Great Salt Lake Microbialites Past and Present

John Lake
(abstract & bio below)

Bushwakker Brewing Company,
2206 Dewdney Avenue, Regina

Lunch: 11:45 am
Meeting Talk: 12:15 to ~1:00 pm

For lunch, the cost is:
S.G.S Members: $15.00
Student Members: $5.00
Non-members: $20.00

For those members not having lunch, the talk is free.

Please contact Alec Pollard at Alexander.pollard@gov.sk.ca or 306-798-4414 by 10:00 am, Monday, February 11th if you plan on having lunch.
Great Salt Lake Microbialites Past and Present

Abstract
Microbialites have recently received a great deal of research. The American Association of Petroleum Geologists offered a two day Field Trip to share information on Microbialites around Great Salt Lake prior to the ACE 2018 Annual General Meeting in Salt Lake City. Day one was led by biologists from Great Salt Lake Institute, of Westminster College in Salt Lake City. Day two was led by European Geologists doing research on Microbialites. Experts have realized that bacteria extracting calcium from water have many different growth forms including the familiar stromatolites, oolites and microbial mats and clots. Next generation DNA sequencing shows no significant variation and the microbe forms are all the same. Morphology is a response to the energy regime they are growing in. Lake Bonneville has been an area of internal drainage for the last 15my. Climate change associated with glaciation has resulted in a reduction of water depth from 300 metres to present depth of 5 metres. The Lake became famous for the “Gilbert” Deltas ancient shorelines of Lake Bonneville. Human activity including mining of Potash and Magnesium plus a permanent railway berm has changed the chemistry and circulation of the lake.

Understanding microbialite growth in Rift Basin Lakes is critical to extracting the billions of barrels of oil from offshore Brazil (South America) and Angola (West Africa) reservoirs. Modern microbe textures are also reminiscent of textures observed in Mississippian Frobisher Beds in the Williston Basin of Southeast Saskatchewan.

John Lake Biography:

John graduated from the University of Waterloo in 1973. He graduated from McGill University in 1977 with a MSc. His thesis was on Upper Ordovician Carbonate Mud Mounds on Anticosti Island under Dr. Eric Mountjoy. He worked for Mobil Oil Canada in Calgary from 1979-1989 and was their Saskatchewan Development Geologist from 1983-1990. From 1990-1995 he worked for Saskoil/Wascana in Regina and Swift Current. When Wascana decided to move everyone to Calgary in 1995, John decided to strike out on his own as a geological consultant to the oil industry. John has faithfully served industry right up to today providing them with a broad depth of knowledge of the petroleum geology of southern Saskatchewan that he has extracted from an exhaustive career examining cores.
John has been the *Saskatchewan Geological Society Field Trip Coordinator FOREVER*. He has *unselfishly* shared his unique insights around the subsurface petroleum geology of southern Saskatchewan through countless core and oral presentations at CSPG and Williston Basin Conferences for the *past three decades*.

*Saskatchewan Geological Society*

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