**This will be a virtual meeting using Webex. Login information will be sent to those folks registering for this event. See next page.**

**When:**

**Thursday, Aug. 27, 2020  
12:00-1:00 PM (note change)**

**Virtual Meeting Reservations:**

**Reservations must be made by:  
12:00 AM Wednesday Aug. 26<sup>th</sup>**

**To register and receive login information by return email, please send an email to our speaker Deborah Olson at [dmolson@payzoneinc.com](mailto:dmolson@payzoneinc.com)**

I apologize for the lateness of this notice, but owing to some communication imponderables, the relevant information was not received until Aug. 22.

Last month's meeting, our first virtual attempt, had 23 attendees. There were a few very minor glitches relating to Zoom issues so our speaker has switched from Zoom to Webex for this month's meeting. Please remember to log onto the Webex meeting a few minutes before 12 noon so as to not interrupt the speaker.

Not much else to report this month. It's too dang hot and humid to do anything. Hope you all stay safe.

**LABGS Board  
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**ANNOUNCEMENTS:**

The LABGS has expanded our meeting raffles. We would appreciate raffle prize donations! *Please bring donation items to the next meeting.*

**Do you know if your PSAAPG/LABGS membership is current?**

*If you don't know, please check via the PSAAPG website:*

<http://www.psaapg.info/cloud/miscellaneous/dues.php>

*Please inform a LABGS Board member if you have a pertinent announcement.*