and development activity. Total production in 2001 amounted to 183 thousand barrels of oil and 148 thousand cubic feet of gas.

RANGELY OIL FIELD – COLORADO'S GIANT STILL GOING STRONG AFTER ONE HUNDRED YEARS

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The Rangely Oil Field had a modest beginning in 1902 when Poole drilled a 750 foot test which produced 7 BOPD from a fractured, upper Cretaceous aged Mancos shale. Few would have imagined that this discovery would result in an oilfield that will ultimately produce nearly a billion barrels of oil and would an area of over 31 square miles.

The early development of the field was slow. Production rates were modest and this portion of northwestern Colorado was 225 miles from the nearest market for oil, Salt Lake City. In 1918, the Raven Oil Company constructed a small refinery with a daily capacity of 250 barrels. Refinery equipment was carried by wagon over the rough roads from a railhead at Dragon, Utah. Gasoline, kerosene and other products were marketed locally in Colorado and nearby parts of Wyoming and Utah. By 1924, fractured Mancos shale wells were producing between 1500 and 2000 barrels per month. Ultimately, the fractured Mancos would yield over 14 million barrels of 41 gravity crude at depths less than 3500 feet.

Deeper pool production in Rangely was not to some for another 30 years after the discovery. In 1907, the Colorado Pacific Development Company, a division of the Southern Pacific Railroad, purchased a 8640 acre block on the crest of the anticline. The first well drilled below the Mancos, by Colorado Pacific, found gas in the Dakota Sand, which was worthless so far from any market. In 1917, A.C. McLaughlin bought this block and resold 5000 acres of it to Standard of California for $200,000. Standard drilled fourteen discouraging Mancos wells in a year's time; their entire production for the year 1919 was only 2100 barrels.

But in 1933, Standard of California's #A-1 Raven well discovered oil in the Pennsylvanian Weber sand and was completed for a modest initial potential of 229 barrels of day. With no pipeline in the area and the nearest railroad 130 miles away, it was to be another ten years until Weber exploitation began. With the national push for oil during World War Two, development of the Weber sand started with three wells in 1944. By the end of 1948, Rangely had been delineated on a forty acre pattern with 473 wells. Today there are about 900 wells at Rangely. Maximum production occurred in 1956 at a rate of 82,000 barrels per day with 45 to 50 million cubic feet of gas being flared.

In September 1945, Utah Oil Refining completed a 10 inch pipeline to Wamsutter, Wyoming, where it joined a major east-west trunkline, and in 1948 another 10 inch line was completed to Salt Lake City. The field was unitized in 1957, with Chevron the designated operator, allowing a successful peripheral water flood with gas reinjection. In February 1986, the 125 mile Raven Ridge Pipeline was completed from Rangely to Rock

Springs, Wyoming, and carbon dioxide injection began. Today Rangely produces about 16,000 BOPD from 348 producing wells

GIANT UNDER THE HILL: DRILLING FOR THE SPINDLETOP GUSHER FROM 1899-1901

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When the Civil War ended, the search for Texas oil began in earnest. The unusual mounds and sour springs of Southeast Texas drew attention early, and by 1892 the Gladys City Oil, Gas, & Manufacturing Company was formed to focus the search on Sour Springs Mound several miles from Beaumont with its 9,000 residents. After three early dry holes in the middle of a national depression, investment capital dried up, and it took a mining engineer working on the salt domes of Louisiana and a one-armed reprobate, turned religious, from Beaumont to revive interest, drill one dry hole, and then finally bring the stunning Lucas Gusher into this world -- roaring, rock-laden, fouling the bayous and prairies, and leaving the world with the opportunities and problems that emerged from its discovery.

The men and one particular woman who were involved in the fifth and successful well are the focus of this presentation. Interesting individuals, they teamed up to solve the problems of drilling on the hill that had defied earlier attempts. They invented tools and processes that would lighten the load of others who drilled on these salt dome formations, and when they succeeded, they scattered around the world to continue the search for that all-consuming oil.

The Spindletop oil that erupted into the cold air in Beaumont, Texas, on January 10, 1901, dramatically changed the industry that fostered its discovery. One of the drillers predicted a flow of fifty barrels a day when they hit an oil sand at 900 feet. No one could conceive of the 70,000 to 100,000 barrels per day this one well would produce over the first ten days. The industry would have to change or be overwhelmed by the sheer size of this discovery, so Texas led the way into the oil-based 20th century economy.

FROM SALT LICKS TO STOCK TANKS – A BRIEF OVERVIEW OF THE EARLY SALT AND OIL INDUSTRIES IN WEST VIRGINIA

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In many places throughout the world, saline springs, oil and gas seeps, and related phenomena have proven to be surface indications of associated hydrocarbon accumulations at greater depths. That has certainly been the case in West Virginia. From salt licks visited by buffalo, deer, and other animals in prehistoric times, to the utilization