

13-23-18

DELTA DRILLING COMPANY

Box 2012 TELEPHONE 214 595-1911

TYLER, TEXAS 75710

February 28, 1980

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NEW MEXICO OIL CONSERVATION COMMISSION
P. O. Box 2088
Land Office Building
Santa Fe, New Mexico 87501

O. C. D.
ARTESIA, OFFICE

Attention: Mr. Joe D. Ramey, Sec. Director

Re: South Culebra Bluff Unit Well #4
Eddy County, New Mexico

Gentlemen:

We are currently producing the subject well under a 90-day authorization from you which will expire on March 6, 1980. The requirement for this authorization was occasioned by a long open-hole completion and the presence of a segment of the Delaware formation being exposed in this Bone Spring producer. Purpose of the test is to obtain data on the Bone Spring section, which could clarify the need for such open-hole completions in the future.

At the present time it appears that the test will be inconclusive, basically due to water intrusion from the Delaware. Following are the observations to date:

- 1) The well is producing about 20 barrels of fluid per day, approximately half of this being water.
- 2) Analyses indicate the origin of the water to be the Delaware, although water analyses from the Bone Spring in this area are not available for comparison.
- 3) The observed rates are low compared to the potential of the well, using SCB #3 as an analogy (60 BOPE).
- 4) Water from the Delaware appears to be blocking the oil production from the Bone Spring. This phenomenon occurred in the drilling and testing of SCB #3, as discussed with you in Santa Fe.

We have concluded that the best alternative is to run a full casing string to total depth, sealing off the Delaware. This will let us:

- 1) Eliminate the possibility that the observed water may be coming from the additional Bone Spring open in the SCB #4, but not penetrated in the SCB #3 (the interval from 8000' to 9800').
- 2) Compare a cased completion as opposed to the open-hole completion in SCB #3 (this comparison will not be valid within the wellbore of SCB #4 alone because of the inordinately poor performance of the well with Delaware water present).
- 3) Selectively test through casing the oil-producing capabilities of the various fractured intervals.