

## **Lunch and Learn - U.S. Navy Square Lake 1 Gas Discovery Well: Core Geochemical Survey, Feb 26, 2020, Alaska Geologic Materials Center**

Baker-Hughes, in conjunction with the Alaska Geologic Materials Center (GMC) and the Alaska Geological Society (AGS), are pleased to invite you to a free workshop on **February 26, 2020 (Wednesday)** focusing on the expanded **Volatiles Analysis Service (VAS)** study that was completed on the samples recovered from the 1952 U.S. Navy Square Lake 1 gas discovery well (northern foothills fold-belt, North Slope; see [figure 1](#) for location). (The Square Lake 1 well tested gas at 112 MSCF/day from 1,646-1,675 ft md bkb in the Nanushuk Gp. (USGS PP 1399, nominal p. 326).) The workshop will include a lunch, results presentation, spirited discussion, and a viewing of the core in the examination room.

### **What is VAS?:**

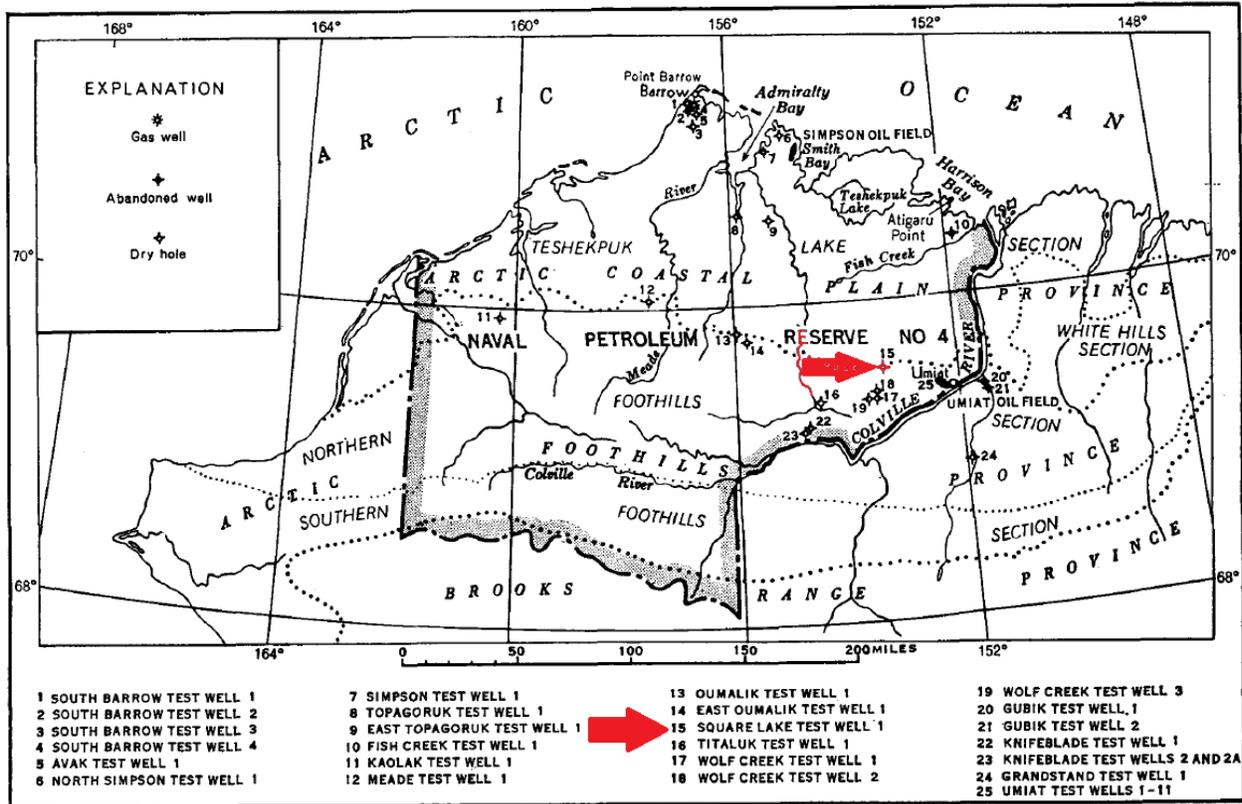
**Volatiles Analysis Service (VAS)**, provided by Advanced Hydrocarbon Stratigraphy and distributed by Baker-Hughes, is an advanced geochemical analysis that can be carried out on multiple types of geologic materials. The VAS analysis provides relevant information on the presence and composition of hydrocarbon (HC) resources, the presence of non-HC compounds (water, helium, H<sub>2</sub>S, CO<sub>2</sub>, organic acids, and many more), plus rock properties in terms of permeability and mechanical strength indices. While commonly applied to “fresh” samples, legacy samples are a very viable, valuable, and often overlooked data resource.

