

THE NATURAL GAS SITUATION IN THE COUNTIES OF KENT, ESSEX AND LAMBTON

Essential Difficulties in Dealing with the Production and Distribution of Natural Gas

There are certain peculiarities about natural gas which make the economical production and use of it difficult. In the first place the fact that it is invisible and is instantly annihilated once it is allowed to escape into the open air renders the waste of gas less impressive and revolting than would be the case with other valuable products. Before the regulations prohibiting waste were enforced in the Kent gas field in 1907, it was nothing out of the way for a gas well to blow off two to three million cubic feet per day. This is equivalent in heating power and, consequently, value to about 100 tons of coal, or over 400 barrels of petroleum; anyone permitting the absolute destruction of such amounts daily of coal or oil would be regarded as a menace to the community, but in the case of gas it was tolerated and the operators of the wells wasting gas even fancied they had a grievance when compelled to close the wells, and found many sympathizers. Moreover, the fact that it is not physically possible to separate, or fence off as it were, the holdings of different operators—allowing each one on his own property to plan a careful and economical development—is really the source of all the trouble. A competitor with the right to drill for gas on adjoining territory can draw off the gas under-lying the leases of any operator who might be disposed to conserve the gas for the future indispensable needs of the community. It accordingly becomes a scramble to draw off the gas first and sell it for any price rather than let a rival have it. This causes unnecessary expense in drilling superfluous wells to "offset," as it is called, the competitor's wells, in laying scores of miles of double pipe lines which are enormously expensive, all of which the consumer must ultimately pay for. There is no other product of nature of which this is the case and it is the governing factor in operations. The experience, therefore, drawn from older industries, which is finally crystallized into legislation, is of no value because the thing is essentially different, and any regulations designed to ensure an intelligent and economical production and use of natural gas which do not take cognizance of this fact must necessarily fail in their purpose.

Estimate of Probable Amount of Gas in Reserve in the Known Gas Field

Up to the end of 1917 about 80,000 million cu. ft. of gas had been produced from the Kent field. During this time the pressure dropped from about 590 lbs. to 320, a decrease of 270 lbs. Assuming the pressure may go down to 100 lbs. before the field is abandoned, there remains a drop of 220 lbs. to be drawn on, and this represents a proportional amount of gas which is available and should produce $80,000 \times \frac{220}{370}$, or 65,000 million cu. ft. If the pressure may go down to 50 lbs. there remains a drop of 270, representing in a similar way about 80,000 cu. ft. It is, however, almost an absolute certainty that more gas will be obtained than is indicated by the calculations just made. This is only reasonable to expect from the shape of the field, which is roughly that of a ham, the knuckle of the ham pointing northwards and the broad base extending into Lake Erie. In making the cal-