

ABSTRACTS – 2016 INTERNATIONAL SYMPOSIUM, CASPER, WYOMING

lines were being constructed to connect many of the major oil fields to established refineries with cracking capabilities to secure maximum yields. The consolidation of major refiners to streamline operations and more efficiently compete for markets also became the trend.

Wyoming's refining landscape changed after World War II, with the shutting down of many of the smaller plants due to supply problems, the need for more efficient methods of refining, and larger operators committing production to their own refineries. At least 70 refineries, ranging in size from less than 100 barrels per day of processing capacity to as much as 80,000 barrels per day, have existed in Wyoming since 1895, with the simplicity of "tea-kettle" distilleries that sold fuels and lubricants to local markets to complex, fully integrated refineries capable of handling multiple grades of crude and refining the oils into a variety of products transported and sold worldwide.

This work focuses on when, where, and why these plants were constructed, and why they ceased to operate. There currently remain five active refineries in Wyoming, a stark contrast to the over 50 plants reported in operation throughout the state during the peak years of the 1930s.

**NATURAL GAS LESSONS IN PETROLEUM  
HISTORY FROM UPTON SINCLAIR'S FICTIONAL  
'OIL!' TO METHANE! AT PORTER RANCH**

Ann Mauer  
P.O. Box 2093  
Yorba Linda, CA 92885  
[annmauer@envirotechnicalimaging.com](mailto:annmauer@envirotechnicalimaging.com)

In the late 1800's, inventors wrangled how to use powerful bursts of methane erupting after oil wells gushed. Burned off into the atmosphere at first, methane natural gas became a legally defined mineral separate but related to petroleum. The first natural gas pipelines in California were laid before the 1920's at a time when the Trumble Gas Trap became the world's best-selling device capturing methane at the wellhead. The Trumble cylinder featured top quality steel and smart pressure fittings. With this contraption or any safe, reliable gas trap, oil drillers large and small could sell methane from their wells. Pipes delivering this mineralized fuel to customers helped 'nat gas' catch on as a keen, clean power source. Shrewd marketing and grand energy deals anchored this carbonized energy in U.S. history.

Our peek at the old technology and ways of thinking to deliver natural gas are of interest now amid concerns about global methane. The safety of natural gas in Southern California

was generally acceptable to populations as the industry grew between 1916 and 2016. The process to update California's natural gas infrastructure was underway when the Aliso Canyon methane leak occurred between October 2015 and January 2016. Porter Ranch is the name of a master-planned community impacted by the storage facility leak. Porter Ranch and Aliso Canyon became event names that reference the leak.

This methane release signals an historic turning point one century after California's natural gas industry began. The industry functioned under regulations generally guided by expert operator self-governance, a condition that emerged in the 19-teens when producers such as M. J. Trumble and his peers politely acknowledged that the Bureau of Mines could never keep up with the skyrocketing inventive growth in American energy industries. California activist and one-time gubernatorial candidate, Upton Sinclair, wrapped his head around the oil industry in 1927 to illuminate pitfalls of the industry, but he did not approach the topic of natural gas. Today, environmental mitigations for the methane leak in Los Angeles County will be scrutinized on the world stage. Mitigations will be negotiated in the context of acknowledging climate impacts legally, and mitigations will mark an era of new technical criteria to monitor aging infrastructure upgrades. Airborne methane measured alongside weather modification and natural particulates will draw scrutiny reflective of spirited debates that raged in the time of M. J. Trumble and brought people a hundred years of visionary energy. A new day has dawned.

**DEVELOPMENT OF GLENROCK AREA FIELDS,  
CONVERSE COUNTY, WYOMING**

Mark Milliken  
1319 Hornchurch Ave.  
Casper, WY 82609  
[mmilliken@blm.gov](mailto:mmilliken@blm.gov)

In 1916, shallow Shannon Formation oil was discovered on an "oil claim" on University of Wyoming Land Grant acreage near Parkerton about 20 miles east of Casper. This discovery would become the huge Big Muddy field, rivaling the Salt Creek field in size and activity. Development soon included the Frontier 2<sup>nd</sup> Wall Creek, and Dakota Formations. Since then, the Glenrock fields have produced more than 140 MMBO. Revenues from Big Muddy State leases allowed University of Wyoming to survive the depression and construct several buildings at a time when their very existence was in doubt. Poor early-day production practices led to substantial waste. Conoco built the Glenrock refinery in 1925 to process crude from Big Muddy field and other areas.