

July 31, 1995

El Paso Natural Gas Co.
Recommended Plugging Procedure
Federal "O" Well #2
Washington Ranch Gas Storage Area
Eddy Co, New Mexico

The well was originally drilled as the Government "M" Well No 2 by Cities Oil Company and completed as a gas well June 2, 1972. The well later became the property of El Paso Natural Gas Company and since that time has been utilized as an observation well for their Washington Ranch Gas Storage Project.

The attached Schematic (Fig #1) shows the condition of the well during the period of time it was used as an observation well and at the time the recent work-over commenced. The attached daily report is a detailed account of the effort made to recover the fish in this well and to repair the casing failure. Also included is an estimated accumulative cost of the operation.

A review of Fig #1 indicates that the casing had failed prior to commencement of their work-over, but the 2 7/8" tubing was intact. This is evidenced by the report of 3-31-95 because when the tubing was pressured to 1400 psi and there was no evidence of communication with the annulus.

The proposed plugging procedure is as follows and is illustrated on the included schematics:

1. Run 2 7/8" tubing to \pm 1500'.
2. Pump 200 sx slurry of designed cement. Close in and monitor the 8 5/8" - 5 1/2" and 5 1/2" - 2 7/8" annulus.
3. Pull 2 7/8" tbg up to \pm 800' and then run back to original depth, allowing time for slurry to thicken.
4. Pump 100 sx slurry of designed cement. Close in and monitor 8 5/8" - 5 1/2" and 5 1/2" - 2 3/8" annulus. Pull 2 7/8" tubing up to \pm 800' then run to original depth, allowing time for slurry to thicken. Continue this operation as many times as necessary until a squeeze pressure is obtained.
(As pumping continues the separate zones will be filled with cement and will be squeezed. This operation is shown in the schematics Fig #2 thru #5.)