R. R. BELL " A" NO. 2

The testing procedure and the results of testing R. R. Bell "A" No. 2 for a possible casing leak is hereby submitted as follows:

February 10, 1954

Field notes taken during OCC Eunice Pool casing leak survey - surface pipe pressure 300#, continuous blow of gas. Salt string is bradenhead gas well.

February 17, 1954

A separator and tank was moved to the well site to flow the surface pipe in conjunction with setting a dual pressure recording gauge on the surface and salt strings. Shut in pressure of the surface pipe was 240 psig. Flow was conducted to the separator from 8:30 AM until 12:00 PM a period of 3-1/2 hours with the flowing pressure stabilizing at 75 psig. The daily flow rate was found to be 1,878.6 MCF of gas. at 12:00 PM, the surface pipe was flowed through a 2-inch pipe wide open to the atmosphere until 2:00 PM. the flowing pressure stabilized at 15 psig and would not blow down. The surface pipe discharged a constant fine spray of mud while flowing to the atmosphere, however, fluid was not dumped to the tank while flowing to the separator. The gases from the surface and salt strings both tested sweet, based upon wet lead acetate paper. The pressure on the salt string (bradenhead gas well) remained constant at 500 psig before flowing, during flowing, and after flowing the surface pipe. The surface pipe was closed in at 2:00 PM, and the pressure immediately built up to 210 psig, to 240 psig within 30 mins., and to 250 psig within 2.5 hours. Within 17 hours, the surface pipe pressure was 265 psig.

February 24, 1954

The shut-in pressure on the surface and salt strings were 290 psig and 500 psig, respectively. The salt string (bradenhead gas well) was flowed through the separator from 9:35 AM to 11:50 AM. Flowing pressure stabilized at 80 psig. Approximately 12.5 barrels of fluid, mostly condensate, was flowed into the tank. The salt string was flowed for 2.25 hours and would not blow down. The pressure on the surface string had stabilized previously at 290 psig, the apparent static pressure, and did not deflect during the flowing of the salt string. The salt string was closed in at 11:50 AM and the pressure built up to 425 psig within 15 minutes and to 500 psig within 3.75 hours, and stablised at 505 psig within 21.5 hours.

February 25, 1954

The salt string was flowed to obtain a flow rate using a 4-inch orifice well tester. Flowing pressure stabilized at 90 psig, and the calculated daily flow rate was 2,910 MCF of gas. The surface pipe pressure of 290 psig was uneffected by the flow rate testing of the salt string. The salt string pressure was 505 psig before flowing, and had built up to 490 psig within 10 minutes after flowing at a pressure of 90 psig. The test period time was 20 minutes.

Conclusions

Based upon the above test date, there is not communication across the salt string.

Remarks: It is proposed to cement the surface-salt annulus with a volume of cement in excess of the calculated volume to fill the annulus, in order to alleviate the potential hazard created by the pressure currently on the surface bradenhead.

Accompanying C-102 outlines our corrective measures for remedying the hazard.

Hobbs, New Mexico
March 15, 1954
JLM:ptg