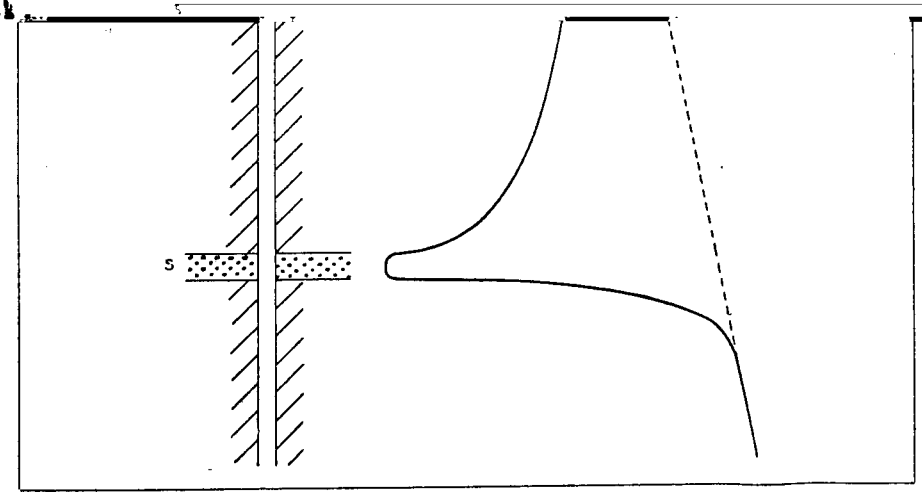

ing fluid is usually such that the pressure of the mud at any point of the hole is greater than the formation pressure. Therefore, there is generally no fluid intrusion from the beds penetrated into

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Sixth of a series of seven articles, which are based upon research work sponsored by Halliburton Oil Well Cementing Company. Preceding installments have been published in The Oil Weekly of October 21 and 28, November 4 and 11, and December 2.

Figure 6-1 (top). Temperature anomaly produced by gas entry (hypothetical).

Figure 6-2 (bottom). Depth-temperature graph in a well producing a large quantity of gas from a high-pressure reservoir (hypothetical).

example, if the quantity of gas released by S' is much less than that released by S, the temperature graph is basically as

water which is produced from many oil wells it is necessary first to locate the

Figure 8-4. Depth-temperature graph in a cable tool well having penetrated two gas sands (hypothetical).

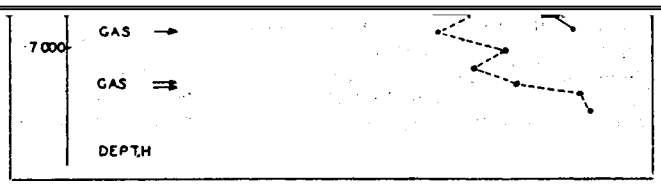

Figure 6-6 (lower left). Temperature graph from a West Texas well having penetrated porous dolomite containing oil and gas.

Figure 6-7 (upper right). Temperature graph from a West Texas well having penetrated a fractured lime section containing oil and gas.

Figure 6-8 (lower right). Depth-temperature graph in a flowing well. After Van Orstrand, 1930. Courtesy API

The writer is greatly indebted to C. R. Dale, Dale Company, Los Angeles, for the logs and data contributed to the present article.

(Additional figures on following page.)

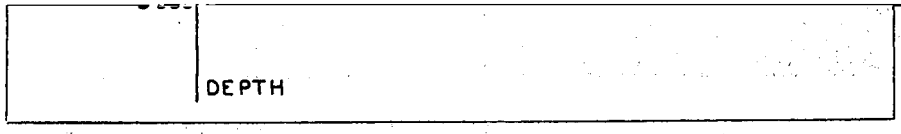

Figure 6-10. Depth-temperature graph of a West Virginia well.
After Van Orstrand, 1918. Courtesy West Virginia Geological Survey

