

Cueva Unit #1  
Perforation of Atoka 10,590'-10,598'

- 9/20/96      Moved rig in and rigged up.
- 9/23/96      Rigged up BJ Services. Loaded tubing with 9.5 bbls of 2% KCL. Tested tubing to 1000#. Loaded annulus with 12.2 bbls of 2% KCL. Tested annulus to 500#. NDWH, NUBOP. Released on/off tool & L/D 1 joint of 2 3/8" N-80 tubing, 3-2 3/8" subs & an additional 10 joints of 2 3/8" N-80 tubing. EOT-10,627'. Spot 200 gals. of 10% acetic acid from 10,397' to 10,627'. Spotted 1-sk of sand with acid. L/D an additional 5 joints of 2 3/8" tubing & POOH with 337 joints of 2 3/8" N-80 tubing & XL retreaving head. RIH with Guiberson 4" TCP gun assembly with mechanical disconnect & upper ported glass disc sub, 2 3/8" X 5 1/2" 17.0# Guiberson UNI-VI 10-K packer, XL- on/off with 1.812"-F/profile in gudgeon, 1 joint of 2 3/8" N-80 tubing, 2 3/8" X 6' N-80 marker sub, & 339 joints of 2 3/8" N-80 tubing to surface. Rigged up Black Warrior Wireline & RIH with 1 11/16" GR/CCL. Locate 6' marker joint exactly on depth @ 10,447'. POOH with wireline. Set packer @ 10,373' & release on/off tool. Circulate packer fluid. NDBOP, latch on to packer, set 11-points compression on packer, NUWH. Test annulus 500#, TBG-1000#, SDFN.
- 9/24/96      Swabbed fluid from tubing down to 10,400'. Rigged up BJ nitrogen truck. Pressured tubing to 4000# with 65,000-SCF on N2. Drop bar & perforated 5 1/2" 17.0# casing from 10,590'-10,598' @ 4-JSPF, 33 holes. Blew tubing down to 10# on a 48/64 choke @ 10 MCFD rate. Gas to surface in 1 hour. RIH with swab & tagged fluid @ 9,600'. Pulled 800' of packer fluid & acetic acid out of tubing. Had slight increase in gas rate to 15 MCFD. Waited 1 hour & made 2nd swab run & had no fluid entry & recovered no fluid. Shut well in overnight @ 3:15PM.
- 9/25/96      SITP-20#. Rigged up Pro-Well Testing. RIH with 1 25/32" bowen overshot with 1 1/4" grapple. Tagged fluid level @ 10,400'. Fished firing bar @ 10,578' & POOH. RIH with 1 3/4" OD heavy wall "SB" with 1 3/16" catch. Latched on to firing sleeve & slipped off. No firing sleeve. RIH with 2" Otis "B" shifting tool with positive key & 1 1/2" Bowen hydraulic jars. Released TCP guns & POOH with shifting tool. Rigged up Hughes Services. Pumped 3000 gals. of 15% HCL methanol acid with 50-1.3" "SG" ball sealers. Acidized perfs (10,590' 10,598') @ 2.7 BPM @ 4200#. Formation broke