

17. Describe Proposed or Completed Operations

Shut in casing pressure 3050 psi; shut in tubing pressure 2970.
Flow Test: Flowing Upper Morrow through casing at 4,400 MCFD.
Shut in Lower Morrow in tubing.

Flowing Time	Upper Morrow Flowing Casing Pressures	Lower Morrow Shut-in Tubing Pressure
0	3050 psi	2970 psi
1.5 Hrs.	400 psi	2375 psi
2.0 Hrs.	300 psi	2380 psi
2.5 Hrs.	300 psi	2430 psi
3.0 Hrs.	300 psi	2400 psi

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U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

- Indications of communication between tubing and casing. Shut in for Temperature Survey.
- 10/25/70 Ran Temperature Survey and found leak in sliding side door at 10,079 and leak in tubing joint at 10,060'.
- 10/27/70 Set Blanking plug in permanent packer and pulled tubing.
- 10/28/70 Ran tubing with new sliding side door and Hydrotested tubing in hole at 4,000 psi. Set tubing into permanent packer.
- 10/29/70 Blanking plug still in packer to shut off Lower Morrow.
- 10/30/70 Opened sliding side door and swabbed in Upper Morrow through tubing.
- 10/30/70 Flowing Upper Morrow through tubing at 3,200 MCFD, 3/4" choke, 220 tubing pressure.
- 10/31/70 Closed sliding side door and pulled blanking plug to flow Upper Morrow through annulus and Lower Morrow through tubing.
- 11/1/70 Flowing Upper Morrow through annulus and Lower Morrow through tubing. Casing and tubing pressure dropping at same rate indicating communication.
- 11/2/70 Ran "straight through" tool in sliding side door but did not stop communication.
- 11/3/70 Pulled "Straight through" tool from sliding side door and ran blanking plug in permanent packer to shut off Lower Morrow from tubing. Bled tubing pressure to 1350 psi and casing pressure remained steady at 3000 psi, indicating there was no tubing leak.
- 11/4/70 Killed Upper Morrow and pulled tubing. Ran tubing with R.T.T.S. packer and overshot.
- 11/5/70 Set R.T.T.S. packer below Upper Morrow perforations. Pressure tested permanent packer to 4500 psi and lost 100 psi in 35 Mins. Pulled blanking plug out of permanent packer and set R.T.T.S. packer below Upper Morrow perforations. Pumped 90 Bbls. water in annulus at 6.5 BPM with 3500 psi and tubing was on vacuum. Pumped water down tubing at 4 BPM with 4000 psi and had 1/4 BPM return from annulus. Indicates communication between Upper and Lower Morrow behind casing.
- 11/6/70 Set R.T.T.S. packer at 9940' to determine if perforations at 9902-9912' were communicated with perforations at 10,016-026' and 10,034-060' in Upper Morrow. Water backflowed up tubing while gas flowed out of annulus. Pumped water down both sides and no communication was indicated.
- 11/7/70 Dumped sand on permanent packer with blanking plug in place. Set R.T.T.S. packer at 9940' and squeezed perforations at 10,016-26' and 10,034-060' with 50 Sks. Cement at 5000 psi. Left 10 Sks. of cement in casing.
- 11/8/70 Pulled tubing and went in with bit and drilled out cement.
- 11/9/70 Pulled tubing and went in with R.T.T.S. packer. Set R.T.T.S. packer at 9946' and pressure tested to 2600 psi. Lost 400 psi in 15 Mins. Set R.T.T.S. packer at 9865' (above all perforations)