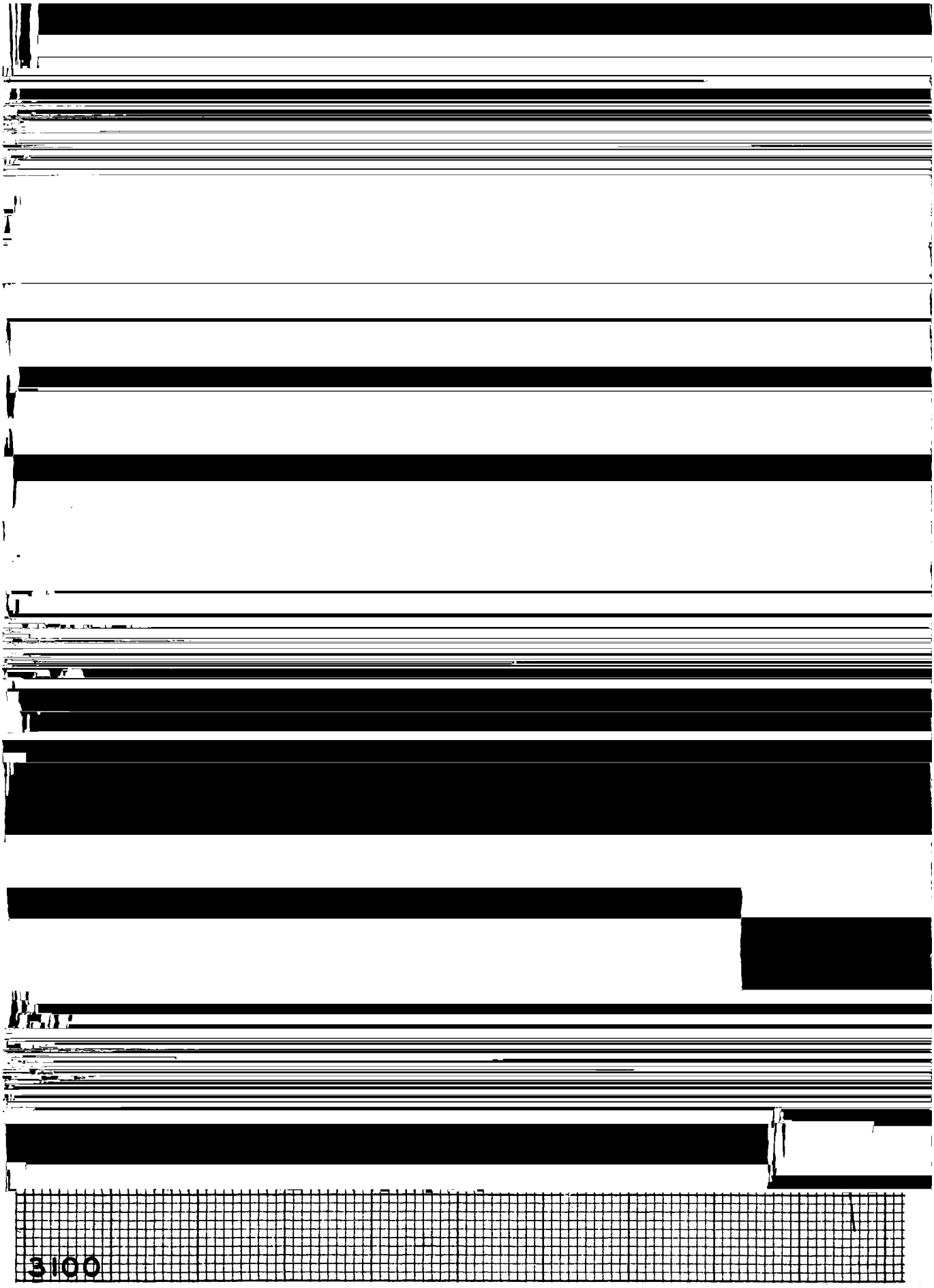

Figure 6-12. Location of a water flow in a California well.

These three charts courtesy Dale Company