### **Background of Study:**

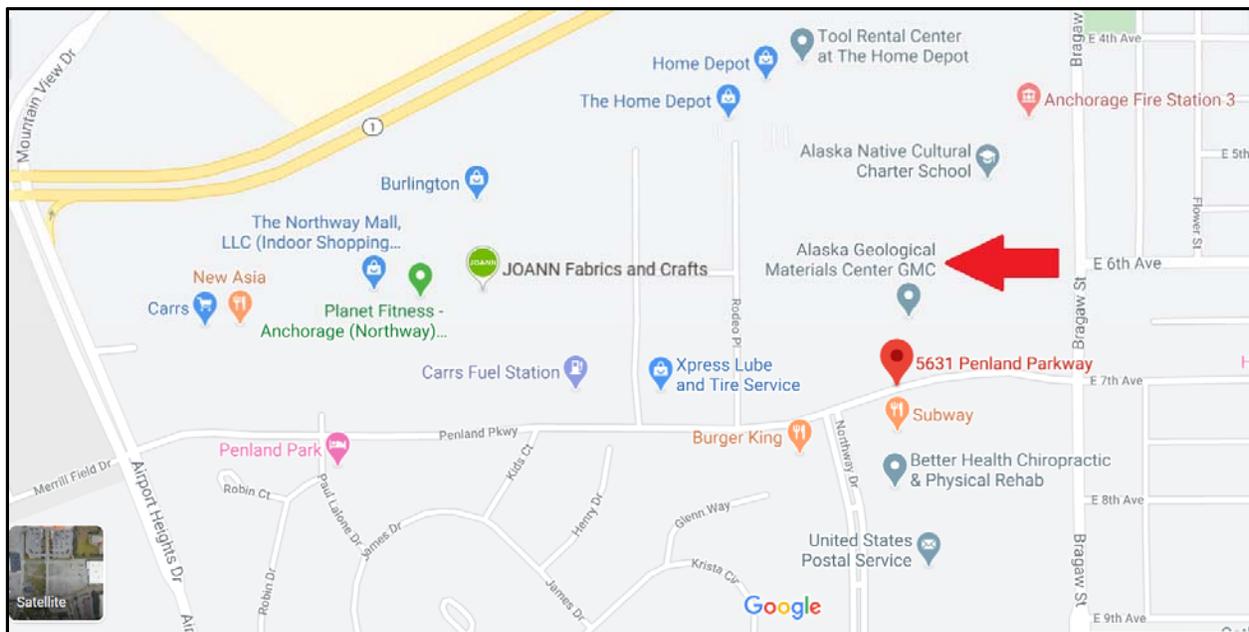
In early 2019 a proof of concept study was delivered at the GMC-AGS technical conference focusing on a key 190-ft interval of the lower Seabee and upper Ninuluk/Chandler formations. From the blind test, an unconformity at 1,885 ft was detected solely from geochemical results from cuttings originally collected 68 years ago. Given the rich legacy of oil and gas activity in Alaska and the large repositories of available cuttings and core at the Geologic Materials Center (Anchorage) and the Core Research Center (Denver), there are significant opportunities to reevaluate petroleum systems on the North Slope.

### **Information for Interested Parties:**

Baker-Hughes proposes to provide a free light lunch at the GMC and needs a head count. Please RSVP to Kurt Johnson, Geologic Materials Center Curator, via email at [kurt.johnson@alaska.gov](mailto:kurt.johnson@alaska.gov) or by telephone at 907-696-0079. The Alaska GMC facilities are located east of the Northway Mall at 3651 Penland Parkway (see [figure 2](#) for map location). The lunch will be available at 1130 and the presentations will begin at 1145, followed by examination of the Square Lake cores at 1300. The Baker-Hughes contact is Caleb Conrad at [caleb.conrad@bakerhughes.com](mailto:caleb.conrad@bakerhughes.com). The Alaska Geological Society contact is Steve Carhart at [president@alaskageology.org](mailto:president@alaskageology.org) (web page: <http://www.alaskageology.org/>).



**Figure 1.** Location of Square Lake 1 gas discovery west of Umiat oil field (~70 MMSTBR). Source: USGS Prof. Paper 305H, fig. 33, nominal p. 423, (access at <https://dgs.alaska.gov/pubs/id/3844>, file p. 5).



**Figure 2.** Location of Alaska Geologic Materials Center at 3651 Penland Parkway, Anchorage, off Penland Pkwy near Glenn Hwy (AK Hwy 1) and west of Bragaw St.