

WILLIAMSTOWN DEEP UNIT WELL NO. 1  
I. W. C. Form C-103 Attachment  
10-30-64 to 3-1-65

1975

Drilled 15,493' to 15,658'. Ran DST #7, 15,408' to 15,658', 3200' water cushion, 2300' nitrogen at 200 psi. Opened too, packer failed to hold. Recovered 40 barrels water cushion and 8 barrels slightly gas cut mud. IHP 12,072#, BHT 201 degrees. Drilled 15,658' to 16,825'. Ran Electrical Logs. Rigged up and ran 15,221' 7-5/8" OD 38.05# and 39# P-110 Rg.3 liner, top of liner hanger assembly at 12,283'. Guide Shoe set at 16,820'. Cemented liner with 1350 sacks cement, maximum and final pressure 2000 psi. Drilled cement 11,312' to 12,283', tested top of liner with 2000 psi, held 30 minutes OK. Drilled cement 12,283' to 12,285' and 16,825' to 16,811'. Pressured 7-5/8" liner to 3000 psi, dropped to 2950 psi in 1 hour. Perforated 7-5/8" liner at 12,740' with 2 holes. Squeezed perforations at 12,740' with 200 sacks cement. Drilled cement 12,654' to 12,740', tested perforations with 2850#, held 30 minutes OK.

Drilled cement through shoe at 16,820'.

Drilled formation 16,825' to 17,305'.

Cut Core #1, 17,305' to 17,352', no show of oil or gas.

Ran DST #8, Devonian formation, 17,302' to 17,352', 3000' of nitrogen to 2000 psi, tool open 3 hours, 10 minutes. Opened tool after 1 hour ISIP, started blowing after open 30 minutes, pressure 5# on 3/4" and 1/4" chokes, decreased to 1# and held throughout test. Recovered 90' slightly gas cut mud, 1200' salty sulphur water. 1 hour ISIP 7449#, IHP 2378#, and increasing when clocks stopped, IHP 8663#, BHT 221 degrees. Reamed core hole 17,305' to 17,352'.

Drilled 17,352' to 17,397'. Ran DST #9, Devonian formation, 129,800 cubic feet nitrogen, tool open 3 hours, 1-3/4 hours blowing off nitrogen, surface pressure 1525 psi to 0 psi. Recovered 90' mud, 1300' salty sulphur water, and 90' of salt contaminated mud. 30 minute ISIP 7552 psi, IHP 2973 psi, FFP 683 psi, IHP 8712 psi, FHP 8682 psi, 1-1/2 hour FSIP 7552 psi.

Drilled 17,397' to 17,589'.

Cut Core #2, 17,589' to 17,649', no show of oil or gas. Reamed core hole. Ran DST #10, Devonian formation, 17,408' to 17,649', 130,100 cubic feet nitrogen, 1525 psi surface pressure, tool open 3 hours, 1-1/4 hours bleeding nitrogen, gas to surface in 2 hours, 15 minutes, too small to measure. Recovered 350' gas and water cut drilling mud, 15,350' salty sulphur water. 30 minute ISIP 7448 psi, IHP 3216 psi, FFP 7448 psi, IHP 8506 psi, FHP 8146 psi, 20 minute FSIP 7630 psi, BHT 256 degrees. Ran Schlumberger Gamma Ray-Ventron and Collar Locator, Gamma Ray-Sonic, Dual Induction-Laterolog, and Microlog-Caliper surveys. Set HOKCO SVDC tool at 16,800', cemented through tool with 250 sacks cement, final pressure 3800#. Tested casing with 2500 psi, held OK. Tested casing with 14.3# mud in hole to 2000#, held 30 minutes OK.

16,810' PBTD. Perforated 7-5/8" OD Liner in Mississippian Lime, 16,680'-16,685', 16,691'-16,706', 16,716'-16,720', 16,747'-16,752', and 16,787'-16,792' with 2 shots per foot (total 33', 66 shots). Swabbed trace of gas, no formation fluid. Reset HOKCO RTTS tool at 16,802' (was 16,511'), squeezed Mississippian perforations, 16,680' to 16,792' with 250 sacks cement, maximum pressure 5000#, minimum 3400#. After AOC, pressured up on plug to 7000 psi, held OK. Set HOKCO DC Bridge Plug at 15,700'.

15,700' PBTD. Set HOKCO RTTS tool at 15,372'. Perforated 7-5/8" OD Liner, in Pennsylvanian formation, 15,468'-15,468', 15,491'-15,495', and 15,498'-15,509' with 2 shots per foot (total 35', 70 shots). Well open to air 8-1/2 hours, no blow. Swabbed load water, trace of gas. Swabbed down to 10,000', well started flowing. 9-1/2 hours flowed to pit, 3/4" and 5/8" chokes, mud and slightly salty water. Flowed 30 minutes on 1/4" choke, FTP 600 psi. rate of 830 MCF/D. Acidized Pennsylvanian perforations, 15,468' to 15,509' with 2000 gallons 7-1/2% mud acid. Swabbed to pit, flowing by heads, tubing pressure 130 psi to 0 psi. Flowed through separator, 3/4" choke, average rate of gas 725 MCF/D, average on