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ANTHROPOGENIC NATURAL GAS LOSSES IN THE U. S.—REMEMBERING HISTORY

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Recently the *New York Times* (February 26, 2016) published a brief article concerning a *Science* paper on the natural gas release of the 2015 Aliso Canyon, CA, blowout. The *Times* article stated that the scientists reported this natural gas leak as "the largest known release of climate-changing methane in United States history." The *Science* article did not state that. The authors considered the leak/blowout as temporarily "creating the largest known anthropogenic point source of CH^4 in the U.S." The release was calculated as 5.0 billion SCF of methane. The historic record does not support that claim. A 1981 blowout is likely the largest natural gas loss in modern post-WWII U.S. history. The Key 1-11 well blowout of Wheeler County, TX, began in October of 1981 and was controlled 16 months later after losing about 14.3 billion SCF from venting and flaring.

Most natural gas losses were never recorded or written about in the public record, and those that were are commonly forgotten. The historic measurement of natural-gas ranged from educated approximation, to calculation based on a reservoir oil:gas ratio and liquids production, to reported metered production. The largest natural gas losses (with 90% or more methane) were intentional due to the practice of economic oil recovery without gathering the non-economic associated gas. Accidental losses also occurred, and the most common were from blowouts.

Reported California natural gas losses in 1929 were 248 billion SCF. Most natural gas production losses were not recorded until the 1930s—in Louisiana, regulations required gas metering to the State, but only 3 out of 37 South Louisiana fields did so in 1930. A 1935 study considered that more natural gas in the U.S. had been wasted to the air or lost underground than had been marketed. One of the largest Louisiana blowouts was the 1908-1913 Dawes well in Caddo field. The total losses were estimated at about 15 billion SCF. A blowout in Garland Field, WY, lost about 16 billion SCF over 406 days (1936-37) from flaring and venting. Intentional loss examples from field-wide venting and flaring are large. The Panhandle field of Texas from 1933-1935 lost on the order of 1 billion SCF/day after striping petroleum liquids. An early 1940s estimate of the Texas Railroad Commission was that the state lost over 2 billion SCF/day and approached losses of 1 trillion SCF/year.