

CALIFORNIA INDIANS, ARTISANS OF OIL

Susan Fox Hodgson, California Division of Oil, Gas, and Geothermal Resources, 801 K Street, MS 20-20, Sacramento, CA 95814-3530, shodgson@consvr.ca.gov

“...at a distance of two leagues from this mission [San Luis Obispo] there are as many as eight springs of bitumen or thick black resin that the natives call chapopote; it is used chiefly by them for caulking their small watercraft and tarring the vases and pitchers the women make for holding water.” Pedro Fages, 1775

Natural oil seeps, like those Pedro Fages found with his soldiers in 1775, have been active in California for thousands of years. Most seeps are in the southern half of the state—either along the Pacific coastal areas, both onshore and offshore, or in the vast, central San Joaquin Valley.

Any historical study of the petroleum industry in California must begin with the oil-related activities of California Indians living around the seeps. Fages and other early explorers—from the 1500s on—recorded how California Indians refined and used asphaltum and heavy oils from the seeps. Documentation has continued through the years, and today many references and objects show us how California Indians—including the Yokuts, Achomawi, Maidu, and Chumash—used asphaltum and heavy oils for symbolic, decorative, and practical purposes.

As elsewhere in the world, some of these objects evolved into *folk art*, becoming articles that not only satisfied the daily practical needs of those who produced and used them but also reflected the aesthetic values of the creators themselves, the artisans of oil. In fact, the astounding variety of Indian uses of petroleum resembles our own.

CANOE PITCH TO CORNERSTONE OF CANADIAN OIL PRODUCTION: THE ATHABASCA OIL SANDS, ALBERTA, CANADA

L. Mark Larsen, Schlumberger Oilfield Services, 10119 Trailridge Drive, Shreveport, Louisiana 71106

At some 868 billion barrels of bitumen in place, the Athabasca oil sand deposit is the world's second largest known crude oil resource. There is a tremendous difference between a resource in place and economic production. Bridging that gap took many decades and numerous failed attempts before the first trickle of economic production was achieved. This is that story.

Bitumen is heavier than water and is more viscous than molasses. The oil sands are saturated with water and bitumen trapped in the pore spaces. The sands are exposed along the banks of the Athabasca River in northeastern Alberta. The native Indians who traveled the Athabasca river highways knew of this enormous deposit. It was, however, a local curiosity with practical applications limited to a pitch for caulking canoes and the like. The first recorded mention of the bitumen deposits was in 1719 when a Cree Indian brought a sample to a fur trading post on the shores of Hudson Bay.